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EDITORIAL

University and College teachers define themselves as knowledge-creators and disseminators while school teachers are consumers of knowledge for the purpose of teaching. It is therefore imperative on the part of college and university academics to constantly conduct research and to consistently document their research findings before getting them shared with the international scholarly community. Hence, they require platforms for such scholastic ventures through institutions like conferences and publications. These forums bring together diverse critical thoughts and reflections on various topics from diverse fields. Knowledge in the twenty first century has transcended the man-made disciplinary boundaries and emerged as multi-disciplinary and trans-disciplinary approaches. The present conference is basically multi-disciplinary in nature with teachers from the fields of humanities, arts and science.

We are therefore very much delighted to place in your hands the select conference papers that were presented and deliberated at the 1st Bodhi International Conference on “Humanities, Arts and Science - 2018” (BICOHAS-18) held from 24 to 27 August 2018, jointly organized by the Department of English, Faculty of Modern Languages and Communication, UNIVERSITI PUTRA MALAYSIA (UPM), Malaysia & BODHI INTERNATIONAL JOURNAL OF RESEARCH IN HUMANITIES, ARTS AND SCIENCE, India and co-organized by BISHOP HEBER COLLEGE (Autonomous), India. They were further content-edited post-conference. We do hope that this special issue of the journal bearing articles from Humanities, Arts, and Sciences would provide food for critical thought with thought-provoking views.

This Journal is a compendium of the thematic definitions and explanations from various sources and resources. It is hoped that the compilation provided contexts for meaningful participation and interaction among the presenters and delegates at the technical sessions. We are indebted to all the Professors, Research scholars, Students and other well-wishers who have contributed their papers and efforts with full commitment and conviction to make this publication meaningfully purposeful and successful with knowledge value and thematic conceptual credit.

At this juncture, we make our sincere thanks to VC, Dean, HOD, and Faculty members of UPM, Malaysia, and Management and Faculty of Bishop Heber College, Trichirappali, India for their collaboration in making this Successful Academic International a Reality.

Editors
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Academic Excellence in research is continued promoting in research support for young Scholars. Multidisciplinary of research is motivating all aspects of encounters across disciplines and research fields in an multidisciplinary views, by assembling research groups and consequently projects, supporting publications with this inclination and organizing programmes. Internationalization of research work is the unit seeks to develop its scholarly profile in research through quality of publications. And visibility of research is creating sustainable platforms for research and publication, such as series of Books; motivating dissemination of research results for people and society.

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Management of Non-Performing Assets of Banks in India

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Abstract

Raising Non Performing Assets is one of the serious problems faced by the Indian Banking Sector over a decade. It is also a biggest hurdle in the socio-economic development of our country. High level of NPA affects the financial soundness of the banking system. Public Sector Banks are the biggest contributor to the large and rising stock of NPAs. The share of stressed Assets in Public Sector Banks is nearly 16% which is more than three times that in Private Banks. It suggests high probability of credit defaults that affects the profitability. Rising NPAs have reflected in the declining Return on Assets (ROA) and Return on Equity (ROE) Ratios. The problem of NPA is a challenge not only to Indian Public sector Banks but it prevails worldwide. High NPAs are also likely to effect the bank's ability to meet higher capital requirements under Basel III which will come into force in January 2019. Unless there are some unanimous policies are followed for solving the problem, NPAs cannot be reduced. This paper deals with understanding the concept of NPAs, the root causes of NPAs and the strategies adopted for reducing NPAs in commercial Banks.

Keywords: NPA, Banks

Introduction

Banks are the custodians and distributors of the liquid capital of the country. Therefore they play a key role in the accumulation and allocation of resources in an economy. The Growth of Country's economy and GDP largely depends upon the credit disbursement by Banks who borrow by way of Deposits and lend for the Profit which leads to employment generation and earning of Forex. As long as there is steady and healthy increase in the Gross Advances of Banks the GDP increases and Productive growth is faster. This also leads to higher Domestic Investment. Any laxity in lending by Banks due to Higher level of NPAs which affects the Balance Sheet and the profitability of the Banks leads to reduction in growth and thereby the investment in the economy is held up. While the primary function of banks is to provide loans to various sectors such as agriculture, industry, personal loans, housing loans etc., in recent times the banks have become very cautious in extending loans. The reason being mounting non-performing assets (NPAs). Non Performing Assets has a tremendous impact on the performance of the banking sector and the financial institutions of any country, In India an increase in the level of NPAs over the past decade has slowed down the performance of Public Sector Banks.



This is one of the major reasons for the deterioration of the Banking sector in India. In line with International Practices as per the recommendations made by the Narasiman Committee, the RBI has introduced Prudential Norms for the advance portfolio of the Banks to move towards greater consistency and Transparency in the Published Accounts. Non Performing Asset means a loan or an Account which has been classified as Sub-Standard, Doubtful or Loss Assets as per the guidelines issued by the RBI.

Review of Literature

There have been many studies conducted on the issue of Non-Performing Asset Management in Indian Banks. The following are some of the reviews about the NPA Practices and Management conducted for Banks in India.

Kanika Goyal, (2010) in an article titled "Empirical Study of Non-Performing Assets Management of Indian Public Sector Banks" has observed that all the prudential and provisioning norms and other initiatives taken by the regulatory bodies has pressurized banks to improve their performance and consequently resulted in to reduction of NPA and improvement in the financial soundness of the Indian Banking system.

Kajal Chaudhary and Monika Sharma, (2011) in their research paper titled "Performance of Indian Public Sector Banks and Private Sector Banks: A Comparative Study" have stated that it is right time to take suitable and stringent measures to get rid of NPA problem. An efficient management information system should be developed. The bank staff involved in sanctioning the advances should be trained about the proper documentation and charge of securities and motivated to take measures in solving the problem of NPA.

Khanna (2012) in her research paper titled "Managing NPA in commercial banks" has said that the primary function of banks is to lend funds as loans to various sectors such as agriculture, industry, personal loans, housing loans etc., but in recent times the banks have become very cautious in extending loans. Singh (2013) in his paper titled "Recovery of NPAs in Indian commercial banks" says that the origin of the problem of burgeoning NPAs lies in the

system of credit risk management by the banks. Banks are required to have adequate preventive measures in fixing pre-sanctioning appraisal responsibility and an effective post-disbursement supervision

Dr. Sonia Narula & Monika Singla (2014) in the paper titled "Empirical Study on Non-Performing Assets of Bank" reveal that due to mismanagement in bank there is a positive relation between Total Advances, Net Profits and NPA of bank which is not good. Sanction It is not possible for the banks to sanction new loans to new customers the new customers due to lack of funds as a result of NPAs.

Dr. M. Syed Ibrahim and Dr. Rangasamy Thangavelu (2015) in their article "A Study on the Composition of Non-Performing Assets (NPAs) of Scheduled Commercial Banks in India" have found that the problem of Non-Performing Assets (NPAs) is a serious issue and danger to the Indian Scheduled Commercial Banks, because it destroys the sound financial positions of them. The customers and the public would not trust the banks any more if the banks have higher rate of NPAs. So, the problem of NPAs must be handled in such a manner that would not ruin the financial positions and affect the image of the banks.

Objectives of the Study

1. To Identify the various concepts of Non Performing Assets (NPA) in Banks.
2. To Examine the reasons for Non Performing Assets in Banks.
3. To analyse the significant differences between ratio of Gross NPA to Gross Advances for aggregates of Public Sector, Private Sector and Foreign Banks in India from 2013-2017.
4. To study the strategy adopted by the Banks for reducing NPAs

Hypotheses of the Study

Null Hypothesis (H₀): There is no significant difference between the Ratio of Gross NPA to Gross Advances for Public sector, Private Sector and Foreign Banks from the year 2013 to 2017.

Alternate Hypothesis (H₁): There is a significant difference between the Ratio of Gross NPA to Gross Advances for Public sector, Private Sector and Foreign Banks from the year 2013 to 2017.

Methodology of Study

The analysis in the paper is done on the total in other words. The aggregate data starting from 2013 to 2017 has been taken for analysis for making a comparison between Public sector Banks, Private Sector Banks and Foreign Banks on the overall basis. This has helped to derive the findings and conclusions sector wise.

Population: Banking industry's aggregate data related to NPA for Public sector Banks, Private Sector Banks and Foreign Banks is taken,

Data Collection

Secondary data has been used for the study from Reserve Bank of India (RBI) website, research papers and published articles and Books relating to current Banking scenario.

Data Analysis Tools

- Tools include percentage analysis, ANOVA
- Time period of the paper
- Five years Aggregate data from 2013 to 2017 is used for the study

Limitations of the Study

The major limitations of this study are the following:

- This study is prepared only on the basis of secondary data.
- This study is based on the data of years 2013 to 2017 only

Concepts of NPA

With effect from 31st March 2004, NPA shall be loan or advance where

- Interest and /or instalment of Principal remain overdue for a period of more than 90 days in respect of Term loans
- The account remains out of order for a period of more than 90 days in respect of an overdraft/cashcredit.
- The bill remains overdue for a period of more than 90 days in the case of bills purchased and discounted.
- Out of Order: If the outstanding balance remains continuously in excess of the sanctioned limit.

Overdue: Any amount due to the Bank under any credit facility is overdue if it is not paid on the due date fixed by the Bank.

Categories of NPA

With Effect from March 31st 2005

Sub-Standard Assets: An Asset which has remained NPA for a period less than or equal to 12 months.

Doubtful Assets: An Asset that has remained in the Sub-Standard category for a period of 12 months

Loss Assets: An Asset where loss has been identified by the Bank or Internal or External Auditors or the RBI inspection but the amount has not been written off wholly.

Reasons for Non Performing Assets

1. Enthusiasm in increasing Balance sheet size by lending to borrowers unaware for their past credit history.
2. Funds were borrowed for creating excess capacities in anticipation of demand without factoring in the global capacities or demand supply position.
3. Delay in Completion of the Project due to various reasons
4. Recovery of debts was poor.
5. The concerned corporate was not able to raise capital by issuing equity shares or other debt instruments from capital markets and used borrowed money as equity,
6. Failure of Business is due to over optimistic projections.
7. Borrowed funds are not utilized for the purpose for which they were lent.
8. Wilful defaults, fraud, mis-appropriation etc.
9. Lack of Skill on the part of the banks to monitor end use of funds and diversion by the borrower through web of shell companies etc.
10. Deficiency in credit appraisal and improper due diligence.

Current scenario of Non Performing Assets in Banks Bad Loans in Banking Sector have been rising steadily for the past eight years, As per the RBI Data, the Gross NPAs of Public Sector Banks as on December 31st 2017 were Rs.7.77 Lakh crores.



The Gross NPA under Industry Large category for all banks soared to Rs.5.27 lakh crores as on December 2017 from Rs.1.23 lakh crores on March 31st 2015. There is an increase in NPA Portfolio of Private Sector Banks in Q2 of 2017-18 increased nearly by 10.5 % to Rs. 1.06 crores and the country is witnessing many Corporate Scams. Industry Sector constitutes 23% of Stressed Assets as on March 17 whereas Agriculture Services and Retail were 7% and 2.1%. Amongst Industries Basic Metal, Cement and their Products, textile, Infrastructure are under broad spectrum of Stressed Assets.

As per the Financial Stability Report released by RBI during December 2017

- The overall risks to the banking sector remained elevated due to asset quality concerns. Credit growth of scheduled commercial banks (SCBs) showed an improvement between March and September 2017, while public sector banks (PSBs) continued to lag behind their private sector peers.
- Stress test suggests that in the baseline scenario, GNPA's of the banking sector may rise from 10.2 per cent of gross advances in September 2017 to 10.8 percent in March 2018 and further to 11.1 per cent by September 2018.
- SCBs' Return on Assets (RoA) remained unchanged at 0.4 per cent between March and September 2017 while PSBs have continued to record negative profitability ratios.
- Overall, capital to risk-weighted assets ratio (CRAR) improved from 13.6 per cent to 13.9 per cent between March 2017 and September 2017.
- The share of large borrowers both in total SCBs' loans as well as GNPA's declined between March and September 2017.
- GNPA's of the NBFC sector as a percentage of total advances increased between March 2017 and September 2017.

Strategies Adopted for Reducing NPAs

NPAs cannot be absolutely avoided. They can be minimised through continuous monitoring of the Account. It can also be reduced by adopting some precautionary measures at the time of sanctioning

loans. Some of the Compromise Settlements which are involved in minimising NPAs are One Time Settlement (OTS), Out of Court Settlement(OCS) and writing off the non-recoverable assets. The other methods of reducing NPAs are Recovery through LokAdalat, Debt Recovery Tribunals, SARFAESI proceedings and filing Civil suit for recovery of dues. Banks may probe into the new option to implement Scheme for Sustainable Structuring of Stressed Assets (S4A) to reduce NPAs in large enterprises. There is also The Insolvency and Bankruptcy Code which was introduced in Lok Sabha in December 2015 and was passed on 5th May 2016. The bankruptcy code is one stop solution for resolving insolvencies. But at present is a long process and does not offer an economically viable arrangement. The system set in place by the Insolvency and Bankruptcy code 2016 has resulted in Nearly half of the staggering Rs.9 lakh crore worth of NPAs accumulated by Banks to return. This is as per the figure revealed by Corporate Affairs Secretary Srinivas at the conference on Resolving Insolvency .

Data Analysis and Interpretation

Total Gross NPA to Total Gross Advances (Rs In millions) as on 31st March (Amt in million)

Bank Name	Year	Gross NPAs	Total Gross Advances	% Share
SBI and its Associates	2013	627785	14188827	4.42
	2014	798165	16087376	4.96
	2015	735084	17191685	4.28
	2016	1219686	19107755	6.38
	2017	1778106	19519311	9.11
Nationalised Banks	2013	1016831	31412859	3.24
	2014	1474474	36071821	4.09
	2015	2049595	38975490	5.26
	2016	4179878	39111756	10.69
	2017	5069217	39144423	12.95
Private Sector Banks	2013	203817	11512463	1.77
	2014	241835	13602528	1.78
	2015	336904	16073394	2.10
	2016	558531	19726588	2.83
	2017	919146	22667207	4.05

Foreign Banks	2013	79256	2604049	3.04
	2014	115678	2995755	3.86
	2015	107578	3366090	3.20
	2016	157980	3765043	4.20
	2017	136210	3436112	3.96

Interpretation: From the above Table it is interpreted that the Percent share of Gross NPA to Gross Advances is increasing from 2013 to 2017 in all categories except for Foreign Banks where there is a reduction from 2016 to 2017. In the year 2017 the Percent Share of Gross NPA to Gross Advances is maximum of 12.95 in Nationalised Banks and it is minimum of 3.96 in Foreign Banks. The Table clearly depicts the picture of rising share of Gross NPA to Gross Advances in Public Sector Banks when compared to Private sector and Foreign Banks

Analysis of Variances (ANOVA)

Ratio of Total Gross NPA to Total Gross Advances

Year	Public Sector Banks	Private Sector Banks	Foreign Banks
2013	3.61	1.77	3.04
2014	4.36	1.78	3.86
2015	4.96	2.10	3.20
2016	7.39	2.83	4.20
2017	11.67	4.05	3.96

Summary

Groups	Count	Sum	Average	Variance
Public sector Banks	5	31.99	6.398	10.69
Private sector Banks	5	12.53	2.506	0.931
Foreign Banks	5	18.26	3.652	0.254

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	40.002	2	20.001	5.052	0.026	3.885
Within Groups	47.512	12	3.9593			
Total	87.515	14				

Interpretation

(H0): There is no significant difference between the Ratio of Gross NPA to Gross Advances for Public sector, Private Sector and Foreign Banks from the year 2013 to 2017.

(H1): There is significant difference between the Ratio of Gross NPA to Gross Advances for Public sector, Private Sector and Foreign Banks from the year 2013 to 2017

The observed value 5.052 is greater than the critical value 3.885. So the Null Hypothesis HO is rejected. It shows that the ratio of Gross Advances for Public Sector, Private Sector and Foreign Banks differ significantly from the year 2013 to 2017

Findings

1. The percent share of Gross NPAs to Gross Advances has increased from 4.42 in 2013 to 9.11 in 2017 in case of SBI and its Associates.
2. The percent share of Gross NPAs to Gross Advances has increased from 3.24 in 2013 to 12.95 in 2017 in case of Nationalised Banks
3. The percent share of Gross NPAs to Gross Advances has increased from 1.77 in 2013 to 4.05 in 2017 in case of Private Sector Banks over the years.
4. The percent share of Gross NPAs to Gross Advances has increased from 3.04 in 2013 to 3.96 in 2017 in case of Foreign Banks.
5. H0 is rejected and it is found that the ratio of Gross Advances for Public Sector, Private Sector and Foreign Banks differ significantly from the year 2013 to 2017.



Suggestions and Conclusion

The healthy growth path of Banks in India (Both Public Sector Banks and Private Sector Banks) mostly depend upon their efficient management of NPA Portfolio and to retain it well thy Banks are The emerging scenario after the enactment of Insolvency and Bankruptcy Code law by the Central Government has changed the pattern of bulk economy and Banks are awaiting decisions by NCLT to write back their provisions. The laws of the Government in this direction will give great sigh of relief to Banks. The mindset of large borrowers will start changing will bring in laudable change in the NPA level and its management by Banks. Still Government has to finetune the gaps after implementation of some judgements to make the laws Banker friendly. Prudent management of NPAs coupled with supporting laws and fast decisions will alone create fast decisions will alone create an atmosphere for the quick resolution of NPAs. Healthy Banks are the gateway progress to the nation.

References

- Ankit Garg (2016) A STUDY ON MANAGEMENT OF NON-PERFORMING ASSETS IN CONTEXT OF INDIAN BANKING SYSTEM Vol.3 (Iss.11): November, 2016] International Journal of Engineering Technologies and Management Research ISSN: 2454-1907
- Anuja Barge (2012) NPA Management in Banks : An Indian Perspective Volume-1, March 2012 Innovation in Banking and Finance © 2012 IBMRD IBMRD's Journal of Management and Research, ISSN: 2277-7830
- A Study on Non- Performing Assets of Nationalised Banks in India Santosh Balasaheb Khalate ISSN : 2230-9667 Chronicle of the Neville Wadia Institute of Management Studies & Research
- Deepak Narang (2018) “Managing Non-Performing Asseets: A Paradigm Shift” YOJANA January 2018
- Dr. M. Syed Ibrahim and Dr. Rangasamy Thangavelu (2014-15), A Study On The Composition of Non-Performing Assets (NPAs) Of Scheduled Commercial Banks in India, Journal of Finance and Bank Management, March 2014-15, Vol. 2,
- Dr. Ujjwal M. Mishra & Jayant R Pawaskar (2017) “A Study of Non-Performing Assets and its Impact on Banking Sector “Journal for Research | Volume 03 | Issue 01 | March 2017 ISSN: 2395-7549
- Kajal Chaudhary and Monika Sharma Performance of Indian Public Sector Banks and Private Sector Banks: A Comparative Study International Journal of Innovation, Management and Technology . 2011, 2 -3.
- Kanika Goyal, “Empirical Study of Non-Performing Assets Management of Indian Public Sector Banks”, APJRBM Volume 1, Issue 1, October 2010.
- Khanna, P. (2012), ‘Managing nonperforming assets in commercial banks’, Gian Jyoti E-Journal, Volume 1, Issue 3 (Apr – Jun 2012) ISSN 2250-348X
- Monika Singla & Dr. Sonia Narula (2014), “Empirical study on non-performing assets of bank”, International journal of advance research in computer science and management studies, Vol.2, Issue 1, January -2014.
- Payel Roy (2017) “ ANALYSIS OF NON PERFORMING ASSETS IN PUBLIC SECTOR BANKS OF INDIA” International Journal of Management (IJM) Volume 8, Issue 1, January – February 2017, ISSN Print: 0976-6502
- Singh, J. (2013), ‘Recovery of NPAs in Indian commercial banks’, International Journal Of Transformation in Business, Vol. 2, Issue 3
- Srinivas, K. T. (2013), “A Study on Non- Performing Assets of Commercial Banks in India”, International Monthly Refereed Journal of Research In Management & Technology, http://www.abhinavjournal.com/images/Management_&_Technology/Dec13/10.p
- Vivek Rajbahadur Singh (2016) A Study of Non-Performing Assets of Commercial Banks and it’s recovery in India Annual Research Journal of SCMS, Pune Vol. 4, March 2016
- www.moneycontrol.com
- www.rbi.org.in

A Study of Consumer Awareness Regarding the Risk and Return of Mutual Fund in India

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Abstract

Recently the Indian capital market is booming positively. The Indian economy has completely undergone change with lot of reforms, regulatory network becoming strong, industrial and financial sector witnessing multiple reforms. During last two decade there has been magnificent growth in small investors with reference too income, changes in demand and investment capacity. This investment capacity is most targeted by all mutual fund companies but could not succeed. Thus, it has become imperative to study the hidden and unknown factors which result in dissatisfaction even when innovatively designed mutual funds are available in the market. For a common man mutual funds are still associated with word stock investments which are volatile in nature. Investors still relied on safe investment in bank and government postal account deposits. Investors in India have less patience and when the results of mutual fund investment are not satisfactory they immediately withdraw themselves from the market. To a great surprise depositors trust for risk calculation on intermediaries like friends, broker and agent rather than scientific calculation of risk before or during the course of investment. The present paper is attempts to find out what type of risk are associated and how are they perceived by the investor while investing in mutual Fund.

Keywords: Stocks, Consumer behavior, Risk-return analysis, Investment preference

Introduction

Development of a nation depends upon continuous capital formation. Mobilization of savings particularly from the small and medium investors in any form of investment apart from traditional forms is very difficult due to uncertainty and risk associated with new forms of market oriented investments like stock, equity or debt funding.

This is because these small investors have a very inadequate facts of the stock index and they find difficult to understand the information provided by any consultant or expert in methodical terms. Investor finds himself to be aberrant in the financial market. At this time mutual funds act as dream come true for indirect investment in risk oriented forms with better earnings at minimum cost and high security.

Mutual Fund is an investment option for those who are unable to straightly invest in capital market because of its lopsidedness and lack of stability, but charmed by the continuous growth and ever increasing returns available from the market.



Mutual fund industry in India is steadily growing at the rate of 8.2% per annum. But it is sad to note that even after 54 years of first mutual fund was launched, the mutual fund companies are unable to attract the savings of the small investors in large chunk, even though SEBI has brought in lot of strong regulatory framework for safety and security of investors.

Mutual funds offers a large number of diversified schemes, that helps in reducing risk to a large extent, but it does not exclude threat which means that if we decide to invest in various open market options through mutual funds the risk connected with those securities still remain attached. May be the impact is less as they are taken care by the financial experts. The different types of risk associated with mutual funds are, safety, market, liquidity, credit, interest, currency risk, etc.

There is substantial amount of research done to create awareness on why to or by what method to put infunds in mutual funds, butnot very constructive research has been undertaken from the investor's point of view.to educate the type and quantum of risk involved in the investment in MF(mutual funds)

Thus, it is need of an hour to identify and analyze investor's perception and expectations with regard to risk & return from mutual fund investment.

Literature Review

Developing countries have stated concentrating on how to accumulate scattered small savings and therefore all governments and private financial institutions are encouraging research in this area as this is the easiest and safest way to attract the funds. The research is also helping in development of new regulatory measures required in this area.

Prabhu G and Vechalekar N.M.(2014) concluded that the investors belonging to middleclass of age slab of 19 to 55 choose to invest in mutual fund because of customized portfolio, availability of switch over and tax rebate

Nair R K (2014) has mentioned repeatedly in his article that mutual fund can be used as device to bring stability in economy as they have the potential to accumulate geographically scattered small savings thru government and nongovernment intermediaries and put in productive use for the growth of country.

Sharma N. and Ravikumar R (2013) used Capital Asset Pricing Model (CAPM) to evaluate the accomplishment of equity based MF's. While equating public and private sector MF's over a period of 15 years, they concluded that result wise public sector could not perform as good as private sector.

Vasantha S. et al (2013) stated that an investor will choose to invest in mutual fund depending upon his capacity to bear the loss.

Singh and Vanita (2002) studied 150 investors in Delhi, the Capital of India, for their choices and attitude towards mutual fund. The study indicates that tax benefit and security of fund investment was more trusted for making investment in public sector mutual funds as compared to private sector.

Dr.S.M.Tariq Zafar, &Dr. D.S.Chaubey and Syed Imran Nawab Ali,(Feb2012), Conducted a primary research on Indian mutual funds specifically in equity based growth schemes and then examined their performance. The objective of the paper was to find out on what parameters are the mutual funds evaluated and ranked,so as to decide right investment avenues.

Objectives of the Study are

1. The Inclination of investor towards various investment possibilities.
2. The investment avenues preferred by investor.
3. The Mode of investment chosen by investor.
4. The Awareness of threat in investment and risk analysis

The Sample Size

From the city the sample size of 200 respondents was selected. The respondents were differentiated on the basis of age, income, qualification, annual saving habits. The samples were also chosen keeping in mind those who have already done some investment in mutual fund or want to invest but have very limited awareness and information about the methodologies used in mutual funds.

Data Collection

To collect the data from the samples in Mumbai city, the financial capital of the country Structured questionnaire was prepared and circulated. An attempt was made to find out the awareness level regarding risk and return calculations done by the investors before investment.

Data Analysis

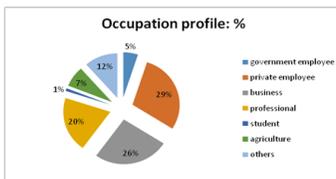
Following is the analysis done on the basis of data collected through the survey conducted with the help of questionnaire.

1. Age group of sample chosen



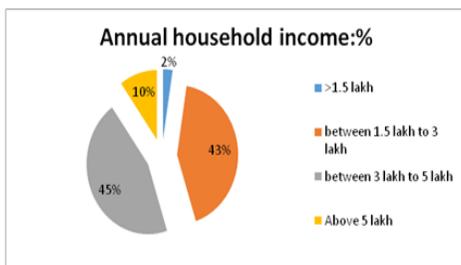
The above graph, shows that most investors are in the age group of 20 to 39 years followed by 40 to 60 years.

2. Occupation profile of investor



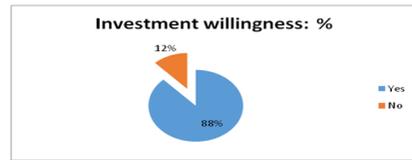
Majority of the investors belong to either private sector or are professionals with higher risk and money disposable capacity. Others include housewives, retired people, unorganized sector workers etc.

3. Annual house hold income



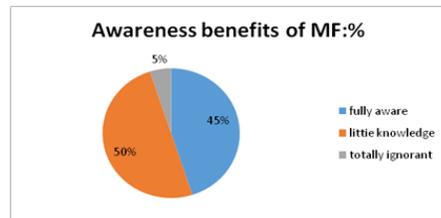
The above pie chart shows that annual income has its own importance when it comes to investment and savings. In our sample group about 45% had their annual income in range of 3 lakhs to 5 lakhs followed by 43% in range of 1.5 lakhs to 3 lakhs. It is very difficult to imagine any investment opportunity other than mutual funds for income earners below 1.5 lakhs per annum.

4. To know investment willingness in mutual fund or not



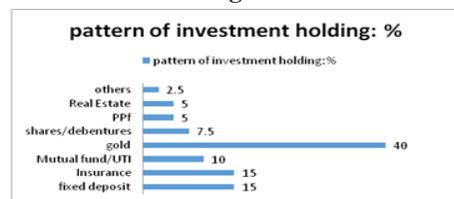
Was observed that 88% of all respondents invest in mutual funds. 12% respondents have till date not invested in mutual funds but somewhere else may be because of unawareness or lack of confidence on thyself.

5. Awareness of benefits of Mutual funds



It was observed that 50% of the total respondents were fully aware of the benefits of Mutual Funds only 5% sample had no knowledge about the benefits of investment in mutual fund.

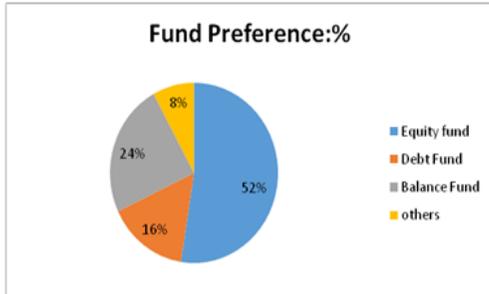
6. To figure out the present pattern of investment holding



The above pattern indicates that In India still the trust for safety and fast liquidity if any investment has than it is gold, followed by bank deposit and insurance which are treated as old age security, mutual funds comes at third number followed by shares and real estate. Moderate returns but high safety and liquidity are key factors influencing investment.

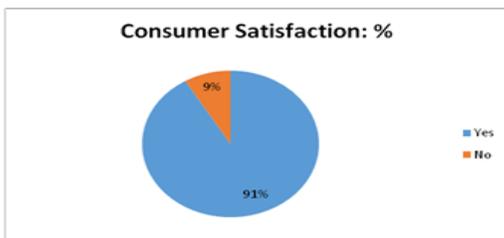


7. To find out consumer fund preference.



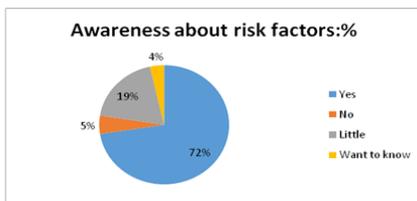
The above pie chart indicates that nearly half (52%) of the samples respondents choose equity for investment as the chances of earnings are more as compared to other sources. Debt funding is chosen by those respondents who want safety for their deposits and balance funding is taken up by only 24% population of the sample as they would love to be part of growing market's profit with safety for investment..

8. To find out are they satisfied with mutual fund investment return of not.



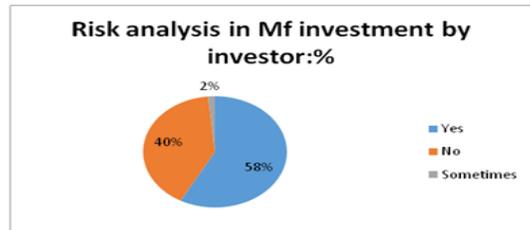
90% respondents are satisfied with mutual fund investment return, and 9% respondents are not satisfied with mutual fund investment.

9. To find out awareness level about the mutual fund risk factors



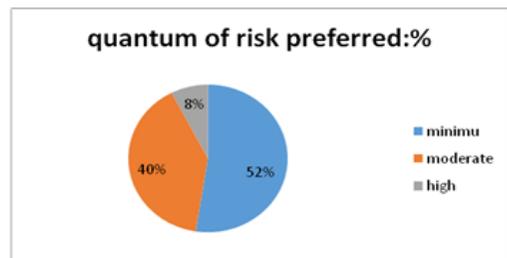
Here the respondents were asked as to whether they are aware of risk involved in mutual fund. 72% said yes and 19% had little knowledge about the risk factors. 5% said they had no knowledge about the risk involved and 4% said they want to know about different types of risk involves in mutual fund investment.

10. To find whether they evaluate risk in their mutual fund investment



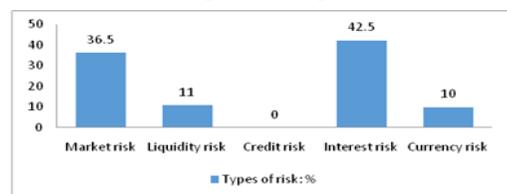
It is surprising to note that only 58% investorsevaluate the threat in their savings though risk consciousnesspercentage was 72%. . It means most of the financial participatorsare familiar with types of risk in investment but either they do not want or they don't have enough knowledge to investigate the risk.

11. To find out quantum of riskpreferred



Majority of the respondent i.e. 52% will invest where minimum risk is there. 40% will prefer moderate risk and 8% were ready to take high risk. This may be due to age, occupation, knowledge and their risk taking capacity.

12. To find the type of risk preferred



The study was to find out the type of risk preferred by consumers while investment in mutual fund. Majority of them preferred interest risk i.e. 42.5% followed by 36.5% market risk and others. Mostly investors followed financial agents advice or may be help from friends in the field of investment

Conclusion and Suggestions

The most vital problem found from the analysis was unfamiliarity. Investors will never be ready for investments till they realize what they are unable to earn by not investing in MF. Nobody will save without getting convinced about the profits that can be realized at any point of withdrawal from MF. As of today MF's are the sole alternative which can offer much more than expectations even in bearish market if an investor has little patience. But the ground reality is that many of the financial participators are not even sentient of what is a mutual fund? It can be assumed that as the earnings are on rise along with financial literacy improving, the numbers of people ready to capitalize their savings in MF will also grow. Therefore --- Mutual fund companies if wish to succeed than should change their approach towards the investors. They should have "investor in" perspective rather than "product out" perspective. The philosophy with respect to terms of advisory services, helping investors in designing their portfolio, complete transparency should be maintained in matters of disclosure of related information to investor, easy explanation of expressed and implied terms and conditions of different types of MF schemes. Government authorities should ensure maximum protection to investors by framing strict laws and regulations, more tax rebate to small investors, simple and effective redressal system, and high level surveillance on AMC's should be there.

References

- Atmaramani K N (2001), "Mutual Funds: The Best Avenue for Investment", Chartered Secretary, Vol. XXXI (1), pp. 9-11
- Banerjee, Arindam (2006), "Mutual Funds: Wealth Creation through Systematic Investment Plans", ICFAI Portfolio Organiser, pp.53-58.
- Bhayani, Sanjay J & Patidar, Vishal G (2006), "An Empirical Analysis of Performance Evaluation of Mutual Fund Schemes in India", ICFAI Reader, pp.15-24
- Deepti Goyal, Richa Sharma, (2014) Mutual Fund Industry in India: An Overview, International Journal of Emerging Research in Management & Technology, ISSN: 2278-9359 (Volume-3, Issue-5) pg no 168-171
- Dhar, Satyajit (1994), "Mutual Funds in India- a Close Look", Finance India, Vol. VIII (3), pp. 675-679.
- Dr. Binod Kumar Singh ,(2012), "A study on investors' attitude towards mutual funds as an investment option", International Journal of Research in Management ISSN 2249-5908 Issue 2, Vol. 2 pg no 61-70
- Dr. Ravi Vyas, (2012), Research World-Journal of Arts, Science & Commerce ■E-ISSN 2229-4686 ■ ISSN 2231-4172, Vol.- III, Issue-3(1), July. 2012 [67-75].
- Ganesan S, Raja J (2000), "Mutual Funds, the Millennium Strategy", The Journal of The All India Management Association, Vol. 39(10), pp.42-47.
- Gauri Prabhu Dr.N.M.Vechalekar, (2014), Perception of Indian Investor towards investment in mutual funds with special reference to MIP Funds, IOSR Journal of Economics and Finance (IOSR-JEF) e-ISSN: 2321-5933, p-ISSN: 2321-5925 PP 66-74
- Mehta, Rajan (2003), "Indian Mutual Fund Industry: Challenging Issues", Chartered Financial Analyst, Vol. IX, pp. 32-33.
- Prasanna K Baral, , Dr. Kishore Kumar Das (2016), "Mutual Funds Industry in India: A Growth Trend Analysis", International Journal of Multidisciplinary Research and Development, Online ISSN: 2349-41 Volume 3; Issue 1; January 2016; Page No. 01-13.
- Poonam Gautam Sharma, "The development of mutual fund industry in India", International Journal of Research – Granthaalayah, Vol.4 , No.7 (2016): 162-173



Adoption of Artificial Intelligence in Indian Banking Sector

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Abstract

Satya Nadella, CEO of Microsoft believes that Mixed Reality, Artificial Intelligence (AI) and Quantum Computing as next waves of disruptive technology cutting across all sectors. The current technology giants have offered AI embedded services like Alexa, Cortana and Siri who act as personal assistants to end users on a day to day basis. Likewise, personal assistants in Banking Sector are anticipated to offer expertise in Customer services, Asset management, Core banking, E-commerce and Anti-Fraud & Abuse. The researcher had conducted an exploratory research to study the maturity level of various AI products like chatbots, voicebots, Interactive humanoids and software robotics of top ten banks in India. The selection of banks was based on the RBI report 2017 from Dun & Bradstreet publication. The researcher attempted a bottom up approach and analysed the AI products based on their purpose, complexity, accuracy and scalability in the substitution of human intelligence. From the findings, the researcher derived at the cumulative maturity level of the banks in the consumption of artificial intelligence by plotting them against the Consumer adoption of AI product life cycle. The researcher had classified HDFC & YES banks as Innovators, ICICI, Canara Bank as Early Adopters, Axis, SBI & Bank of Baroda as Early Majority, Kotak Mahindra & PNB as Late Majority and Bank of India as Laggards in terms of AI adoption.

Keywords: Disruptive Technology, Artificial Intelligence, AI Product Life Cycle, Chatbots, Voicebots, Indian Banks and Maturity level

Introduction

Digitization in Indian banking industry started after 1988 when RBI set up a committee and urged the need for digital revolution. The journey of digitalization in banking was rightly explained by Forbes article by WeSchool as the journey from conventional banking to convenience banking. The objective was to transform core banking services like MIS reporting, book keeping and customer services from paper based working model to electronic services.

In late 1980s, the process of computerization started with Mechanization activities by deploying MICR (Magnetic Ink Character Recognition) enriched cheque processing activities. In 1990s, the banking system of Automation with ATMs, Electronic Fund Transfer and computerization of core banking services were launched. From the year of 2000, decade of Online Banking dawned focussing on transaction services like IMPS, NEFT, Netbanking, RGTS etc. Banking Industry ventured into Mobile technologies in early years of 2010, a journey embarked towards Virtual Banking.

Over decades of digitization, banking industry has progressed towards optimization practices and has moved beyond computerization en-routing personalized services to customers. With rapid technological advancements comes the vulnerabilities of security and customer awareness. New technologies like artificial intelligence, blockchain, bitcoin, biometrics, robotics and augmented reality are continuously redesigning the business model of banking sector. Embracing these technologies is not a lavish option but an imperative decision to build a secured system and sustain in the industry with a competitive edge.

Out of all the new technologies, Artificial Intelligence in banking has stemmed out to create personal assistants to guide the customers in the areas of Core Banking, Customer Service, Asset Management, eCommerce etc. In this paper, the researcher had attempted to conduct a secondary research on the various AI solutions in the top ten Indian banks in India and studied the adoption level of AI across all the banks.

Material and Methods

1. Devendra Mangani, Senior Consultant at Bizoft states that there are five AI powered solutions that will revolutionize banking sector. They are Anti-Money Laundering pattern detection systems to crack unethical money laundering activities, chatbots to enhance customer relationship management through automated chat services, Algorithmic trading service to provide investment decisions, Fraud detection through AI powered systems and Recommendation engines that provide banking services on analysing customer preferences.
2. Deloitte in the Banking vision 2020 states the next components of Artificial Intelligence to be Natural Language Generation cum Processing constituting to Ontology based information extraction and speech recognition, Machine learning on neural networks and Computer vision with image recognition. Smart banking powered AI solutions will offer cognitive services in Engagement, Automation, Insights and Sensing & Shaping Strategies. With deep learning strategies AI solutions aims to offer a more focussed personalized banking services to each of the customers. Deloitte also captures data on banks that are partnering with Fintech companies to embrace more AI and cognitive solutions in their services. The banks such as Yes, Bank of Baroda, HDFC, IDFC, Axis and SBI are that are more pronounced in the industry in investing in Fintech partnerships to build POCs for payments, credit underwriting, vehicle financing, wealth management, algorithmic credit assessments and mobile banking services.
3. According to Mapa research in 2016, the financial services embracing AI will emulate human thinking, reasoning and decision making. The different AI powered solutions are studied along with its applicability and adaptability across various financial services. The Chatbots aim to resolve customer queries faster and is adapted by Bank of America, MasterCard and American Express. Chatbots' functionality is built on the basis of decision trees. Voice Assistants like Santander are conversational and responds to customer queries. PayPal uses Siri payment feature by capitalizing on ios 10 platform. City Union Bank and RBS use IBM Watson cognitive services to provide more personalized financial services to customers. Bank of America uses predictive analytics and cognitive messaging to enhance banking transactions. As we move towards future all the boring stuff will be replaced by machines, some of such apps are Cleo, Plum and Chip. AI will also span across Fraud prevention, Dynamic product pricing and Sentiment Analysis in Banking.
4. Ayushman Baruah explores on the AI solutions used by employees and customers in the top 4 banks in India and evaluated the subsequent benefits. SBI, HDFC, ICICI and Axis banks are studied. The researcher found that SBI bank had conducted a hackathon and implemented the winning POC, Chapdex to measure customer feedback. SBI has also launched the chatbot SIA developed by Payjo to respond to customer queries. HDFC Bank



has launched EVA developed by Senseforth to address customer queries and IRA for in-store robotic applications. ICICI Bank's iPal is designed to assist in FAQs, financial transactions and in discovering new features in banking services. They also have a software robotics platform to leverage AI solutions such as facial and voice recognition, natural language processing, machine learning and bots. Axis Bank has recently launched a AI & NLP enabled app to assist customers with financial and non – financial transactions. Axis bank has also launched an Innovation Lab to accelerate more technology driven solutions.

5. Infosys in the report of Artificial Intelligence Powered Banking in 2017, describes that AI is not a single technology but a group of related technologies such as big data analytics, machine learning, deep learning, predictive analytics, virtual agents and avatars. The report provides the broad spectrum of AI stack and its various uses. Bigdata and Analytics is applied in credit scoring, sales and marketing augmenting customer behaviour and Fraud & Prevention. Machine Learning and Deep Learning can be used to combat fraudulent activities and help build artificial neural networks to alert payment inconsistencies. Natural Language Processing can be used in Sentiment Analysis and Virtual assistance like chatbots. Speech Recognition is used to process spoken language into machine readable format and can be used to offer efficient authentication. Natural Language Generation can be applied to strike an intelligent conversation with customer. Visual Recognition enables consumers to pay bills, deposit checks by taking a picture in their smartphone camera. Intelligent OCRs will improve accuracy in processing physical documents. Smart virtual assistants and Bots can address customer queries. Robotic Process Automation can cover data validation, customer onboarding, reconciliations and workflow acceleration. Robots are electro mechanical or bio mechanical device that offers customer service in physical bank branches.

Statement of the Problem

The study was conducted to understand the degree to which the top ten banks of India had embraced Artificial Intelligence in their services. In the era of digital evolution where people are moving towards virtual channels, banking industry also had undergone radical technological changes in the last few decades. However, banking is one of the last few industries to comparatively score low in terms of AI Maturity Index next to Retail and Public Sectors from the report jointly published by Infosys5 in 2017.

With an emergence of any disruptive technology, a natural hesitation towards adoption of technology is a pronounced condition considering the factors such as Security, Unemployment due to machine substitution, Fraud & Abuse etc. However, for the nation to witness economic growth, requires industries to be open to innovations and be ready to adapt to new technologies. Thus, it is indispensable for the banks to embrace new technologies to sustain trust among customers.

This research is therefore endeavoured to assimilate AI solutions in all the ten banks and categorize the banks in the product life cycle based on their level of AI adoption.

Objectives of the Study

- To study the purpose, complexity and maturity of AI solutions in top ten banks in India
- To conduct a bottom-up approach and classify the banks based on their adoption of AI technologies

Research Methodology

The researcher selected the top ten banks in India based on the RBI report 2017 with respect to the factors such as total income, net interest income, deposits, total advances and CASA ratio. Top five private banks such as HDFC, ICICI, Axis, Kotak Mahindra and Yes Bank and top five public banks such as SBI, Punjab National Bank, Bank of Baroda, Canara Bank and Bank of India were selected for this research.

Research Design - In views to support the objectives of the study, an exploratory research design has been adopted.

Research Methodology - The researcher has used secondary data to collect data regarding each of the AI products launched by the banks. The researcher has conducted content-analysis to study the scalability, accuracy, complexity of AI and availability of the products. The researcher then performed a bottom up approach to derive at the maturity level of the AI banking services.

Findings and Interpretations

AI solutions of the top ten banks are analysed and their solutions are categorized into segments such as Customer Service, Asset management, e-Commerce, Robotics and others. The products are sorted into three categories(Green – Amber – Red) based on their level of maturity. The table below provides the detailed list of the AI products from all the ten banks that are studied:

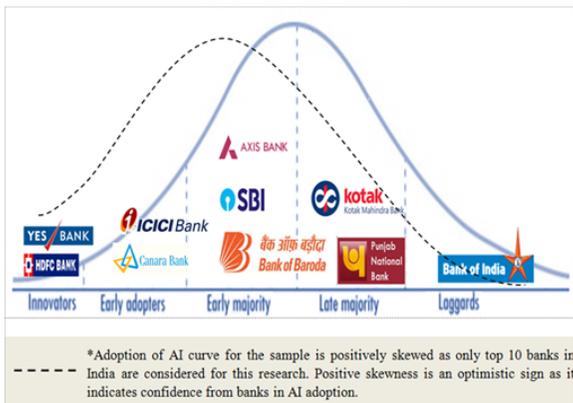
Bank Names	Customer Service	Asset Management	E-Commerce	Robotic Assistance	Others
HDFC	Ask Eva (Efficient Virtual Assistant) - Chatbot for customer queries		OnChat - Assists in Recharges, Bill payments, Bus and cab bookings	IRA (Intelligent Robotic Assistant) - Interactive humanoid that assists with bank related queries, FAQs with voice based navigation	
ICICI	iPal - Responds to Customer queries on Financial services			Software Robotics - Performs data validation, data mining and formatting	
SBI	SIA (SBI Intelligent Assistant) - Conversational Banking Chatbot for Customer Service queries				Chapdex - Captures realtime Customer feedback based on facial expressions
Axis	Active.ai Chatbot - Offers mobile banking services	Whatsapp based Virtual Assistant - Provides live portfolio values, stock quotes, index and responds to investor queries			
YES	YES ROBOT - Executes queries, transactions, bill payments and locate branches YES TAG - Executes queries and performs financial transactions	YES mPower - Provides information on Loan products	YES Pay Bot - Pay wallet services available across web, mobile and IVR		
PNB					AI for Account Reconciliation to reduce Fraud and Abuse
Kotak Mahindra	Keya - Voicebot that augments phone banking services				
Bank of Baroda	Chatbot to address customer queries				Baroda Dig iNext - Digitalization of Cash Management for Corporates and Governments. Provides analytics and metrics for cash management
Canara Bank				Mitra - Humanoid Robot that helps customers to navigate within the bank office	
				Candi - Responds to customers in english for 215 preset FAQs	
Bank of India	NA				



	AI Solutions that are launched in the market successfully for over a year. These Solutions address queries with more than 70% accuracy.
	AI Solutions that are in pilot stage or built with less features when compared to accuracy or complexity of the competitive solutions available in other banks
	AI Solutions that are not available or that are yet to be released to the market

Based on the level of maturity of ten banks taken for analysis they have also been categorized according to the level of adoption of AI in the graph given below:

Adoption of Artificial Intelligence by the Banks



Innovators: Innovators are the leaders who are willing to take risks, ready to fail and are fast to innovate. HDFC and Yes Banks are categorized as Innovators for their pioneering efforts across multiple realms of business. HDFC bank has launched AI solutions in the form of Chatbots and Interactive humanoid offering convenience banking in the areas of Customer Service, eCommerce and Robotics. Yes bank has extended its chatbot’s capability across multiple terrains namely Customer Service, Core Banking, eCommerce and Asset Management.

Early Adopters: Early Adopters like ICICI and Canara Banks are also leaders who are affirmative to adopt to innovations but they are picky in selecting the new technologies. ICICI bank has a chatbot for customer service and software robotics for data mining purposes. Canara Bank has launched humanoid robots to offer customer service. Canara bank’s Candi is a minion robot and Mitra acts as a receptionist. Though there are interesting features coming down the line for Mitra, it can now greet the customers and navigate within the office using a conveyor belt.

Early Majority: Early Majority are those who significantly take longer time to respond to new technologies and fall into the category of diligent followers. SBI has a chatbot to respond to customer

queries. SBI’s Chapdex is in pilot phase which uses sentiment analysis to capture customer feedback on the service rendered. Axis Bank has a virtual assistant to respond to investor queries related to Asset Management and has a chatbot in pilot phase for mobile banking services. Bank of Baroda has invested in digitization of Cash Management and has a chatbot in POC stage where improvisation on response accuracy is required.

Late Majority: Kotak Mahindra and Punjab National Bank are categorized as Late Majority. Late Majority are sceptical and show mediocre participation in the adoption Life cycle. Kotak has imparted Voicbot, Keya for customer service and PNB has implemented AI to reduce Fraudulence activities.

Laggards: Bank of India is categorized under Laggards. Laggards are apprehensive to change and are comfortable in their status quo. Bank of India has either not implemented any of the AI solutions till date or have not yet publicized the solutions to wider audience.

Conclusion

The findings that are listed above are based on the AI products that are launched in the Market. In the digital era, technology adoption is not a onetime event but a continuous journey for all the players. For example, Bank of Baroda which is classified as Early Majority has multiple Fintech collaborations namely CreditMantri, Power2SME, Fisdcom, FunsTiger etc that are trying to bang new channels such as Wealth Management, Invoice discounting etc. In the near future, when Bank of Baroda launches more innovative solutions, its adoption cycle may shift to Early Adopter or Innovators, aligning the distribution to be more positively skewed. Apart from the top ten banks, other banks like IDFC are investing in new technologies not just AI but also in blockchain, cloud and other cognitive solutions. Hence, it requires a constant watch on the changing needs through research and hackathons, investment on the ways to adapt new technologies, a dynamic business model

to embrace uncertainties and collaboration with Fintech companies to remain technologically savvy and customer centric in the banking industry.

References

- <https://www.analyticsvidhya.com/blog/2017/04/5-ai-applications-in-banking-to-look-out-for-in-next-5-years/>
- <https://www2.deloitte.com/content/dam/Deloitte/in/Documents/financial-services/in-fs-deloitte-banking-colloquium-thoughtpaper-cii.pdf>
- <https://www.maparesearch.com/report-artificial-intelligence-digital-banking/>
- <https://www.techemergence.com/ai-applications-in-the-top-4-indian-banks/>
- <https://www.edgeverve.com/wp-content/uploads/2017/09/Artificial-Intelligence-Powered-Banking-PoV.pdf>
- <http://www.dnb.co.in/Publications/topbanks2017/TopBanks2017.pdf>
- <http://www.forbesindia.com/article/weschool/digital-revolution-in-the-indian-banking-sector/47811/1>
- <http://www.forbesindia.com/blog/digital-navigator/emerging-technologies-in-digital-banking-in-india/>



Green Marketing Practices on Agricultural Products

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Abstract

In simple words green showcasing is changing over to a more feasible promoting with ecological concern mulling over the generation, preparing and advertising. Farming then again is workmanship, business and study of yield generation and creature generation. In this day and age the term green market has picked up a great deal of energy. By appropriation of legitimate rural practices as one with green showcasing, can enhance the GDP (Gross Domestic Product) in India. This paper would rather talk about on the effect that horticulture in India would convey to this new showcasing technique, as it is well said agribusiness is the foundation of Indian economy. The paper additionally looks at the constraint in agrarian set up in India and how the defeating of these confinements can improve and contribute in its own specific manners to green showcasing.

Keywords: Green marketing, Agriculture, Green Technologies, Greening Research and Development.

Introduction

AMA (American Marketing Association) says green advertising is the promoting of items that are dared to be naturally sheltered. Other comparable terms utilized are Environmental Marketing and Ecological Marketing. This would reasonably go well for a creating country like India where two buyers and makers are getting cognizant step by step because of the ramifications of a dangerous atmospheric devotion, non-biodegradable strong waste, destructive effect of contaminations and so on gave this does not go for Green washing (very synonymous to indoctrinating) wherein when an organization or association invests more energy and cash guaranteeing to be green through promoting and showcasing than really actualizing business hones that limit natural effect.

Objectives

- To Study the Green Technologies in Food Production.
- To Understand the Greening Research and Development.
- To Study the Social Perspectives Regarding Green Technologies.

Agricultural Potential in India for Green Marketing

India is best known as an exporter of natural tea and furthermore has incredible fare potential for some different items. Other natural items for which India has a specialty showcase are flavours and organic products. Natural agrarian fare showcase is the significant main thrust for greening of agribusiness in India.

A portion of the essentials for abusing this fare potential are the rancher's ability to create the naturally horticultural items which have worldwide market and related knowledge of exporters and merchants in sending out agrarian products to these business sectors.

Agricultural strategies to enable successful green markets

- We must expand the cultivable region of sustenance yields and vegetables, so we require not import from different nations which may convey compound buildups in them.
- More method for reasonable cultivating by receiving a joined method for intercultural rehearses like incorporated weed administration (IWM), coordinated sickness administration (IDM), Integrated Pest administration (IPM), coordinated supplement administration (INM) and so on.
- Packaging of rural create must be finished with earth safe bundling materials.
- More broad horticultural research and exchange of innovation strategies that achieves all the cultivating network.
- The benchmarks of domesticated animals and dairy industry that are aligned with farming ought to likewise be enhanced by maintaining a strategic distance from hormonal infusions on grills, contaminated of drain and drain items and choosing natural feed for these trained creatures.
- Use of hereditarily changed or enhanced cultivars for better quality and end point.
- Release of more supports to enhance the showcasing models of horticulture.
- More of distribution centers and cryopreservation units to be set up in the nation to improve the capacity of horticultural product.

Green Technologies in Food Production

Green sustenance creation regularly brings out natural cultivating hones run of the mill of a couple of hundreds of years back. This sort of cultivating utilizes a little territory of land for crops and another committed zone for brushing hamburger, sheep, and goat. Ranch substances were quite often independent with no utilization of pesticides or herbicides and the

main compost utilized was excrement. As a regular support to-support approach, natural cultivating suits the idea of a green innovation. As rural as the picture seems to be, these cultivating rehearses must be assessed for maintainability. A for the most part substantial measurement of the ecological execution of natural horticulture is, in any case, troublesome as there is high changeability between nations, areas, cultivate sorts, and items. Moreover, extraordinary appraisal techniques prompt mostly negating conclusions on the natural effects of natural cultivating. Natural cultivating performs better as far as biodiversity, soil fruitfulness, air quality, relieving asset exhaustion and environmental change, and groundwater contamination when contrasted with ordinary agriculture.

Greening Research and Development

The advancement of effective sustenance creation and handling hones is moored on great science. Innovative work (R&D) are key segments of the advancement continuum and much of the time is where the greater part of assets are spent in the underlying phases of process outline and item improvement. The agrarian and agri-nourishment divisions specifically have depended intensely on R&D to build edit yields, diminish the requirement for high horticultural information sources, distinguish quicker strategies to recognize pathogens, monitor sustenance's to counteract deterioration, and distinguish mixes in nourishments with wellbeing advancing properties, to give some examples illustrations. Exercises attempted as a major aspect of R&D endeavours can have natural effects; in this manner, greening of the nourishment creation and handling parts requires a watchful take a gander at the contributions to R&D so as to distinguish zones that can be focused to lessen ecological impressions while upgrading monetary advantages and speeding access to business sectors.

Social Perspectives Regarding Green Technologies

The meaning of green innovation or green agribusiness is extremely liquid and regularly relies upon the client and the specific situation. A definitive client of novel advancements, items, and in this occurrence, sustenance is the customer.



Social points of view of novel elective advances and methodologies ought to accordingly be mulled over in both process and item improvement. Customers are gone up against with an unbelievable measure of decision every day and their choices depend on

observations which could conceivably be prove based. Decisions made by purchasers, all things considered, impactfully affect makers and processors and at last the economy.

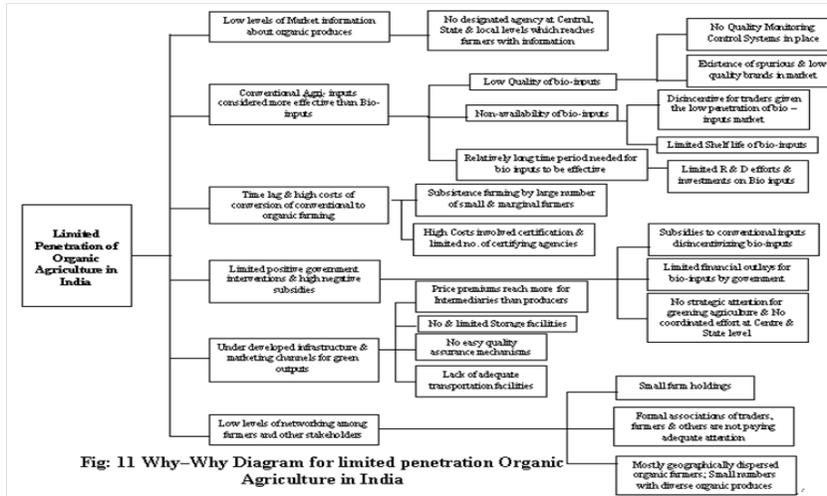


Fig: 11 Why-Why Diagram for limited penetration Organic Agriculture in India

Conclusion

Farming is demographically the broadest financial division and assumes a noteworthy part in the general financial texture of India. Farming insights, India is the world’s biggest maker of numerous new foods grown from the ground, drain, significant flavors, select sinewy products, for example, jute, a few staples, for example, millets and castor oil seed. India is the second biggest maker of wheat and rice, the world’s real nourishment staples. India is additionally the world’s second or third biggest maker of a few dry organic products, horticulture based material crude materials, roots and tuber crops, beats, cultivated fish, eggs, coconut, sugarcane and various vegetables. India positioned inside the world’s five biggest makers of more than 80% of rural create things, including numerous money yields, for example, espresso and cotton. India is additionally one of the world’s five biggest makers of animals and poultry meat, with one of the speediest development rates. Foundation building can take horticulture to more prominent statures that can clear route for green markets also.

References

<https://link.springer.com/article/10.1007/s12393-012-9062-z>
<http://www.ijbm.co.in/downloads/vol2-issue1/37>

Motivational Factors Influencing the Online Shopping buying Behaviour Compared to Offline Shopping – A Study with Reference to the Workgroup in Tiruchirappalli City

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India has to be transformed into a developed nation, a prospective nation and a healthy nation with a value system.

--- Dr.A.P.J Abdul Kalam

Abstract

Technology keeps developing rapidly paving the way to innovation, improvisation and modernisation. This improvisation tends to identify taste, needs and expectation of the customers and also to accomplish it. With the advent of, and development in the field of online e-commerce, shopping gets its shape of the market. This study intends to search the requirements of the customers preferring to go for online shopping compared to offline shopping, and identify the various motivational factors which tend the customers to choose the online shopping rather than offline shopping. In conclusion, this study will serve as a reference to enhance the online shopping by considering the various motivational factors that are influencing the customers towards online shopping.

Keywords: Online shopping, Offline shopping, e-commerce, innovation, improvisation.

Introduction

Technology keeps developing and upgrading every day with new outcomes and versions which paved the new way towards the success and prospects of online shopping. Every manufacturer tries to find out the needs, wants and preference of have consumers to make them satisfied. Hence, they keep searching for the better way to grab the attention of consumers. With the advent of e-commerce, a new track of selling has been introduced which is known as the online shopping, and this was introduced in the 1994. The main objective and vision of the online shopping is the convenience, attractive price, exciting offers, choice of selecting the product, variety of products, enhanced time consuming, anytime anywhere shopping facilities. These are the maximum factors which have attracted the customers towards the habit of online shopping. Though the traditional shopping or the offline shopping plays a vital role among consumers, still the online shopping plays a very significant role among the consumers and the sellers.



Hence this study focuses on the motivational factors behind the consumers, which tend them to prefer the online shopping rather than the offline shopping.

1.1. Objectives of the Study

1. To identify the motivational factors influencing online shopping buying behaviour
2. To analyse the factors for consumers to prefer online shopping rather than the offline shopping,
3. To explore the advantages of online shopping
4. To furnish the top players in the online shopping.
5. To provide findings and suggestions for the success towards online shopping.

1.2 The Scope of the Study

This study focuses on the motivational factors insisting or the consumers to prefer online buying behaviour of workgroup community which may also help in identifying their foremost preference for preferring online shopping rather than the offline shopping and also helps in extending the study to identify the other underlying preference of the consumers related to the other group buying through online shopping.

1.3 Research Methodology

This study involves the contribution of both primary and secondary data for the purpose of data analysis. For data analysis, the respondents are chosen from the work group which comprises 100 sample respondents.

1.4 Statistical Tool

The analysis for this study was done using percentage analysis and chi-square test. The limitations of this study are:

The study was limited only to 100 sample respondents

The respondents sometimes may not be true respondents.

Hypothesis

H0- There is a significant difference between the workgroup and the preference towards online and offline shopping.

H1- There is no significant difference between the workgroup and the preference towards online and offline shopping.

2.Importance of Online Shopping

Online shopping has reduced the days of travelling for longer distance. Online shopping saves the travelling time, and it helps in getting a variety of choices with multiple brands along with an exciting offer, discount etc. This may not be experienced with offline shopping. Spending time in queues for paying the payment and waiting for delivery is eased by the emergence of online shopping. Onlineshopping makesthe job of customer's ease by just sitting before the system or even a smartphone with an internet connection which helps in their online shopping.

2.1 Benefits of Online Shopping Compared to Offline Shopping

With the advent and revolution in the field of internet, life was made easy to the customer. Online shopping paves the way for the customers in making their shopping exciting and to feel satisfied. Here are some of the benefits of online shopping.

Convenience in purchase: Customers can make their purchase at any time just by sitting before the computer with an internet connection and can choose their need of products with their own choice of range and preference, and this process reduces the time of transportation and delay in billing and another delay which may occur in offline shopping.

Best price option: low price and better deals with attractive prices are the foremost advantage of online shopping. The products are got directly from the manufacturers and which removes the interference of middleman. This at most privilege enables the online shopping companies to provide better discounts with attractive deals to capture the customers.

Variety of brands: Variety in the brand in online shopping makes the customers amaze and attract. Many brands with variety are available from various sellers with different price and models which enables the customers to go for better selection and option of choosing the best one as per their wants and requirements.

Fewer expenses: Online shopping may not lead to unwanted expenses as faced by the offline shopping. The unexpected and the unavoidable expenses are avoided by shopping through online.

Enables Price comparison: multi-variety choices of the brand with different variations facilitates the

customers to look in for the best price option and also enables them to compare the prices and helps to choose the best product with the best price.

No crowd: Online shopping is free from the trouble of standing in the queue and shopping among the crowd of people. It helps in free and crowds less peaceful shopping and at any time and any place.

Buying and selling of used and unused product: Online shopping facilities in selling and buying all unused and unwanted durable goods from the place of the country which may not be available in the offline shopping.

2.2 Top Most Players in the Online Shopping

Flipkart: Flipkart is an online E-commerce portal that provides the customers in selecting what they expect and want to buy. There are many products which start from the mobile Phone, T-shirts, durables, kitchen gadgetsetc. Flipkart is the leader of e-commerce. Flipkart is an efficient and rapidly growing company that is most likely to become even more prominent in the future by updating its features and portals for the requirement of the customers.

Walmart:Walmart malls also play a prominent role in meeting the wants and expectations of the customers they are one of the famous online shopping sites. Walmart deals in electronics, home appliances, automobiles, sports, toys, fashion accessories, gifts, crafts, pharmacy, grocery and many more categories. Walmart also offers free shipping, discount coupons, discount on special occasions.

Snap deal: Snap deal is an Indian e-commerce company based in New Delhi, India. They deal in the selling of all the durables products which are eagerly expected and required by the customers they keep changing their way of displaying the products and come up with new trendy fashions and also deliver the products at the right time.

eBay: The world leader in online shopping store has stamped its mark also in India. eBay is a shopping store in which a wide variety of goods, services and products are bought and sold. eBay sells fresh new products along with used products. It sometimes holds up an auction for some products also. eBay and Flipkart are on a neck to neck competition for becoming the best online shopping site in India.

Myntra:To satisfy the customers who are more

cared about the fashion world this particular online shopper offers fashion products such as T-shirts, jeans, watches, shoes, belts and other fashion accessories which captures the taste and needs of the customers.

3.Data Analysis and Interpretation

The primary dataset is analysed in different dimensions such as Gender, Stream of Education, Age, Income level, Workgroup, Reasons for online shopping, Mode of Payment, Category of purchase, Preference towards buying online and offline shopping. The detailed statistics of the primary dataset in different dimension are depicted in Table 3.1 to Table 3.9.

Table 3.1 Demographic Characteristics of Respondents

Gender	No of Respondents	% of Respondents
Male	58	58
Female	42	42
Total	100	100

Table 3.2 Stream of education

Stream of education	No of Respondents	%of Respondents
Arts	46	46
Engineering	34	34
Others	20	20
Total	100	100

From the Table 3.1, that majority of the respondents are male (58%) and 42% of the respondents are female. From the Table 3.2, it is observed that majority of the respondents are from arts stream (46%) and engineering (34%). From the Table 3.3 it is clear that majority of the respondents are in the age category of 29-39 years of age. From the Table 3.4, it is clear that the majority of the respondents fall under the category of Rs. 10,001- Rs. 25,000. i.e. (41%) and the least comes under the category of above Rs. 40,000. i.e. (10%).



Table 3.3 Age Group of the Respondents

Age group	No of Respondents	% of Respondents
18-28	34	34
29-39	45	45
40 & above	21	21
Total	100	100

Table 3.4 Income Level of the Respondents

Income Level	No of Respondents	% of Respondents
Below Rs.10,000	21	21
Rs.10,001- Rs.25,000	41	41
Rs.25001- Rs.40000	28	21
Above Rs.40,000	10	10
Total	100	100

Table 3.5 Work Group of the Respondents

Private sector	55	55
Government sector	35	35
Professionals	10	10

Table 3.6 Reasons for Online Shopping

Reasons for online shopping	No of Respondents	% of Respondents
Convenience	45	45
Time saving	14	14
Wide range of choice	15	15
Offers and discounts	20	20
Others	06	06
Total	100	100

From the Table 3.5, it is clear that majority of the work group comes under private sector (55%) which is followed by government sector (35%) and professionals (10%). From the Table 3.6, it is clear that convenience is the reason for going online shopping (45%) which is followed by Offers and

discounts (20%), wide range of choice with 15%, time saving with 14% respectively. From the Table 3.7, it is inferred that the majority of the respondents prefer cash on delivery for their online shopping, i.e. 45% which is followed by debit card payment 25%, and credit card payment by 10%.

Table 3.7 Mode of Payment

Mode of payment	No of Respondents	% of Respondents
Debit Card	25	25
Credit Card	10	10
Cash on Delivery	45	45
Total	100	100

Table 3.8 Category of Purchase

Category of Purchase	No of Respondents	% of Respondents
Apparels	28	28
Electronic Products	25	25
Beauty products	18	18
Home needs	15	15
Books and others	14	14
Total	100	100

Table 3.9 Preference towards buying Through Online and Offline Shopping

Category of Workgroup	Online shopping	Offline shopping	Total
Private sector	38	17	55
Government sector	27	08	35
professionals	08	02	10
Total	73	27	100

From the Table 3.8, it is clearly understood that 28% of the respondents prefer to buy apparels followed by electronic products (25%), beauty products by 18%, home needs by 15%, books and others by 14%. From the Table 3.9, it is clear that majority of the respondents prefer online shopping (73%) than offline shopping (27%).

Furthermore, the Chi-square test is used for the comparison of workgroup and preference towards online and offline shopping and the results are depicted in the Table 3.10. From Table 3.10, the Chi-square statistic value is lesser than the critical value (5.991, $\alpha=0.05$) and (9.210, $\alpha=0.01$) for the degrees of freedom 2. Therefore, it is inferred that there is no significant difference between the workgroup and preference towards online and offline shopping.

Table 3.10 Online and Offline Shopping – Chi-Square Test

Factors	Chi-square value	Degree of freedom	Table value	Result
work-group	28.8161	2	5.991	Rejected

3.11 Findings

From the study, it is revealed that majority of the respondents are of male 58%.46% of the respondents are from the Arts stream of education. 34% of the respondents come under the Age group of 18-28years.41% of the respondents are in the salary group of Rs. 10,001-25,000/-.55% of the respondents are working in private sector. 45% of the respondents prefer flip kart as their online shopper. 45% of the respondents prefer online shopping for its convenience. Majority of the respondents prefer cash on delivery (45%) for their online shopping. 28% of the respondents prefer to buy apparels. 73% of the respondents prefer online shopping.

3.12 Suggestions

Customers move towards the online shopping despite of the offline shopping because of the ease of shopping comfortable. Thus the satisfaction and needs of the customers should be sustained and safeguarded in order to retain them with the online shopping. So, it becomes a responsible job from the online shopping providers to prevent the fraudulent activities and to provide the customers with the proper product of their choice and to provide them with the right information about the product, price, colour, discount, payment and mode of transportation so as to keep the customers satisfied.

Conclusion

Online shopping plays a vital role in fulfilling the needs of the customers and attaining their satisfaction, and the online shopping keeps increasing its growth and capturing the market despite the offline shopping. This study which focused on highlighting the factors influencing towards online shopping

shows that the 73% of the respondents prefer online shopping and the respondents belonging to private sector show more interest and response towards the online shopping which in future will tend to increase gradually.

References

- Bhattacharjee, A. (2001) "Understanding information systems continuance: an expectation-confirmation model", *MIS Quarterly*, Vol. 25 No. 3, pp. 351-70.
- Davis, F.D. (1989) "Perceived usefulness, perceived ease of use, and user acceptance of information technology", *MIS Quarterly*, Vol. 13 No. 3, pp. 319-40.
- Davis, F.D., Bagozzi, R.P. and Warshaw, P.R. (1989), "User Acceptance of Computer Technology: A Comparison of Two Theoretical Models," *management Science* (35:8), pp. 982-1003.
- Gopal & R. Deepika. (2014). Consumer buying behaviour towards online shopping- A literature review. *International Journal of Information Research and Review*, vol. 3385-3387.
- Kumar, S., & Maan, S. (2014). Status and scope of online shopping: An interactive analysis through literature review. *International Journal of Advance Research in Computer Science and Management Studies*, 2(12), 100-8.
- Miyazaki, A.D.; Fernandez, A. (2001) "Consumer perceptions of privacy and security risks for online shopping", *The Journal of Consumer Affairs*, Vol. 35, No. 1, pp. 27-44
- Shanthi, R. and Kannaiah, D. (2015). Consumers' perception on online shopping, *Journal of Marketing and Consumer Research*, 13, pp 14-20.
- Sharma and Mittal (2009) "Prospects of e-commerce in India, *Asian Journal of Management and Research*. 3(2), 396-408
- Smith A. D. & Rupp, W.T. (2003) "Strategic Online Consumer Decision making: leveraging the transformational power of the internet" *Online Information Review*, 27 (6), p. 418 – 432
- Sultan, F., Henrichs, R.B. (2000). "Consumer preferences for Internet services over time: initial explorations", *The Journal of Consumer Marketing*, 17(5), pp. 386-403
- Vijayarathy and Jones (2000) "Print and Internet catalog shopping: assessing attitudes and intentions *Internet Research*, 10(3), p. 191-202.



A Comparative Study on Organisational Climate of Public Enterprises, Before and After Globalisation

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Abstract

India had largely been insulated from the world trading system for more than four decades since independence in 1947. Decades of pursuit of an inward oriented development strategy, rationalized both by a wary, almost hostile attitude towards foreign trade, technology and investment and by pessimism about export markets, inevitably led to India becoming marginalized in world trade. During the period of phenomenal growth in private capital flows to developing countries since the mid eighties, India was not one of the favoured destinations for private foreign investors. Only with the reforms of 1991, deliberate efforts towards integrating India with the world economy and attracting foreign capital began. In many fundamental ways globalization and the policy changes initiated to integrate the Indian economy with the global one, change the rules of the game. Indian business needs to respond to the new rules. Fundamentally this calls for a change in the mind set. Indian business need to make basic changes in their thinking they need to incorporate the new realities in their decision making. In general, business function on the basis of the signals they receive from the economic system.

A number of studies on organizational climate have been carried out in the past, emphasizing that individual behaviour is greatly influenced by the work environment. Therefore, creating a favourable work climate by incorporating appropriate changes in the various dimensions of the organization based on the changes in the global business environment is essential for the success of an organization. To a great extent all organisations need to be flexible in present era. Also, in most cases, organisations need to increase their flexibility to respond to the changes happening in the surrounding environment. Though it can be said that it is important for organisations to be flexible under the impact of globalisation but whether or not to increase the flexibility of an organisation would depend upon the specific conditions of that organisation. The need to increase flexibility of an organisation depends upon the difference between the level and nature of existing, targeted and potential flexibility of that organisation.

This research entitled “The Impact of Globalisation on Climate of Public Enterprises” is a Longitudinal Research, which discovers the changes in the Organisational Climate of a large, well established Public Enterprise (BHEL, Thiruchirappalli, Tamil Nadu), where a study was conducted during 1991, just prior to globalization and during 2011 two decades after a paradigm shift in Indian Economy, in order to examine the impact of economic reforms, especially the globalization, on the climate of PEs in India.

Background

Organizational climate comprises mixture of norms, values, expectations, policies and procedures that influence work motivation, commitment and ultimately, individual and work unit performance. Positive climate encourages, while negative climates inhibits discretionary effort. ‘Organizational Climate (OC)’ refers to the quality of working environment. If people feel that they are valued and respected within the organization, they are more likely to contribute positively to the achievements of the business outcomes. Creating a healthy organizational climate requires attention to the factors which influence employee’s perceptions, including the quality of leadership, the way in which decisions are made and whether the efforts of employees are recognized. In fact “Climate may be thought of as the perceptions of the characteristics of an organization”.

In present time globalisation has emerged as important force, which helps in integrating the world economy. Globalisation is a process through which the diverse world is unified into a single society. If a country has opened his gate without any restriction for the world economy through trade, foreign investment, flow of capital, flow of technology and mobilisation of labour between countries, etc., such type of situation is called globalisation. The rapid industrial development, opening up of economies and the rapid progress of science and technology has reduced the world into a global village. In recent times, the world has witnessed the emergence of an astonishing consensus with regard to strategies to be employed for achieving economic growth. Nations are embracing market economics for achieving economic well being of their people. It was

increasingly being realised that even redistributive goals were better achieved by adopting market oriented economic policies since they facilitated achieving faster economic growth.

Globalisation and its Impact on Indian Industry

Broadly speaking, the term ‘globalization’ means integration of economies and societies through cross country flows of information, ideas, technologies, goods, services, capital, finance and people. The term globalisation has four parameters: First permitting free flow of goods by removing trade barriers between the countries, second, creating environment for free flow of capitals between countries. Third, allowing free flow of technology transfer and last, but not the least from the point of view of developing countries, creation of an environment in which free movement of labour between the countries of the world. Thus, taking the whole world as global village, all the four components are equally important for a smooth path for globalisation. The focal point of globalisation and liberalisation is, therefore, to those imbalances and restrictions that hamper the free flow of trade. It is also the aim of globalisation to available larger number of goods and services to the people at relatively cheaper prices (C.Rangarajan 2006).

According to Noble Prize winning economist Milton Friedman Ohame, (1990), globalisation means that it is now possible to produce a product anywhere; using resources from anywhere, by a company located anywhere, to be sold anywhere. Ohame (1990) further states that due to globalisation, keeping an organisation healthy over a period of time requires working continually to improve every aspect of its business system. That implies organisation cannot rely upon their past performance to survive in today’s world. Organisations have to struggle continuously to maintain an edge over their competition. Organisations have to continuously work overtime to improve, innovate or reinvent their products or processes to meet the challenges in front of them. Organisations would also have to adapt their production methods and workforce to meet the needs and demands of this new ‘globalised’ customer (Eubusiness, 2007).



The new industrial policy of 1991 un-caged the competitive spirit of industry by abolishing industrial licensing in almost all industrial sectors, abolishing restrictions on MRTP companies, terminating the phased manufacturing programmes, substantially freeing foreign direct investment and import of foreign technology, and freeing areas hitherto reserved for the public sector. This policy reform removed almost all restrictions on new entry into the industrial sector. Over the years, the trade regime has also been modified substantially so that there are now no quantitative restrictions on the import of industrial goods. At the same time the tariff structure has been brought down considerably thereby reducing the protection available to Indian industry.

The absorptive capacity of the industrial sector increased after the initiation of liberalisation process, which has impacted on its size and spread. The globalisation process also brought about changes in the expenditure pattern of the industries. The costs of production, including interest payments declined which resulted in increased profitability of the factory sector. The integration of the markets enabled the firms to expand their markets beyond their traditional destinations. Increased M&As is the direct outcome of globalisation, which led to increase in R&D activities in many of the sunrise industries. The industrial performance has been broadly in tandem with the trends at the aggregate level. The globalisation process, at the end of the arduous restructuring, has given rise to a competitive industry ready to take on the mighty world.

Research Problem

Since 1990, a series of economic reforms have been taking place in India. Reforms are particularly aimed at moving towards global economy. To promote foreign investment in the industrial sector, fiscal, revenue and trade policies were reformed, removing all controls on the movement of foreign capital. As consequences of the reforms, Indian economy has increasingly got integrated into world economy. The reform measures implemented by the government have the following significant impact on Indian industries. They are (i) State-owned Enterprises are being disappeared; (ii) Capital intensive industry

increased that resulted in regeneration of traditional labour intensive industry; (iii) Service sector gets expanded; (iv) Informal sector has been increased; (v) Above all, PEs face stiff competition not only from domestic private players but also from foreign companies. In this changing scenario, it is imperative to infuse appropriate changes in various dimensions of PEs. That is, the structure, policies, values and culture of SOEs are to be transformed in such a way to cope with globalised scenario. In this context, it is proposed to undertake a study mainly to (a) identify the variation in climate of PEs after globalisation, (b) identify the pattern of ranking of employees on climate factors, and (c) the level of perception of employees on the major determinants of performance in terms of climatic dimensions.

Methodology

This is a kind of longitudinal research, which attempts to discover the change in the OC of a large, well-established public enterprise in Tamil Nadu, BHEL, Trichirapalli, where a study was conducted during 1991 just prior to globalisation and at present, during 2011 two decades after a paradigm shift in Indian economy in order to examine the impact of economic reforms, especially the globalisation on the climate of public enterprises in India. Hence, it was decided to choose the sample from the same organization, viz., Bharath Heavy Electricals Limited, Tiruchirapalli (Tamil Nadu). The desired sample size, 668, a composite of 116 executives, 158 supervisors and 394 artisans was obtained after a multiphase stratification.

The same questionnaire, which was adopted during 1991 (pre-globalization period) to measure the employees' perceptions of the climate was used at present (2011, post-globalization period) also in order to examine the differences in the scores of these periods. Although it was not a standardized questionnaire previously used by researchers, the climate dimensions incorporated in this questionnaire were based on the determinants of climate identified by some of the earlier researchers. The questionnaire, which was in four parts, contained 70 statements grouped under ten dimensions. Each respondent was asked to respond to 70 statements using the Likert type 5-point scoring system, ranging from 'Strongly

Agree (5) to “Strongly Disagree (1)”. The scores obtained on Q-1 were classified into three groups of climate rating: (i) High climate rating: scores ranging from 315 to 350; (ii) A moderate rating: scores ranging between 275 and 315; (iii) A low climate rating: Scores less than 275 and the results have been presented below.

Comparative Statement of Climate of Public Enterprise (Bhel) Before and After Globalisation

Major Observations	Before Globalisation (1989)	After Globalisation (2009)
Overall Climate	Moderate	Moderate
Perception of Different Category of Respondents	Artisans and Executives – ‘Moderate’; Supervisors – ‘Good’	Artisans and Supervisors – ‘Moderate’; Executives – ‘Good’
Uniform Perception on OC Dimensions by All Respondents	WOC, PPS, and PMT (favourable on WOC; unfavourable on PPS and PMT)	WOA, JOC, SOV, PRR, PMT, EXI and PPS (favourable on WOA, JOC and SOV; unfavourable on PRR, PMT, EXI & PPS)
Ranking of OC Dimensions by All Respondents	WOC, WOA and JOC in top three places; PRR, PMT and PPS in last three places	WOA, JOC and SOV in top three places; PRR, PMT and PPS in last three places
Influence of Personal Variables on OC Dimensions	Age, Salary and Native Place	Education, Experience and Income
OC Dimensions Influenced by Personal Variables	WOA, JOC, MS&P, PRR, EXI, SOV and NTA	MS&P, PMT, EXI, SOV and NTA
OC Dimensions not Influenced by Personal Variables	WOC, PPS and PMT	WOA, JOC, WOC, PPS and PRR
OC Dimensions Found Differences between Actual Level of Climate Perceived and Desired Level of Climate	Less Differences on EXI, SOV and NTA, whereas wide differences on all other Dimensions	Less Differences on SOV and NTA, whereas wide differences on all other Dimensions
Differences between Actual Level of Climate Perceived and Desired Level of Climate among Different Category of Respondents	Wide Difference is found among Supervisors and Less Difference among Artisans and Executives	Wide Difference is found among Executives and Less Difference among Artisans and Supervisors
OC Dimensions Perceived as ‘Most Important’ by All Respondents	WOC, SOV and WOA	WOC, MS&P and JOC
OC Dimensions Perceived as ‘Least Important’ by All Respondents	PMT, NTA and JOC	PMT, SOV and NTA

OC Dimensions

Worker’s Attitude (WOA) Job Characteristics (JOC) Working conditions (WOC) Personnel Policies (PPS) Managerial Structure and Policies (MS&P)	Performance – Reward Relationship (PRP) Participative Management (PMT) External Influences (EXI) Social Values (SOV) New Technology Analysis (NTA)
--	--



Major Impacts of Globalisation on Climate of Public Enterprises

1. Overall Climate of Public Enterprises – No Impact
2. Perception of OC by different categories of employees
Artisans – No Impact
Supervisors – Negative Impact ('Good' to 'Moderate')
Executives – Positive Impact ('Moderate' to 'Good')
3. Perception on various dimensions of OC
Positive Impact on 'Social Values' and 'Workers Attitude' ('Unfavourable' to 'Favourable')
Negative Impact on 'Working Conditions' and 'External Influences' ('Favourable' to 'Unfavourable')
No Impact on the remaining SIX dimensions
4. Personal Variables influence on the perception of OC
'Education' and 'Experience' instead of 'Age' and 'Income'
5. Dimensions perceived as 'Most Important'
'Managerial Structure & Policies' instead of 'Social Values'
6. Ranking of OC dimensions
Positive Impact on 'Social Values' ('middle order rank' to 'top order rank')
Negative Impact on 'Working Conditions' ('top order rank' to 'middle order rank')

Implications and Action Plan Suggested

- The organization should initiate measures to improve the perception of 'Supervisors' and 'Executives'.
- Though there is a positive impact on the perception of 'Executives', it must be improved further, since wide difference is found between 'Actual Level of Climate Perceived, and 'Desired Level of Climate Expected' as far as the executives are concerned.
- 'Working Conditions' and 'Managerial Structure & Policies' may be so modified to live up to the expectations of the employees.
- Similarly, more autonomy may be given to public enterprises in order to eschew from 'External Influences', especially from the political quarters.
- Regarding employees with less-qualified and less-experienced, the management should take steps to make them aware of and appreciate the organizational policies and characteristics.

Conclusion

The findings of the study suggest that though there is a significant improvement in the climate scores of public enterprises after globalization, still there is considerable scope for improving the OC. Especially, special attention is required on the three factors of climate, viz., WOA, WOC and PPS, which are the major determinants of employee performance. Though there is a significant improvement in the perception scores of the respondents on WOA, it must still be improved as the executives are not satisfied about this at present. Likewise, the management has to take into consideration for improving the dimension WOC, as there is more gap between the actual and derived levels of climate at present (2011) compared to the same prior to globalization (1991). Moreover, at present, this dimension is viewed as most important by the respondents. Above all, it is a sorry state of affair to observe that 'Personnel Policies' is degenerated more after the advent of globalization. If one looks at the personnel policies and practices generally followed within Indian organisations, more often than not, it is "who you know rather than what you know" that counts at the time of recruitment (Sharma, 1995; Varadarajan D.B, 2000). A study group appointed by the Calcutta seminar on social responsibilities of business came to the conclusion that favouritism by employers in appointments, promotion and other matters was one of the major obstacles to organisational effectiveness. Rewards and punishments are rarely linked with performance and criteria for promotions are seldom clearly defined. Therefore, we may say that for an ideal climate in organizations the personnel policies or practices may be so modified as to live up to the expectations of the employees. With regard to recruitment, the interest of the institution and the ability of the individual should weigh more with the officials involved in the process. Favouritism is a double loss in the sense that talent is not weighed and the organization suffers from the inefficiency of the favourite. Special promotion may be given on the basis of the mettle of the individual. Regular and recurring rewards in proportion to the performance will also go a long way in promoting climate and bettering productivity in the industry.

References

- Dr. C.Rangarajan (2006), Chairman Economic Advisory Council to the prime Minister New Delhi responding to globalization: India's Answer 4th Ramanbhai patel memorial lecture on Excellence in Education 25th February 2006
- Ekvall, G., Isaksen, S.G., Lauer, K.L. & Britz, A. (2000), "Perceptions of the best and worst climates for creativity", *Creativity Research Journal*. Vol. 13 No. 2.
- EUBusiness (2007), 'Flexicurity-the response to globalisation and demographics by combining flexibility and security' Available at: <http://www.eubusiness.com/Employment/flexicurity-guide/> [Accessed: 19 November, 2007]
- Isaksen, S. G., & Ekvall, G. (2007), *Assessing the context for change: A technical manual for the Situational Outlook Questionnaire*. Orchard Park, NY: The Creative Problem Solving Group.
- O'hame, K. (1990), 'The Borderless World'. Collins: London.
- Schneider, B. (1990), "The climate for service: An application of the climate construct", In B. Schneider (Ed.), *Organizational climate and culture*. (pp. 383-412). San Francisco: Jossey-Bass.
- Sharma R.C. (1995), "Indian public sector: Changing scenario", in Bhatia, B.S. and Batra, G.S. (eds) *Management of public enterprises*, Deep and deep publications Delhi.
- Varadarajan, D.B (2000), "Impact of new economic policy on foreign trade in K.R.Gupta (eds) *Liberalisation and globalisation of Indian Economy*", vol.1 Atlantic publishers and distributors, New Delhi.



An Analytical Study of Green Marketing Strategies Adopted by Organised Retail Sectors with Special Reference to One of the Northern Eastern Suburb Mulund, Mumbai

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Abstract

After experiencing deterioration of environment by society almost every country's government and society has started to be more aware about these issues. Businesses as well as consumers are becoming more concerned about the environment & the future of our planet. This leads to the trend to use green marketing as a strategy to attract new consumers combined with motive of retaining existing consumers, to gain competitive advantage and protection of environment. These measures can be said to be a reflection of consumers need for green lifestyle. Society is actively trying to reduce their harmful impact on the environment. However, this idea is not widespread and is still an evolving idea. Organisations and business however have seen this change in consumer attitude and are trying to gain an edge in the competitive market by exploiting the potential in the green market industry with their green marketing strategies. The major objective of the study was to analyse the existing green marketing strategies applied by organised retail sectors in one of the northern eastern suburb Mulund. The present study was based on primary data; researcher has also collected data from managerial personnel & owners of select organised retail outlets through interview & structured questionnaire.

Keywords: Deterioration, Green Marketing, Marketing Strategies, Evolving, Consumer Attitudes.

Introduction

American Marketing Association defines 'green marketing' as the marketing of products that are presumed to be environmentally safe. The term green marketing incorporates a broad range of activities, including product modification, changes to the production process, packaging changes, as well as modifying advertising. Other similar terms used are Sustainable Marketing, Environmental Marketing and Ecological Marketing. Thus "Green Marketing" refers to the holistic marketing concept wherein the production, marketing, consumption and disposal of products and services happen in a manner that is less detrimental to the environment with growing awareness about the implications of global warming, non-biodegradable solid waste, harmful impact of pollutants etc.

Both marketers and consumers are becoming increasingly aware and sensitive to the need for switching on to green products and services.

While the shift to “green” may appear to be expensive in the short run it will definitely prove to be indispensable and advantageous, cost-wise too, in the long run. Increased importance of green marketing for success in marketing to be considered as one of the major trends in modern businesses (Kassaye, 2001). Consumers are therefore, becoming more sensitive in their environmental attitudes, preferences and purchases (Sarigollu, 2009). The desire of consumers to purchase environment friendly products and services is rising. Awareness of environment friendly issues is leading to consumers choosing eco-friendly products over the less eco-friendly products even if they cost more. Environmentally preferable products are sometimes more expensive to purchase than other alternative products. Green consumers have been shown to be willing to pay premium price for eco-friendly products. (Laroche et al, 2001; Peattie, 2001), Paying more attention on environmental issues can result in huge marketing opportunity for companies as well as governments looking to make eco-friendly policy changes.

Most of the scientists state that Green marketing is different from general social marketing (Peattie, 1995). Green marketing has the following advantages in the comparison with general socialmarketing (Ken Peattie, 1995):

- Company’s strategy is more focused on environmental issues
- Concentration on the global issues instead of the local issues

So, in this scenario of global concern, corporate houses have taken green marketing as a visible part of their strategic planning. The idea is to promote products by supporting their environmental claims by communicating through advertising, public relations, product attributes or about their green production system, processing system, packaging system etc. Hence, it clearly shows that Green marketing is a part and parcel of overall corporate strategy for not only attracting new customers but to survive in this highly competitive environment.

Review of Literature

For the present study, researcher has reviewed published literatures on green marketing. According

to the authors like Ottaman, (1993) and Ken Peattie, (1993) Conventional marketing is out and Green Marketing is in for good.

Yeow Kar Yan & Rashad Yazdanifard (2014), has done their research on “The concept of green marketing & green product development on consumer buying approach”. The research revealed that -Green marketing is a strategy that addresses the concern of promoting and preserving the natural environment which can benefit the firms, consumers and environment if caution is exercised when the green product is being developed. Most firms have started to practice the concept of green marketing and green product development in their day to day business operations to produce eco-friendly products in order to satisfy the consumers’ wants and needs. Beyond this, there is a shift in consumers’ behaviour towards a greener lifestyle; such consumer is known as the “green consumer”. They have concluded their research that implementing green marketing and green product development strategy are not complicated, but rather a relative concept that consistently differs over the time.

S.M. Das, B.M. Dash, & P.C. Padhy (2012), carried out a research on “Green marketing strategies for sustainable business growth. They have explain the need and importance of Green Marketing and strategies for Green Marketing in their research and also tried to explain some strategies to avoid Green Marketing Myopia. They have also discussed some cases of successful green marketing strategies like L&T, Ponds Cold Cream, ITC, Mac-Donald, Coca-Cola, Philips etc. In conclusion, they have suggested that Marketers should innovate and adopt new marketing strategies that would safeguard our eco-system as well as satisfy the customers.

Kulbir Kaur Bhatti, (2016), in his research on “Green Marketing: Saviour for the Consumers, Businesses and the World”, said that - Green marketing is an approach by the organisations and the industries to produce the green products and protect the globe. Green marketing is a continuous process that requires constant inputs from the suppliers, government legislations and policies and the people. Marketers are making consumers understand the need and benefits of green marketing and the consumers are willing to pay premium price



for the products to maintain a cleaner and greener environment. Green practices result in financial and market performance by balancing holistic development with environmental sustainability.

This would result in having a competitive advantage over the non-green users. Green marketing makes business socially responsible. The non-green business organisations have to shift from the traditional marketing strategies to green marketing strategies opting for elements like the greendesign, green labeling, green packaging and green distribution.

Limitations

Due to time and access constraints, the researcher carried out the research in Mulund area only and also the sample size is quite small. Because of this, the findings of the research are just based on the selected area & retail outlets for the study.

Objectives of Study

- To check the awareness level of green marketing practices among select organised retail sectors.
- To understand the strategies and practices adopted by select organised retail sectors.
- To study the efforts taken by select organised retail sectors to preserve environment.

Research Methodology

Area for Study

Due to limitation of time and resources, researcher has selected one of the Northern Eastern Suburb Mulund in Mumbai for the present study.

Data Collection

This study is an empirical one. So, as far as possible and attempt was made to gather primary data. In that context, a detailed questionnaire was prepared for the said purpose. Meanwhile personal interviews and observations were also made.

In order to ensure an acceptable number of responses, a convenience sample was used. Data were collected through the self administrated questionnaires by the researcher.

The secondary data was also used in some extent for the study & it was collected mainly from the various published and unpublished sources and internet (websites relating to study topic).

Sample Design

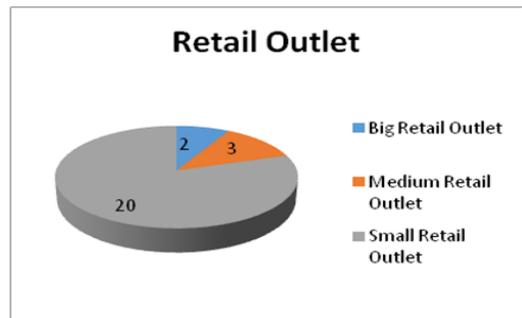
Researcher selected the sample using combination of convenience and simple random sampling method. The sample size was 25 select organised retail outlets consisting from big to small retail outlets.

Analysis & Interpretation of Data

Table 1 & Chart 1: Classification of Retail Outlets on the Basis of size

Category	Number
Big	2
Medium	3
Small	20
Total	25

Source: By researcher



Survey From Selected Sample (Table 2)
SA- Strongly Agree, A-Agree, UD- Undecided, D-Disagree, SD- Strong Disagree

Sr. No.	Questions		SA	A	UD	D	SD	Total
1.	You are aware about green marketing practices?	Frequency	4	14	-	5	2	25
2.	Does your management believes in green marketing strategies? / Do you believe in green marketing strategies?	Frequency	5	6	4	6	4	25
3.	Do you think that you are doing enough to save the environment?	Frequency	3	3	7	6	6	25
4.	Do you have “green plans” for the future?	Frequency	1	3	14	4	3	25
5.	Do you market your green products in environment friendly manner i.e. No print ads, no hoardings, recycled packaging.	Frequency	1	1	-	19	4	25
6.	What are your green marketing strategies?							
	Advertising using green themes & messages	Frequency	2	2	11	4	6	25
	Self-Explanatory Labels	Frequency	1	3	17	3	1	25
	Educational Campaigns	Frequency	1	2	15	4	2	25
	Avoid Plastic & Use of paper bags	Frequency	13	6	-	4	2	25
	Recycle Paper	Frequency	-	1	12	9	3	25
	Recycle Water	Frequency	-	-	17	5	2	25
	Wastage Treatment	Frequency	1	1	12	5	6	25
	Energy Saving	Frequency	9	15	-	-	1	25
	Use of Solar Energy	Frequency	-	-	18	2	5	25
	E- Payment	Frequency	9	3	5	-	8	25

Source: By researcher

Interpretation & Findings

A total number of 25 samples were selected to provide answers to the structured questionnaire. Table 2 indicates the responses given by the selected sample for the study.

- It can be seen from the table 2 that only 60% of surveyed respondents said that they know about Green Marketing, which is not an encouraging statistic in the current scenario.
- From table 2, respondents (more specifically the Marketing Managers) were asked to indicate that whether their management believes in green marketing strategies, around 44% respondents

- said that, their management not only believes in green marketing strategies but also take initiative to promote green marketing through different activities as their regular practice. But this 44% are big retail outlets. Majority of retail outlets don't use green marketing as their strategy.
- It was found that 76% of surveyed respondents were agree with the statement that they are not doing enough to save the environment but it was also observed that all the respondents have environmental concern which is really appreciable.



- When it was asked to the respondents that whether they have any future “green plans”, it was found that 84% answered no and these were the small and medium retail outlets. Only big retail outlets like R-Mall, D-Mart and Croma answered that they have some plans to preserve our environment.
- Findings revealed that, 23 out of 25 respondents don’t market their green products in environment friendly manner. Those 2 who were agree that they market their green products & initiatives to protect the environment without print ads, hoarding etc., and researcher observed that they have kept the big hoarding in their premises stating that they are green warriors and you can be a green warrior too. And thousands of print ads (pamphlets) were put there for the consumers.
- As title of the study suggests that this is an analytical study of green marketing strategies adopted by organised retail sector, when researcher asked the surveyed respondents about their green marketing strategies, it was found that out of given green marketing strategies very few green marketing strategies were known to the respondents & majority of respondents were in undecided category.

Conclusion

This was an analytical study which was aimed at investigating the awareness of green marketing and green marketing strategies & practices adopted by select retail outlets and also their efforts to preserve the environment. The study revealed that only 72% surveyed respondents are aware about green marketing which is not satisfactory number and out of given green marketing strategies, very few like using paper bags because of governmental pressure, use of

Compact Fluorescent Light (CFL) to save the energy and use of e-payment are their main green marketing strategies. Hence, there is further scope for all retailers to use different green marketing strategies not only to attract more customers but to remain in the competitive market and also to preserve the environment. Through personal interview researcher came to know about very unique practice adopted by Croma (Retail Outlet) i.e. they pick-up E-Waste of their customers and plant a tree in their name. So, this is the time now for Businesses to realise that they must behave in an environmentally conscious fashion and we as consumer have to become a “Green Thinkers” and support the green business practices. And together we can make the world a better place to live in.

References

- https://en.wikipedia.org/wiki/Green_marketing
Kulbir Kaur Bhatti (2016), International Journal of Emerging Research in Management & Technology ISSN: 2278-9359 (Volume-5, Issue-6)
Ottaman, J.A. (1993). Green Marketing: Challenges and Opportunities. NTC: Lincolnwood.
Peattie, K. (1995). Environmental Marketing Management. London: Pitman.
S.M. Das, B.M. Dash, & P.C. Padhy (2012), Journal of Business Management & Social Sciences Research (JBM&SSR) ISSN No: 2319-5614 Volume 1, No.1.
Sarigollu, E., 2009. A Cross-Country Exploration of Environmental Attitudes. Environment and Behavior, 41(3), pp. 365-386.
Yeow Kar Yan & Rashad Yazdanifard, 2014, G.J.C.M.P. ISSN: 2319-7285, Vol. 3(2), 33-88.

Appendix I





Comparative Statement Analysis of Select Paint Companies in India

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Abstract

Paint industry is a fast moving industry in India. Every day new paint units are entering into that industry, but the stability of these companies is purely based on the financial and operational performance. The 2nd largest paint market in Asia is India with annual demand of over four million tones. The country continues to have a strong growth rate when compared to other economies, by the increasing level of disposable income, and demand from infrastructure, industrial and automotive sectors. Through this support that the sector post a CAGR of around 15per cent during 2012 to 2015, according to Indian paint industry expert forecast. The manufacture of paint by Indian paint industry is at Rs.40,300 crore (in 2015-16). The share of decorative paint is Rs.30,385 Crores (75per cent) and share of industrial paint is Rs.9,915Crores (25 %). In volume terms, the size of the industry is 4.19 million tones with decorative paints being 3.70 million tones (88%) and industrial paints being 0.49 million tons (12%). India's per capita consumption of paints is still dreadfully low at 3.23 kg/annum compared to world average of 15Kg and 25Kg for US. The major boost to the growth which is anticipated to grow at a Compounded Annual Growth Rate (CAGR) of more than 16% during the period from 2013-14 to 2015-16 in Indian Paint market has been provided by the decorative paint segment, This study makes an attempt for the comparative analysis of financial statements of select paint companies in India

Keywords: Financial Performance, Asian Paint, Nerolac Paint, Comparative Analysis.

Introduction

The financial statement analysis commonly includes common size analysis, ratio analysis, trend analysis and industry comparative analysis. This helps the analyst to make a company to compare with other business in the same or similar industry, and the trends affecting the company or the industry over a period of time. By making comparison of company's financial statements in different time periods, the valuation expert can see growth or decline in income or expenses, changes in capital structure, or other financial trends. Analyzing and interpreting the financial statements refers to the process of identifying financial strength and weakness of the firm by establishing strategic relationship between the items of the Balance Sheet, Profit and Loss account and other operative data. The purpose of financial analysis is to make out the information enclosed in financial statements so as to moderator the profitability and financial soundness of the firm. These statements are used by investors and financial analysts to observe the firm's performance in order to make investment decisions; so these statements should be prepared very carefully and contain as much investment decisions.

The main purpose of the Comparative study of financial statement is the comparison of the financial statement of the business with the previous year's financial statements so that weaknesses may be identified and remedial measures applied. Comparative statements can be prepared for both types of financial statements i.e., Balance sheet as well as profit and loss account. The comparative balance sheet shows the effect of operations on the assets and liabilities that change in the financial position during the period under consideration.

Objectives of the Paper

The aim of this paper is to make comparative analysis of balance sheet of different years to find out financial soundness of two major paint companies in India that is Asian Paint Limited and Nerolac Paint Limited.

Research Methodology

In this study, an effort has been taken to measure, evaluate and compare the financial performance of two major paint companies which are one among the leading companies in India. The study is based on

secondary data and such data have been collected from annual reports of the respective companies, magazines, journals, documents, financial data websites and other published information. The study covers the period of 5 years i.e. from the year 2012-13 to 2016-17.

Analysis and Discussion

The comparative balance sheet analysis is the analysis of the trend of the same items, group items and computed items in two or more balance sheets of different companies on different dates. The changes in periodic balance sheet items reflect the conduct of a business. The changes can be observed by comparison of the balance sheet at the beginning and at the end of a period and these changes can help to derive an opinion about the progress of the company. The comparative balance sheet has two columns for the date of original balance sheets. A third column is provided to show increase or decrease in figures. The fourth column shows percentage of increase or decrease.

Table 1 shows the comparative balance sheet of companies for the years 2012 – 2013.

Table 1 Comparative Balance Sheet of Select Paint Companies for the Years 2012-2013

Particulars	Asian Paint		Nerolac Paint	
	Absolute Increase/Decrease (Rs.)	Percentage Increase/Decrease (%)	Absolute Increase/Decrease (Rs.)	Percentage Increase/Decrease (%)
I. Equity and Liabilities:-				
Shareholder's Funds	534.48	22.34	222.83	22.07
Long Term Liabilities	65.19	32.24	29.88	26.63
Current Liabilities	68.58	2.99	111.39	21.30
Total Liabilities	852.27	17.77	364.10	21.44
II. Assets:-				
Fixed Assets	542.55	33.65	340.14	60.97
Investments	80.48	28.82	4.19	9.54
Long Term Loans & Adv.	-218.46	-70.16	0.52	1.18
Other Non Current Assets	0.00	0.00	-10.22	-100
Total Current Assets	263.67	9.49	29.48	2.82
Total Assets	852.27	17.77	364.10	21.44

Source: computed from annual reports



Interpretation

In the table, the fixed assets of Asian paint and Nerolac paint companies are increased by Rs 542.55 crores i.e., 33.65% and Rs 340.14 crores i.e., 60.97% while long term liability to outsiders of both the companies have relatively increased by Rs 65.19 crores and 29.88 crores. Shareholders' funds are increased by Rs 534.48 crores and 222.83 crores. Further the current liabilities are increased by Rs.68.58 and Rs 11.39 Crores respectively. The fact indicates that the policy of the Asian paint

company is to purchase fixed assets from the long term sources of finance through which working capital is not affected and Nerolac Paint Company has also the same policy but part of fixed assets is financed by working capital. The current assets of both the companies are increased by Rs 263.67 crores and Rs 29.48 crores that indicates that they have flexible credit policy Increasing the current liabilities indicates that these companies are not paid the short term liabilities with in the period. In general the financial position of both the companies during the year 2013 is good.

Table 2 Comparative Balance Sheet of Select Paint Companies for the Years 2013-2014

Particulars	Asian Paint		Nerolac Paint	
	Absolute Increase/ Decrease (Rs.)	Percentage Increase/ Decrease (%)	Absolute Increase/ Decrease (Rs.)	Percentage Increase/ Decrease (%)
I. Equity and Liabilities:-				
Shareholder's Funds	578.67	19.77	137.21	11.13
Long Term Liabilities	29.58	11.06	4.27	3.00
Current Liabilities	425.18	18.02	51.42	8.10
Total Liabilities	1071.59	18.97	192.89	9.35
II. Assets:-				
Fixed Assets	-104.29	-5.02	59.77	6.65
Investments	188.49	52.40	-15.00	-31.14
Long Term Loans & Adv.	1.76	1.89	-4.09	-9.24
Deferred Tax Assets	6.32	100	0.00	0.00
Total Current Assets	941.15	30.94	152.23	14.20
Total Assets	1071.59	18.97	192.89	9.35

Source: computed from annual reports

Interpretation

In table 2 it is observed that during the year 2014, the working capital of both the companies has considerably improved. The current assets of Asian paint and Nerolac paint companies is increased by Rs 941.15 crore and Rs 152.23 crores, the current liabilities of both the companies are increased only by Rs 425.18 crores and Rs 51.42 crores. The fixed

assets of Asian paint company is decreased by Rs 104.29 crores i.e., 5.02% that shows the sale of fixed assets. And the fixed assets of Nerolac paint company are increased by Rs 59.77 crores i.e., 6.65%. The long term liability is increased by 11.06% and 3.00% in both the companies.

The overall financial position of the both companies is shown a satisfactory.



Table -3 Comparative Balance Sheet of Select Paint Companies for the Years 2014-2015

Particulars	Asian Paint		Nerolac Paint	
	Absolute Increase/ Decrease (Rs.)	Percentage Increase/ Decrease (%)	Absolute Increase/ Decrease (Rs.)	Percentage Increase/ Decrease (%)
I. Equity and Liabilities:-				
Shareholder's Funds	629.33	17.95	173.63	12.68
Long Term Liabilities	-11.82	-3.98	16.22	11.08
Current Liabilities	-26.02	-0.93	-81.19	-11.84
Total Liabilities	553.33	8.23	88.25	3.91
II. Assets:-				
Fixed Assets	54.88	2.67	-8.79	-0.91
Investments	227.53	41.50	0.00	0.00
Long Term Loans & Adv.	114.90	121.40	26.59	66.22
Other Non Current Assets	7.32	115.82	0.00	0.00
Total Current Assets	186.86	4.69	70.42	5.75
Total Assets	553.33	8.23	88.25	3.91

Source: computed from annual reports

Interpretation

In table no. 3 it is found that the fixed assets of Asian paint company is increased by Rs 54.88 crores and the long term liabilities are decreased by Rs 11.82 crores. The decrease of long term liability means that the company has a sound financial position in the year 2015 so that they repaid its outsiders liability. On the other side of balance sheet, the fixed assets of Nerolac paint company are decreased by Rs 8.79 crores which indicates the sale of fixed assets and long term liabilities are increased by Rs 16.22 crores.

The current assets of both the companies are increased by Rs 186.86 crores and Rs 70.42 crores respectively. And it is also found that the current liabilities of Asian paint and Nerolac paint companies are decreased by Rs 26.02 crores and Rs 81.19 crores. By decreasing the current liabilities both the companies have a good liquidity position so they are able to pay liabilities within the specific period. That is a good sign for the improvement of these companies. In general the financial position of both the companies during the year 2015 is good.

Table 4 Comparative Balance Sheet of Select Paint Companies for The Years 2015-2016

Particulars	Asian Paint		Nerolac Paint	
	Absolute Increase/ Decrease (Rs.)	Percentage Increase/ Decrease (%)	Absolute Increase/ Decrease (Rs.)	Percentage Increase/ Decrease (%)
I. Equity and Liabilities:-				
Shareholder's Funds	732.90	17.72	693.03	44.91
Long Term Liabilities	50.03	17.54	-12.32	-8.66
Current Liabilities	308.02	11.20	245.99	40.69
Total Liabilities	1451.75	19.96	867.66	37.02



II. Assets:-				
Fixed Assets	612.90	29.11	19.57	2.06
Investments	231.17	29.80	10.79	32.59
Long Term Loans & Adv.	-98.31	-46.91	6.17	9.24
Other Non Current Assets	16.90	123.90	0.00	0.00
Total Current Assets	328.29	7.87	889.48	68.70
Total Assets	1451.75	19.96	867.66	37.02

Source: computed from annual reports

Interpretation

In the above comparative balance sheet it observed that the current financial position of both the companies are considerably improved. The total current assets of Asian paint and Nerolac paint are increased by a sum of Rs 328.29 crores i.e., 7.87% and Rs 889.48 crores i.e., 68.70% while the increase in current liabilities of both the companies are Rs 308.02 crores i.e., 11.20% and Rs 245.99 crores i.e., 40.69% respectively which is less than the increase in current assets. In the year 2016 both the companies have no problem in meeting its day to day expenses.

The fixed assets of Asian paint and Nerolac

paint are increased by 29.11% and 2.06% in 2016 as compared to 2015. The increases of fixed assets of both the companies are financed by issue of share capital and long term loans. In the year 2016 the shareholders fund and long term liabilities of Asian paint are increased by 17.72% and 17.54%, while for Nerolac paint the shareholders fund are increased by 44.91% and long term liabilities are decreased by 8.66%. The considerable increase in fixed assets, shareholders fund and long term loans indicates that both the companies have taken up expansion plan in a big way.

The short term as well as long term financial position of both the companies is sound.

Table 5 Comparative Balance Sheet Of Select Paint Companies For The Years 2016-2017

Particulars	Asian Paint		Nerolac Paint	
	Absolute Increase/ Decrease (Rs.)	Percentage Increase/ Decrease (%)	Absolute Increase/ Decrease (Rs.)	Percentage Increase/ Decrease (%)
I. Equity and Liabilities:-				
Shareholder's Funds	1987.82	40.84	516.15	23.09
Long Term Liabilities	52.20	15.57	25.17	19.38
Current Liabilities	-190.11	-11.90	-163	-19.16
Total Liabilities	1489.11	17.06	386.34	12.03
II. Assets:-				
Fixed Assets	106.51	3.91	120.21	12.41
Investments	447.66	44.45	-21.86	-49.80
Long Term Loans & Adv.	-40.96	-36.82	-72.91	-100
Other Non Current Assets	404.38	1324.09	131.95	100
Total Current Assets	932.39	20.73	170.60	7.81
Total Assets	1489.11	17.06	386.34	12.03

Source: computed from annual reports

Interpretation

The comparative balance sheet of the select paint companies reveals during the year 2017, that there is an increase in fixed assets of both the companies by Rs 106.51 crores and Rs 120.21 crores while the share holders fund and long term liabilities are increased by Rs 1987.82 and Rs 52.20 crores for Asian Paint, and for Nerolac paint it is increased by Rs 516.15 crores and Rs 25.17 crores. The considerable increase in the gross block, shareholders fund and long term loans indicates that both the companies have taken up expansion plan in a big way during the year 2017.

The current assets of Asian Paint and Nerolac paint companies are increased by Rs 932.39 crores and Rs 170.60 crores respectively in the year 2017 as compared with 2016. The current liabilities are decreased by Rs 190.11 crores and Rs 163 crores of both the companies. The increase of current assets and the decrease of current liabilities shows that both the companies have good liquidity policy so that they are able to meet its all short term loans in stipulated time.

The overall financial performance of both the companies has been improved a lot in the year 2017 as compared to the year 2016.

Conclusion

The study of the comparative financial statement concerned with the companies like Asian Paint and Nerolac Paint was listed with objective of assessing the financial performance in terms of the existing system of fixed assets, long term loans, current assets

and current liabilities of the companies by analysing the financial data with the help of comparative statement analysis. It is observed from the analysis that the financial position of both the companies is efficiently managed throughout the study period. It is also understood that the working capital management of both the companies is found satisfactory.

References

- Annual Reports of Asian Paint Company
- Annual Reports of Nerolac Paint Company
- Financial Management -Sawalia Bihari verma – Asian Books Private Ltd
- Management Accounting -Dr. M. Sheik Mohaned, Dr. E.Mubarak Ali, Dr. M.Abdul Halleem -Raja publications – Reprint 2012.
- Management Accounting- R.Ramachandran & R.Srinivasan – Sriram Publications, Trichy.
- Management Accounting – R.S.N. Pillai, Bagavathi -S. Chand & company Ltd December 2005.
- Murthy Management Accounting First Edition-2000, S. Viswanathan (Printers & Publishers), PVT., LTD
- M Y Khan and P K Jain Financial Management Fourth Edition-1, Tata McGraw-Hill Publishing Company Limited, New Delhi.
- S.N. Maheswari, Management Accounting, Sultan Chand & Sons Educational Publishers, New Delhi.
- Sharma Shasi K.Guppa Financial Management, Kalyani Publishers, - New Delhi



Corporate Social Responsibility: Towards Understanding its Malleable Nature and the Role it Can / Cannot Assume in Society

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Abstract

Any business is established within society and the concept of Corporate Social Responsibility is based on the assumption that a business operates through the 'social sanctions' given by a society. Therefore it is liable to give back by abiding to the laws of this society and conducting to its development. All corporations are said to have obligations towards its stakeholders, shareholders and the environment, which they must fulfill. Though how they contribute back and how much is quite ambiguous. Through secondary research this paper aims at exploring the essential nature of Corporate Social Responsibility and discuss the stakeholder integration to be considered while managing corporate social responsibility, and at the end discuss what role does the government regulations play in this domain. Since CSR is not mandated by law, the corporations can over look their responsibility towards crucial social issues causing disruptions in the society, this is where the role of government regulations come into play; this paper discusses the role and impact of such government regulations in the Indian context, where CSR is mandatory by law for big corporations. This paper presents CSR in a broad perspective, highlighting benefits for both, the organization and the society; here the involvement of stakeholders is significant because if the demands of the stakeholders are understood and met with, then it builds a competitive advantage for the corporations. Lastly the society should not completely rely on corporations, rather shift its focus to better and more effective ways of resolving the major issues.

Corporate Social Responsibility (CSR), in action, has existed much before the concept was even defined; big business companies that operated in the 18th century provided housing and established education institutions for their employees. The concept of CSR in theory originated in the 20th Century, and discourse on the subject began only in the later part of the 20th century (Moura-Leite and Padgett, 2011). CSR is often defined in terms of business companies' responsibility toward the environment, economic and social concerns (Cazeri et al., 2018); a business that operates in a society must adhere to the laws of the state and should contribute towards welfare and development in stride of these concerns (Devinney, 2009). Though it is ambiguous that in what ways should they contribute and how much should this contribution be (Blowfield, Murray, 2008). In this regard, this paper aims at exploring the concept of Corporate Social Responsibility and how its malleable nature can be moulded for the convenience of business companies, and would further explore the scope of government laws to ensure that companies assume their social responsibilities and work towards social welfare; the paper discusses the role and impact of such governmental regulations in the Indian context, where CSR is made mandatory by law for big corporates.

Although CSR is considered very important in the contemporary business scenario all around the globe, the definition and meaning of CSR is highly contested. Okoye (2009) presents CSR as an ‘essentially contested concept’ and points out the difficulty of a singular definition of CSR as it addresses so many diverse concerns for various groups in society. In any society, these diverse groups would not only have varied interests but might also have differing ideologies, which would influence and render different definitions of Corporate Social Responsibility for each of them. In contemporary times, defining CSR becomes even more difficult due to level of globalisation where multi-cultural groups exist within the same society and companies operate across nations. Wan-Jan (2006) confer that the concept of CSR is context dependant and that many scholars accept that it can rather be essential to have varied definitions of CSR as it should relate and address to the specific concerns of the respective societies where the businesses operate in. A shortcoming of CSR being contextual is that it may lead to a conflict between the different ideologies in society, where the followers of one school of thought will hold an organization socially responsible for an issue while others will exempt it from the same issue.

Regardless of the discrepancies in the definition, it is essential to analyse the concept and then form a workable definition of CSR to establish accountability of companies. It is important to remember that the core objective of any business is to earn profits; in this regard Karani (2010) notes the contradistinction in the nature of CSR and explains that a company will stride towards CSR initiatives only until they are not a hinderance to their primary goal of making profits and whenever these two objectives are at odds the company is most likely to bend towards its primary goal of profits over choosing CSR. Devinney (2009) corroborates this viewpoint by explaining that business companies are not set up with the aim to fulfil social, economic or environmental needs that CSR holds it accountable for, but to generate profits that ensures its existence.

The purpose of understanding the profit-making nature of businesses in regard to CSR is not to perceive it as a case of hopelessness, but it’s for society to be aware of it in order to hold

companies accountable when its interests are at odds with companies’ interests. At the same time, the society and the state should be mindful about its expectations or requirements from a company’s CSR initiatives, which should be limited to its context. This context is best known by the companies themselves as it is only them who are aware about their operations in detail and hence are strategically more suited, than the state and society, to formulate context driven CSR initiatives that contribute towards societal development (Devinney, 2009). In contemporary times where the consumer is aware and concerned about ethical implications of a company’s actions, whether a company is ethically responsible or not can affect its acceptance and demand in the market to the effect (Carrol and Shabana, 2010). Here, it would be of strategic importance that a company launches CSR activities to achieve a competitive edge in the market, which would in-turn result in higher profitability for their business.

The traditional stockholder model is a business approach that directs companies to focus all efforts towards achieving the stockholders’ benefit through maximising profits, while operating within the confines of law (Taghian, D’Souza and Polonsky, 2015). The stockholder model is limited in its scope as it leaves out its other stakeholders’ interests. Stakeholders for a company comprises of all persons and groups that are affected by the companies’ decisions and actions, for example, its shareholders, employees, suppliers, associated government departments, customers, consumers and local community. The Stakeholder model of business focuses on safeguard of interests of all its stakeholders and is a comprehensive approach that is better suited for companies’ CSR goals (Calabrese et al., 2013). The stakeholder model directs companies to identify all its stakeholders, analyse to understand their concerns and interests, and devise policies to address these. Contrary to common assumption that Stakeholder model and Shareholder are at odds, Strand and Freeman (2012) explain that stakeholder model encompasses the aim of shareholder model of higher profits through creating superior value by catering to interests of all its other stakeholders as well. CSR initiatives through stakeholder model can ensure long term profitability for a company by



creating a better acceptance of its products owing to its better brand reputation; ‘co-operative advantage’ with the stakeholders helps build this better brand reputation for the company. When companies cater to its stakeholders’ requirements, the Corporate Social Performance shows high improvement (Brower, Mahajan, 2012); to set a high trend in CSP, companies must focus on stakeholders as much as they focus on its customers.

The stakeholder theory implies that when managers respect and cater to the requirements of the various stakeholders of the company, they are in a better position to produce long-lasting successful results, since marketing strategies are formed with the aim of meeting the needs of these various stakeholders. This comprehensive approach to stakeholder management can steer the organizations to achieve sustainable competitive advantage and eventually yield higher financial gains as it would “reduce costs, increase access to new markets, increase a firm’s ability to innovate, and avoid the risk associated with negative events” (Browers, Mahajan, 2012; p. 328)

Michel Foucault directs our focus on the influence that unrecognised relationships of power have on our perception of the world, which, in the present setting, prompts a discussion whether companies have ulterior motives behind fulfilling their Corporate Social Responsibility - to be free from the obligations to negotiate with trade unions and respect human rights. The organizations function within legal boundaries, but there is no law mandating companies to incorporate CSR; which means businesses can prioritize their interests over CSR, ignoring social concerns at free will (Roseberry 2007). Even if companies voluntarily take up CSR initiatives they will be only those that are in line with their interests, over-shadowing critical societal issues. Scheltema (2012) points out to the increase in upcoming private legislations regarding CSR, but these may not be of much significance as they are self administered and easy to slip away from.

Karani (2010) recommends that CSR should no more be voluntary and governments should enforce legislative controls mandating CSR for all big corporations. He points out impediment of the governments that arise due to the absence of assets

and lack of expertise in developing appropriate design for corporate regulations, and also due to corruption in governments. Such impediments may cause the government regulations to be less efficient but because of their binding nature it is still the best approach to protect the masses. In this regard it would be interesting to observe CSR case in India, where the government has mandated, through The Companies Act 2013, that corporates with turnover of over 10 billion INR (approximately 148 million USD) are required to spend 2% of their profits towards CSR activities every year. India is the first country to mandate a compulsory spend on CSR by law (Ohlrich, 2017); hence it is in view of the global spectacle and it is important to study the impact of such a law as it can be a learning lesson for other nations.

A report titled ‘India’s CSR: Taking Singles Instead of Hitting Sixes’ studies impact this law has against it aims for development of the society through interviewing thirty-nine people who are NGO leader that represent varied social development sectors. Even though CSR spending in the country has significantly gone up, the reports says, there has been no significant impact in any sphere of societal development due to unorganised spending and non-strategic efforts. The report gives several recommendation for improvement in CSR efforts, against the failings/shortcomings of corporates’ current social activities : firstly, the corporates should move beyond its mere mandatory grant making acts and should partner with NGOs integrally to formalise long term strategy to bring significant social change; secondly, corporates should improve their CSR staff and focus on imparting NGO training to its skilled executives belonging to various departments of finance, strategy, operations, marketing so that they can help the NGO partners for betterment in these fields and beyond with proper understanding of social efforts they are making; thirdly, the corporates must shift their focus on the impact of their CSR activities through proper strategic planning before grant making and later monitoring of the results, rather than just compliance of the law. Interestingly, the report is positive and shows great hope in the CSR spending by the middle class, that does not come under purview of the mandatory CSR law

and still contributes to an average of 10 billion INR annually with the pure motivation of social welfare. The small but consistent donations by the people in middle class are hailed as the “stabilizing force” of the NGOs in India. An article in *The Economic Times* (Narayan, 2015) claim that some Indian companies abuse the mandatory CSR law by laundering their CSR spending through external charitable trusts that fabricate these spending. The article says that this is made possible by the many loopholes in the law such as no requirement of statutory audit of the CSR spending. This throws light towards the importance for the government to set up a strong frame work and well thought administrative regulations to follow up the good intent of the mandatory CSR law. The administration, through these regulations, must ensure efforts towards the government to set up a strong frame work and well thought administrative regulations

The onset of globalization, as significant as it may be, has prompted critical social issues worldwide, which are the result of irresponsible management and unconcerned conduct of organizations in quest of monetary benefits. Ocampo and Stiglitz (2011) point out that forums like G8 or G20 summit are not enough to solve these global concerns as they do not represent the voice and issues of the global community. Considering the grave reality of these global concerns, they must be presented and discussed at a greater platform involving most nations, and legislations must be imposed at a global level to solve the issues.

In conclusion, it is important to understand that CSR as a concept has not been clearly defined and is of pliable nature, and furthermore the natural inclination of businesses towards gaining monetary benefits. This ‘broad view’ of CSR presented, highlights benefits for both, the organization and the society; here the involvement of stakeholders is significant because if the demands of the stakeholders are understood and met with, then it builds a competitive advantage for the corporations. Since CSR is not mandated by law, the corporations can overlook their responsibility towards crucial social issues causing disruptions in the society, thus laws can be set up by the governments to make CSR mandatory but with a solid structure and a capable administration which

successfully implements the enactment and works towards the social development. Lastly, society should not completely rely on corporations, rather shift its focus to better and more effective ways of resolving the major issues.

References

- [//economictimes.indiatimes.com
articleshow/49474584.cms?utm_](http://economictimes.indiatimes.com/articleshow/49474584.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst)
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[medium=text&utm_campaign=cppst](http://economictimes.indiatimes.com/articleshow/49474584.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst)
- Acharya, N. ‘India’s CSR: Taking Singles Instead of Hitting Sixes’ [Online] Available at: <http://www.equalinnovation.com/india-csr-report.html>
- Blowfield, M., and Murray, A., (2008) *Corporate Social Responsibility a critical introduction*, New York: Oxford.
- Brower, J., and Mahajan, V. (2012) ‘Driven to Be Good: A Stakeholder Theory Perspective On the Drivers of Corporate Social Performance’ Springer Science+Business Media Dordrecht.
- Calabrese, A., Costa, R., Menichini, T. and Rosati, F. (2013). Does Corporate Social Responsibility Hit the Mark? A Stakeholder Oriented Methodology for CSR Assessment. *Knowledge and Process Management*, 20(2), pp.77-89.
- Carroll, A. B., and Shabana, K. M., (2010) ‘The Business Case for Corporate Social Responsibility: A Review of Concepts, Research and Practice,’ *International Journal of Management Review*.
- Cazeri, G., Anholon, R., da Silva, D., Cooper Ordoñez, R., Gonçalves Quelhas, O., Filho, W. and de Santa-Eulalia, L. (2018). An assessment of the integration between corporate social responsibility practices and management systems in Brazil aiming at sustainability in enterprises. *Journal of Cleaner Production*, 182, pp.746-754.
- Devinney, T., (2009) ‘Is The Socially Responsible Corporation a Myth’ *Academy of Management Perspectives*.
<http://onlinelibrary.wiley.com/store/10.1002/pa.227/asset/227ftp.pdf?v=1&t=hut4b139d63e5c73223fd443a8c8540cbc70313478http://openarchive.cbs.dk/bitstream/handle/10398/7119/wp%20cbcsr%202007-1.pdf?sequence=1>.



- Karani, A. (2010) 'The Case Against Corporate Social Responsibility,' *The Wall Street Journal*.
- Moura-Leite, R. and Padgett, R. (2011). Historical background of corporate social responsibility. *Social Responsibility Journal*, 7(4), pp.528-539.
- Narayan, D. (2015) 'How Indian companies are misusing public trusts to launder their CSR spending' *The Economic Times* [Online] Available at:
- Ocampo, J. A., and Stiglitz, J. E., (2011) 'From the G-20 to a Global Economic Coordination Council' *Journal of Globalization and Development*, Vol.2.2, Article 9
- Ohlrich, N. (2017) 'Mandatory Corporate Social Responsibility in India: How Is It Working?' [Online] Available at: <https://nonprofitquarterly.org/2017/02/17/mandatory-corporate-social-responsibility-india-working/>
- Okoye, A. (2009). Theorising Corporate Social Responsibility as an Essentially Contested Concept: Is a Definition Necessary?. *Journal of Business Ethics*, 89(4), pp.613-627.
- Roseberry, L., 'Towards a Discourse Analysis of the Corporate Social Responsibility/Accountability Debate,' *CBS Centre for Corporate Social Responsibility* [Online] Available at:
- Scheltema, M. W., (2012) 'Does CSR Need More (Effective) Private Regulation in the Future?' *The Law of the Future and the Future of Law: Volume II*.
- Strand, R., and Freeman, R. E. (2012) 'Scandinavian Cooperative Advantage: The Theory and Practice of Stakeholder Engagement in Scandinavia' *Springer Science+BusinessMedia Dordrecht* 2013.
- Taghian, M., D'Souza, C. and Polonsky, M. (2015). A stakeholder approach to corporate social responsibility, reputation and business performance. *Social Responsibility Journal*, 11(2), pp.340-363.
- The Companies Act, 2013, The Ministry of Companies Affairs, The Parliament of India [Online] Available at: <http://www.mca.gov.in/Ministry/pdf/CompaniesAct2013.pdf>
- Wan--Jan, S. W., (2006) 'Defining corporate social responsibility,' *Journal of Public Affairs* [Online] Available at: http://onlinelibrary.wiley.com/store/10.1002/pa.227/asset/227_c73223fd443a8c8540cbc70313478 .

Sustainable Human Resource Management-Need of The Hour

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Abstract

A paradigm shift is evolving in people management policies and practices that aim to integrate HRM with sustainability. Organizations are keen these days to create sustainable eco-system for themselves as well as for them society. The overall goal of the organization is implementing sustainable human resource practices for sustainable HRM and link the sustainability of organizations and societies. The objectives of this issue is to understand the important factors that affect sustainable HRM, identify the possible outcomes of following sustainable HRM practices and creating the future of sustainable HRM. For many, the relation between sustainability and human resources is an intangible one. For the HR practitioner, being an “employer of choice” is synonymous with sustainability. After all, one of the main agenda of sustainability is maximizing the positive benefits of a business’ operations for all stakeholders. For sustainability professionals, the HR team primarily represents employees as one of the important stakeholders of the group, playing a important part in forming “green teams” and encouraging employee engagement on environmental and other sustainable issues. As a academicians there is a need to understand the multifold interpretations of sustainability in literature, the dimensions of the organization and HRM where sustainability is utmost requirement, the process of implementing sustainable HRM, policies and practices that develops sustainable HRM and the ethical or social responsibility aspects of sustainable HRM.

Introduction

The role of HRM in creating sustainable organisations is spreading all over and has become one of the important agenda for the organizations. Sustainability is a indispensable part for Company’s HRM and responsibility toward society. On the one hand it creates conditions for employee’s sustainability and develops the ability of HRM systems to attract, develop motivate and engaged employees by making the HRM system sustainable and on the other, it links the top management, stakeholders and NGO’s for achieving their organizational, ecological and personal goals It aims at taking care of present as well as future generation of the nation. Its all about practicing ecological activities inside the organization by employees and employers both, its about reducing the waste of natural resources while working in the organization.

HRM

HRM is procuring, selecting, training, appraising compensating employees and answering to their labor relations, health conditions, safety concerns, its about taking care of the people inside the four walls of the organization.



Sustainability

It is about growing but growing with reducing the wastage of resources and also to make sure that future generations will also reap the advantages of Natural resources equally.

Environmental Sustainability

It is the ability to preserve non renewable resources, decreasing pollution and that can be monitored and practiced regularly.

Economic Sustainability

It is the ability of a social system of a country to function at a defined level of social well being.

Social Sustainability

Its about practicing those deeds which help in upgradation of society like employment generation, equality in the paying system and last but not the least practicing diversity.

Practices to be Followed

- **Training:** Organisations should impart training to employees on less paper work methods.
- **Employee Engagement:** Employees in workplace should be motivated for recycling and reducing waste.
- **Informal and Formal Communications:** HR department should create informal groups and committees to discuss over the issues happening in the organization on regular basis so that less paper can be used
- **Reducing Waste in the Talent Tapping Process:** elimination all paper from talent acquisition process, including brochures, newspapers, forms instead of these everything should be digitalized.
- **Car Pooling:** In order to reduce pollution, organizations should give extra benefits to those who pool their vehicles for coming to their Jobs.
- **Plantation:** Once in a year every employee should be motivated for plant a sapling near to his work place.
- **Digitalisation:** More of digitalization should be practiced in the organization, Guest lectures on his topic should be arranged.

Literature Review

SHRM has been conceptualized based on particular outcome {internal or external} (Karmar 2013), SHRM consist of three school of thoughts-First, based on Reproducing Capability, Second, based on Triple Bottom Line approach and Third is the mixture of first and Second.

Reproducing capability focuses on creating such HR systems that can manage social, demographical and environmental pressures to achieve organizational goals. (Ehnert 2009).

Triple Bottom Line approach focuses on Social, environmental and Economic parameters to earn adequate profit and to also fulfill CSR of the organizations. (Branco and Rodrigues, 2006).

The third approach emphasizes on coupling the earlier two approaches together by acknowledging and appreciating that HR systems and external economical, ecological, and social factors are interrelated (Renwick, Redman, & Maguire, 2011). This special issue seeks to ground, explore, and examine this third approach which focuses on understanding sustainable HRM by connecting the internal and external outcomes.

SHRM is getting popular among scholars, academicians, practitioners and researchers because of its positive consequences for its contributions towards society, organization, environment, economy and for the employees itself. . It makes the internal HR systems last long and links them effectively with external outcomes, the triple bottom line There practical theories of SHRM pose interesting and exciting challenges to our current theories of HRM. (Cohen 2010). Employee engagement, Women empowerment, greening the organization, performance reward system,less use of paper,digitalization,work life balance, less attrition, self leadership, green leadership, strategic staffing are some of the outcomes of SHRM which paves the way for company's sustainability culture. (Fairfield 2010), in the upcoming year SHRM will become the prime responsibility of the organizations and help to contribute into the agenda of Development with Sustainability.

This debate, both at the macro- and micro-level, is just not about profitability alone. It is now linked to the shortage of talented human resources,

unfavorable demographic dynamics of workforce in certain companies, and increasing awareness on employee and society welfare.. Hence the need of the hour is that the sustainable HRM system itself becomes a 'survival strategy' for organizations dependent on high quality employees (Ehnert, 2009b)

Conclusion

The amalgamation of CSR and human resources should be the group and ultimate goal is sustainability team, creating employees as an important stakeholder and the HR function as a major one in giving the maximum. Bringing CSR into HR means utilizing employees to have a greater effect on society. So that both will work in accordance to the sustainable development of the organization and on whole as a society. Major crux is that if sustainability is practiced then for any organization, the sustainability team will work as a charismatic leader while the HR works and brings about positive change.

References

- Beach, Dale; SPersonnel. "The Management of People At Work." *MacMillan, NewYork*, 1980 p.443.
- Chhabra, T N, K.K Ahuja and Jain, S P. "Managing People at Work." *Dhanpat Rai and Sons*, 1977, p.399.
- Chhabra, T N, et.al, p,400.
- Michael, (ucius). "Personnel Management", *Richard D .Irwin Inc*, 1975, p,131.
- Wendel, French, The Personnel Management Process, Houghton Miffling, Co, Boston, 1970, p.581.
- Yoder, Dale. *op.cit.* p.585.
- Yoder,Dale. "Personnel Management and Industrial Relations." Prentice-Hall, 1970, pp, 696-97.



Study of Employee Retention and Organizational Commitment in Teachers of Private Institutes

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Abstract

Employee is an asset of the organization, every organization is main focus is to retain the best talent for which organization take many steps and many factors considered. Many steps taken by the organization for employees not infringe but fringe benefits which increase their organization commitment. The paper identifies various factors that lead to employees' retention and organization commitment in 3 private teaching institutions in punjab. This is an exploratory study. The findings of the paper are based on a detailed analysis of data obtained by questionnaires. The study is conducted on 100 female teachers of 3 private universities of Punjab. Data collected from 80 respondents who are employed in private teaching sector. The responses have been converted into SPSS convertible data for analysis. Tools such as frequency analysis, factor analysis, chi square, T- test/ F test were used to identify the most significant factors that contribute to enhance employee retention in an organization and leads to organization commitment of teachers in Punjab. The study is to focus on finding a few factors which affect on the organizational commitment among female teachers. The factors are attitude towards job, attitude towards company, service conditions, wage factors, working conditions. An opportunity matrix developed by the professors at harvard business school, was drawn to reveal those factors that employees consider important to enhance their retention and commitment.

Keywords: Employee Retention, Organizational Commitment, Retention, Human Resource Management, Job satisfaction

Introduction

Organizations are based on the employee skill talent experience without whom, services can stop and cant think of to run operations of an organization. Need of the hour is to retain the employee while considering environment externalize which affect the organization need of skill. In teaching teachers need to be updated skilled to meet urge of student. Today teachers who act as mentor switch the organizational frequently either due to low wages, less training , not good working environment. Retention of employees leads to organizational commitment , need is to make some policies to keep long term retention of employees and increase goodwill of an organization .

Frequent turnover of employees specially teachers who are responsible for building future of student affect the nation base, Institution's image building is possible only if teachers are well versed well paid, trained and given time and space for their self improvement.

Some of the Reasons for employees to leave organization are low wages, lack of good working environment, low recognition, Mental strain, clerical work

Literature Review

Badrinarayan (2017) studied on Human resource management practices and organization commitment. A comprehensive review studied on relationship between HRM practices and organizational commitment. He has reviewed 63 empirical articles, content review. It is identified that indirect relationship between HRM practices and satisfaction with work, person organizational fit.

Kavita (2017) studied on job satisfaction as a Mediator between leader's emotional intelligence and organizational engagement among teachers, survey conducted on basis of questionnaire among 200 teachers in NCR. She analyse and found that multiple regression analysis to search relationship among these factors. It is resulted that job satisfaction mediates significantly between leader's emotional intelligence and organizational engagement.

Objective of Study

The objective of the study

- To find the impact of various factors that lead to employees retention and organization commitment in 3 private teaching colleges of Punjab.
- To identify the correlation in wages and organizational commitment of 3 private teaching employees of Punjab.
- To identify the variance in various factors that leads to variation in retention and commitment of employees.

Scope of Study

To identify steps of retention and to enhance commitment of employees so that those factors can be implemented/focused effectively in an organization.

Research Methodology

Questionnaire consists of 42 questions divided in 7 factors are used to know the extent of employee/teacher retention and employee/teachers commitment. Random sample method is used to collect data, in which 100 questionnaires distributed and out of which 80 respondents filled form. Data collected from 80 respondents who are employed in private teaching sector. The responses have been converted into SPSS convertible data for analysis. Tools such as frequency analysis, factor analysis,

chi square, T- test/F test were used to identify the most significant factors that contribute to enhance employee retention in an organization and leads to organization commitment of teachers in Punjab.

Sampling and Data Collection

Research Tools

Tools such as frequency analysis, factor analysis, chi square, T- test/ F test were used to identify the most significant factors that contribute to enhance employee retention in an organization and leads to organization commitment of teachers in Punjab.

Pre-Testing of the Questionnaire

Pretesting of the questionnaire

Bartlett's Sphericity Test

Chi-square (Observed value)	151.616
Chi-square (Critical value)	11.591
DF	21
p-value (Two-tailed)	< 0.0001
alpha	0.95

Test Interpretation

H0: There is no correlation significantly different from 0 between the variables.

Ha: At least one of the correlations between the variables is significantly different from 0.

As the computed p-value is lower than the significance level $\alpha=0.95$, one should reject the null hypothesis H0, and accept the alternative hypothesis Ha.

The risk to reject the null hypothesis H0 while it is true is lower than 0.01%.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy

Att twds job	0.360
att twdOrg	0.564
service condition	0.572
working conditions	0.573
welfareMeasures	0.674
wage & Salary	0.576
worker participation	0.679
KMO	0.576



Normally, $0 < KMO < 1$. If $KMO > 0.5$, the sample is adequate. Here, $KMO = 0.576$ which indicates that the sample is adequate and we may proceed with the Factor Analysis.

The Kaiser-Meyer Olkin (KMO) and Bartlett's Test measure of sampling adequacy was used to examine the appropriateness of Factor Analysis. The

approximate of Chi-square is 151.61 with 21 degrees of freedom, which is significant at 0.05 Level of significance. The KMO statistic of 0.576 is also large (greater than 0.50). Hence Factor Analysis is considered as an appropriate technique for further analysis of the data.

Framework Analysis & Findings

Estimation of missing data: Nearest neighbor Observations with replaced missing data

Observation	Att twds job	att twd Org	service condition	working conditions	welfare Measures	wage & Salary	worker participation
3	37.000	39.000	22.000	30.000	21.000	7.000	9.000
5	34.000	40.000	17.000	40.000	35.000	8.000	14.000
9	33.000	38.000	20.000	33.000	34.000	14.000	7.000

Summary statistics (Quantitative data)

Variable	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation
Att twds job	80	0	80	20.000	39.000	32.338	5.426
att twd Org	80	0	80	11.000	43.000	30.788	7.294
service condition	80	0	80	8.000	39.000	21.063	9.406
working condition	80	0	80	11.000	43.000	30.263	7.565
welfare Measures	80	0	80	7.000	43.000	20.025	11.274
wage & Salary	80	0	80	6.000	33.000	11.900	6.108
worker participation	80	0	80	1.000	24.000	13.013	5.969

Correlation Matrix (Pearson (n))

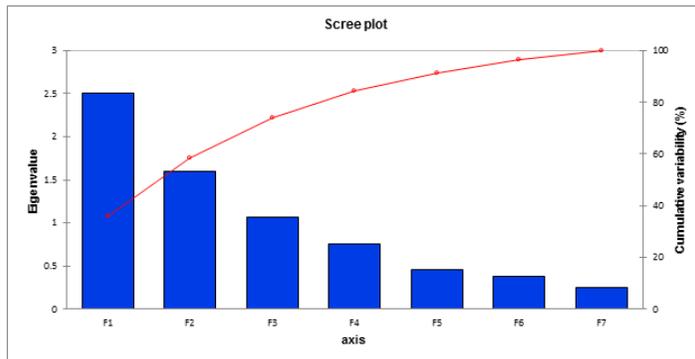
Variables	Att twds job	att twd Org	service condition	working conditions	welfare Measures	wage & Salary	worker participation
Att twds job	1	0.469	-0.188	0.298	0.023	-0.005	0.048
att twdOrg	0.469	1	-0.377	0.178	0.174	-0.388	-0.162
service condition	-0.188	-0.377	1	0.055	-0.133	0.248	-0.028
working conditions	0.298	0.178	0.055	1	0.565	-0.223	-0.592
welfare Measures	0.023	0.174	-0.133	0.565	1	-0.178	-0.567
wage & Salary	-0.005	-0.388	0.248	-0.223	-0.178	1	0.294
worker participation	0.048	-0.162	-0.028	-0.592	-0.567	0.294	1

Principal Component Analysis

Eigenvalues

	F1	F2	F3	F4	F5	F6	F7
Eigenvalue	2.505	1.597	1.065	0.753	0.459	0.377	0.244
Variability (%)	35.790	22.812	15.217	10.756	6.552	5.387	3.487
Cumulative %	35.790	58.602	73.819	84.575	91.127	96.513	100.000

Figure: Scree Plot



The scree plot graphs the Eigenvalue against the each factor. We can see from the graph that after factor 4 there is a sharp change in the curvature of the scree plot. This shows that after factor 4 the total variance accounts for larger extent.

Eigenvectors

	F1	F2	F3	F4	F5
Att twds job	0.228	0.436	0.668	0.082	-0.228
att twdOrg	0.368	0.496	0.023	0.191	0.675
service condition	-0.192	-0.495	0.349	0.645	0.296
working conditions	0.486	-0.263	0.325	0.072	-0.427
welfareMeasures	0.459	-0.286	-0.027	-0.466	0.167
wage & Salary	-0.343	-0.162	0.561	-0.563	0.361
worker participation	-0.460	0.376	0.103	-0.044	-0.252

Factor loadings

	F1	F2	F3	F4	F5
Att twds job	0.361	0.550	0.690	0.071	-0.155
att twdOrg	0.582	0.627	0.024	0.166	0.457
service condition	-0.303	-0.626	0.360	0.559	0.201
working conditions	0.769	-0.333	0.335	0.063	-0.289
welfareMeasures	0.727	-0.361	-0.028	-0.404	0.113
wage & Salary	-0.543	-0.205	0.579	-0.488	0.245
worker participation	-0.728	0.476	0.106	-0.038	-0.170



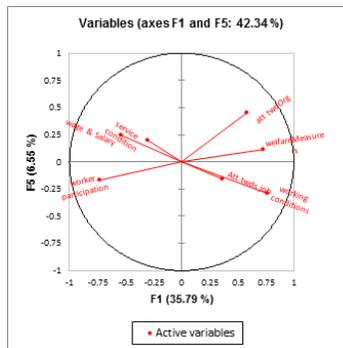
On the basis of Varimax Rotation with Kaiser Normalisation, 4 factors have been extracted. Each factor is constituted of all those variables that have factor loadings lesser than 0.5. 42 variables were clubbed into 7 factors. 7 factors were extracted from

the 42 variables used in the study. These 4 extracted factors explained 100% of the variability the factors of retention and organization commitment. This explains over full percent of the variability

Correlations between Variables and Factors

	F1	F2	F3	F4	F5
Att twds job	0.361	0.550	0.690	0.071	-0.155
att twdOrg	0.582	0.627	0.024	0.166	0.457
service condition	-0.303	-0.626	0.360	0.559	0.201
working conditions	0.769	-0.333	0.335	0.063	-0.289
welfareMeasures	0.727	-0.361	-0.028	-0.404	0.113
wage & Salary	-0.543	-0.205	0.579	-0.488	0.245
worker participation	-0.728	0.476	0.106	-0.038	-0.170

Figure Variables (axes F1 and F5: 42.34 %)



Contribution of the Variables (%)

	F1	F2	F3	F4	F5
Att twds job	5.208	18.975	44.661	0.674	5.210
att twdOrg	13.520	24.607	0.054	3.641	45.541
service condition	3.674	24.515	12.163	41.564	8.790
working conditions	23.596	6.933	10.555	0.524	18.267
welfareMeasures	21.070	8.179	0.071	21.724	2.792
wage & Salary	11.780	2.623	31.437	31.679	13.066
worker participation	21.153	14.169	1.059	0.194	6.335

Squared Cosines of the Variables

	F1	F2	F3	F4	F5
Att twds job	0.130	0.303	0.476	0.005	0.024
att twdOrg	0.339	0.393	0.001	0.027	0.209
service condition	0.092	0.391	0.130	0.313	0.040

working conditions	0.591	0.111	0.112	0.004	0.084
welfareMeasures	0.528	0.131	0.001	0.164	0.013
wage & Salary	0.295	0.042	0.335	0.239	0.060
worker participation	0.530	0.226	0.011	0.001	0.029

Values in bold correspond for each variable to the factor for which the squared cosine is the largest

Figure: Observations (axes F1 and F5: 42.34 %)

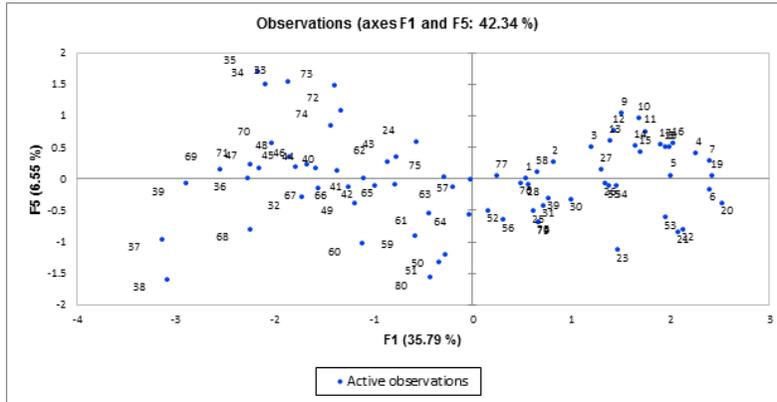
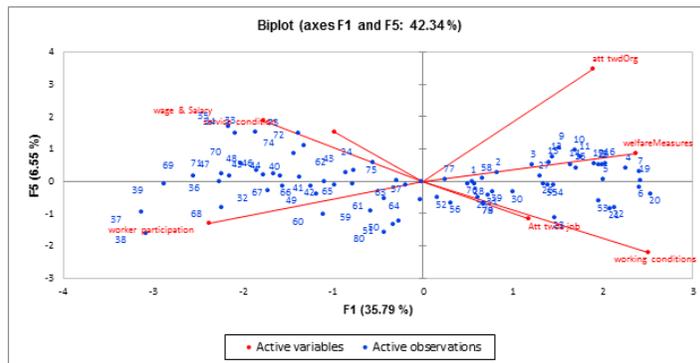


Figure: Biplot (axes F1 and F5: 42.34 %)



Contribution of the observations (%)

	F1	F2	F3	F4	F5
1	0.146	0.143	2.056	3.169	0.000
2	0.334	0.047	1.447	5.244	0.184
3	0.726	0.440	0.013	1.044	0.695
4	2.544	0.001	0.195	0.013	0.426
5	2.011	0.140	0.019	0.058	0.008
6	2.875	0.041	0.021	0.334	0.079
7	2.876	0.045	0.329	0.935	0.227
8	1.970	0.000	0.230	0.196	0.701
9	1.141	0.064	0.068	0.555	2.963
10	1.418	0.011	0.121	0.256	2.523



11	1.525	0.084	0.295	0.197	1.537
12	1.025	0.242	0.030	0.331	1.587
13	0.975	0.257	0.005	0.190	0.967
14	1.345	0.170	0.230	0.062	0.743
15	1.441	0.007	0.145	0.991	0.485
16	2.041	0.231	0.243	0.136	0.848
17	1.814	0.915	0.168	0.055	0.816
18	1.903	0.343	0.002	0.111	0.689
19	2.916	0.001	0.021	0.742	0.004
20	3.181	0.000	0.024	0.364	0.414
21	2.145	0.247	0.196	0.625	1.948
22	2.271	0.589	0.109	0.420	1.778
23	1.067	0.735	0.204	0.002	3.523
24	0.158	0.364	5.534	0.037	0.931
25	0.189	0.764	0.127	0.528	0.717
26	0.892	0.001	0.281	1.235	0.015
27	0.840	0.026	0.113	1.834	0.060
28	0.161	0.837	0.009	1.639	0.021
39	0.295	2.413	0.145	0.793	0.264
30	0.494	2.501	0.088	0.368	0.289
31	0.258	3.341	0.108	0.227	0.498
32	1.483	0.050	3.580	12.201	0.244
33	1.726	0.103	8.227	0.616	6.419
34	2.175	0.086	9.682	0.725	6.172
35	2.329	0.001	8.424	0.270	7.836
36	2.560	0.304	3.621	0.168	0.000
37	4.891	0.082	1.379	9.755	2.517
38	4.738	0.012	0.380	5.238	6.965
39	4.154	0.018	2.364	0.032	0.017
40	0.937	1.650	0.153	0.789	0.042
41	0.605	3.199	0.735	0.001	0.000
42	0.487	2.331	0.000	1.460	0.039
43	0.294	6.109	0.765	0.415	0.341
44	1.251	2.483	0.115	1.016	0.068
45	1.579	1.758	0.106	1.624	0.096
46	1.384	1.645	0.022	0.072	0.132
47	2.315	5.375	0.170	0.263	0.083
48	1.697	4.932	0.051	0.129	0.331
49	0.702	3.876	0.111	0.114	0.408
50	0.036	2.678	0.642	0.021	4.039
51	0.055	2.204	0.887	0.003	4.831
52	0.013	0.114	1.931	2.114	0.691

53	1.903	0.009	0.057	0.577	1.040
54	1.058	0.000	0.075	0.325	0.040
55	0.955	0.003	0.013	0.224	0.040
56	0.047	0.366	0.002	0.804	1.185
57	0.000	0.024	0.220	5.443	0.001
58	0.215	0.294	0.156	1.397	0.027
59	0.167	1.281	0.028	2.136	2.262
60	0.611	0.890	0.085	4.690	2.943
61	0.095	2.364	0.001	3.008	0.815
62	0.367	2.017	0.189	2.842	0.184
63	0.019	4.112	0.393	1.006	0.042
64	0.001	1.999	0.009	0.600	0.867
65	0.305	4.106	0.046	0.237	0.024
66	0.781	3.129	0.032	0.561	0.056
67	1.207	4.226	0.131	0.319	0.057
68	2.496	7.231	0.186	0.063	1.774
69	3.252	2.565	1.742	1.203	0.066
70	2.037	2.300	2.275	2.168	0.839
71	2.502	0.045	9.128	0.791	0.140
72	0.872	0.764	5.812	0.101	3.225
73	0.961	0.366	6.853	0.552	5.903
74	1.025	0.000	5.670	1.035	1.936
75	0.042	0.388	3.556	0.532	0.001
76	0.122	2.100	4.041	2.170	0.013
77	0.030	2.604	3.223	2.243	0.005
78	0.224	1.176	0.000	2.218	1.267
79	0.222	1.414	0.064	2.694	1.321
80	0.093	0.215	0.092	0.341	6.719

Squared Cosines of the Observations

	F1	F2	F3	F4	F5
1	0.065	0.041	0.389	0.424	0.000
2	0.118	0.010	0.218	0.557	0.012
3	0.460	0.178	0.003	0.199	0.081
4	0.882	0.000	0.029	0.001	0.027
5	0.694	0.031	0.003	0.006	0.001
6	0.927	0.008	0.003	0.032	0.005
7	0.785	0.008	0.038	0.077	0.011
8	0.857	0.000	0.042	0.026	0.056
9	0.594	0.021	0.015	0.087	0.282
10	0.703	0.004	0.025	0.038	0.229



11	0.737	0.026	0.061	0.029	0.136
12	0.630	0.095	0.008	0.061	0.179
13	0.677	0.114	0.002	0.040	0.123
14	0.764	0.061	0.055	0.011	0.077
15	0.725	0.002	0.031	0.150	0.045
16	0.757	0.055	0.038	0.015	0.058
17	0.619	0.199	0.024	0.006	0.051
18	0.755	0.087	0.000	0.013	0.050
19	0.840	0.000	0.003	0.064	0.000
20	0.839	0.000	0.003	0.029	0.020
21	0.717	0.053	0.028	0.063	0.119
22	0.707	0.117	0.014	0.039	0.101
23	0.468	0.205	0.038	0.000	0.283
24	0.050	0.073	0.739	0.004	0.053
25	0.139	0.357	0.040	0.116	0.096
26	0.274	0.000	0.037	0.114	0.001
27	0.282	0.006	0.016	0.185	0.004
28	0.104	0.342	0.003	0.316	0.002
39	0.112	0.584	0.023	0.090	0.018
30	0.194	0.625	0.015	0.043	0.021
31	0.095	0.788	0.017	0.025	0.034
32	0.197	0.004	0.203	0.488	0.006
33	0.242	0.009	0.491	0.026	0.165
34	0.271	0.007	0.513	0.027	0.141
35	0.311	0.000	0.478	0.011	0.191
36	0.563	0.043	0.339	0.011	0.000
37	0.529	0.006	0.063	0.317	0.050
38	0.591	0.001	0.020	0.196	0.159
39	0.769	0.002	0.186	0.002	0.001
40	0.371	0.416	0.026	0.094	0.003
41	0.202	0.681	0.104	0.000	0.000
42	0.178	0.544	0.000	0.161	0.003
43	0.058	0.762	0.064	0.024	0.012
44	0.357	0.452	0.014	0.087	0.004
45	0.442	0.313	0.013	0.137	0.005
46	0.555	0.420	0.004	0.009	0.010
47	0.373	0.552	0.012	0.013	0.002
48	0.297	0.549	0.004	0.007	0.011
49	0.201	0.707	0.014	0.010	0.021
50	0.012	0.576	0.092	0.002	0.249

51	0.019	0.483	0.130	0.000	0.304
52	0.003	0.019	0.211	0.163	0.032
53	0.645	0.002	0.008	0.059	0.064
54	0.654	0.000	0.020	0.060	0.004
55	0.599	0.001	0.003	0.042	0.005
56	0.061	0.307	0.001	0.317	0.285
57	0.000	0.009	0.052	0.906	0.000
58	0.106	0.092	0.033	0.206	0.002
59	0.062	0.305	0.004	0.240	0.155
60	0.181	0.168	0.011	0.417	0.159
61	0.030	0.480	0.000	0.288	0.048
62	0.133	0.467	0.029	0.311	0.012
63	0.006	0.827	0.053	0.095	0.002
64	0.000	0.783	0.002	0.111	0.098
65	0.100	0.860	0.006	0.023	0.001
66	0.240	0.612	0.004	0.052	0.003
67	0.271	0.604	0.013	0.022	0.002
68	0.322	0.595	0.010	0.002	0.042
69	0.541	0.272	0.123	0.060	0.002
70	0.385	0.277	0.183	0.123	0.029
71	0.362	0.004	0.561	0.034	0.004
72	0.189	0.106	0.536	0.007	0.128
73	0.179	0.043	0.542	0.031	0.201
74	0.250	0.000	0.587	0.076	0.086
75	0.016	0.097	0.592	0.063	0.000
76	0.031	0.341	0.437	0.166	0.001
77	0.007	0.415	0.343	0.169	0.000
78	0.108	0.362	0.000	0.322	0.112
79	0.087	0.355	0.011	0.319	0.095
80	0.045	0.067	0.019	0.050	0.598

Values in bold correspond for each observation to the factor for which the squared cosine is the largest

F-Test Two-Sample for Variances

	working conditions	wage & Salary
Mean	30.2625	11.96203
Variance	57.23402	37.4729
Observations	80	79
df	79	78
F	1.527344	
P(F<=f) one-tail	0.031299	
F Critical one-tail	1.453277	



F test between working condition and wage and salary factor indicates as calculated value is more than the critical value at 5% level of significance, null hypothesis is rejected and hence it can be

concluded that there is significant difference between working condition factor and wage & salary factors contributes towards employee commitment.

F-Test Two-Sample for Variances

	wage & Salary	att twdOrg
Mean	11.96203	30.7875
Variance	37.4729	53.20744
Observations	79	80
Df	78	79
F	0.704279	
P(F<=f) one-tail	0.0614	
F Critical one-tail	0.6881	

Two way ANOVA for organization commitment for factors calculated .As calculated value is less than critical value at 5% level of significance, null

hypothesis is accepted and hence it can be concluded that there is no significant difference between wage & salary to attitude towards organization.

F-Test Two Sample for Variances

	worker participation	att twdOrg
Mean	13.07692	30.7875
Variance	36.07193	53.20744
Observations	78	80
df	77	79
F	0.677949	
P(F<=f) one-tail	0.044279	
F Critical one-tail	0.68707	

Two way ANOVA for organization commitment for factors calculated .As calculated value is less than critical value at 5% level of significance, null

hypothesis is accepted and hence it can be concluded that there is no significant difference between worker participation to attitude towards organization.

Summary Statistics

Variable	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation
Att twds job	77	0	77	20.000	39.000	32.247	5.502
Att twdOrg	77	0	77	11.000	43.000	30.468	7.247
Service condition	77	0	77	8.000	39.000	21.117	9.577
Working conditions	77	0	77	11.000	43.000	30.104	7.624
Welfare Measures	77	0	77	7.000	43.000	19.636	11.245
Wage & Salary	77	0	77	6.000	33.000	11.987	6.180
Worker participation	77	0	77	1.000	24.000	13.130	6.027

The descriptive statistic with mean 32.2 depicts that moderate level of attitude towards job. The variance statistics scores 5.5 with minimum and maximum statistic being 20 and 39 respectively. Thus implies that minor level of variation in attitude towards job by respondent.

Correlation matrix (Kendall)

Variables	Attitude towards job	Attitude towards Org	Service condition	Working conditions	Welfare Measures	Wage & Salary	Worker participation
Attitude towards job	1	0.308	-0.212	0.240	-0.098	-0.089	0.040
Attitude toward Org	0.308	1	-0.228	0.181	0.052	-0.338	-0.143
Service condition	-0.212	-0.228	1	-0.045	0.030	0.211	-0.077
Working conditions	0.240	0.181	-0.045	1	0.403	-0.193	-0.483
Welfare Measures	-0.098	0.052	0.030	0.403	1	-0.016	-0.410
Wage & Salary	-0.089	-0.338	0.211	-0.193	-0.016	1	0.090
Worker participation	0.040	-0.143	-0.077	-0.483	-0.410	0.090	1

Values in bold are different from 0 with a significance level alpha=0.05

It is found that there is positive correlation among variables attitude towards organization and working conditions with worker participation. But -0.212 indicates negative correlation with service conditions along with this on employee retention and on commitment welfare measures & wage & salary have negative impact on significance level alpha 0.05.

**Relation in service condition and attitude towards job
Summary Output**

Regression Statistics	
Multiple R	0.188179
R Square	0.035411
Adjusted R Square	0.023045
Standard Error	9.296546
Observations	80

ANOVA

	df	SS	MS	F	Significance F		
Regression	1	247.4783	247.4783	2.863479	0.094603		
Residual	78	6741.209	86.42576				
Total	79	6988.688					
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>
Intercept	31.61076	6.319585	5.00203	3.42E-06	19.02943	44.19208	19.02943
Att twds job	-0.32619	0.192765	-1.69218	0.094603	-0.70996	0.057572	0.70996



Regression value is 0.18 (lesser than .05) reveals that retention and commitment is positively related to factors concern.

ANOVA test, it is noticed that F value of 2.9 is significant at 5% level of significance. Therefore,

from the result, it can be concluded that with 35% of the variance (R-square) in factors of retention and employee commitment is significant and model is appropriately measure the latent construct.

Summary Output

Regression Statistics	
Multiple R	0.854698
R Square	0.730509
Adjusted R Square	0.717851
Standard Error	12.03776
Observations	80

ANOVA

	df	SS	MS	F	Significance F			
Regression	1	31031.29	31031.29	214.1452	4.5E-24			
Residual	79	11447.71	144.9077					
Total	80	42479						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
att twdOrg	0.622681	0.042551	14.6337	3.35E-24	0.537985	0.707377	0.537985	0.707377

Regression value is 0.85 (greater than .05) reveals that retention and commitment is positively related to factors concern.

ANOVA test, it is noticed that F value of 214 is significant at 5% level of significance. Therefore, from the result, it can be concluded that with 72% of the variance (R-square) in factors of retention and employee commitment is significant and model is appropriately measure the latent construct.

Conclusion

This study finds out that employee retention and organizational commitment in Female Teachers of Private Institutes is based on job satisfaction. It is identified that several variables significantly effect on organizational commitment. Need of the hour is to focus on their work recognition, wages, recent teachers training development programs, excursions, Conferences, Seminars, Child care programs, proper leaves so that parity in employee retention leads to organization commitment .

References

- Badrinarayan, S, and Ramaprasad. "Human Resource Management Practices and Organisational commitment: A Comprehensive Review (2001-2016)." *Prabandhan Indian Journal of Management* 2017, 7-23.
- Bentein, K., F Stinglhamber and C Vandenberghe. "Organization-, Supervisor-, and workgroup-Directed Commitments and Citizenship Behaviours: a Comparison of Models." *European Journal of Work and Organizational Psychology*, vol. 11, no. 3, 2002., pp.341–362.
- Cohen, A. "Multiple Commitments in the Workplace." *Lawrence Erlbaum, Hillsdale, NJ, 2003.*
- Jawahar, I M. and P Hemmasi. "Perceived organizational support for women' advancement and turnover intentions: the mediating role of job and employer satisfaction." *Women in Management Review*, vol. 21, no. 8, 2006, pp.643–661.

- Kavita. "Job Satisfaction as a Mediator between Leader's Emotional Intelligence and Organisational Engagement among Teachers." *OPUS*, pp 1-14.
- Murray, L P, M B Gregoire and R G Downey. "Organizational commitment of management employees in restaurant operations." *Hospitality Research Journal*, 14, 1991, pp.339-348.
- Porter, L W, R. M Steers, R T Mowday & P V Boulian. "Organizational commitment, jobsatisfaction, and turnover among psychiatric technicians." *Journal of Applied Psychology*, 59, 1974, pp.603-609.
- Yousef, D A. "Organizational commitment: A Mediator of the relationships of leadership behavior with job satisfaction and performance in a non-western country." *Journal of Managerial Psychology*, 15(1), 2000, pp.6-24.



Impact of Collaborative Technologies Use in Financial Services Industry

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Abstract

As Organizations are going global and competition is increasing among the industry, it is very useful to collaborate among knowledge workers. In present days' work is demanding more knowledge and timely decision making as in competitive market it is necessary to make riught decision at right time. In this paper the author discusses how collaborative technologies leaves impact on employee at work, specifically in Financial services industry where peer communication and sharing of best practices is essential.

Keywords: Collaborative technology, Peer-to-Peer sharing, Competitiveness, Decision making, Financial services

Introduction

The way the work is performed is changing and becoming nonlinear. Nonaka and Takeuchi (2000) described various activities in their SECI model are more relevant for knowledge workers. Therefore, Collaboration is new buzz of working style in the business. With developments in technology new avenues have emerged for firms that increased the need for sharing of knowledge at intra organizational and inter-organizational level like any firm manufacturing products generally need to enter in partnership with different small and medium scale units to benefit from collective expertise. With this enterprises are becoming virtual and networked with others. As a result of this transformation organizations will have staff in geographically different locations and sharing inter-organizational work processes by using IT systems to perform regular activities. Virtual project teams are prepared by involving person from different countries and cultures to perform on different platforms. Well designing and penetrated collaboration not only help the firms to design world class products but also reduce the time to introduce the product in the market. Mayall and Neal (2004) explained that "collaborative work to involve co-development (e.g. create, edit, review, revise, share), co-ordination (e.g. locate, schedule, conduct), co-decision (e.g. create/analyze a poll, joint decision making) and commitment (e.g. summary, follow-up actions)." The different types of collaborations prevalent in organizational workplace are as follows.



- **E-mail Based** – Using which employees can send & receive messages, they can even filter various messages.
- **Message Based** – Typically instant messaging, social media app, voice mail, short messages.
- **Document Based** – which allow to create new document and sharing it with others.
- **Project Based** – Expertise location, project planning & execution.
- **Learning Based** – like Web/Video conferencing for Collaborative learning.
- **Community Based** – For sharing of knowledge and mentoring the people online, use of various community platforms can be made.
- **Process Based** – To increase the efficiency and helping the workers to work in contemporary environment, various user centric tools can be used by Business. Such tools will help in employees to develop, share and integrate their content online.

Collaborations & Financial Service Industry

For a business in financial service industry, it is important to collaborate with different groups & parties. Typically, financial industry works in following manner- Input, collect, participate of stake holder and Management of services. For example marketing staff requires to collaborate with various other departments to bring out new product into the market. Like to process insurance claims ICICI Prudential collaborate the process of assessing, reviewing, verifying and disbursement by making use of collaborative technologies. As per Dawson (2004) financial planning is the process which require collaboration between planner broker and customer.

As per (Harris, 2004) for a business in financial service industry, it is important to collaborate with different groups and parties. Typically financial industry works in following process-input collect, participate and stake holder views. As an example we can say that marketing staff requires to collaborate with various other departments like to process insurance claims, ICICI prudential collaborate the process of assessor, claim staff, policy holder and legal advisory by making use of collaborative technologies like bulletin boards and video conferencing.

Collaborative Techniques and Knowledge Management

New wave of change in collaborations is shift from intra-organizational use to across organizational usage. The contemporary systems either commercial or research prototypes, are generally network-centric systems. Such systems require established network for operating and allowing to do collaborations amongst employees.

Though large amount of research carried out on Peer to Peer computing and its use, the impact of Peer to Peer on Knowledge Management has not been explored much up till now (Tsui, 2002). To summarize, this technique uses the concept of decentralization to work with KM-related functions. Peer to Peer Knowledge Management can be explained using the following areas:

- **File Sharing and Distributed Content Networks (DCN)** – for using unutilized storage in the network, files are stored in part or full at different locations in Peer to Peer Network. The main advantage of such DCN to reduce time and cost of storing and transferring stored files. It will also reduce the chance of single point failure in the network.
- **Collaboration** – For disperse teams which are functioning from different locations and different time zones, P2P collaboration is becoming the major requirement. Peer to Peer collaboration tools could be utilized for mergers and acquisitions to be managed. For Example, Groove (www.groove.net) a P2P collaboration tool which provides fast deployment and user friendly tools like contact management, project management, instant messaging, and voicechat to build “shared spaces”.
- **Search** – As per (Halepovic and Deters, 2002) search on P2P network is drastic change from Web searches. It search document using P2P network on online peers’ machines, rather than searching through Web using any search engine. In this search document request is moved from one computer to other peers on the (P2P) network. Based on the required material is found or not, the search is processed further to more peers on the



network. P2P search engine required to carry large load in the present network.

Among others, As per (McCue, 2001) Deloitte and Touche used a P2P technology from NextPage to provide content to their auditors. (Hayward, 2001) mentioned that during 2001, Reuters had been using SUN 's P2P computing for supporting its retail brokerage business and JPMorgan Chase had been inquiring regarding the use of P2P KM for collaborative work system. PayPal is using P2P payment system on internet using collaborating techniques.

(Zhuge, 2002) explained that as P2P KM offers benefits and boost knowledge sharing in intra and inter organizational setup but has certain issues in the areas security, system load, control, and privacy while deploying such networks in organizations.

Add-ons with P2P Technology

There are also alliances with different technologies which has implications on formation of collaborations. Such Add-on Technology are divided into three groups as below:

- **Handheld communications devices** – Mobile phones with different OS like Symbians, Blackberries, and Android have capability to collaborate. Nowadays such hand held devices are used for communications, web browsing, video and photo taking, etc. There is no alternate as time passes, such devices will become more powerful with high speed processing and storage. This advancement will enable the workers at dispersed location to collaborate easily.
- **IP Networks** – with innovations in networking and communications technologies, now networks carry voice, data and multimedia through networking devices that support real time communications and collaborative working. Many commercial collaboration tools provide VoIP communications for collaborating employees with each other.
- **Enterprise applications** – Now a days, enterprise applications are coming with integrated add on like Search, taxonomy, instant messaging, e-mail, groupware, etc. As there is not much difference among the

applications from different vendors in the technical and features areas but difference can be found on parameters like local market, support and services, and investments into R & D.

Evolution & Assessment of tools for collaboration

Assessment criteria for better collaborative tools is adapted from (Foti, 2004), who had given list of criteria as mentioned below.

- Use of various forms of networks like Synchronous, Asynchronous networks, etc.
- Integrating portal or collaborating platform with mail
- Maintain Data Repository of search document, routing of document, approval of document and controlling of version, tools for managing taxonomy.
- Network should be either server and client or P2P
- Verifying Security concerns
- Hosting – In House or using third party sources
- Agile deployment – Installation should enable offline use, easy to install/uninstall and handle all ad hoc, intra and inter-organizational collaborations.
- Social Networking, Community Building and Development tools which support the creation and knowledge sharing in online communities
- Managing Personal Information through Blogging and RSS feeds configured by individual users
- Overall collaborative tool support of collaborative culture, work and processes

In older days, collaboration tools were developed by proprietor and require license for systems. But in last five years, due to changes in advancement of technology and standard and also the market pressure have impact on work pattern, decision making. These changes are summarized below:

- **Transition old to new tools** – In late 90s, there were standalone systems only available which offers separate set functionality such as searching, categorizing, creation of discussion space etc. Such systems were not integrated

with other KM-related or collaborative-centric tools on the desktop. Currently collaborative tools are available with features that are commonly available in any enterprise application.

- Intra and inter-organizational collaborations support – Recently available collaboration tools support collaborations across organizational boundaries as well as intra-organizational collaborations. Few critical issues in supporting inter-organizational collaborations are listed as compatibility of the technical infrastructure, adaptability and complexity of the tools being offered, variations in work pattern and group culture.
- **Public collaborative groups:** It can work with the least set-up, these groups are major pool of collaborations over the Internet. Anyone can create a collaborative space with tools like directory for members, management of Document, bulletin board, discussion groups, E-mail and Blogs, etc.; and any interested group may be able to join the group instantly or via approval from a moderator. Example of collaboration group over internet is Yahoo Groups. Another example is Intranets.com, which is a chargeable service. Intranets.com is offering tools like task manager, database manager, discussion forum, document manager etc. One major pitfall of such kind of groups is that third party owns the hosting and the content which may be seen as a restricting factor for organizations to use.
- **Alignment with other enterprise systems** – recent developments in collaborative tools can be linked as APIs (Applications Program Interface) or Web Services-compliant objects. Such linkages are evident in Business Process Management Systems (BPMS) and process portals. In recent years, due to this major consolidations and alliances has taken place between portal, content management, document management and collaboration tool vendors.

Organization work culture is affected with the use of Collaborative tools. The two main factors for this impact are advancement in the technologies

and the approach to implement such tools. In short, collaboration means building trust and relationship among people. People require to relate contextual information and knowledge to one another in order to better work, creating knowledge and building faith collectively.

Collaborative tools leave remarkable impact on future work practices like -

- Improved distribution of task among knowledge based value chain.
- Third party access and input of data & information.
- Enhanced tools for knowledge workers to personalize information sources.
- Leveraging on knowledge helps in timely & quality of decision making.
- Simplification of intermediate steps or dimensions for improved working and work spaces.

Virtual teams at organizations can use collaborative tools to develop relations based on shared goals. This not only help firms to increase work efficiency but better decision making and lower downtime and failure rates in many organizational work areas.

Concluding Remarks

There is no doubt that with the change in competitive mode and change in work culture using the latest techniques and technology. Organizations can dwell on making smart and optimum use of collaborative tools and techniques which not only help in solving their routine problems faster, but also become the base for developing new innovative methods and leading towards better organization work culture. We can see a definite transition to synchronous collaboration at various industries is not yet well accepted. So it is expected that benefits of collaborative technologies can be seized by modifying relationship with buy and sell side with objective of value creation in international business.

References

- Barkai, D. "Technologies for sharing and collaborating on the net." *IEEE*, 2002.
- Bielski, L. "Peer-to-peer technology." *ABA Banking Journal*, June, 2001, pp.56-61.



- Chang, M. "I've gathered a basket of communication and collaboration tools." *Infotoday*, September, 2004, pp.8, 61-64.
- Dawson, R. "Review of the Collaborations in the Financial Services Conference." 2004, 29th September, 2004, URL=<http://www.aht.com.au>
- Foti, R. "The virtual handshake." *PM Network*. March, 2004, pp.28-37.
- Harris, P. "Two new market places for E-Suppliers: Healthcare and Financial Services, Training and Development." January, 2004, pp.38-45.
- Halepovic, H. and Deters, R. "Building a P2P Forum System with JXTA, Proceedings of the Second International Conference on Peer-to-Peer Computing." 2002.
- Hayward, N P. "JPMorgan Chase: Leading through Innovation, presentation at SCOTSOFT." 2001.
- Kontzer, T. "Come Together." *Information Week*. 7th October 2002, pp.34-42.
- O'Brien Coffey, J. "Shared Vision Peer-to-Peer computing promises enhanced productivity and collaboration for bank systems, Banking Systems and Technology." March, 2002, p.32-46.
- O'Donnell, A. "Carrier learns underwriting lessons." *Insurance and Technology*, January, 2003, pp.22.
- TSUI, E. "Tracking the Role and Evolution of Commercial Knowledge Management Software, in Handbook on Knowledge Management (edited by C.W.Holsapple)." *Springer-Verlag, Berlin/Heidelberg*. 2002.
- Zhuge, H. "A knowledge flow model for peer- to-peer team knowledge sharing and management, Expert Systems with Applications." 23, 2002, pp.23-30.

An Empirical Testing of the Efficiency of Black Scholes Models for Pricing Options at Indian Stock Exchanges

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Abstract

The main motive of this research paper is to find the efficiency of the black and Scholes option pricing model for predicting the option prices at Indian stock exchanges for which Data set from Indian stock exchanges will be chosen, market price of option contracts are considered as sample for the year 2008-2013. Black and scholes model was developed for valuing the options in derivatives market in the year 1973.this model became the prime tool for pricing options but because of its deficiencies it forced researchers to find out new model for pricing options (Rubinstein, 1985; Hull and White, 1987; Wiggins, 1987; Dumas, Fleming and Whaley, 1998). Option pricing is proven to be very challenging task during high volatility situations where black and Scholes option pricing model is not proven a successful predictor for determining approximate price of the options. Even empirical evidences support that black and Scholes model produces some biasness in estimating the prices. Keeping all these factors in mind this paper evaluates the extent of appropriateness of Black and Scholes models for determining option prices at Indian stock exchanges. This paper checks out how does black and Scholes model work for predicting prices at Indian stock exchanges.

Keywords: Options, Derivatives, Black and Scholes, Stock Exchanges, Market Price, Model

Introduction

The main motive of this research paper is to find the efficiency of the black and scholes option pricing model for predicting the option prices at Indian stock exchanges for which Data set from Indian stock exchanges will be chosen, market price of option contracts are considered as sample for the year 2008-2013. That actual market price will be compared with the price derived with the help of Black and scholes formula.Black and Scholes model is developed under the concepts of financial derivatives; financial derivatives are more dependent on the usage of financial mathematics. Black and schools model was developed for valuing the options in derivatives market in the year 1973.this model became the prime tool for pricing options but because of its deficiencies it forced researchers to find out new model for pricing options (Rubinstein, 1985; Hull and White, 1987; Wiggins, 1987; Dumas, Fleming and Whaley, 1998). Over the years few attempts were made to find out the efficiency of Black and Scholes option pricing model for valuing options contracts.



Generally, the empirical evidence on the same studies found that Black and Scholes model misprices the options to the extent and volatilities are high for in the money options especially. The major problems which are found in Black and Scholes formula for these volatilities are due to its dependence on few assumptions, for deriving the theory concept is depended on few assumptions which may or may not necessary be true all the times. Option pricing is proven to be very challenging task during high volatility situations where black and Scholes option pricing model is not proven a successful predictor for determining approximate price of the options. Even empirical evidences support that black and Scholes model produces some biasness in estimating the prices. Keeping all these factors in mind this paper evaluates the extent of appropriateness of Black and Scholes models for determining option prices at Indian stock exchanges. This paper checks out how does black and Scholes model work for predicting prices at Indian stock exchanges.

Literature Review

The developer of Black and Scholes model themselves tested the efficiency of the model in the year 1972 using the over the counter market's data and found that the result of formula gives a lower value than the actual market data.

Merton (1973) used stochastic time depended on rate instead of interest rate for option pricing to develop a model which can better estimate the price by real data and extended the Black and scholes formula and showed that that the basic form of model was the same if the payment structure was increase or lifted, the interest rate is stochastic and the option is exercisable prior to maturity.

Merton, Cox and Ross (1975) wanted to examine option pricing when stock price dynamics included the possibility of non local changes and found that if the return on ordinary stock do not follow a stochastic process with a continuous path, the hedging mechanism used by black and scholes will not be suitable. Mac-Beth and Merville (1979) found obscure volatilities from the Black-Scholes European call option pricing model and concluded obscure volatilities for out-of-the-money call options are lesser compared to implied volatilities derived from

at-the-money call options. Their finding highlighted implied volatilities for in-the-money call options are more compared to at-the-money call options. MacBeth and Merville supposed that at-the money options are properly priced with the Black-Scholes model However, their findings are depended on the soundness of obscure volatilities recovered from the Black-Scholes European option pricing model.

Gali (1977) used the data of Chicago Board Option Exchange to test the efficiency of black and scholes model and found that additional daily returns on hedged portfolio are varying from zero and transaction cost eliminates the excessive positive return.

Bhattacharaya (1980) analyzed the one-day-before out-of-sample performance of the stochastic volatility model of Heston (SVH) in the Indian markets. He also wanted to compare the ex-ante performance of the SVH with Two-Scale-Realized-Volatility (TSRV)-based on Black-Scholes model (BS) using the liquidity-weighted performance metrics for which he used tick by tick CNX nifty data tested Black and Scholes model and found the over valuation of model for at the money options, opposite to that near the money options were undervalued.

Geske, Roll and Shastri (1983) wanted to compare American and European call option price on OTC market and found that the reason behind the formula value and actual market price is due to dividend protection in the OTC market performing research work on OTC protected American options.

Ramazan Gencay and Aslihan Salih(2003) compare the Black-Scholes model against the Feed forward Networks Model using S&P 500 option Index data from January1998 to December 1993. They suggest that the Black-Scholes Model exhibits pricing error at several occasions especially for the deeper out-of-the money options compare to the near out-of-the-money options and this pricing error worsens with increased in volatility. Hence, Feedforward networks provide less pricing error as compare to the Black-Scholes model for the deeper out-of-money options.

S. McKenzie, D. Gerace and Z. Subedar(2007) tried to find out the effectiveness of the black and scholes formula on Australian stock exchange's 200 options by sole parameter estimates of factors

in black and scholes, they wanted to evaluate the likelihood of exchange-traded European call option getting exercised and found the model relatively accurate in pricing options.

Sarbapriya Ray(2012) tried to conceptually examine the practicability of Black and Schole’s assumptions by conceptual paper and found that Black and scholes model is lacking in few assumptions and more relevant and practical assumptions should be made to derive proper option price.

Matloob Ullah Khan, Ambrish Gupta and Sadaf Siraj (2013) with objective of incorporating modifications in black and scholes option’s pricing model, performing analysis on NSE Derivative market’s stock, suggested few modifications in Black and scholes model on the grounds of risk-free rate assumptions. They also recommended some modification on the assumption of risk free interest rate in Black and Scholes formula.

Rachna Aggarwal and Rajesh Kumar (2013) performed analysis on S&P CNX Nifty options on stock of 15 companies for investigating the efficiency of Black and scholes option pricing model and found that out-of-the-options are under-priced by this model in the Indian option market. In-the-money options are generally overpriced by this model.

Vipul Kumar Singh (2013) compared the results choosing Nifty option contract securities as data set for comparing black and scholes performance with the other models for deriving option prices using excel vba and found that black and scholes model is the model producing the highest pricing errors.

Jaakko Salminen(2015) attempted to compare black and scholes model with two other advanced models for valuing options using DAX index call options traded on EUREX derivative exchange as sample and found that other models were quite efficient in predicting the option price compared to black and scholes formula.

Matthew J. Krznaric(2016) using S&P 500 data performed R analysis in order to assess the effectiveness of Black and Scholes model for pricing options and found that black and scholes model is not too accurate model to predict the actual option prices.

Data Analysis

For each data set approximated underlying stock price and option price are calculated according to average of last bid and ask quotes. The risk-free rate is collected from 91-day government’s treasury bills rate mentioned during the issue date of the option. Researchers acknowledge biasness unavoidable in volatility estimation. For ensuring healthiness in findings three dissimilar procedures of volatility parameters are: historical instantaneous (v1) actual instantaneous (v2) and implied volatility (v3). The instantaneous procedures are derivative of standard deviation of the underlying stock returns;

Standard deviation of the stock returns (basic);

$$\sigma = \sqrt{\frac{1}{n-1} \sum_{i=1}^n (u_i - \bar{u})^2} \tag{1}$$

In above equation \bar{u} is taken as sample mean known as

$$\bar{u} = \frac{1}{n} \sum_{j=1}^n u_j \tag{2}$$

Annual factor h is presented by the yearly amount of trading days on the Indian stock exchanges, so h is equal to 252.

$$\sigma_{an} = \sigma * h \tag{3}$$

The obscure volatility is figure of σ when replaced into Black Scholes model equalises the price of the option to the experiential spot price.

$$C = S_0 N(d_1) - Ke^{-RT} N(d_2) \tag{4}$$

$$d_1 = \frac{\ln(S_0/K) + (RF + \sigma^2/2)T}{\sigma\sqrt{T}} \tag{5}$$

$$d_2 = \frac{\ln(S_0/K) + (RF - \sigma^2/2)T}{\sigma\sqrt{T}} \tag{6}$$

It is not practical to reverse the Black-Scholes formula so as σ is uttered as a function of S_0 , K , T , RF and C . A root result method is implemented to compute implied volatility.

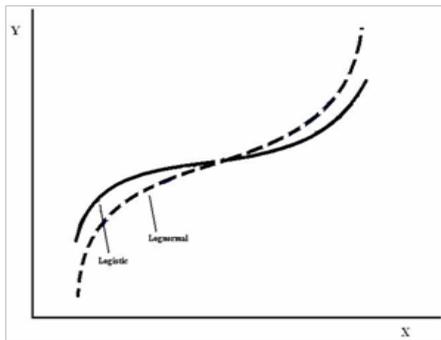
Model

Research paper focuses on log distribution that will increase tail properties of lognormal distribution. The same distribution was implemented in research by Draper and Smith (1981) and Aparico and Estrada (2001).

Logistic and lognormal distributions are same but their base for different significance level differs. Logistic distribution's fatter tails suggest that provisional probability comes 0 and 1 at slower rate than lognormal distribution.

In logistic distribution predicted likelihood of option being exercised at expiry is lower than lognormal distribution at levels more than 50% and lower at levels less than 50%.

Figure-1 Logistic and lognormal distributions



Study of the paper is represented in twofold form where Y is Bernoulli variable. If the option is exercised at the end, Y is 1 and when it is not exercised Y is 0. This paper uses regression logit and probit models to examine mathematical significance of Black and Scholes model with Indian stock exchange observation.

$Y = 1$ if the option gets exercised at expiration and 0 if it is not exercised;

P_i is the probability that option will be exercised at the end. Y is binary dependent variable; Φ is cumulative lognormal distribution function; B_i is coefficient regressor.

The models discussed above distribute P_i into two mechanisms; problematic part that can be attributed by the error term and other difficulty free part which is not attributed to the error term. The second step includes the difficulty free part to predict the level of β_1 . The level of β_1 checks the statistical importance of individual regression model. Specifications of second step least squares model;

$$R_{i,t} = \beta_0 + \beta_1 P_i + \epsilon_{i,t-1} \quad (11)$$

Is forecasted probability from individual model $R_{i,t}$, t is chosen as lagged return on the stock I at time t-1. And B_1 is taken as coefficient of -1 the regressor. Results

Logit and probit models show if call option got exercised then $Y=1$ and if it didn't, $Y=0$. The independent variables considered in model are factors used in Black and Scholes option pricing formula.

The results are represented in 1st and 2nd table. The second step least squares are included in 3rd table. SAS software is used to estimate regression.

Maximum likelihood method is used for logit model, so standard errors are asymptotic. Z statistics is used to test the level of significance for the coefficient.

The predicted model is highly significant at 1% level by related p values. The McFadden R^2 lies among 0.184 (column 1 and 2) to 0.730 (column 3) highlighting that 72-73% options exercised on Indian stock exchanges were predicted accurately by the logit model.

Each slope of coefficient included in the model is partial slope coefficient and mentions variation in predicted logit model for single element of variation in the value of known regressor. The coefficient in 1st regression assumes in table number 5-1 of 0.745 suggesting that if S_0 increases by a single unit, logit model increases by 7.475 units, indicating positive relationship between two keeping other variables constant.



Table-1 Logit Model

LR is ratio of degrees of freedom at 5.

Explanatory Variables	(1)	(2)	(3)
Intercept	-5.3134*	-4.8813*	-5.4564*
	(2.7269)	(3.2856)	(4.3876)
Spot Price	0.5465***	0.6515***	0.6532***
	(0.3102)	(0.3105)	(0.2543)
Strike Price	-0.6054***	-0.6512***	-0.7212***
	(0.2100)	(0.2000)	(0.1877)
Time to maturity	2.6599***	1.7937***	1.7090***
	(0.5212)	(0.5057)	(0.6657)
Risk free rate	105.2511**	104.0389**	104.7095**
	(67.7295)	(65.3295)	(67.653)
Volatility 1	0.0564	-	-
	(0.3751)	-	-
Volatility 2	-	0.3872	-
	-	(0.6412)	-
Volatility 3	-	-	0.5072
	-	-	(2.0325)
LR statistic (5 df)	34.566	33.546	35.502
p-value	0.000	0.000	0.000
McFadden R ²	0.198	0.195	0.195
Count R ²	0.826	0.826	0.812
Sample size	160	160	160

Table number 5-1 suggests that other regressors except for option strike price (K) experienced positive effect on logit model, suggesting that all variables are major. The intercept and risk-free interest rate factors are impacting at 10% level, all remaining variables other than volatility measures have impact at 1% level. Every volatility measure (V1,V2 and V3) are not worth mentioning indicating that volatility does not have effect on probability of a European call option being exercised at maturity on Indian stock exchanges. Though combined all regressors have major effect over predicted probability; LR statistic of individual equation is among 33.546 and 35.502 and p-values < 0.0001.

Each of slope coefficient in probit is a partial slope coefficient and tests variation inside predicted probit model for single variation in amount of regressor. SO coefficient in 1st regression approximation in table 5-2 of 0.4191 means, if S0 rises by one unit average probit model rises by 4.191 units, indicating positive relationship between both of them. Probit and logit model are same but predicted coefficients are not similar in both the models.



Table-2 Probit Model

Explanatory Variables	(1)	(2)	(3)
Intercept	-3.1260*	-3.2085*	-1.0781*
	(2.5245)	(2.6825)	(2.3275)
Spot Price	0.5120***	0.5245***	0.5102***
	(0.1287)	(0.1100)	(0.1875)
Strike Price	-0.4950***	-0.4200***	-0.4100***
	(0.1450)	(0.1245)	(0.1100)
Time to maturity	1.3500***	1.341***	1.1685***
	(0.3542)	(0.3215)	(0.3698)
Risk free rate	67.9765**	65.7865**	64.8954**
	(40.6876)	(38.8451)	(37.4586)
Volatility 1	0.0518	-	-
	(0.2524)	-	-
Volatility 2	-	0.2371	-
	-	(0.4247)	-
Volatility 3	-	-	0.2761
	-	-	(0.5145)
LR statistic (5 df)	34.406	31.413	34.300
p-value	0.00	0.00	0.00
McFadden R ²	0.165	0.165	0.158
Count R ²	0.742	0.748	0.747
Sample size	160	160	160

Predicted model here too is highly significant at 1% level using related p-values. The McFadden R² falls between 0.158 and 0.165 mentioned in column 1 and three respectively suggesting that 71-72% options exercised on Indian Stock exchanges were predicted correctly by probit model.

Table 5-2 highlights positive impact of regressors on probit model excluding strike price (K), indicating economic significance of coefficients. intercept and risk free rate are important at 10% level and remaining variables are significant at 1% level. Each

volatility measure is not significant. Whereas jointly all variables have a noteworthy effect on the model.

Observing between logit and probit variables, study of data for all equation in table 5-5 and 5-6 had been necessary. LR data for individual model shows that logistic model displays superior LR numbers compared to probit model equation. The same results were found under research results of Duan (1999) that Black and Scholes model prepares accurate outcome when tail properties of distribution are enlarged.

Table-3 Second Stage Least Squares



	Volatility 1		Volatility 2		V3
	φ	F	φ	F	φ
Intercept	-0.0323***	-0.0304***	-0.0285***	-0.0274***	-0.0323***
	(0.0095)	(0.0251)	(0.0094)	(0.0110)	(0.0251)
P	0.0320***	0.0285***	0.0265***	0.0261***	0.0261***

	(0.0120)	(0.0111)	(0.0114)	(0.0142)	(0.0121)
R2	-0.0045	-0.0048	-0.003	-0.003	-0.0047
	(0.0054)	(0.0054)	(0.0054)	(0.0054)	(0.0054)
Obs.	160	160	160	160	160

The level of B1 checks worth of individual regression model. Analysis of significance for B1 for every regression model is at 1% level. Economical importance of B1 is highlighted with the sign of coefficient that is positive suggesting direct relationship between return of underlying stock and expected value of Pi.

Conclusion

Data analysis in paper suggests Black and Scholes model is accurate. Comparison of regression models gives conclusion that Black and Scholes model is noteworthy at 1% level during prediction of probability of option being exercised. Every variable of regression model is significant. Whereas individually volatility variable is relatively less significant, suggesting volatility measures are unrelated in predicting likelihood of option getting exercised. Qualitative regression models indicate significance of Black and Scholes model with logistic distribution over lognormal distribution. Using Jump diffusion anomaly raises tail property for lognormal distribution, consequently rising importance of Black and Scholes model.

References

Bick, A. (1987), On the Consistency of the Black-Scholes Model with a General Equilibrium Framework, *Journal of Financial and Quantitative Analysis* 22, 259-275.

Black, F. (1976). Fact of fantasy in the use of options. *Financial analysis journal*, 31, 36-41, 61-72.

Black, F., and Scholes, M. (1972). The valuation of option contracts in a test of market efficiency. *Journal of finance*, 27(3), 399-417

Black, Fischer and Myron Scholes. 1973. "The Pricing of Options and Corporate Liabilities." *Journal of Political Economy*, vol. 81 (May-June), pp. 637-54.

Black-Scholes Option pricing Model, *IME Journal*, 6(1), 19-26.

David Backus, S. F. (2014). Accounting for Biases in Black-Scholes.

Elliott, W. D. (2015). Analyzing Options Market Toxicity and the Black-Scholes Formula in the Presence of Jump Diffusion. *Undergraduate Economic Review* , 1-23.

Khan, M.U., Gupta, A., Siraj, S., Ravichandran, N. (2012), Derivation and Suggested Modification In

Krznaric, M. J. (2016). Comparison of Option Price from Black-Scholes Model to Actual Values. *Honors Research Projects* , 1-21.

Kumar, R. A. (n.d.). Determining the Efficiency of Black-Scholes Model for Pricing Option Quotes on NSE in INDIA.

Lauterbach, B. (1990). An empirical study of black and scholes model and its alternatives. *Journal of Finance* , 1181-1209.

Mac-Beth, J.D., Merville, L.J. (1979), An Empirical Examination of the Black-Scholes Call Option

Matloob Ullah Khan, A. G. (2013). Empirical Testing of Modified Black-Scholes Option Pricing Model. *International Journal of Economics and Financial Issues* , 87-98.

Pricing Model, *Journal of Finance*, 34, 1173-1186.

Ray, D. (2012). A Close Look into Black-Scholes Option Pricing Model. *Journal of Science* , 172-178.

S. McKenzie, D. G. (2007). An empirical investigation of the Black-Scholes model: evidence from the Australian Stock exchange. *Australasian Accounting Business and Finance Journal* , 71-82.

Salih, R. G. (2003). Degree of Mispricing with the Black-Scholes Model and. *ANNALS OF ECONOMICS AND FINANCE* , 73-101.

Singh, V. K. (2013). Empirical Performance of Option Pricing Models: Evidence from India. *International Journal of Economics and Finance* , 141-154.



Yujie Cui, B. Y. (2012). The Simulation of European Call Options' Sensitivity Based on Black-Scholes Option Formula. *Journal of Mathematical Finance* , 264-268.

Web Sites

<https://www.coursehero.com/file/31630189/TQM-Assignment-0880948docx/>

<https://ideas.repec.org/p/hhs/eijswp/0210.html>

<http://iiste.org/Journals/index.php/EJBM/article/download/40352/41499>

<https://thebulletin.org/2018/02/now-more-than-ever-is-the-time-for-creative-diplomacy/>

<https://ideas.repec.org/p/hhs/eijswp/0210.html>

<https://link.springer.com/content/pdf/bbm%3A978-3-322-93484-0/1.pdf>

<https://www.questia.com/library/journal/1P3-1427035241/an-empirical-investigation-of-the-black-scholes-model>

Perception and Awareness of Menstrual Cups

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Abstract

There is a general culture of silence surrounding all aspects of menstruation. This silence is exacerbated by taboos and myths that perpetuate practices that women and girls believe and how they manage their menstruation from personal hygiene to the cleaning and disposal of used materials. There are various issues and concerns which are emerging due to many diseases which are spreading due to improper hygiene management. Menstrual Cup is one of the available menstruation management product which hasn't received much light. Menstrual cup is inserted into vagina to collect menstrual fluid. The product has evolved since 1830s in aspects of features, materials and size, and if we talk about the Indian society which associates many customs and rituals towards menstruation, the acceptability of menstrual cup has many challenges. Researcher compared the menstrual cup with the most used menstruation management product Sanitary napkins, then benefits way more on the side on cup. The cup if brought of the premium quality cost about NRI 1200-1500, which can be used up-to minimum 3 years depending upon the brand you choose. The sanitary napkins approximately yearly cost is NRI 1500-2000. If we consider the ecological part, menstrual cups can easily be degraded in environment. The challenge is more on solving the concerns before using the product. This study tries to cover that aspect and also study the major concerns towards acceptance. The author thanks research students Khushboo Ravalani and Rajan Trivedi for researching this topic and helping in collecting the data.

Introduction

Menstrual hygiene management is an important part of every woman's life. It covers different aspects in it such as using different menstrual management products, the process of buying them, washing them and disposing them off. The objective of this research paper is to find out the awareness and perceptions of women regarding one such product i.e. Menstrual Cups.

Menstrual cups have been around in the market since 1932 when they were first patented in USA. Since then, the product has undergone numerous changes and improvements to arrive at the current design. There has been research regarding its usage, advantages it presents and the dangers associated with it across various countries of the world spanning several continents. However, what's surprising is that despite being studied and researched so thoroughly, it has failed to garner the attention of the market and women as a whole on a level comparable to other menstrual hygiene management products such as sanitary pads and tampons. This research is a small effort to find the underlying reasons for this gap.

Researcher has adopted a two pronged approach to achieve the objective. First, researcher conducted focus group discussion to introduce the product. Second, researcher met medical experts working in the field of women and interviewed them.



Theoretical Framework: Conceptual Roots

Many cultures have beliefs, myths and taboos relating to menstruation. Almost always, there are social norms or unwritten rules and practices about managing menstruation and interacting with menstruating women. Some of these are helpful but others have potentially harmful implications. Cultural norms and religious taboos on menstruation are often compounded by traditional associations with evil spirits, shame and embarrassment surrounding sexual reproduction. For example, in Tanzania, some believe that if a menstrual cloth is seen by others, the owner of the cloth may be cursed.

Most striking is the restricted control which many women and girls have over their mobility and behaviour due to their ‘impurity’ during menstruation, including the myths, misconceptions, superstitions and (cultural and/or religious) taboos concerning menstrual blood and menstrual hygiene.



Figure Restrictions during the time of Menstruation in Asian countries

The figure above gives detailed examples of these restrictions in several Asian countries. Similar restrictions are practiced in other countries around the world. Having said this, it is important to recognize the potential for intra-cultural variations in the interpretation of meanings of menstruation, and how ‘taboos’ may in fact serve the interests of women, even if at first glance they appear to be negative. For example, women may appreciate the ‘banishment’ to menstrual huts as they are given a rest period from the normal intensity of daily chores. Remarkable is also that the education by parents concerning reproductive health, sexuality and all related issues is considered almost everywhere as a “no-go” area.

It appears that in much of Asia and Sub-Saharan Africa, girls’ level of knowledge and understanding of puberty, menstruation and reproductive health are very low.

Literature Review

Awareness, perception and practices of government pre-university adolescent girls regarding menstruation in Mysore city, India (Kusuma M. L., Mansoor Ahmed) A cross sectional study was conducted among 1500 adolescent girls selected by using proportional stratified sampling technique. Direct interview method was used to collect the data. Only 22.33% had awareness about menstrual cycle before attaining the menarche and only 54% were using sanitary pads. Thus we can say that there is a substantial lack of knowledge and perception among the girls.

Perception, Knowledge and Practices Regarding Menstruation among School Going Girls in Karaikal (PagadpallySrinivas) It was a prospective study done on 1000 adolescent school going girls from June 2011 to June 2013 studying in government, aided and private schools. A pre designed questionnaire was given to the students to know their knowledge, perception and practices regarding menstruation. Majority of the girls attained menarche at age 13years. Most of them were told about menstruation by their mothers. Anger, fear, cry and irritation were the major emotional reaction experienced by girls. Majority of the girls are isolated in the home and treated differently during menstruation. Problems regarding menstruation is usually discussed with mothers. Majority of the girls were using sanitary pads, and menstrual hygiene maintained was good.

Perceptions, practices and problems pertaining to menstruation among adolescent girls of rural field practice area of M.S. Ramaiah medical college, Bangalore (GS Vidya, K Lalitha, T Hemanth, NS Murthy, S Pruthvish) This cross-sectional study was undertaken during the period July 2011 to August 2011 in the Kaiwara Primary Health Centre (PHC) area which is the rural field practice area of Department of Community Medicine of M.S. Ramaiah Medical College, Bangalore. The study found that Majority of the girls were scared during first menstruation and felt that menstruation is discharge of bad blood.

Educational campaigns should be conducted in the rural schools to remove the false perceptions. Gap exists between perception and practices pertaining to absorbent to be used during menstruation which emphasizes the need to provide free sanitary napkins to adolescent girls in rural areas. The literacy status of the mother is associated with safe perceptions regarding absorbent to be used during menstruation. This strengthens the need to improve the literacy status by decreasing the school dropout rate among rural school girls and the need to address the school drop outs.

Awareness of adolescent girls regarding menstruation and practices during menstrual cycle (Tarhane and Kasulkar) A questionnaire based prospective cross-sectional study was carried out in N.K.P. Salve Institute of Medical Sciences and Lata Mangeshkar Hospital, Nagpur in 100 female adolescent girls (age group 12-18 years). We concluded that the proper menstrual hygiene and correct perception can protect women from suffering. Before bringing any change in menstrual practices, girls should be educated about the facts of menstruation, physiological implication, about the significance of menstruation and development of secondary sexual characters, and above all about proper hygienic practices and selection of disposable sanitary menstrual absorbent.

Menstrual Hygiene: Knowledge and Practice among Adolescent School Girls of Saoner, Nagpur District (Subhash B. Thakre, Sushama S. Thakre, Monica Reddy, Nidhi Rathi, Ketaki Pathak, Suresh Ughade) A community based, cross sectional study was conducted in January- March, 2011 on 387 school going girls. The present study was undertaken among adolescent school going girls. It can be said that among the adolescent school girls in both urban and rural areas, the knowledge on menstruation is poor and the practices are often not optimal for proper hygiene. Menstrual hygiene is an issue that needs to be addressed at all levels. A variety of factors are known to affect menstrual behaviours, the most influential ones being economic status and residential status (urban and rural). Awareness regarding the need for information on healthy menstrual practices is very important. It is essential to design a mechanism to address and for the access of healthy menstrual practices.

Menstrual hygiene management among adolescent girls in India: a systematic review and meta-analysis (Anna Maria van Eijk, M Sivakami, Mamita Bora Thakkar, Ashley Bauman, Kayla F Laserson, Susanne Coates, Penelope A Phillips-Howard) This systematic review and meta-analysis examined all papers published between 2000 and 2015, to assess the status of MHM among adolescent girls in India to determine unmet and priority needs, and to develop a package of interventions for schoolgirls. Data from 138 studies involving 193 subpopulations and 97070 girls were extracted. In 88 studies, half of the girls reported being informed prior to menarche. Commercial pad use was more common among urban than rural girls. A quarter reported missing school during periods. A lower prevalence of absenteeism was associated with higher commercial pad use. Thus, Strengthening of MHM programmes in India is needed. Education on awareness, access to hygienic absorbents and disposal of MHM items need to be addressed.

Menstruation, Sanitary Products and School Attendance: Evidence from a Randomized Evaluation (Emily Oster, Rebecca Thornton) Policy-makers have cited menstruation and lack of sanitary products as barriers to girls' schooling. This research evaluates these claims using a randomized evaluation of sanitary products provision to girls in Nepal. They report two findings. First, menstruation has a very small impact on school attendance: we estimate that girls miss a total of 0.4 days in a 180-day school year. Second, improved sanitary technology has no effect on reducing this (small) gap: girls who randomly received sanitary products were no less likely to miss school during their period. Hence it can be rejected (at the 1% level) the claim that better menstruation products close the attendance gap.

Attitudes towards, and acceptability of, menstrual cups as a method for managing menstruation: Experiences of women and schoolgirls in Nairobi, Kenya. The study used quantitative and qualitative methods to collect data at baseline before the use of the menstrual cup, and at end-line after four months of use of the menstrual cup. These findings on the use of menstrual cups among adolescent girls and women bring closer the efforts to promote the realization of reproductive health and rights in



Kenya. As information and acceptability of the menstrual cup become more widespread nationally, distribution methods that could be considered include social marketing and distribution through youth-friendly services to offer proper guidance on its use and uptake. Other interventions include the provision of information on menstrual flow management, production and distribution of cheaper menstrual flow commodities and guidance and counseling programs for young girls. Menstrual flow management, production and distribution of cheaper menstrual flow commodities and guidance and counseling programs for young girls.

Research Methodology

The data collection and analysis is done into two sections, which help us to evaluate the implications of research in descriptive form. These are three sections:

Focus Group Discussion – A focus group discussion is conducted among 18 candidates to introduce the product (i.e. menstrual cup) as majorly women are unaware about this menstruation management product. The perception developed statements are considered and used for further research of product usage.

Expert Opinion – The research design used is exploratory as there are very less research done on the adaptability and efficacy of product, expert opinion was collected from 2 gynecologists for understanding the product more deeply as it includes various health implications and product has concept of inserting in the vagina, which requires concept clearing and understanding before trial.

Menstrual Cup is not a new product it is almost similar to the inserting of tampons in the vagina but are made with different concept where the menstrual fluid gets collected in the cup and can removed washed and wore again. The product hasn't received much awareness so initially before going for trial of the products. The product was introduced. The Focus Group Discussion was done among 18 respondents. There was only one respondent who was aware and had used the cup.

The Focus group was conducted for 25-30 minutes, initially 10 minutes the various menstruation management products were discussed

both traditional and conventional methods. The concept of menstrual cup was explained by showing the pictures of cup and insertion of the cup in the vagina on projector. The basic question faced as moderate was, "Why should we shift to menstrual cups?"



Figure Focus Group Discussion conducted in B.K School of Business Management

The benefits of the menstrual cup were explained also the various health complications and infections occurred due to not changing pads and tampons in the prescribed time period. Comparatively the menstrual cup might be a better alternative. After discussing the pros and cons of different menstruation management products.

We asked for, "After getting aware about the product, how many are ready to use it?"

The following questions/statements were received:

"Is this Menstrual Cup approved by the FDA?"

"The person has inserted the cup, and what if the cup gets full with menstrual fluid, the person is not aware, then what is the indication?"

"The company manufacturing this product, if can find out this indication the it can be helpful to accept."

"The micro bacteria can attach while washing the menstrual cup with tap water."

"What if hot water is not available due to some reason, then the bacteria will get attached."

"There is better alternative like muslin cloth, which can be washed and that won't harm the uterus."

"The concern is inserting part, as sanitary pad is easy and convenient where the menstrual cup seems larger which doesn't make us feel that it would be easy to insert."

"Once we start using it, then we will get comfortable with the process of menstrual cup."

After having one to group discussion for 15-20 minutes on menstrual cups, out of 18 respondents 8 were ready to try the product for their next cycle.

Expert Opinion

After collecting the underlying perception regarding the product through focus group discussion and various medical concerned raised, we collected expert opinion on the product from two gynecologist of Ahmedabad city, before studying the trial phase. These two experts were approached and following are the statements received on 15-20 minutes' interactive session.

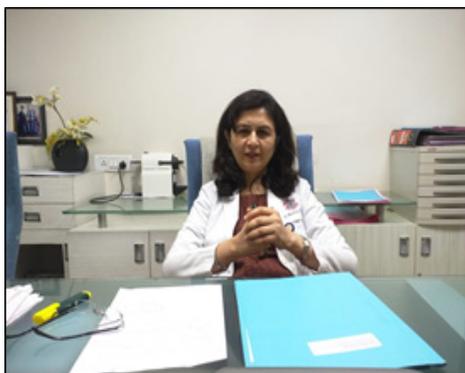


Figure Dr. MeenaJhala

Dr. MeenaJhala, MD, DGO, Mayflower Women's Hospital, Ahmedabad

The interview started with introducing the subject to be discussed : awareness and perception of Menstrual Cups considering Indian Society.

She started off by saying that mostly it is due to the lack of awareness that people do not know about such an effective product. She added that it may also be due to the shape of the product which is perceived that it can hurt the walls of the vagina.

When asked about the health complications, she said that there are no such complications. She went on to add that silicon is an inert material and it is used in different vaginal and uterus related surgeries for a longer time without any problems.

Our next question was regarding Tampons and the Toxic Shock Syndrome associated with its use. She said that sometimes the tampons absorb more than the flow which changes the pH of the internal vaginal cavity. This results in flora and fauna changes which lead to infection. When asked if the same can happen with a menstrual cup, she said that it's just a device that fits the vaginal cavity and hence there is no chance of such an issue happening.

When asked that if the repetitive usage of Menstrual Cups over the lifetime can loosen up the vaginal walls, she replied in negative and went on to add that it's a muscular cavity and the size of cup is too small to do any lasting change unless and until it is done very forcefully by someone else.

She said that there is a chance that usage of menstrual cups can lead to breaking of the hymen in unmarried girls but she also added that the same can happen by the usage of tampons also.

When asked what were her overall reviews regarding the product, she said it's a very good option and can help reduce the waste disposal problems of a country like India which is generated in huge amounts due to usage of sanitary pads and tampons.

Lastly we asked her if she recommend it to any of her patients, she told that patient should first have awareness and knowledge from non-medical sources. Once they will know about it, then they will come and ask as in the case of Copper-T.

Dr. Bela T. Patel Gynaecologist, Medical Officer at Urban Health Care, Ahmedabad

The discussion started regarding the menstruation and its management, women tend to menstruate from 50 ml to 350 ml during their menstruation depending upon their body hormones. It is ideal to change sanitary napkin in every 3-5 hours if convenient circumstances permit.

The recommendation for changing the sanitary or any menstruation product is because the menstrual fluid contains a lot many bacteria that can easily get to the body, this can contaminate the vagina and the uterus as well because of the close proximity in the body. This can lead to irritation and rashes, infection in uterus.

There are various problems of disposing of the sanitary napkins, she accepted the fact that women are disposing of in unconventional ways also in flushing in toilets thus problem is there. Menstrual is better product, but the acceptance depends upon the individual, the research is still going it might happen in future that some infection there might be from it but it can't be said now. Talking about the comparison with tampons as it has same inserting concept, she added people have used but there are many cases of infections from tampons, where



menstrual cup up till now research is on, as such menstrual cup insertion won't lose up the vagina. But there would be inserting problem for unmarried women because of membrane is tight.

The possibility of TSS is very less in case of menstrual cup as we have seen in tampons. We see major health complications or diseases because of the improper menstruation management because Indian women tend have low hemoglobin comparatively in whole world so the cases are here more. Plus, the spreading of the diseases depending upon the resistance level of the body. So we have seen common seen in today's generation we have less outdoor activities and eat habits they have also increased the possibilities.

After studying the perceptions of the participants and getting the insights of product from the experts. 8 respondents were willing to try the product. Figure 14 shows the brand of menstrual cup given for trail.



Figure Dr. Bela T.



Figure Brand of Menstrual Cup used for trail

Characteristics of Sample

Focus Group Discussion – The sample of 18 respondents (i.e. women) was taken from deriving from age of 21-40, having regular menstruation and

are aware of commercially available menstruation management products.

Conclusion

Menstrual cup can be a good alternative for menstruation management if considered the positive points associated with it. The product is appropriately designed and is save to use as the opinion of the experts. As any new product in the market it requires awareness, to be spread among the consumer, for trail. Menstruation management is important aspect to be touched upon, when we have modernized our thoughts and clothes then we should shift to better products also for betterment of society and ourselves. The menstrual cups are not only better in terms of usage but can be easily disposed of by burning and converting it into ashes or giving to recycle in any recycle stores or outlet. The gap of awareness will take time to fill as the product requires education and training, as there can be various misconceptions that might be created while viewing the product. This study showed that there is awareness of the product because of various social media platforms that have played a major role of sourcing and educating people but that much percentage has not seen in the acceptance or usability of the product. A women menstruating and is comfortable with any product she uses, won't think of shifting until and unless there is some problem been created by existing. As, the first step of Consumer Decision Making Model there has to be need recognition or problem to generate the stimulus. The product overall holds a huge potential in terms of marketability and acceptance, even by women shifting towards these products can lead to decrease in the diseases as well the ecological benefits it gives.

Managerial Implications

Menstrual Cups as a product have a very huge potential in the Menstrual Hygiene Management landscape. The product has no sincere health implications and is very economical especially in a country like India where majority of the people cannot afford the sanitary pads sold by the MNC's. As a result, they have to resort to using cloth pads or other such cheaper alternatives which can increase chances of infection. This can over time render them infertile to bear a child. Menstrual cups can

be a feasible and cheap option for the economically weaker section for the society.

In addition to that, the materials used in pads and tampons are not environmentally friendly and thus it generates a billion tons of solid waste every year. India, already is facing challenges in the disposal of huge solid waste generated due to the lack of proper infrastructure. Thus such products can also help solve such issues.

Moreover, the taboos associated with menstruation prevents girls, especially in rural areas about openly discussing, using, washing and disposing off the products like pads and tampons. Menstrual cups can help solve such social issues as well.

Thus a good marketing campaign that can help educate the people and raise awareness along with a robust distribution network can help change the social and cultural perceptions about the product and develop the market and its acceptance which can lead very profitable in the long run.

References

- Baars, C, J Tapper & Lindvall, J. "Menstrual Cups - A Sustainable Way To Achieve Economic Benefits In Kenya." *Linköping, Sweden: Department of Management and Engineering, Linköping University*. 2017.
- Kakani, C R J K. "Study of adaptability and efficacy of menstrual cup in managing menstrual health and hygiene." *International Journal of Reproduction, Contraception, Obstetrics and Gynecology* Kakani CR et al. *Int J Reprod Contracept Obstet Gynecol*. 2017.
- Cajsa Baars, J T. "Menstrual cups - a sustainable way to achieve economic benefits in Kenya How to empower women in a society with only small measures." *Kenya: Bachelor Thesis in Economics*. Linköping University Department of Management and Engineering, 2017.
- Center, A P. "Attitudes towards, and acceptability of, menstrual cups as a method for managing menstruation: Experiences of women and school girls in Nairobi, Kenya." *Kenya: African Population and Health Research Center*. 2010.
- Goyal, V. (2016). *Scope and Opportunities for Menstrual Health and Hygiene Products in India*. Noida: International Research Journal of Social Science.
- Howard, C, Rose, C L, Trouton, K, Stamm, H, Marentette, D, Kirkpatrick, N and Paget, J. "FLOW (Finding lasting options for women)." *Canadian Family Physician*, 2011, pp.208-215.
- Kakani, C R and Bhatt, J K. "Study of adaptability and efficacy of menstrual cup in managing menstrual health and hygiene." *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*, 2017, pp.3045-3053.
- Kusuma, M. L, and Ahmed, M. "Awareness, perception and practices of government pre-university adolescent girl regarding menstruation in Mysore city, India." *International Journal of Community Medicine and Public Health*, 2016, pp.593-1599.
- 2015-16 National Family Health Survey - 4. "New Delhi, India: Ministry of Health and Family Welfare".
- North, B B. and Oldham, M J. "Preclinical, Clinical, and Over-the-Counter Post marketing Experience with a New Vaginal Cup: Menstrual Collection." *Journal Of Women's Health*, vol.20, no. 2, 2011, pp. 303-312.
- Oster, E, and Thronton, R. "Menstruation, Sanitary Products and School Attendance: Evidence from a Randomized Evaluation." *Forthcoming, American Economic Journal: Applied Economics*, 2010.
- Pagadpally, S. "Perception, Knowledge and Practices Regarding Menstruation among School Going Girls in Karaikal." *Journal of Dental and Medical Sciences*, 2016, pp.27-34.
- Tarhane, S. and Kasulkar, A. "Awareness of adolescent girls regarding menstruation and practices during menstrual cycle." *Panacea Journal of Medical Science*, 2015, pp.29-32.
- Team, M C. "Attitudes towards, and acceptability of, menstrual cups as a method for managing menstruation: Experiences of women and schoolgirls in Nairobi, Kenya." *African Population and Health research Center*, 2010.



- Tellier, M, M Hyttel and M Gad. "Assessing acceptability and hygienic safety of menstrual cups as a menstrual management method for vulnerable young women in. Kampala." *Uganda: Uganda Red Cross Society*. 2012.
- Thakre, S., Reddy, M., Rathi, N., Pathak, K., & Ughade, S. (2011). Menstrual Hygiene: Knowledge and. *Journal of Clinical and Diagnostic Research*, 1027-1033.
- van Eijk, A M, M Sivakami, M B Thakkar, A Bauman, K F Laserson, S Coates and A P Phillips-Howard. "Menstrual hygiene management among adolescent girls in India: a systematic review and meta-analysis." New Delhi: Department of Clinical Sciences, Liverpool school of Tropical Medicine, Liverpool, UK: *UNICEF India*. New Delhi, India, 2016.
- Vidya, G S, K Lalitha, T Hemanth, N Murthy and S Pruthvish. "Perceptions, practices and problems pertaining to menstruation among adolescent girls of rural field practice area of M.S. Ramaiah medical college, Bangalore." *Indian J. Prev. Soc. Med.* Vol. 44 No. 2013, pp.1-2.
- Weir, C S, D Wright and D Tyedmers 2015. "In The Red: A private economic cost and qualitative analysis of environmental and health implications for five menstrual products." Nova Scotia, Canada: Environmental Science and Gender and Women Studies, *Dalhousie University*.

An Overview of Block-Chain Technology and its Possible Commercial Application in India

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Abstract

In today's fast changing world of emerging technologies, 'Block chain' technology is one of the most exciting and sought after technologies around the world, often referred as 'disruptive and innovative' by many. Block chain's inherent characteristics have received attention from various industries and applications. The concept of recording transactions in a secure, stable and scalable manner, has led to a huge potential for future applications in areas like, election management, land record reforms, digital asset management, identity management, health care and others. This paper aims to study the already established uses of block chain technology, as well as few potential applications in India, emerging in the near future

Keywords: Block chain, Bit coin, India

Introduction

To understand the Block-chain technology one needs to focus on the term 'digital payment'. A Digital payment is where the payments are carried out via a digital medium. According to this context, Digital platform can be defined as "a proprietary or open modular layered technological architecture that support efficient development of innovative derivatives, which are embedded in a business or social context." Block-chain is considered to be as one such platform.

Block-chain is a distributed database or ledger wherein the entire previous history of the transaction is stored, which is shared in a chain of a public ledger. This public ledger is known as a "block". There are infinite possibilities with respect to the application of such technology. Currently crypto-currency is one of the popular applications of block-chain technology where crypto-currencies uses a technique known as public key cryptography as security measure to prevent counterfeiting transactions.

In recent times, block-chain technology is now far more mainstream, and widely used by businesses and government around the world. Many are still in learning phase while some are working on solutions to real-world problems. Block-chain also allows even creating solutions to problems that don't exist, the possibilities are endless.



A block-chain is an open, decentralised database without single person or company in charge. The cost of hosting, maintaining and securing a centralised database is paid for by the cost a company charges for the product/service it offers. But no company in charge of securing a block-chain, hence the security needs to be outsourced to the free market

Block-chain is both a technical as well as an economic innovation where on one side it upgrades the database transaction technology and on other hand it offers tools for a trusted platform for record of transactions in a decentralized environment.

In order to provide the security for an open block-chain to free market participants, they are regularly rewarded with a share of a predefined number of the block-chain's native tokens if they provide the computing power required to validate transactions and include them in blocks. This is called the block reward, and it diminishes slowly over time for most block-chains, eventually being replaced by transaction fees.

The fact that most block-chains will not achieve a reasonable level of adoption in the longer term, due to its number of them in existence, makes it fair to assume that they will need to have large transaction fees in order to maintain their level of security, and would therefore struggle to survive. The most likely exception to this scenario is currently the Bitcoin block-chain.

Types of Block-Chain

In general all Block-chain can be classified into three groups namely: Public, Permissioned & Private.

- Public Block-chain is referred to where anyone can read or write on the given platform. However with a condition that they can show proof of work.
- Few examples of public block chain platform applications: OTC clearing and settlement, replacing central clearing, foreign exchange and replacing its intermediaries, Insurance, Mutual funds, redemptions and replacing transfer agency, medical claims and other similar
- Block-chain offers selective transparency where the selected nodes have the authority to access and provide consensus on that

transaction. They are quasi decentralized whereby consensus is controlled by pre-selected set of nodes and read permissions is restricted to participants.

- Few examples of permissioned block-chain platform applications: Remittances, OTC clearing and settlement with counterparties, brokers and market makers, syndicated-loan among the participants, supply chain finance, bancassurance.
- Private Block-chain is one where the authorised member gets the right to join the network, which in turn creates a closed loop system. It is a centralized, requiring high trust entity where write permissions are centralized to one entity and read to all participants.
- Few examples of private examples of private block chain platform applications: KYC among banks and authorities, letter of credit and bill of lading, loyalty rewarding mechanism for customers and employees

Benefits of Using Block-Chain

- State of the art cryptographic authorisation and verification mechanism enable trust in shared data across complex multiple party networks.
- Time stamped events are agreed upon across multiple, possibly hostile or non trusting entities
- Secure encryption and verification technologies enable un-trusted participants to securely share trustable information with third party
- Digital signature provides authenticity and non repudiation
- End to end asset lifecycle including ownership, custody can be tracked
- Universal data loss becomes a lesser issue
- Data management is executed without a controlling entity
- Enables trust across complex multi party agreements.

Potential of Block-Chain Technology in India

Capital Markets

Trade settlement

Block chain can allow faster transfer of security along with the payment, and would thereby help to reduce trading costs by removing intermediaries in trade cycle.

Commercial Papers Issuance and Trading

Block chain can help to create smart contract based issuance of negotiable instruments like commercial papers and allow allocation of it to the investors. Moreover the settlement of delivery and payments can also achieve a superior transparency among the parties involved in the trade.

Insurance Industry

Under Writing

Block chain can be used to verify the identity of the concerned person and ensure completeness of application, evaluation of risk and speed up quoting and binding process in the industry..

Claims Processing

Block chain Smart contract can enable flood claims in handling process can be done effectively by using block chain technology

Banking Industry

Trade Finance

Block chain can help shorten and moreover streamline trade financing process by ensuring minimum intervention of the intermediary

Regulatory reporting and compliance

Use of block chain would lead to a secure store for all the financial information, by eliminating errors associated with manual auditing of activities. Such a practice would also help reduce reporting costs and potentially support various future activities.

Public Sector

Digital Identity

Block chain technology will help to allow a real time contract management system for boarding customers using block-chain based digital identity management systems.

Customer onboarding

customer onboarding experience would improve by leveraging digital identity over block-chain

Land Registry

Block chain would allow Reduction in the risk of manual errors while creating more secure processes for transferring ownership of documents

Retail

Warranty Receipts

Block chain technology can reduce disparities between retailers and customers for lost receipts and unreadable receipts

Block chain can help in tracking the history of ownership of goods.

Health Care and Life Sciences

Patient Record Management

- Simplify claim processing
- Secure medical records
- Monitor the pharma supply chain
- Collaborate with network stakeholders

Conclusion

Block-chain holds unlimited potential. In terms of the applications and its de centralised fundamental characteristics, it offers high end secure and effective medium for inter party transactions and information sharing. India can benefit immensely by adopting block-chain technology. In today's context, block-chain today can be compared to bring about the same impact what the Internet had in the last decade of twentieth century. Today a block-chain might offer the same paradigm shift towards 'Internet of Trust' and 'Internet of Value'. In todays context, the financial services industry is one of the first to be influenced by the adoption of Block-chain and its associated decentralised distributed ledger technology. The extent of this impact now depends on how various industry, capitalize on this technology and the nature of support it receives from wider stakeholders.



References

- <https://www.icicibank.com/aboutus/article.page?identifier=news-icici-bank-executes-indias-first-banking-transactions-on-block-chain-in-partnership-with-emiratesnbd-20161210162515562>
- <http://www.mahindra.com/news-room/press-release/Mahindra-and-IBM-to-Develop-Block-chain-Solution-for-Supply-Chain-Finance>
- <http://www.livemint.com/Companies/BcqXQgey9fieFps9xVZxrK/How-Bajaj-Electricals-uses-block-chain-to-pay-suppliers.html>
- <http://computer.expressbpd.com/news/nse-looking-at-block-chain-for-ensuring-settlement-guarantees/18956/>
- <http://www.ibtimes.co.uk/stellar-connects-icici-bank-offers-cross-border-payments-india-africa-philippines-1595052>
- <http://www.livemint.com/Industry/loztj0R98Ea6m58Ng8jUzM/Block-chain-technology-catches-Axis-Kotak-Mahindras-fancy.html>
- <http://www.bankingtech.com/702131/rbi-investigates-block-chain-for-financial-applications-in-india/>
- <https://www.arup.com/-/media/arup/files/publications/b/arup--block-chain-technology-report.pdf>
- <https://www2.deloitte.com/content/dam/Deloitte/in/Documents/strategy/in-strategy-innovation-block-chain-technology-india-opportunities-challenges-noexp.pdf>
- <https://www.block-chain.com/>
- <https://news.bitcoin.com/analysts-and-bullion-dealers-notice-a-relationship-between-gold-and-bitcoin/>
- <https://m.in.investing.com/crypto/bitcoin/btc-usd-historical-data>
- http://aisel.aisnet.org/hicss-50/da/open_digital_services/3/
- “Block-chain: The Essential Quick & Easy Blueprint...” by Victor Finch

Export of Basmati Rice from India to Asian Countries

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Abstract

Almost 70% of the global basmati rice is produced in India. For more than decades it is believed that Indian subcontinents have been cultivating Basmati rice. Basmati rice is healthy for human and is easy to excrete. It is cultivated in Indian subcontinent traditionally. It is a variety of long, lean and aromatic rice. India plays a major role in the export of basmati rice internationally. In recent years, the income from foreign has increased relatively because of basmati rice export. India has exploited about 59 percent of the basmati rice market across the world. It has bagged the first place in the world markets. This paper is about the time series data on export of basmati rice from India in the recent years. This research also covers the export performance and country-wise analysis of basmati rice to five selected countries in Asia.

Keywords: Asian countries, Basmati Rice, opportunity, performance and Global Market.

Introduction

India's contribution in the world food exports is around 2.07%. India has secured 10th rank in terms of global agricultural and food exports. India's annual growth rate in export of agricultural and processed food is more than 21 percent over the past decade and has been the highest of any country. India exports agricultural and processed foods to more than 120 nations. The major importers of our food products are the Middle East, Southeast Asia, SAARC countries, the EU and the US.

Basmati which is conventionally cultivated in the Indian subcontinent is a long, lean-grained flavorful variety of rice. According to the state-run Agricultural and Processed Food Products Export Development Authority, in the year 2014, export of about 59 percent of the international basmati rice trade was done by India and the rest was done by Pakistan. Many countries prefer domestically cultivated basmati rice.

History and Etymology

For centuries, Indian farmers are presumed to have been cultivating Basmati rice traditionally. Heer Ranjha is the ultimate extant variety of basmati rice that has been cultivated for a long period of time.



The Hindu traders were the first to introduce basmati in the Middle East region. It plays an important role not only in a range of south Asian cooking, but now is also applied widely in Persian, Arab, and many other Middle Eastern cuisines. The major cultivators and exporters of this variety of rice are India, Pakistan and Bangladesh.

Production and Cultivation

More than 70% of the global basmati rice production is done by India. A minute segment of that is being grown naturally without any chemicals. Many organizations like Kheti Virasat Mission are aiming to enlarge the quantity of basmati rice that is being cultivated in the Punjab in India.

In India

Punjab, Haryana, Himachal Pradesh, Delhi, Uttarakhand, Uttar Pradesh and Bihar are the major basmati rice producing states in India. India's aggregate basmati production from 2011 to 2012 crop year was 5 million tonnes.

Producing over 60 percent of the overall basmati rice cultivated in India, Haryana is the most important basmati rice producing state in India.

In Nepal

Basmati rice is delivered to most part of the Kathmandu Valley and the Terai area of Nepal. One of a kind of Nepali assortments of Basmati rice was banished from trading to different parts of the world despite the fact that this restriction may be lifted.

In Pakistan

As per data 95 percent of the basmati rice development happens in the Punjab region of Pakistan, which adds up to creating 2.47 million tons in 2010.

Varieties and Hybrids

There are a few assortments of basmati rice. Conventional Indian types comprise basmati 370, basmati 385, and basmati Ranbirsinghpura (R.S.Pura) and Gujjar Chack territory in Jammu region arranged at the Indo - Pak outskirt in Jammu and Kashmir province of India. 1121 Extra Long Grain Rice. Pakistani assortments of basmati rice are PK 385, Super Kernel Basmati Rice and D-98.

Researchers at Indian Agricultural Research Institute, Delhi, utilized regular plant rearing to create a half and half semi-overshadow plant which had many of the great highlights of customary basmati (grain extension, scent, soluble base substance). This half and half were called Pusa Basmati-1 (PB1; likewise called "Todal", in light of the fact that the blossom has awns); crop yield is twice as high as conventional assortments. Fragrant rice's that are transported from basmati stock are not original basmati assortments also contains PB2 (likewise called sugandh-2), PB3, and RS-10.

Approved Varieties

Country	Varieties
Nepal	Basmati 217, Pusa Basmati, Basmati 1, Nepalese red Basmati.
Indian	Basmati, P3 Punjab, type III Uttar Pradesh, hbc-19 Safidon, 386 Haryana, Kasturai(Baran, Rajasthan), Basmati 198, Basmati 217, Basmati 370, Bihar, Kasturi, Mahi Suganda, Pusa 1121.
Pakistani	Basmati 370 (Pak Basmati), Super Basmati (Best A Roma), Basmati Pak (K emal), 386 or 1121 Basmati rice, Basmati 385, Basmati 515, Basmati 2000 and Basmati 198.

Literature Review

Sharma (2013) examined that India's commitment related to domestic support under the AoA and agricultural modalities in context of Doha ministerial negotiations. The study found that India does not have any commitment to reduce domestic support under AoA because Aggregate Measure of Support (AMS) is below deminius level. Further, the study examined the revised draft of Doha negotiations and concluded there is no reduction commitment related to OTDS and final bound AMS. The study concluded that India has more flexibility to provide Blue Box and Green Box subsidies to its agricultural sector.

Paramita Bhattacharjee, Rekha et al., (2002) in their study entitled on a review on Basmati rice. The study discussed that India contributes about one-third of the world acreage under rice. Rice is available in over 5000 varieties, of which Basmati rice occupies

a prime position on account of its extra long superfine slender grains, pleasant, exquisite aroma, fine cooking quality, sweet taste, soft texture, length-wise elongation with least breadth-wise swelling on cooking and tenderness of cooked rice. This article reviews the quality and aroma traits of Basmati rice, particularly the varieties grown in different parts of India and Pakistan, the agronomy, breeding and physiology of the grain, the trade scenario, Agmark grade designation for export and the US patent of new hybrid strains of Basmati.

Objectives of the Study

- To ponder over the theoretical structure for the fare Opportunities for ASIAN nations.
- To examine India’s fare execution of Basmati Rice.
- To evaluate the nation shrewd fare execution of Basmati Rice.

Research Methodology

The study is analytical and empirical in nature. All the data has been collected from secondary sources. The secondary sources collected from books, published reports, journal articles and the internet. The secondary sources are planned to be collected from Agricultural Export Processed Development Authority (APEDA). This research article was scientific and observational in nature. Every one of the information has been gathered from secondary sources only. These sources are gathered from books, distributed reports, magazine articles and the web. These sources are intended to be gathered from Agricultural Export Processed Development Authority (APEDA).

Source of data

The sources of data are of secondary and the main sources are from APEDA, government reports, articles, magazines and Internet.

Study Period

The study period covers between the years 2012-2017.

Statistical Framework

Based on the secondary data, statistical tools have applied the Trend Analysis and Growth Rate.

Scope of the Study

Asia is the world’s biggest landmass which covers 30% of earth’s aggregate land region. It has a total of 48 countries present in it. In the point view of our research, it is hard to cover all the countries. Hence we have selected 5 countries namely Japan, Singapore, Malaysia, Sri Lanka and Pakistan to which we export the maximum quantity of Basmati Rice.

Export Performance of Basmati Rice to JAPAN

Japan is a monarch island nation in Eastern part of Asia. Situated in the Pacific Ocean, it lies in the eastern shore of the Asian territory and widen from the north toward the East China Sea and China in the southwest in the Sea of Okhotsk.

The Kanji that make up Japan’s name signify “sun origin” and it is regularly called the “Land of the Rising Sun”. Japan is a stratovolcanic archipelago comprising of around 6,852 islands.

Quantity in Metric Tons; Value ₹ in crore

Period	Quantity	Trend	Value	GR%
2012-2013	181.15	181.472	1.22	--
2013-2014	200.10	196.737	1.99	63.114
2014-2015	236.11	212.002	3.12	56.783
2015-2016	170.25	227.267	1.78	-42.948
2016-2017	272.40	242.532	2.79	56.74
2017-2018 (Trend Projected)				
2018-2019 (Trend Projected)				
2019-2020 (Trend Projected)				

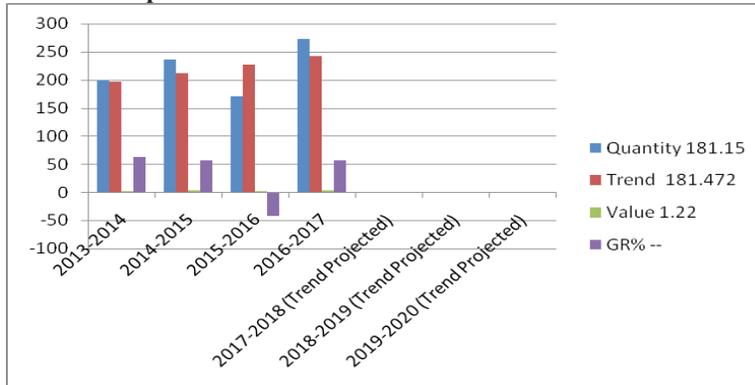
Source: DGCIS



From the above table it is clear that in 2016-17 the quantity of export is maximum that is 272.40 Mts and minimum in 2015-16 that is 170.25 Mts. This

shows that there is an instant growth in the export quantity as well as value in 2016-17.

Export Performance of Basmati Rice to JAPAN



Export Performance of Basmati Rice to Singapore
Singapore formally the Republic of Singapore, is a self-governing city-state and island nation in Southeast Asia. It lays a degree (137 kilometers or 85 miles) north of the equator, at the southern end of the Malay Peninsula, with Indonesia's Riau Islands

toward the south and Peninsular Malaysia toward the north. Singapore's region comprises of one primary island alongside 62 different islets. Since freedom, broad land recovery has expanded its aggregate size by 23% (130 sq Km or 50 sq miles).

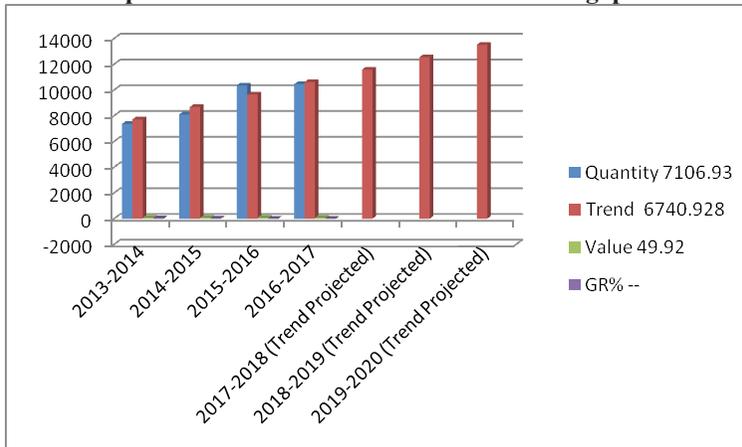
Quantity in Metric Tons; Value ₹ in crore

Period	Quantity	Trend	Value	GR%
2012-2013	7106.93	6740.928	49.92	34.97
2013-2014	7363.66	7707.392	67.38	12.956
2014-2015	8106.51	8673.856	76.11	0.026
2015-2016	10342.38	9640.32	76.13	-6.646
2016-2017	10449.89	10606.784	71.07	
2017-2018 (Trend Projected)		11573.248		
2018-2019 (Trend Projected)		12539.712		
2019-2020 (Trend Projected)		13506.176		

Source: DGCIS

From the above table it shows that in 2016-17 the quantity of export is maximum that is 10449.89 Mts and minimum in 2012-13 that is 7106.93 Mts. This shows that there is a gradual increase in the export quantity from 2012-13 to 2016-17.

Export Performance of Basmati Rice to Singapore



Export Performance of Basmati Rice to Malaysia

Malaysia is a centralized legitimate monarchy in Southeast Asia. It comprises thirteen states and three government domains, isolated by the South China Sea into two likewise measured areas, Peninsular Malaysia and Malaysian Borneo. Peninsular Malaysia fringes Thailand in the north and Singapore in the south, Vietnam in the upper east, and Indonesia

in the west; Malaysian Borneo outskirts Brunei and Indonesia. Kuala Lumpur is the country's capital and biggest city. With a populace of more than 30 million, Malaysia is the world's 44th most crowded nation. The southernmost tip of mainland Eurasia, Tanjung Piai, is in Malaysia. In the tropics, Malaysia is one of 17 mega assorted nations, with extensive quantities of endemic species.

Quantity in Metric Tons; Value ₹ in crore

Period	Quantity	Trend	Value	GR%
2012-2013	5862	4978.512	39.52	--
2013-2014	6383	8346.653	53.05	34.235
2014-2015	12310.92	11714.794	94.69	78.49
2015-2016	15974.69	15082.935	95.64	1.003
2016-2017	18070.36	18451.076	107.15	12.034
2017-2018 (Trend Projected)		21819.217		
2018-2019 (Trend Projected)		25187.358		
2019-2020 (Trend Projected)		28555.449		

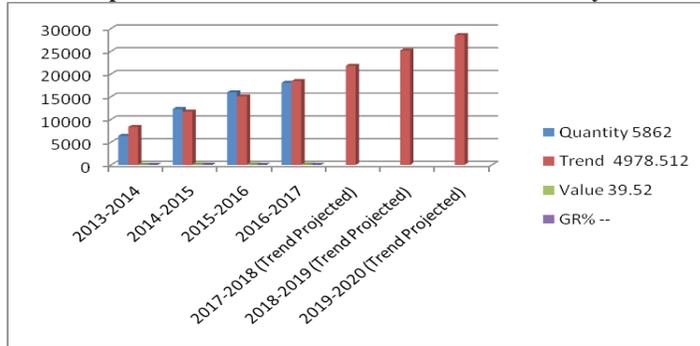
Source: DGCIS

From the above table it is evident that in 2016-17 the quantity of export is maximum that is 18070.36 Mts and minimum in 2012-2013 that is 5862Mts.

This shows that there is an instant growth in the export quantity in the recent two financial years.



Export Performance of Basmati Rice to Malaysia



Export Performance of Basmati Rice to Sri Lanka

Sri Lanka authoritatively the Democratic Socialist Republic of Sri Lanka, is an island nation in South Asia, situated in the Indian Ocean toward the southwest of the Bay of Bengal and toward the

southeast of the Arabian Sea. It is isolated from the Indian subcontinent by the Gulf of Mannar and the Palk Strait. The authoritative capital, Sri Jayewardenepura Kotte, is a suburb of the business capital and biggest city, Colombo.

Quantity in Metric Tons; Value ₹ in crore

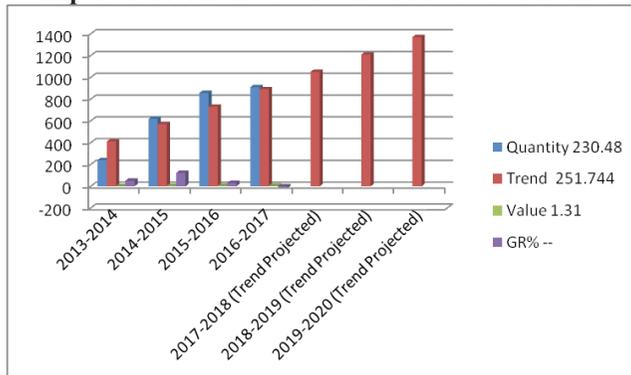
Period	Quantity	Trend	Value	GR%
2012-2013	230.48	251.744	1.31	--
2013-2014	240.50	411.649	1.98	51.45
2014-2015	618.64	571.554	4.42	123.23
2015-2016	857.65	731.459	5.79	30.995
2016-2017	910.50	891.364	4.78	-17.443
2017-2018 (Trend Projected)		1051.269		
2018-2019 (Trend Projected)		1211.174		
2019-2020 (Trend Projected)		1371.07		

Source: DGCIS

From the above table it shows that in 2016-17 the quantity of export is maximum that is 910.50 Mts and minimum in 2012-13 that is 230.48 Mts. This

shows that there is a gradual increase in the export quantity from 2012-13 to 2016-17.

Export Performance of Basmati Rice to Sri Lanka



Export Performance of Basmati Rice to Pakistan

Pakistan is a nation in South Asia. It is the fifth-most crowded nation with a populace surpassing 212,742,631 people. In region, it is the 33rd-biggest nation, spreading over 881,913 square kilometers (340,509 square miles). Pakistan has a 1,046-kilometer (650-mile) coastline along the

Arabian Sea and Gulf of Oman in the south and is flanked by India toward the east, Afghanistan toward the west, Iran toward the southwest, and China in the far upper east. It is isolated barely from Tajikistan by Afghanistan's Wakhan Corridor in the northwest, and furthermore imparts an oceanic outskirt to Oman.

Quantity in Metric Tons; Value ₹ in crore

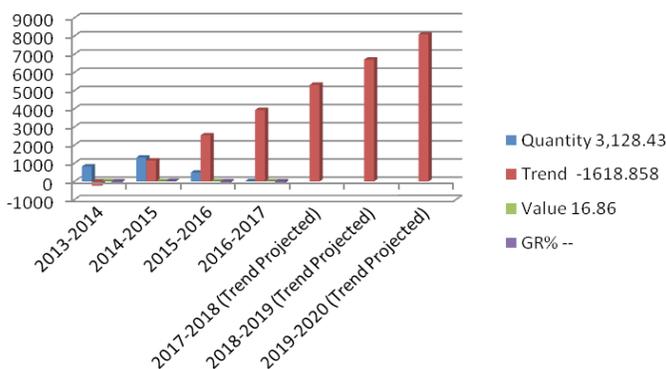
Period	Quantity	Trend	Value	GR%
2012-2013	3,128.43	-1618.858	16.86	--
2013-2014	823.00	-231.586	5.51	-67.319
2014-2015	1314.00	1155.686	7.19	30.490
2015-2016	490.00	2542.958	2.40	-66.620
2016-2017	23.00	3930.23	0.11	-95.416
2017-2018 (Trend Projected)		5317.502		
2018-2019 (Trend Projected)		6704.774		
2019-2020 (Trend Projected)		8092.046		

Source: DGCIS

From the above table it is evident that in 2012-13 the quantity of export is maximum that is 3,128.43 Mts and minimum in 2016-17 that is 23.00Mts. This

shows that there is a huge decrease in the export quantity from 2015-16 to 2016-17. This is due to the unhealthy relationship between India and Pakistan.

Export Performance of Basmati Rice to Pakistan



Conclusion

India's earnings through export of rice are the major sources of foreign currencies with respect to agriculture. On an overview from our research, it is found that there is a gradual growth in terms of size, value and unit value for basmati rice. This research shows that there is a wide scope in the international market for Indian Basmati rice. India's agricultural export encounters a few constraints that arise from contradictory domestic policies relating to manufacturing, warehousing, distribution, food

security, price fixation etc. If we are very particular about increasing our exports contribution in the international market, we must ensure that there is a considerable increase in production. India needs necessary promotion strategies to be implement to encourage export and to avoid international market risk. To exist in the world market, our pricing strategies must be competitive and also exceed the expected quality standards of international consumers.



References

- Bhattacharjee, Paramita, Rekha S. Singhal and Pushpa R Kulkarni and quot. "Basmati rice: a review."" *International journal of food science & technology*. Vol.37, no. 1 2002, pp.1-12.
- Hamidi, Saeid and Devaraj M "Impact Of WTO To India's Basmati Rice Export: Opportunities and Challenges" *International Journal of Marketing.Financial Services & Management Research*, ISSN 2277-3622, Vol.4 (3), 2015. March, pp. 36-45.
- Kumar Arul M, S Gopalsamy. "Export Of The Dairy Products In India -With Special Reference To Bangladesh." *International Journal Of Research Culture Society*, ISSN: 2456-6683, Volume - 1, Issue - 09, Nov 2017, PP-162-164.
- Satishkumar, M, H V Harishkumar, Ramesh and R Rangegowda. "Growth, Export Performance and Competitiveness of Basmati and Non-Basmati Rice of India-an Markov Chain Approach" *International Journal of Agriculture. Environment and Biotechnology*, DOI Number: 10.5958/2230-732X.2016.00040.1, April 2016, pp.305-311.
- Sharma, S K. "Doha Negotiations and Domestic Support to Indian Agricultural Sector." *Centre for WTO Studies, Indian Institute of Foreign Trade*. Working Paper No.CWS/WP/200/12, 2013, pp.1-22.
- www.apeda.com

Aged Women Are under Care or Undercared? – A Study of Tamil Nadu

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Abstract

This paper highlights the living conditions of aged women in Tamil Nadu. Women in general and aged women in particular are under-cared in all parts of the world. The living conditions of aged women differ from developed countries to developing countries. India is a one of the developing nations, is having higher proportion of aged women. Tamil Nadu one of the developed states in India has been taking effective steps to rectify the problems of women including aged women for the past couple of decades. In spite of the efforts, the emergence of old age homes has been mushrooming everywhere in the state as well. The employed women especially urban employed aged women have lesser problems in their living arrangements than aged rural unemployed women. Urban employed aged women enjoy the retirement life in sophisticated old age homes, whereas rural unemployed women frustrate with their living arrangements. Some rural aged women accept the worst situation and live with the family members, whereas some rural aged women, who have no moral and financial supports move to old age homes which are in poor conditions. This paper is an attempt to examine the living conditions of rural poor aged women who are at old aged home. The samples are selected at an old age home of Chidambaram.

Keywords: aged women, old age home, living condition

Introduction and Statement of the Problem

Life expectancy of the human beings has been increased due to medical advancement. Globalisation and technological improvement are the two sides of the same coin which lengthen the life expectancy of men as well as women. Modernisation and urbanisation cause nuclear family system everywhere. Ageing is the process which affects women rather than men. Rural poor women have been exploited by family members as well. Old age homes have been gearing up everywhere. As per 2011 census, report three are 15mn elderly population live in India. Tamil Nadu and Andhra Pradesh have highest proportion of aged population. Under integrated programme of older persons, Tamil Nadu is supporting old age homes with seed money. In India, next to Kerala, Tamil Nadu has extended its support to oldage homes. Employed urban women enjoy the amenities provided by the retirement homes. Getting attraction by the sophisticated lifestyle in the oldage homes, women, that to employed urban women like to shift their life style from home to away from home. But the condition of rural women, especially unemployed women is pathetic at oldage. They are considered to be as burden to the family and illtreated by the family members as well.



Novelty of the Study

Studies related to the living condition of rural women in oldage homes are rare. Retirement homes with sound financial background are getting name and fame but oldage homes in rural areas are not considered and the services of them are not well documented. Hence this paper is an attempt to study the undercared aged women by the family members. They are pushed up by the family members and they are under care in the oldage homes. The researcher has made an attempt to study aged women at oldage home named Anbagam in Chidambaram, Tamil Nadu.

The study area is a semi urban type where people respect their culture. Though people respect culture there are two oldage homes in the study area. Anbagam is an old age home / has been functioning for the past 25 years.

Focal Theme

The focal theme of the paper is to study the living conditions of women at oldage home.

Delimitation

This study is delimited to only one oldage home where the no of samples is 14 and the study is confined to present conditions of the women in the oldage home only.

Data Analysis

The conditions of the women at oldage homes have been assessed by getting information from them through a well structured interview schedule. The question covers, distance from oldage home, number of children, reason for stay, spending time relative visit etc.

Old Age Home – Chidambaram

Old home named ‘Anbagam’ was started by Muthukrishna Swami Pillai in the year 1986. At Chidambaram initially it was functioning at Gandhi Nagar with the emolument of 50 members comprising 22 men and 28 women. Since it was at the centre of the town, more volunteers came forward to assist the elders morally as well as financially. But due to lack of support from the commercial organisation, it could not function well and could not pay rent for the

house. After, twelve years the home has been shifted to minngar in the year 2002, this place is far away from the town, the member of members has been decreased to 36, due to ageing and health problem. The home faded away from the public little by little and then it has financial constraint. Now this home has been functioning at Mariappanagar for the past six year with 25 members comprising 9 men and 16 female members. With the support of elite people, it could function better than the earlier place. This home is managed by the sons Muthukrishna Swami Pillai – Sukumar and Satheesh kumar. With the little financial support from the govt., it is functioning at the present place.

It is clear from the Table 1 that majority of the respondents have male children and half of the respondents have female children. Gender equality has been emphasised everywhere. Taking care of elders should be the role responsibility of male child is the Indian culture. That has been faded away due to tram formation of the social system. Though the respondents are having children, they have been pushed away from the families. The ego clash between mother-in-law and daughter-in-law is the main reason and the generation gap follows. There is no difference between urban environment and rural environment for selecting old age homes. The elders themselves want to stay at retirement homes as they like to have peaceful time with their likely minded people. The Hindu reported that the transition from traditional way of life to modern pattern is the root cause of the emergence of old age homes and added that the nuclear family system pushes away the elder members from the home to retirement homes (Rajagopal, 2017).

It is also known from the Table 2 that more than two-thirds are from in and around chidambaram only. Earlier joint family / Extended family system has been adhered in rural areas. Education and employment of children broken that system and elders have been left alone at the home. There are cultural differences between the generations as well.

More than half of the respondents moved to old age home as per their wish only willingness of them can be witnessed from the Table (2) followed by family problem. Close to one-third has shifted to old age home for family problem. The cold war between

the family members changed the mind set of elders and they moved to old age home out of compulsion.

Media helps the elders spend their time. Infact, Television plays the major role. Half of the respondents spent their by watching television at their place (Table 3) followed by reading books since rural women are illiterates the lowest proportion can be seen in reading books and news papers less than one-third spent their time by sharing their personal problems with other friends at the old age home. More than half of the respondents do not have any visitors.No one has visited them (Table -3) only one has friend outside the home. Less than one-third have friends and same proportion can be noted for relatives as well.Irudayarajan(2008) viewed that elders moved to old age homes as there is none in the house to take care of them.

Most of the respondents have accommodation problem at the old age home (Table-4). Since the home is with weak financial background, could not provide more space for them. In a small room, five members are accommodated. They could not get happiness with accommodation amenities. More than half share their experiences with others and more than half have detached with the family members. Vanitha (2014) evaluated the problems faced by women at old age homes. She observed that physical and mental disorders and adjustment problems with fellow inmates. Furthermore she opined that the change ongoing within and outside the family have driven elderly from own homes to old age homes and they have problems as such.

Regarding physical mobility of the respondents, more than two-third are doing devotional work like pooja and meditation and more than half go for walking. A few are doing physical exercise.

Table 1 Number of Children by Gender

No of Children	No of Male	No of Female
None	01	07
1-2	06	05
3-4	07	02
Total	14	14

Source: Computed from the Primary Data

Table 2 Proximity from Home and Recent Stay at Old Age Home

Distance	Respondents	Reason	Respondents
Below 50 Km	11	Poverty	01
51 – 100 Km	02	Willingness	09
Above 100 Km	01	Family Problem	04
Total	14	Total	14

Source: Computed from the Primary Data

Table 3 Aged Women Activities and Visiting Persons and Old Age Homes

Spending time			
Watching T.V	07	Son and Daughter	02
Reading	03	Friends	01
Writing	01	Relatives	02
Chatting	03	None	09
Total	14	Total	14

Source: Computed from the Primary Data

Table 4 Psychological Perception of the Respondents

Perception	Yes	No	Total
Accommodation Problem	13	01	14
Feeling happy	09	05	14
Visiting detached with family	04	10	14

Source: Computed from the Primary Data

Table 5 Physical Mobility of the Respondent

Work	Yes	No	Total
Devotional Work	11	03	14
Walking	08	06	14
Physical Exercise	02	12	14

Source: Computed from the Primary Data

Major Findings

- Most of the respondents native place is near to the old age home.
- Half of the respondents have male children
- More than half of the respondents have willingness to say at old age home, irrespective of gender



- More the half of the respondents spent time by watching T.V
- Neither sons or daughters provide financial assistance two-third of the respondents
- None of the women respondents have moral support from their relatives
- Majority of the respondents do not get old age pension
- Almost all women respondents do have accommodation problem at the old age home
- Very few respondents were employed prior to stay at old age home
- Three-fourth of the respondents are free from mental stress
- Few respondents go for walking
- Almost all men respondents are happy at old age home

Suggestions

- NGOs and other voluntary organizations may take up responsibility to redress the problem of financial constraint
- Law should be strictly followed to punish the children irrespective of gender who do not care their parents.

Select References

Bevinamar, S.,Kavita (2012).Problems of Elderly Women: Need for Interventions.Indian Streams Research Journal,Vol.1, Issue. 12,pp.1-4.

Gopal, Meena (2006). Gender, Ageing and Social Security', Economic and Political Weekly. 21 October, pp.4477-86.

Irudayarajan, S (2008). Aging pensions and social security in South Asia, in S.Irudayarajan (ed) social security for the Elderly experiences from south Asia, New Delhi Routledge Taylor&Francis Group, p.1-38.

Nasreen (2010). Family in Transition and Challenges for Elderly Person Department of Social Work.JamiaIslamia New Delhi, Vol. 24, Issue.4, pp.501-508.

Rajagopal.V (2017). Old age homes as a fact of life, 20 august, the Hindu.

Vanitha. D (2014). Institutional care of the Elderly: A study of old-age homes in Hassan city, Karnataka, India, Available online at [http. ISSN- 2348 0343](http://www.ijer.in)

Wason,Neelam and Jain, Karuna(2011). Malnutrition and Risk of Malnutrition among Elderly, Indian Journal of Gerontology, 25(2). pp. 208-17. Problems of the Rural Aged, Research and Development Journal, Help Age India, Vol. 11, No. 1.

India's Trade Relation with Malaysia

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Abstract

Growing importance of "Look East Policy" in recent days made essential to study India's trade relation with Malaysia; as Malaysia accounts sizable amount of trade with India among ASEAN countries. Hence, the present study is an attempt to analyze the volume and trend of India's bilateral trade relation with Malaysia for the period of 1990 to 2017. The study has confined to only merchandise trade relation between India and Malaysia. Essential data has been extracted from the Handbook of Statistics on the Indian Economy, RBI website. Simple bar diagram and line chart have been used to illustrate the outcome of the study.

Keywords: India, Malaysia, Bilateral trade, Merchandise trade, Trade balance

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Introduction

India and Malaysia are the two countries with similar socio-economic conditions. They are connected by various cultural and historical ties from the distance past. Both the countries have been under British colonial rule for long time. According to Department of Statistics report (2011) a considerable section of the Malaysia population is of Indian origin. India and Malaysia globally shares platforms like G15, Asian Union, Commonwealth of Nations and ASEAN. Indeed, Malaya stood in favour of India's entry into ASEAN. Likewise, India –Malaysia stood by each other in various issues. This boosted their diplomatic understanding despite the differences in their policies and development path (Jyothi, 2016; Anwer .T, 2002).

"In the commercial front, India and Malaysia have had a long-standing commercial links dating to the pre-Christian era" (Anwer .T, 2002). India and Malaysia bilateral trade can be followed back to the pre-British and even pre-Islamic period. Historical evidence reveals that British colonial period witnessed cross-cultural exchange along with exchange of goods between India and Malaysia. Immigrated unskilled labours especially from south India contributed to "life blood" (Rubber Wealth) of Malaya's Economy. They also played major role in the development of Malaya's transport and communication in modern times (Jyothi, 2016). Therefore, B.N Ganguli opined that "India's economic relations with Malaya are very intimate from the point of view of the share of Indians in the economic development of Malaya" (as cited in Jyothi. 2016, p.91).

Nevertheless, up to nineties trade opportunities between two nations were remained unutilized to large extent. Both India and Malaysia have paid less attention to extend their trade ties, because of various internal and external reasons. India's close relations with Soviet Union and its stand in Kampuchea issue made Malaysia to maintain distance from India (Jyothi, 2016; Anwer, 2002).



The liberalization measures introduced since 1991 in India Economy, rapid progress of the Malaysia economy in the late 80s, disintegration of Soviet Union and end of cold war have triggered new dimensions in their bilateral trade relations. By the side, Launch of India's "Look East Policy" in early 1990's also contributed to it. Under new strategy, India's effort to get closer with Association of South East Asian Nations (ASEAN) open up new chapter in India - Malaysia trade regime. Malaysia, as one of founder member of ASEAN facilitate as gateway between India and South East Asia. Thereafter, both India and Malaysia started a new journey in their trade relations. Together India and Malaysia took various steps to strengthen their bilateral trade ties and utilize mutual trade potentials. Frequent High level meets, setting up of Joint committees, MOUs and various trade agreements signed between India and Malaysia after 90s focused to boost the trade between two nations (Jyothi, 2016; Anwer .T, 2002; Chauhan .P.T, 1999).

Thus, changed global trade scenario and India's new approach towards trade direction has mandate to focus on India-Malaysia trade opportunities and potentials, as ASEAN is concerned. The present study is an attempt in this direction.

Objectives of the Study

- To examine bilateral trade relations of India and Malaysia during post-liberalisation period.
- To understand trends and tendencies in India's merchandise trade with Malaysia.
- To find the extent of change occurred in their trade over the period.

Methodology

The present study is confined to only bilateral merchandise trade between India and Malaysia. Data has extracted from the Handbook of Statistics on the Indian Economy, RBI website. As the study focus is mainly on post-liberalisation trade relation, data from 1990 to 2017 is used here for analysis. Simple table, bar diagrams, line charts and percentage have used to present the study outcome. Results separately analyzed for imports, exports, total trade, trade balance and relative share for better understanding.

Results and Discussion

A) Volume of Bilateral Merchandise Trade

To enhance trade cooperation between the countries it is pre-requisite to understand the quantum and trends in their bilateral trade. This can easily understand by studying their volume of trade. The table 1 reveals the volume of trade between India-Malaysia for the period 1990-91 to 2016-17.

In the case of India's export to Malaysia, the table 1 clearly shows that exports increased from 151 US \$ million in 1990-91 to 5230.8 US\$ million in the year 2016-17. Over a period of 27 year's exports to Malaysia is almost increased by thirty-five times. After liberalisation, volume of export to Malaysia has noticed continues growth, with some fluctuations in between (Chart 1a). It doubled in a span of just 5 years of time. In 2004-05, the exports crossed US 1000 \$ million mark for the first time. Downswing in it observed in two consecutive years i.e., 1997-98 and 1998-99, this was mainly due to East Asian Crisis. According to Indian Statistics the drop was 7.76 percent and 34.33 percent in respective years. After this turmoil recovery is started in second half of 1999 and registered record growth of 39 percent in 1999-00 over the period. The growth phase continued thereafter with little disturbance in the year 2002-03, 2009-10, 2013-14 and 2015-16. Minute fall of 3.14 percent and 5.34 percent noticed in 2002-03 and 2013-14 respectively. Global economic slowdown dropped the exports by 17 percent in 2009. But, 2015-16 observed highest fall of 36.6 percent in exports after liberalisation. In the mean while, noticeable growth (96.8percent) in export perceived in 2007-08.

On the other side, India's import from Malaysia increased by 16 times from US \$ 554.8 million in 1990-91 to US\$ 8932.5 million in the year 2016-17. The volume of import increased twofold in six years. In 1996-97, it crossed the mark of 1000 US\$ million. Surprising fact that East Asian crisis had no negative impact on the imports from Malaysia. The years 1997-98 and 1998-99 observed 6.45 percent and 36.43 percent growth respectively. Imports went down in 2000-01 sharply from 2024 US \$ million to 1177 US \$ million. The year 2006-07 witnessed a highest growth of 119.19 percent in total imports during study period. Global Economic slowdown also had adverse impact on imports too;

it has dropped imports by 27 percent in 2009. This has revealed imports were highly affected by the global financial crisis in comparison with exports. It is observed that drastic increase in imports in early 90's attributed by reduced import duties and tariffs under trade liberalisation.

Overall, total bilateral trade is concerned, during post-liberalisation period merchandise trade between India and Malaysia increased by 20 folds from 705.8 US\$ million in 1990-91 to 14163.3 US\$ million in 2016-17. Remarkable change in bilateral merchandise trade has seen during 1996 to 99. The recession in the ASEAN region has made India's export dearer to Malaya's and its import cheaper. As a result, India's export to Malaysia decreased gradually and its import increased significantly (Chauhan .P.T, 1999; Khan .I, 2000). Highest growth in total bilateral trade under study period is noticed in 2006-07, this was largely attributed by imports. The two-way trade more than doubled by 2011-12, as compared to the figures in 2006-07. In the interim, the decline noticed in total trade volume in 2008-09; was mainly due to global economic slowdown. The effect was of only short-period.

However, trade balance has seen largely in favour of Malaya during the 1990-2017 (Chart 1b). Deficit has increased more than nine folds to 3702 US \$ million in the year 2016-17, which was just 403 US \$ million in 1990-91. It was highest in the year 2011-12 which stood at US 5568 \$ million and least in the year 1993-94 with US 2.6 \$ million. This has resulted because of increased demand for Malaysia goods from India on one side, and lack of export promotion measures and proper export composition on the other side.

B) Role of Malaysia in India's Total Trade

During post- liberalisation period, Malaya's relative share in India's total trade has seen a mixed trend (Chart 2a). However, over a period it went up from 1.67 percent in 1990-91 to 2.15 percent in 2016-17. In 1996-97, it crossed the mark of 2 percent. Highest percentage share has recorded in 1999-00. While, Malaya's share in India's export has grew over period from 0.83 percent to 1.89 percent. Remarkable increase has seen in Malaya's share in India's import during 1996 to 2000. Malaysia

remained as India's major source of import among ASEAN despite of East Asian Crisis. Shocking point is Malaya achieved record share of 4.07 percent in India's total imports during 1999-2000. Nevertheless, Malaya's percentage share in India's total import from the world has not at all increased when compare to exports over the time; it was almost remain same (Chart 2b).

Conclusion

Above result and discussion revealed that, after 1990, an introduction of liberalisation measures in Indian Economy, India's "Look East policy" and her efforts to extend economic cooperation with the ASEAN countries ultimately led to an upward movement in India and Malaysia bilateral trade flow, despite the trade balance remained unfavourable to India. In the year 2016, India with a share of 3.6 percent in Malaysia's total trade with world ranked as 10th largest trading partner and a net importer of Malaysia (Exim, 2018). While in South East Asia, Malaysia has emerged as second major trading partner of India. However, the trade between the two nations is remained below their potential levels. In the changed regional and global trade scenario, economic growth pattern and comparative advantages both nations have lot to offer each other. Therefore, the study finds the need of action from both India and Malaysia in the following grounds: 1) Redesigning respective trade baskets by considering recent changes in mutual demands 2) Identifying potential areas of trade 3) Finding the ways to balance their trade with each other.

References

- Anwer, T. (2002). India's Relations with Malaysia (Doctoral dissertation). Retrieved from <http://hdl.handle.net/10603/52000>
- Chauhan, K.P. (1999). India's Trade and Investment Relationship with ASEAN countries: with special reference to Singapore and Malaysia (Doctoral dissertation). Retrieved from <http://hdl.handle.net/10603/16988>
- Department of Statistics Malaysia. (2011). Population Distribution and Basic Demographic Characteristic Report. Retrieved from <https://www.dosm.gov.my/v1>



- Jyoti. (2016). India's look east policy a study of India Malaysia relations in the post cold war era (Doctoral dissertation). Retrieved from <http://hdl.handle.net/10603/117756>
- Khan, I. (2000). Emerging Trends in India's trade relations with ASEAN countries (Doctoral dissertation). Retrieved from <http://hdl.handle.net/10603/49772>
- Export-Import Bank of India. (2018). Strengthening ASEAN-India Partnership: Trends and Future Prospects. Retrieved from <https://www.eximbankindia.in/Assets /Dynamic / PDF /Publication-Resources/ResearchPapers/Hindi/88file.pdf>

Appendix A

Table 1 India and Malaysia Trade from 1990 to 2017

(Value in US \$million)

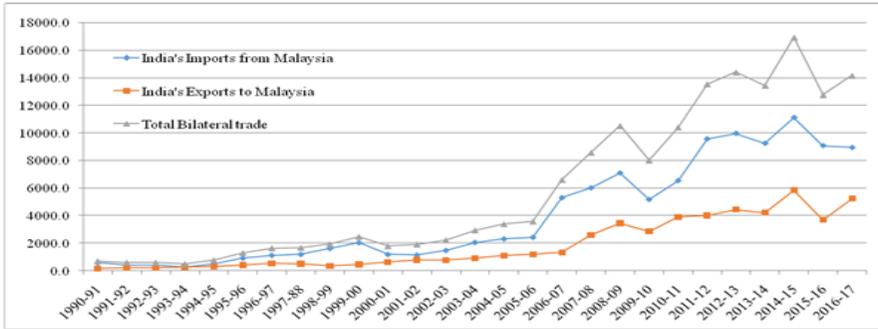
Year	Exports (%)	Imports (%)	Total Trade	Trade Balance
1990-91	151.0 (0.83)	554.8 (2.30)	705.8 (1.67)	-403.8
1991-92	202.4 (1.13)	394.3 (2.03)	596.7 (1.60)	-191.9
1992-93	189.8 (1.02)	405.9 (1.85)	595.7 (1.47)	-216.1
1993-94	247.3 (1.11)	249.9 (1.07)	497.2 (1.09)	-2.6
1994-95	286.6 (1.09)	490.1 (1.71)	776.7 (1.41)	-203.5
1995-96	393.2 (1.24)	902.7 (2.46)	1295.9 (1.89)	-509.5
1996-97	531.1 (1.59)	1107.5 (2.83)	1638.6 (2.26)	-576.4
1997-98	489.9 (1.40)	1178.9 (2.84)	1668.8 (2.18)	-689.0
1998-99	321.7 (0.97)	1608.4 (3.79)	1930.1 (2.55)	-1286.7
1999-00	447.1(1.21)	2024.0 (4.07)	2471.1 (2.86)	-1576.9
2000-01	608.2 (1.36)	1176.8 (2.33)	1785.0 (1.88)	-568.6
2001-02	773.7(1.77)	1133.5 (2.20)	1907.2 (2.00)	-359.8
2002-03	749.4 (1.42)	1465.4 (2.39)	2214.8 (1.94)	-716.0
2003-04	892.8 (1.40)	2046.6 (2.62)	2939.4 (2.07)	-1153.8
2004-05	1084.1(1.30)	2299.0 (2.06)	3383.1 (1.73)	-1214.9
2005-06	1161.9 (1.13)	2415.6 (1.62)	3577.5 (1.42)	-1253.7
2006-07	1304.3 (1.03)	5294.8 (2.85)	6599.1 (2.11)	-3990.5
2007-08	2567.6 (1.58)	6004.9 (2.39)	8572.5 (2.07)	-3437.3
2008-09	3431.0 (1.85)	7086.2 (2.33)	10517.2 (2.15)	-3655.2
2009-10	2846.3 (1.59)	5162.8 (1.79)	8009.1 (1.71)	-2316.5
2010-11	3879.8 (1.54)	6528.6 (1.77)	10408.4 (1.68)	-2648.8
2011-12	3986.2 (1.30)	9554.2 (1.95)	13540.4 (1.70)	-5567.9
2012-13	4437.4 (1.48)	9961.2 (2.03)	14398.6 (1.82)	-5523.8
2013-14	4200.6 (1.34)	9239.7 (2.05)	13440.3 (1.76)	-5039.1
2014-15	5824.8 (1.88)	11108.1 (2.48)	16932.9 (2.23)	-5283.3
2015-16	3690.3 (1.41)	9069.0 (2.38)	12759.3 (1.98)	-5378.7
2016-17	5230.8 (1.89)	8932.5 (2.33)	14163.3 (2.15)	-3701.7

Note: Figures in parenthesis refers percentage share

Source: Data compiled from Handbook of Statistics on the Indian Economy Published by Reserve Bank of India

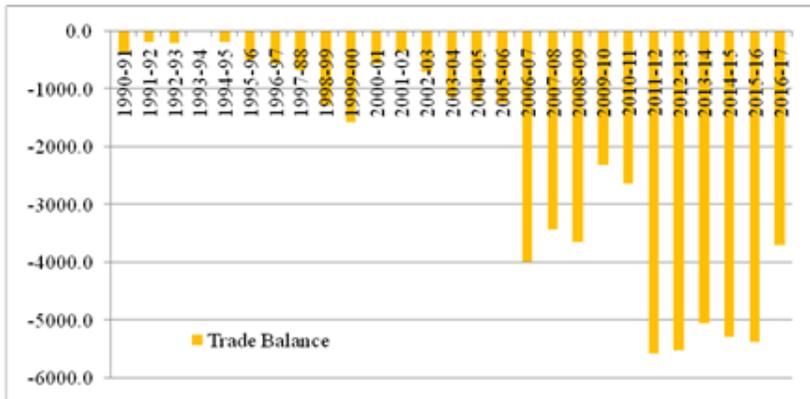
Appendix B

Chart 1a: India and Malaysia Trade from 1990 to 2017 (value in US \$million)



Source: Based on the data presented in table 1

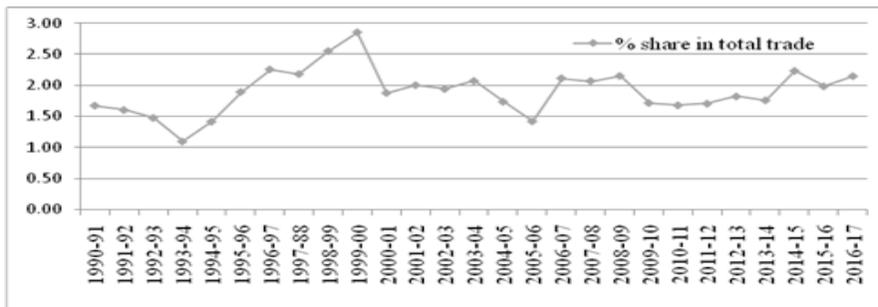
Chart 1b: India's Trade Balance with Malaysia 1990 to 2017



Source: Based on the data presented in table 1

Appendix C

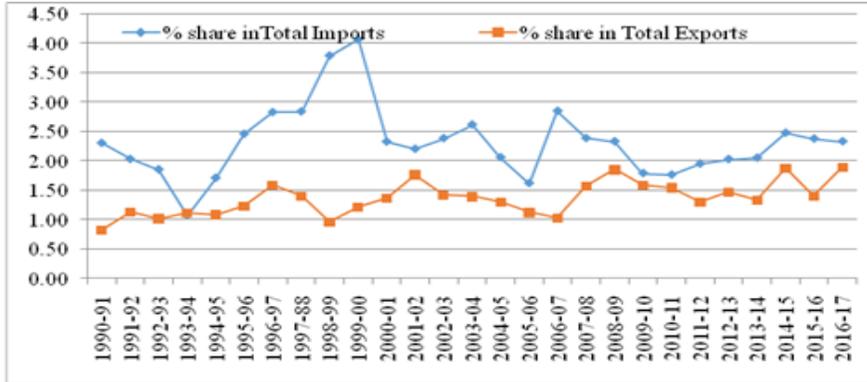
Chart 2a: Malaysia's Percentage Share in India's Total Trade



Source: Based on the data from table 1



Chart 2b: Malaysia's Percentage Share in India's Total Export and Imports



Source: Based on the data from table 1

An Analysis of Welfare Schemes of Life Insurance Corporation of India Towards CSR in Tamil Nadu

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Abstract

Social responsibility is an integral part and an obligation of business to society. Social responsibility implies commitment and answerability to the society. It simply means that giving back to the society what one gets from it. It is more of moral and ethical concept. The changing dimensions of business activity necessitated improvement in quality of life in society. Business houses address the problem of social welfare to fulfill its various requirements. The term Profit maximization is replaced by the term social wealth maximization. Infact, Social wealth maximization leads to value being multiplied. Corporate are engaged in Social Responsibility activities like Socio-economic Development, Health Education, Environmental conservation, Protection & Pollution control, Arts, Culture and Sports. The Companies Act, 2013, which has provided provisions and procedures for CSR activities, motivated innumerable corporate houses to contribute to the society. Now corporate have various CSR Committees focusing their attention on identifying various areas and societal related CSR activities that have really enhanced their image and reputation. The LIC of India through Golden Jubilee Foundation has provided and implemented appreciable societal services. This paper has analyzed the contribution of LIC of India towards implementation of CSR activities particularly in Tamilnadu.

Keywords: CSR, LIC, Contribution, Education, Health, Socio-economic Development, Environmental conservation, Protection & Pollution control

Introduction

Social responsibility is an integral part and an obligation of business to society. Social responsibility implies commitment and answerability to the society. It simply means that giving back to the society what one gets from it. It is more of moral and ethical concept. The changing dimensions of business activity necessitated improvement in quality of life in society. Business houses address the problem of social welfare to fulfill its various requirements. The term "Profit maximization" is replaced by the term social wealth maximization. Infact, Social wealth maximization leads to value being multiplied. Corporates are engaged in Social Responsibility activities like Socio-economic Development, Health & Education, Environmental conservation, Protection & Pollution control, Arts, Culture and Sports.



The LIC Golden Jubilee Foundation has supported initiatives starting from setting up of hospitals, old age homes and colleges, lecture rooms, library, laptop centre, Hostels for kids in tribal regions, vocational training centres for differently abled persons to provide infrastructural facilities and amenities to the needy individuals. LIC have also supplied finances for purchase of school buses for transportation of differently abled children and Ambulances for transportation of sufferers to Hospitals. LIC Jubilee foundation has reached out in areas where herbal calamities have devastated human lifestyles and provided infrastructural aids to orphan youngsters through NGOs.

Significance of Study

The implementation of CSR is of paramount significance to the LIC of India. The capacity to make a full-size distinction in society and enhance the overall satisfactory of lifestyles of common man has without any doubt been established with the aid of the concern. However, all corporates have to try to bring about alternate modes in the modern-day social state of affairs in Tamil Nadu to have an effective and lasting strategy to the social woes. Partnerships between companies, NGOs and the government should be facilitated so that a combination of their skills such as expertise, strategic thinking, manpower and money to initiate extensive social change will put the socio-economic development of Tamil Nadu on a fast track.

Objective

The primary objective of the study is to analyze the extent of benefits availed by the beneficiaries of diverse welfare schemes introduced with the aid of LIC from 2007-2018.

Methodology of the Study

The researcher adopted descriptive and analytical method of study for the purpose of analysis of benefits availed under various schemes brought in by the LIC. The study mainly depended on secondary sources of data. The specified secondary data sources were culled from many trendy courses, websites of LIC of India and LIC Golden Jubilee foundation.

Various Welfare Schemes Of Lic In Tamil Nadu – CSR

Instituted in the year 2006, October 20th, LIC Golden Jubilee foundation was receiving continued encouragement and financial support from LIC of India. It is one of the means of sharing the responsibility of a Government, as the resources of the Government are limited and the Government has to face many challenging tasks ahead. LIC have supported the several NGOs who have been instrumental in implementing various CSR projects being sanctioned by the LIC in order to realize the common issues of day to day life. Initiatives worth Rs. 99.79 crore have been sanctioned and the disbursements on those projects were carried out in installment basis relying upon the development of the said tasks.

Table - I List Of Csr Projects Sanctioned Under Lic Golden Jubilee Foundation in Tamilnadu During 2007 - 2018

S.No.	Name of the Organization and Place	Name of the Divisional Office	Purpose (Construction)	Number of beneficiaries	Year of sanction	Amount sanctioned (Rs.)
1	Sai Vivekanand Vidyalaya, Chennai	Chennai -II	School building for children from BPL families	500	2007-08	10,50,000
2	CSI Balargnana Illam, Salem	Salem	Vocational Rehabilitation Centre for mentally challenged children	136	2008-09	14,76,750

3	Vasantha Memorial Trust, Chennai	Chennai -I	Chemotherapy and Day Care Centre to provide quality care to the poorest of poor cancer patients	350	2008-09	6,70,000
4	Akshaya's Helping Hand in H.E.L.P Trust Madurai	Madurai	ICU in Hospitals cum Rehabilitation Centre for the distressed, mentally dissatisfied elderly citizens	200	2008-09	25,00,000
5	Isha Education	Coimbatore	School Building to impart quality education to the rural masses	450	2009-10	25,00,000
6	Sevalaya, Kasuva Village	Chennai -II	second floor of school building	1,042	2010-11	18,13,000
7	Bethashan Special School, Madurai	Madurai	Class Room building	56 children	2010-11	5,00,000
8	Guild of Service - Home for the Blind	Vellore	Extension to School Building for Blind Students	50	2010-11	15,00,000
9	S M S M Higher Secondary School, Suchindram	Tirunelveli	Rural development Centre	1,594	2010-11	19,60,000
10	YMCA Rural Centres & Institute of Rural Development Marthandan, Kanyakumari	Tirunelveli	Rural development Centre	300 + 40 SHG for women 25 youth girls 45 unemployed	2010-11	25,00,000
11	Community Health Implementation Literacy Development Society	Chennai - II				
12	Isha Education	Vellore	four additional class rooms construction	3,450	2012-13	25,00,000
13	Tirunelveli Social Service Society, Palayamkottai	Tirunelveli	Resource cum Training Centre for Women	1,200	2012-13	18,30,000
14	Saranaalayam Trust, Vaniyambadi	Vellore	Home for the orphaned and aged persons	116	2013-14	18,70,000
15	Kasturba Gandhi Kanya Gurukulam	Thanjavur	free dormitory at Kasturba Gandhi Kanya Gurukulam & Construction of free dormitory facility on first floor of Sri Thayumanavar Vidyalam, Vedaraniam	60	2013-14	19,93,000



16	Sustainable Healthcare Advancement (Suham) Trust	Salem	Philips Colour Doppler Scanner	General Public Utility	2013-14	24,00,000
17	VHS Blood Bank unit of voluntary Health services	Chennai - I	second floor for dispensary	Medical and Health care	2013-14	25,00,000
18	Cancer Institute (WIA)	Chennai - I	Ambulance	Medical and Health care	2014-15	13,00,000
19	Avvai Ashram (A unit of Gandhigram Trust)	Tirunelveli	Boys Hostel Building	1,700	2015-16	25,00,000
20	Chennai Floods in nov- dec. 2015	Chennai I & II	relief to victims of Chennai Floods through South Zone	Medical and Health care	2015-16	25,00,000
21	Ramakrishna Mission Math, Nattarampalli	Vellore	X ray machine for mobile medical van to provide free medical service to needy patients	General Public	2016-17	12,15,000
22	Anandam	Chennai - II	30 KV Solor Energy Plant for installing in Senior Citizen home	General Public	2017-18	19,50,000
Total Number of Beneficiaries in Tamil Nadu = 11,464						

Source: www.licindia.in

The aforesaid table has very clearly brought out the contribution of LIC to the society, particularly downtrodden children, destitute women, mentally retarded children, free dormitory, home for the orphaned and aged persons and relief measures for the victims of Chennai floods. The number of beneficiaries in Tamilnadu alone is 11, 464. This implies that through Golden Jubilee Foundation, LIC of India has been doing tremendous service to the society and proved itself as a partner in sharing the burden of Government in implementing various welfare schemes.

Conclusion

LIC have specialized CSR groups that formulate policies, programs and allocate budgets meticulously for implementation of various CSR activities for the welfare of society.. Those programs are frequently decided by way of social philosophy that have clear goals and are properly described and are aligned with the goals of the LIC of India. The packages are put into practice through the LIC officers who have sufficient experience in implementing various programs ranging from community development to

development in education, healthcare and so forth. LIC have attempted to reach to the remotest villages making sure a Pan India Presence. It is worth to mention that LIC have supported NGOs who are operating in remotest villages in North-East, to tribal region of Kangra District of Himachal to remotest village in Pallakad, Bheemanad in Kerala and Bhuj in West to Magrahat in remotest eastern India.

References

- Ahalada Rao (2015). LIC Contribution towards CSR. Abhaya Foundation, Bangalore, ICSI Publication, pp.42 – 44.
- Minister of State for Corporate Affairs (2017). The Economics Times, New Delhi, Oxford University Press, pp. 190- 198.
- <http://search.licindia.in>
- <http://economictimes.indiatimes.com>
- <http://licgoldenjubileefoundation.in>

Indian Public Distribution System – An Alleviation Drive & For Facilitating Livelihood among the Rural and the Poor

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Abstract

The Public distribution system (PDS) initially played a crucial role in providing food stuff to the people especially to the socially marginalized and economically disadvantaged during the periods of food shortage. But it is being carried on and on to date and the basic aim of Public Distribution System now is giving away important food products like food materials , oils , pulses, cereals and some grocery items to poor and the unaffordable, low-income, rural and urban population of the nation. The Public Distribution System is instrumental in removing poverty, and enhancing the living standard of the poor. Gandhi, the Father of Nation, declared that 'India lives in villages,' implying that they shall be prioritized in official governance. More than 80 percent populations of the rural areas are below the poverty line. Of the total population of India, thereby, nearly 40 percent of the total population led their life below the poverty line. Hence, Public Distribution System (PDS) act as means to safeguard them by providing them the necessary food materials at periodic intervals. Being a competitor to the regular traders who sell at a higher price and for profit, the Public Distribution System is prone to a lot of undermining and subverting attempts by the vested interest trading groups; the PDS materials themselves are likely to fetch greater gains if diverted to be of the Public Distribution System purpose, and sold in black market. This paper discusses such pitfalls the PDS faces in India at present, and how this could be and should be checked. It is concluded that by pointing out what effective steps Government should take to overcome all the drawbacks in the PDS for the betterment of the poor and under-privileged.

Keywords: PDS, basic food resources, poor & disadvantaged, pitfalls, Fair price shops.

Introduction

The Public distribution system (PDS) initially played a crucial role in providing food stuff to the people especially to the socially marginalized and economically disadvantaged during the periods of food shortage. But it is being carried on and on till date and the basic aim of Public Distribution System now is giving away important food products like food materials , oils , pulses, cereals and some grocery items to poor and the unaffordable, low-income rural and urban population of the nation.

Aims of Public Distribution System

The main aims of the public distribution system are:

1. To eradicate long standing hunger among the poor people in Tamil Nadu.
2. To protect people from the evil effects of price inflation.
3. To promote nutrient contents in food among the people.



4. To offer domestic fuel at subsidized prices.
5. To ensure easy accessibility of commodities by the PDS cardholders.

Need and Importance of Public Distribution System

Social welfare is the prime aim of every government. Though governments work with different ideologies, their ultimate aim is welfare of the society. The socialistic pattern of government is the common system of politics in India aiming to ensure equity. As far as the government finance policy is concerned, bringing equality between the rich and poor by way of redistribution of income and wealth is its essence. Regarding Indian society, it is complex in nature, people are from as many religions, caste, race, regions, and they are different in their socio-economic status. There is also considerable gap between the rich and poor. PDS is one solution to bridge the breach between the rich and poor.

In the case of ratio of poverty, around 30 percent of Indians are caught under the clutches of poverty. They are not able to lead even a sustainable life. They become worse and worse even though they earn more than before. Moreover, for operation of various ranges of poverty is also there. Under these situations they are not able to afford for their basic needs and amenities. In order to manage their family needs, the public distribution system helps them in many ways. On the other hand, failure of monsoon, crop failure, and drought create a greater demand for essential commodities. The system of public distribution guarantees them in availing these essential commodities from the ration shops during these critical periods. Therefore, it is very important and the second-largest-population-nation needs to have system of this kind.

Role of Public Distribution System

The Public distribution system is a powerful tool used by the government to fulfill to basic needs of the society i.e. food to eat. The government offers nutrient food stuff at the affordable price and also free some times for some select items. The PDS comprises a large number of outlets such as ration-shops and fair-price-shops through which the government supplies some essential items of daily

use to the public at controlled prices. The PDS has expanded vastly over the years. On account of increasing cost of production, the government purchases the commodities from the producers at higher price than before. This has pushed up the cost of commodities at the ration shops too.

The handling of food items by the open market leads to an artificial increase in demand for these commodities sometimes, which restricts the supply of these commodities in the market. This man made and artificial demand raises the prices of the commodities which eventually cannot be bought by the people especially by the poor people. The functioning of the “fair-price shops” under the Public Distribution System protects the poor people from the rising prices of commodities, and shortage of food items, by providing the same at an affordable subsidized price.

Functions of Shops under Public Distribution System

The fair-price shops improve the living condition of people in terms of providing them basic food materials, especially to the poor and downtrodden. This system provides many services to the poor, disadvantaged and it has multidimensional monetary functions as follows.

1. Providing Subsidized Foodstuff

Providing food materials to the eligible cardholders is the vital function of the public distribution system. Increasing prices of essential commodities in the open market is a matter of great concern to the public as well as the elected governments. Poor people, especially people who are socially and economically disadvantaged in the society are finding it unaffordable to buy essential commodities in the open market. In order to protect them from the price inflation of such items, this system provides primary food materials to them at subsidized prices.

2. Providing Festival Gifts

Besides providing the essential commodities at the subsidized prices to the people, the public distribution shop in India provides festival-gifts to the people such as ‘Pongal gifts’ in Tamilnadu, additional sugar during Deepavali in almost all states etc. In the same

line, free sarees and dhothies are also given to the people through PDS shops during such occasions. Thus, the shop of this PDS systems provides many free products, inclusive of Grinder, Mixie, table fan, TV etc. (In honour of the noble mission of these PDS shops, His Excellency The Governor of Tamilnadu, Shri. BANWARILAL PUROHIT has recently ordered that the purchase for Raj Bhavan itself shall have to be done in these PDS shops and not from private traders.)

3. Implementing many Govt., Schemes

Government of India implements many important schemes through the public distribution shops. Many types of smart cards are being distributed to the public through these shops. This is because of the fact that these shops are located criss cross the nation, almost in every village and they are easily accessible and quickly reachable by the people.

4. Buffer Stock – Procurement System

Buffer stock is a weapon used by the public authority. Every state government in our county has buffer stock. The Governments purchase essential commodities from farmers under government procurement system. A minimum support price is given to farmers. By augmenting the essential agricultural and food commodities for PDS purposes, these commodities are stored and kept safe for future needs. In those days of history too, this type of procurement was in vogue and was compulsory, and every farmer had to give a certain portion of their surplus produce to the government. Nowadays, it is not mandatory and is made optional. So, governments themselves purchase goods directly from farmers.

Drawbacks of PDS in India

- Generally, the consumer gets inferior food grains in ration shops.
- Malpractices by dealers and intermediaries which lead to non-availability of goods.
- The food subsidy incurred by the government is becoming huge that may increase the public expenditure of the governments.

- There are large scale malpractices and corruption in PDS, of late, (inclusive of the latest Christy Fried Gram PDS suppliers' tax evasion scam of 1500 crores).
- Prevalence of fake PDS cards is high in Tamil Nadu and there is a chance for wrong inclusion as there is no system to ensure only the needy but it is issued uniformly for all residents.
- Those who have no shelter are facing difficulties to get the family PDS cards.
- Quantity of the essential commodities supplied under this system is not sufficient when the family size is large.

Suggestions

- Packing of ration articles is a good method since it shall prevent leakage and inadequate weight of the contents.
- The quantity of rice and kerosene allocated must be increased.
- A computer- based model is to be introduced for monitoring the PDS in all the states.
- The practice of selling unnecessary items should be curtailed in the fair-price shops.
- Steps shall be taken to eliminate the Fake PDS cards.
- Rationing of the commodities should depend upon the family size.
- To avoid malpractices and corruption, the workers of the fair price shops should be paid decent pay.

Conclusion

Even many poets and freedom fighters in India have raised their voice and have made slogans in support of ensuring availability of food to every citizen through PDS. Gandhi once quoted that India lives in villages, implying that they shall be prioritized in official governance. More than 80 percent of the rural areas are below the poverty line and the total population, nearly 40 percent are living below the poverty line. The PDS is only way for safeguard for providing necessary food materials to them. Government should take steps to overcome all the drawbacks in the PDS for the betterment of the poor.



References

- Ishwar C. Dhingra, *The Indian Economy*, Sulthan Chand & Sons, Educational Publishers, New Delhi, 2005.
- Loganathan P., and A. Sakthivel, "Role of Public Distribution System in fighting with food inflation", *Tamil Nadu Journal of Co-operation*, Jan 2011.
- Swaminathan.M.S., (1995) "Revamped Public Distribution System", *Economic and Political Weekly*, Vol.XXX, No.27, July 6, PP.1752-1764.
- Maheswari. T., "Public Distribution in Tamil Nadu". *Kisan World*, Vol. 37, No.5 May 2010.

An Investment on Health Model of the Household: Is it Time to Shift the Burden of Proof?

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Abstract

The aforementioned allocation of resources for healthcare services of the households requires a strong enquiry and for which the current study has been carried out. People constitute the valuable human resources needed for the development of any country. The promotion and protection of health of the people is essential for sustained economic and social development. In fact, health is an important input in any process of development. Utilisation of healthcare system entails a price which is determined by the service provider based on the type of facility offered. Herewith the main focus of this study is to create basic knowledge among people (Households) about their health status, pattern of healthcare expenditure, sources of healthcare finance, awareness and willingness to pay for health insurance in Coimbatore. For that following specific objectives have been set for the study: 1. To examine socio- economic background of the sample respondents. 2. To analyse the health status and determinants of healthcare services in Coimbatore and 3. To find out the determinants of healthcare choice among the respondents. To explore the objectives of the study the necessary primary data have been collected using stratified random sampling method. Appropriate statistical tools have been used to draw inferences from the data collected. Health Status was assessed using Self Assessed Health Status (SAHS) of the respondent with the help of Ordered Probit model. Healthcare seeking behaviour and Choice of healthcare provider were analyzed by using Multinomial Logit (MNL) model.

Keywords: Investment on Health, Health status, Determinants of healthcare choice

Introduction

The domain of the term 'Health' is as large and complex as the entire scope of human activities. Good health is considered to be a prominent element for human productivity and development process. Physically and mentally strong healthy community will contribute for economic and sustainable growth for the development of the nation. Buddha has said that of all the gains, the gains of health are the highest and the best. The World Health Organization (WHO) defines health as "A state of complete physical, mental and social well being and not merely an absence of disease or infirmity."

Health has found an important place in the constitution of all countries and the United Nation (UN) agencies. Health status is multidimensional in nature to assess it we need a set of tools to know the health status of individuals as well as the community, they are morbidity, nutritional status or calorie intake, and Human Development Index (HDI) and GDP. Among these, mortality and life expectancy at birth are used to measure HDI. Even illness is not a random event, but one that is systematically related to the household- and community-level factors.



One who fails to invest on their health will be a great complication to lead a successful life therefore preventive or curative health care like public, private, and self-treatment are necessary. It depends upon the type of illness, access to service provider, information about the provider, economic status of the individual/household, among others. (Duraismy, 2001)

Health is an important determinant of economic and social development, because ill health creates vicious circle by depleting human energy, leading to low productivity and earning capacity; deteriorating quality and quality of consumption and standard of living. Therefore, a nation ought to give adequate attention to the health care of its people. Health is an important aspect of human resource development. Good health care facilities and services are essential for creating healthy citizens and society that can effectively contribute to social and economic development (Becker, Gary. 1975). There have been a number of empirical studies of the Grossman model (1972), The health capital has usually been measured either by health indicators, quality-adjusted life-years or categorical measure of overall health status. To measure the demand for health care usually the number of visits to a doctor or the utilisation of medical equipment is used. (Anders Vork, 2000). A specific study about health care has become interesting lately: Health Care Provider Choice. Choice behavior can be characterized by a decision process, which is informed by perceptions and beliefs based on available information, and influenced by affect, attitudes, motives and preferences; however, we can never measure all the aspects of the complex life course of consumer choices, (Bolduc, and Muller, 1996).

Research Questions

The present study is taken up to cover a wide range of aspects in the Demand for healthcare services, Investment of health and healthcare choices. According to the theories of human capital by Grossman, Garry S. Becker, Theader Schultz, Jacob Mincer were revealed that individuals differ in inherited and acquired abilities on investing on them as Health and Education. When in the event of an illness, a majority of individuals seek some form of treatment as and when their level of education and

ability to access decides the choice of curative health care. Do all the people resort to healthcare centre public or private? If not, what makes them to refrain from taking care of their health? How frequently are the healthcare centers utilized by the public? Does the existing system of healthcare cater to the needs of the sick? Are the numbers of healthcare providing units commensurate with the existing level of demand for keeping oneself in good health?. Government plays a prominent role in extending medical facilities to the mass of people. Government run hospitals are now equipped with state-of-the-art machines. Equally competitive are the private healthcare services. In fact, there are private hospitals in Coimbatore, which provide excellent service to the users (Martin Feldstein, 1995). To what extent are the public prepared to come forward to make use of such facilities? Do they differentiate government healthcare service providers from private healthcare providers? If so, what is the basis of such differentiation? Which one government or private healthcare system is favored by the public? Why? Every study has its own scope and usage for the public (government), Private (Individual) or as a whole and this study is also no exception. We found that government in general and private in particular benefited by this study.

Materials and Methods

Primary data forms the basis for the study. Data required are to be collected through interview schedule. Through interview schedule 1224 sample Household were selected on the basis of Stratified Random Sampling method. Each household member was asked to report an illness and/or injury suffered in the past 4 weeks to probe about acute illness. We have used reported morbidity of all the individuals in the household during the reference period at the time of survey by the head of the household. Though this measures may be influenced by the person's knowledge and perception of illness, morbidity profile observed from the questions relating to personal profile of the respondents, demand for healthcare services, healthcare seeking behavior, factors related to healthcare choice. And also secondary data have been collected from annual reports, magazines and brochures about the Coimbatore Municipals, books relating to the service sector, health sector.

Data Analysis

Appropriate statistical tools are to be used to draw inferences from the data collected. Health Status was assessed using morbidity status of the respondent with the help of logistic Regression. Healthcare seeking behaviour and Choice of health care provider were analyzed by using Multinomial Logit (MNL) model. Multinomial logit models are used to model relationships between a polytomous response variable and a set of regressor variables. These polytomous (Nominal in nature) response models can be classified into two distinct types, depending on whether the response variable has an ordered or unordered structure. In an ordered model, the response Y of an individual unit is restricted to one of m ordered values. In our study we use unordered method i.e., (1 = Government, 2= Private and 3= Self Treatment). We carried out MNL model for the probability of selection of hospital by the household's. Formal statement of the model: MNLM can be written as

$$h \Omega_{m/b}(x) = h \frac{\Pr(y=m/x)}{\Pr(y=b/x)} = x\beta_{m/b} \quad \text{for } m=1 \text{ to } J$$

$$\Pr(y=m/x) = \frac{\exp(x\beta_{m/b})}{\sum_{j=1}^J \exp(x\beta_{j/b})}$$

While the predicted probability will be the same regardless of the base category b, changing the base category can be confusing since the resulting output from mlogit appears to be quite different. For example, suppose you have three outcomes and estimate the model with outcome 1 as the base category. Your probability equations would be

$$\Pr(y=m/x) = \frac{\exp(x\beta_{m/1})}{\sum_{j=1}^J \exp(x\beta_{j/1})}$$

And you would obtain estimates and, where If someone else set up the model with base category 2, their equation would be

$$\Pr(y=m/x) = \frac{\exp(x\beta_{m/2})}{\sum_{j=1}^J \exp(x\beta_{j/2})}$$

And they would obtain and, where Ulf- G Gerdtham and Magnus Johannesson (1997).

Table 1.1 Descriptive Statistics for Choice of Hospital

	Mean	Std. Deviation	Min.	Max.
Source of Hospital	2.0315	.97010	1	3
Monthly Household Income (MINC)	10708.52	15322.248	4000	45000
Agriculturist =1 ; Otherwise =0 (OCCAG)	.0534	.22487	0	1
Household=1 ; Otherwise =0 (OCCHO)	.2286	.41996	0	1
Job in organized sector =1 ; Otherwise =0 (OCCJO)	.0801	.27149	0	1
Trade/Business =1 ; Otherwise =0 (OCCTR)	.2192	.41375	0	1
Unemployed =1 ; Otherwise =0 (OCCUN)	.0662	.24859	0	1
Never Married=1; Otherwise =0 (NAMA)	.4275	.49476	0	1
Married=1; Otherwise =0 (CAMA)	.5434	.49816	0	1
Widowed/Diverse/Separated =1; Otherwise =0	.0291	.16809	0	1
Gender Male = 1; Otherwise =0 (GEMA)	.51	.500	0	1
Illiterate =1; Otherwise =0 (EDIPR)	.0616	.24041	0	1
Up to Secondary =1; Otherwise =0 (EDSE)	.2768	.44746	0	1
Higher Secondary =1; Otherwise =0 (EDHS)	.1865	.38957	0	1
Degree/Diploma =1; Otherwise =0 (EDDE)	.2238	.41683	0	1



Profession = 1; Otherwise = 0 (EDPS)	.0231	.15029	0	1
Hindu = 1 ; otherwise = 0 (REHI)	.8948	.30687	0	1
Christian = 1; Otherwise (RECH)	.0532	.22447		1
Muslim = 1; Otherwise (REMU)	.0520	.22207	0	1
SC/SC = 1; Otherwise = 0 (CSCST)	.1425	.34958	0	1
MBC = 1; Otherwise = 0 (CMBC)	.2856	.45173	0	1
BC = 1; Otherwise = 0 (CMBC)	.4773	.49953	0	1
FC = 1; Otherwise = 0 (CMOBC)	.0947	.29277	0	1
Joint family = 1; Otherwise = 0 (TYFM)	.2533	.43494	0	1
Age (AGE)	29.04	16.222	18	86
Distance of household to hospital (TOHE)	3.45	3.049	1	20
(Sample N 694 only those who selected private hospitals out of 1224 households)				

Source : Primary Data

Table 1.2 Multinomial Logistic Regression for Choice of Hospitals

Source	Govt. Hospital					
	Coefficient	Std. Err	z	P>z	[95% Conf. Interval]	
MINC	-.0000846	.0000359	-2.36	0.018	-.0001549	-.0000143
OCCAG	.2365485	.501461	0.47	0.637	-.746297	1.219394
OCCHO	-.6599936	.675623	-0.98	0.329	-1.98419	.6642032
OCCJO	.5801064	.5921399	0.98	0.327	-.5804664	1.740679
OCCTR	-1.740553	1.216251	-1.43	0.152	-4.124362	.6432556
NAMA	-1.693631	1.402318	-1.21	0.227	-4.442124	1.054861
CAMA	.1204069	.9454834	0.13	0.899	-1.732707	1.97352
GEMA	-.9679568	.459401	-2.11	0.035	-1.868366	-.0675475
EDPR	-.9619573	.6817561	-1.41	0.158	-2.298175	.3742602
EDHS	.0243674	.4122901	0.06	0.953	-.7837062	.8324411
EDDE	-1.373661	.5710113	-2.41	0.016	-2.492822	-.2544992
REHI	-.241393	.6515185	-0.37	0.711	-1.518346	1.03556
RECH	.4388194	.9071128	0.48	0.629	-1.339089	2.216728
CSCST	-.3891385	.7582844	-0.51	0.608	-1.875349	1.097072
CMBC	-.0996474	.6760023	-0.15	0.883	-1.424588	1.225293
COBC	.0123192	.6349066	0.02	0.985	-1.232075	1.256713
TYFM	-.4895196	.4160734	-1.18	0.239	-1.305009	.3259693
AGE	.0690279	.018754	3.68	0.000	.0322708	.1057851
TOHE	.1245741	.0506746	2.46	0.014	.0252536	.2238946
_CONS	-2.511872	1.594399	-1.58	0.115	-5.636837	.613093

From the multinomial logistic regression were statistically significant with respect to self independent variables of income, gender male, treatment as base to know the probability of selecting education degree, age and distance from the hospitals public hospitals with respect to private hospitals.

Continue of Table 1.2 Multinomial Logistic Regression for Choice of Hospitals

Source	PRIVATE HOSPITAL					
	Coefficient	Std. Err	z	P>z	[95% Conf. Interval]	
MINC	.0000112	9.68e-06	1.16	0.247	-7.76e-06	0000302
OCCAG	-.2244243	.3272646	-0.69	0.493	-.8658511	.4170025
OCCHO	-.2000888	.3767684	-0.53	0.595	-.9385413	.5383637
OCCJO	.2934195	.274018	1.07	0.284	-.2436459	.8304849
OCCTR	.0617951	.6055365	0.10	0.919	-1.125035	1.248625
NAMA	-.0725757	.8389207	-0.09	0.931	-1.71683	1.571679
CAMA	1.06064	.7855592	1.35	0.177	-.4790279	2.600308
GEMA	.0632338	.2818791	0.22	0.823	-.4892391	.6157067
EDPR	-.474761	.3213001	-1.48	0.140	-1.104498	.1549756
EDHS	-.6065748	.254557	-2.38	0.017	-1.105497	-.1076522
EDDE	-.6631833	.2418055	-2.74	0.006	-1.137113	-.1892532
REHI	.3231178	.3771354	0.86	0.392	-.416054	1.06229
RECH	.2443334	.5777147	0.42	0.672	-.8879667	1.376633
CSCST	-.574124	.3813832	-1.51	0.132	-1.321621	.1733735
CMBC	-.3828453	.3506412	-1.09	0.275	-1.070089	.3043989
COBC	-.3185755	.3280102	-0.97	0.331	-.9614637	.3243127
TYFM	-.1765959	.2108936	-0.84	0.402	-.5899398	.236748
AGE	.0340844	.0105951	3.22	0.001	.0133183	.0548505
TOHE	.015609	.0348955	0.45	0.655	-.0527849	.0840028
_CONS	-1.268342	1.038238	-1.22	0.222	-3.303252	.7665682
(source of==no action is the base outcome)						
Number of obs = 694						
LR chi2(38) = 112.62						
Prob > chi2 = 0.0000						
Log likelihood = -519.24331						
Pseudo R2 = 0.0978						

The data was processed using STATA version10, nature of dependent variable is multinomial so the MNL was employed to know the probability of choice of hospitals.

The Multinomial Logit (MNL) regression estimates if our dependent variable is more than two options we choose MNL for analyzing the choice of providers in this function for the sample households which are given in Table.1.2. The results indicate that as the income increases households seem to prefer private rather than public health facilities. The demand for private health facilities is enormously high as compared to that of public health facilities

in urban Coimbatore. However, coefficient for the government hospital is negatively significant, even though private hospital shows insignificant but positive coefficient (Duraisamy, 2001). Occupation did not influence for the selection of hospital which shows that having insurance policy and ability to care are the reasons. Age is a significant variable to assess the selection of hospitals because age and health expenditures are U shaped curve.

The most important determinant of selection of hospital is household disposable income which is positive and statistically significant. As the income increases, households prefer private to public



health facilities of the samples. The health seeking behaviour among populations, particularly in the urban communities, is a complex outcome of many factors operating at individual, family and community level, because availability of private hospitals are high in the urban areas.

4.1 Findings and Conclusion

The empirical investigation in urban Coimbatore which shows that the main implications of the theoretical Grossman's model hold in reality. Using self-assessed health status we found that increases in income and education raises for health demand, ageing, in contrast, reduces health demand. Household income emerged as a key determinant of the health status. As income increases, the chances of being ill and functional limitation due to illness (measured by number of days ill) reduce. Out of the total number of sample respondents was 1224. Among them 852 (69.6 per cent) were males and 372 respondents (30.4 per cent) females. To study healthcare seeking behavior of respondents, we made analysis on three dimensions, they are i) illness during 30 days (outpatient healthcare services), ii) Chronic Ailment (long term diseases) and iii) the last one hospitalization (bed ridden days). Health seeking behaviour of a person is determined by his social and economic background, knowledge, education, cultural practices, availability of providers together with accessibility and affordability.

Among the total sample respondents 59 per cent of the households mostly preferred for private doctor / dispensary/ clinic and 34 per cent of the sample households preferred for private hospital/ nursing home. Among the total samples 5 per cent of the sample households were taking the treatments in government hospital. Only 2 per cent of the households followed home remedy methods and less than one per cent of the total sample households followed the other methods of treatments like Primary Health Centers (PHC)/Community Health Centers (CHC) /Sub-centre, clinic, Employee State Insurance Schemes (ESIS) hospital, pharmacist/ medical shop, etc.,

Suggestions

The study suggests that to measure morbidity status need to construct a strong methodology for collecting reliable data from the sample respondents. Because respondent may not remember all the expenditure incurred with respect to healthcare expenditure which they have made so need to be develop an appropriate tools for measuring the healthcare expenditure. Even then to reduce out-of-pocket healthcare expenditure there are many policies towards health insurance but it does not cover all kinds of diseases so make compulsory health insurance and cover all the diseases.

References

- Anders Vork, (2000). "An empirical estimation of the Grossman health demand model using Estonian survey data", Term Paper in doctoral course in health economics, University of Bergen.
- Becker, Gary. 1975. Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education. New York: National Bureau of Economic Research.
- Duraisamy P., 2001. "Health Status and Curative Health Care in Rural India. Working Paper Series." No. 78. pp. 1-40.
- Grossman, M., 1972. On the concept of health capital and the demand for health. *Journal of Political Economy* 80 (2), 223–255.
- Martin Feldstein (1995), "The Economics of Health and Health Care: What Have We Learned? What Have I Learned?" *The American Economic Review*, Vol. 85, No. 2, Papers and Proceedings of the Hundredth and Seventh Annual Meeting of the American Economic Association Washington, DC, pp.28-31.
- Ulf- G Gerdtham and Magnus Johannesson (1997), "New estimates of the demand for health: results based on a categorical health measure and Swedish micro data", Working Paper Series in Economics and Finance No. 205.

Critical Evaluation of Economic Status in Solid Waste Management of A Local Panchayat in Erode District, Tamilnadu

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Abstract

Sustainable development needs recycling of solid waste should equal to the production. Because management of solid waste is a global problem lead to deterioration of natural resources. Hence attention of scientists, the planners and the public need to be focused on the efficient utilization of solid waste. The negative impact of solid waste resulted in the contamination of soil, surface water, ground water and other non-renewable resources poses a negative impact on solid waste management and affecting the economy of nation. If no rigorous efforts are made, there will be aggravation of problems related to solid waste management. So the present study has been focused on critical evaluation of economic status of SWM(Solid Waste Management) in local panchayat of Erode District. Veerapanchatram panchayat was selected as a study area to evaluate the investment cost, operational cost, managing cost, recycling cost etc., and to study the cost-benefit analysis. Primary data was collected by door to door survey. Secondary data was collected after discussing with Panchayat officials. It was observed that Veerapanchatram panchayat has established a well planned solid waste management system. The study highlighted that 41.7% of the respondents affected with diarrhea, 34.6% with skin infection, 33.6% with fever and 18.2% has persistent headache. The respondents attributed that physical environmental factors are the cause for diseases. Children are the common victims that 72.1% of the respondents agreed that children are affected by solid waste. Regarding the attitude of residents, 88.4% of the respondents opined that solid waste pollution must be solved without considering the cost involved. The analysis showed 88.9% of the respondents ready to pay for the projects for SWM. All the results are discussed.

Keywords: Economic Status – Solid Waste Management

Introduction

Population increase, urbanization and exploitation of natural resources lead to a number of serious environmental problems like biodiversity loss, habitat loss, depletion and degradation of natural resources, pollution of air and water, and waste disposal. Here the economic growth and urbanization are correlated because they are closely related to each other. Hence, there was a close link between economic growth and environmental degradation. The major threads occurred to environment include loss of grazing land, deforestation, species extinction, geometrical increase of human population, depletion of freshwater resources, over fishing, pollution, incidence of diseases, climate change, shortages of energy resources etc.,

The modern life style resulted in accumulation of urban solid waste and becomes a universal problem at the global level, resulting in problem of pollution and depletion of natural resources.



In cities and towns, waste is mostly collected by a government agency because it was considered a basic government function in the developed countries. If it is deeply analysed in cities only a part of the waste out of total waste produced was properly disposed and the rest was again handled improperly. Thus, the improper collection and inappropriate disposal of solid waste affect the environment and human health by creating environmental menaces.

According to Schubeler, (1996) “solid waste is household refuses, non-hazardous solid waste from industrial, commercial and institutional establishments (including hospitals), market waste, yard waste and street sweepings”. Following is the review of related literature on Economic status of solid waste management.

Review of Related Literature

Kodwo Miezah et.al (2015), have studied the issue of solid waste management by explaining the causes of poor solid waste management in cities. It has been observed that proper characteristics and quantification of municipal solid waste helped in effective waste management in the study area. The collected data had been analysed based on region, selected households in each region based on the rate of waste generation and physical composition of waste. They have reported that the rate of waste generation in Ghana was 0.47 kg / person / day. The study has concluded that overall sorting and separating efficiency of solid waste was high (84%) for biodegradables followed by other waste which was about 76%. They found that one way separation system was effective and have suggested many environmental friendly technologies to manage the solid waste disposal in other countries also. Moreover, they have used multitude of the principles for processing and treatment of solid waste.

Mohamed Osman Saeed, et.al., (2009), have assessed the generation of solid waste and potentiality of recycling of municipal solid waste in Kuala Lumpur, Malaysia, which shows generation rates and composition of solid wastes of various sources such as street waste, landscape and garden waste, industrial and constructional waste, institutional, residential and commercial wastes. The study showed that generation and potentiality of recycling

of municipal solid waste. They have showed that there was an alarming increase in generation of solid waste in Kuala Lumpur. The per capita daily residential solid waste generation was about 1.62 kg, which was double to the national average of 0.8 to 0.9 kg per capita. If this would continue then the per capita generation rate would reach 2.23 kg per capita by 2024.

It was observed that among recyclable wastes, organic food waste was the major one followed by paper and plastics. They have mentioned that because of population growth and their business activities the city has to improve in technologies for efficient waste recycling, by increasing the fund allotment, by creating public awareness and by maintaining the established norms for industrial waste treatment plans.

According to Cointreau, (1982) the methods of collection processing, and disposal of solid waste are directly associated with human health problems and it was acute in under developed nations. The four main components associated with health risks are presence of human fecal matter in solid waste, presence of hazardous material in industrial waste, release of toxic chemicals during decomposition and air pollutants and methane released during burning of dumps. The disease causing vectors like Insects and rodents breed on solid waste and could spread diseases like cholera and dengue fever. Presence of human fecal matter is a potential issue and health risk to the workers who are handling the waste, scavengers and other users.

Materials and Methods

For this study, descriptive research was found to be more appropriate, based on these the research problem and the questionnaire were prepared. During collection of primary data both closed-ended and open-ended questions were included in the questionnaire. A well structured questionnaire was prepared with the help of research experts and concerned officials of Erode district. The respondents were randomly selected and the research was conducted in various places which involved individuals of different occupations which included academicians, lawyers, waste management officers, waste collecting workers and the public who were residing near the areas of solid waste management.

Methodological Approaches

When environmental resources were valued in terms of economic valuation, it might help to make proper methodologies for resource utilization and allocation of available funds. As Jepma and Munasinghe (1998) observed when an individual buys a good, he would find whether readiness to pay is greater than price and its total economic value. Thus the price paid for an economic good or service reflects the consumer's readiness to pay.

In a survey, when people are asked how much they are ready to pay for a specific environmental service or how much they are ready to accept by way of compensation to tolerate a cost. This is Contingent Valuation Method (CVM) which involved direct

questions and it becomes a base for hypothetical basis.

The effective information obtained from the questionnaire was used to test the model, which explained the readiness to pay as a function of variables like average monthly income, education, children, gender, environmental ethic and house ownership. Simple linear regression and Binary logistic regression was employed. $WTP = \beta_1 + \beta_2 AMI + \beta_3 Ed + \beta_4 Cd + \beta_5 Gen + \beta_6 Ea + \beta_7 Hs + u$.

3.2 Variables

The following are the variables used for the study

Table 1.1 Variables Evaluated in the Questionnaire

Variable	Notation	Concept	Characteristics
Readiness to Pay	RTP	Readiness to Pay for the Project	Continuous and Quantitative
House ownership	Hs	Owned (1), Rented (0)	Dichotomous
Gender of the respondent	Gen	Male (1), No (0)	Dichotomous
Education	Ed	Illiterate (1) Upto 5th Std. (2) Upto 12th Std. (3) Degree (4)	Nominal
Children	Cd	Have (1) No (0)	Dichotomous
Income	AMI	Average Monthly Family Income	Continuous and Quantitative
Environmental ethic	Ea	Consider environmental project as important (1), No (0)	Dichotomous

4.1 Findings and Results

The multitude of generation of solid waste in Erode is similar to the urban solid waste generation in India. The data on the MSW generation maintained by the Urban Local Bodies (ULB) is based on the number of trips made by the waste transportation vehicles or approximation on other basis. Generally, there is no practice of weighing the MSW at any stage, giving the available data little authenticity. The main issues associated with MSW in Erode area; inefficient, inadequate and ad hoc primary collection of system, which results in the dumping of solid wastes into water bodies, road side, etc., lack of proper technical expertise in SWM; lack of financial base for the urban local bodies as they depend too much on government grants; absence of engineered landfills and crude waste dumping in open dumps resulting in ground

water contamination and breeding of mosquitoes, flies, rodents and pests and lack of proper private sector participation in the MSW system. The various sources of waste generation include household waste, wastes from hostels, marriage halls, institutions, waste from shops and markets, waste from street sweepings, construction waste and waste from slaughter house, hospitals.

4.2 Regression Analysis Municipal Project: Plum (Polychromous Universal Model)

The SPSS ordinal Regression procedure, or PLUM (Polychromous Universal Model), is an extension of the general linear model to ordinal categorical data (SPSS, Inc 2002). The model involves readiness to pay is the dependant variable and the independent



variable are AMI (Average Monthly Income), Ed (Education). Cd (Children), Gen (Gender), Ea (environmental ethic) and Hs (House ownership).

Table 1 Linear Model

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	1497.789	114.677	8	.000
Final	1383.112			

Link function: Logit^a.

Given the overall test of the model and test the hypothesis that a least one of the independent

variables (AMI, Ed, Cd, Gen, Ea, Hs) does not significantly affect the household's readiness to pay. The link function specifies what transformation is applied to the dependent variable or to the cumulative probabilities of the ordinal categories. It is the link between the random component on the left side of the equation and the systematic component. The p-value of the model fitting information table gives as 0.000, which shows that the overall model is statistically significant or in other words, the independent variables significantly affects the readiness to pay of the households at the 0.05 significance level.

Table 2 Parameter Estimates

Asdf	Asdf	Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold1	[wtp-pl=0]	-3.821	.430	78,875	1	.000	-4.664	-2.978
	[wtp-pl=1]	-.2752	.416	43,668	1	.000	-3.568	-1.936
	[wtp-pl=2]	-.174	.400	.190	1	.663	-.957	.609
Threshold2	AMI	.000016	.000534	2.331	1	.84	.00013	3.014E-5
	Cd	-.041	.041	.976	1	.323	-.121	.040
	Gen	-.211	.191	1.228	1	.268	-.585	.162
	Ea	.495	.157	90.343	1	.000	.804	-.187
	Hs	.676	.188	12.535	1	.000	.297	1.034
	[Ed=1]	.196	.421	.052	1	.028	-.922	.730
	[Ed=2]	.379	.205	3.394	1	.065	-.024	.781
	[Ed=3]	.479	.189	6.465	1	.011	..110	.846
[Ed=4]	0^a				0			

Source : Primary Data

Interpretations and Discussion

The results from the analysis show that the variables Ea, Hs and Ed the are statistically significant at 5 percent level of significance and AMI is significant at 10 per cent significance level (i.e., the p-values for the variables Ea, Hs and Education are less than 0.05 and AMI is less than 0.10).

The parameter estimates table 1.3 shows that the signs of Children and Gender are with negative coefficients. The means of households with more number of children tend to be unwilling to pay

than those with a less number of children. Then, if respondent is male, the household tends to have a lower probability of paying. Variables AMI, Ea, Hs and Ed on the other hand, have positive coefficients. This means that the higher the average monthly income, the more likely that the household will be willing to pay. Also, having environmental ethic helps to increase the probability that the household will be ready to pay. The result shows that the individuals who owned their house tend to a higher probability of paying. Education has also a

positive influence on readiness to pay, i.e. higher the educational attainment higher the willingness to pay for the project.

Results and Discussions

The study highlighted the various impacts of the improper SWM in the municipal area. About 41.7% were affected with diarrhea, 36.6% with skin infection, 33.6% with fever and 18.2% had persistent headache. The respondents mainly attribute physical environmental factors as the cause for disease symptoms and for the occurrence of diseases. Regarding the occurrence of diseases among the respondents, 44.4% of the respondents were affected by acute respiratory infection followed by cholera 42.4%, 29.3% of the respondents were affected by Chicken guinea. Children are very often the victims of the various diseases with 72.1% the respondents agreeing that children are getting affected by the diseases. The survey also highlights the seasonal occurrence of diseases and finds that monsoon season as the most diseases prone season with 48% of the respondents agreeing to it. About the expenses for treatment of a episode of a diseases the survey finds that the average outpatient expense as slightly less than the average inpatient expense. 96.1% of the respondents had an average outpatient expense of less than of Rs.500 while 75% of the respondents had average inpatient expenses of less than Rs.500. 14.3% had an inpatient expense between Rs.500 and Rs.1000 and 10.7% had expenses above Rs.1000. 86% of the respondents agreed that the occurrence of diseases in the municipal area has increased in the last few years. 78.6% of the respondents consider solid waste pollution as the main reason for the increases in the occurrence of diseases. Another important finding was that 62.9% of the respondents had no insurance cover. On the disamenities created by solid waste pollution, mosquito and flies were considered as the main disamenity due to sold waste. 29% were of the opinion that all the given disamenities are present in the corporation area due to solid waste. About 75.1% has ranked the disamenity of mosquito and flies as number one. Regarding solid waste disposal habits of the respondents, 77.2% depend on municipal waste bin for disposing solid waste. Burning solid waste is an option for almost 22.8%

of the respondents. The parameter estimates shows that the variables average monthly income and house ownership show consistent positive relationship with the WTP supporting the hypothesis. Variables like environment ethic and children, show a positive relationship with WTP and the variable gender shows a negative relationship with WTP generally. Education did not show the expected relation with WTP and it showed a negative relationship generally.

References

- Cointreau, S. (1982), "Environmental Management of Urban Solid Wastes in Developing Countries : A Project Guide" Washington, DC, Urban Development Department, World Bank.
- Jepma C.J and M.Munasinghe (1998), "Climate Change Policy", Cambridge University Press, United Kingdom.
- Kodwo Miezah, Kwasi Obiri-Danso, Zsofia Kadar, Bernard Fei-Baffoe, Moses Y.Mensah. (2015). "Municipal solid waste characterization and quantification as a measure towards effective waste management in Ghana", Waste Management.
- Mohamed Osman Saeed, et.al., (2009), "Assessment of municipal solid waste generation and recyclable materials potential in Kuala Lumpur, Malaysia", Waste Management, 29, 2209-2213.
- Schubeler, (1996). "Conceptual framework for municipal solid waste management in low-income countries", United Nations Development Program, UMP Working Paper Series No.9. St.Gallen, Switzerland : SKAT.



Needs and Benefits of Commodity Derivatives Market for Empowering Indian Farmers

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Abstract

Indian terra have been used for cultivating different crops by farmers in many centuries and still remains one of the biggest cultivators in the world for most of the agricultural commodities. The large portion of population is dependent on agriculture. Farmers have helped the nation to overcome a long period of scarcities to reach the present era of abundance. But marketing of agricultural still remaining to be in a bad gestalt and farmers are not getting the right price for their produce. In most circumstances, growers are forced under socio-economic situations to carry on chagrin sale of their produced output at throw-away price. Such distress sale deprives the farmer's legitimate income and loss in agriculture. Due to heavy debts most farmers are committing suicides or they are leaving from agriculture. This leads to agrarian crisis, that agrarian crisis screw up to a panic situation in entire Indian economy. Commodity derivatives market is one of the tools to ensure remunerative price for their produce. In that context, this paper discusses about the needs and benefits of commodity derivatives market for empowering Indian farmers.

Keywords: Commodity Derivatives Market, Agricultural, Price, Needs and Benefits.

Introduction

Commodity Derivatives Market today has become an attractive investment avenue in the world. Phenomenon of commodity trading in India is believed to have existed for thousands of years, but organized trading under commodity exchanges started since 2003. Indian commodity derivative is the leading market in number of future contracts traded in the world (Ranjith, 2018). Commodity derivatives market offering monstrous potential to make a commodities asset class for arbitrageurs, hedgers, speculators and also savvy investors. In India commodity exchanges offering spot, future and option trading for varieties of commodity contracts. Spot trade offering for instantaneous delivery of commodities, future trade is customized covenant between two parties where adjudication takes place on a specified date in future at today's agreed price and option trade is an agreement offers the buyer of the instrument the right but not the obligation to buy or sell underlying asset of commodity at a predetermined price in future. Since 2003 commodity exchanges furnish an eminence for trading commodity contracts for agriculture, energy and metal products. Agricultural commodities derivatives markets have undergone a more turbulent history in India.

Securities and Exchange Board of India (SEBI) is the new regulator for commodity derivative market under the provisions of Securities Contracts Regulation Act (SCRA), erstwhile it's controlled by Forward Market Commission (FMC) under the stipulations of the Forward Contracts (Regulation) Act 1952. At present, the Indian commodity derivative market has been growing faster which is a positive sign of development in this segment.

Objectives

1. To analyse the needs of commodity derivatives market for empowering Indian farmers
2. To study the benefits of commodity derivatives market for empowering Indian farmers

Methodology

This is a descriptive study and it's conducted on agricultural commodity derivatives market in India. Secondary sources of data collection have been taken for this study, from books, journals, magazines, research papers, commodity market bulletins, annual reports of Forward Market Commission (FMC) and Securities and Exchange Board of India (SEBI). The various other records, publications issues and reports keep by the Government of India (GOI) are also used in this investigation.

Needs of Commodity Derivatives Market for Empowering Indian Farmers Indian terra have been used for cultivating different crops by farmers in many centuries. Agricultural production has improved significantly since independence in India. According to 2011 census 54.6 percent of the population is engaged in agriculture and allied activities in India. Now India is a major producer of many agricultural commodities such as fruits, and vegetables. This sector contributes importantly to the Indian economy. It contributed to the total GDP of Indian nation, agricultural exports significantly earn foreign exchange reserve to total exports from India, it provides employment to the total population especially rural population and agriculture is the basic center of food supply to the entire people. In spite of significant contributions by agriculture sector to the Indian economy, it suffers from several debilities. Marketing of agricultural still remaining to be in a bad gestalt and farmers are not getting the right price for their produce.

In India agricultural commodities physical markets are highly unorganized, isolated and fragmented. There is lot of middlemen's involvement in marketing of final output of farmers that are namely village merchant, commission agent, and wholesale trader. So its biggest array of middlemen's between the buyer and vender of agriculture final output. Each intermediaries involved in this long array to fulfil various functions to make money from margins. The charges for each middlemen is very high. So this illuminate that market risk is included at each stage of the marketing and price realization by farmers is low. In physical markets there is no opportunity for actual price dissemination in agriculture commodities which lead to the process of price discovery.

Due to adequate warehousing facilities farmers are coercion to sale their commodities suddenly after harvest which will receive less price during arrival time. Agricultural commodities cannot be stored for long periods of time, because they are perishable in nature. Warehousing facilities is provides crucial for storage of food grains, in this way farmers get an opportunity for higher price realization for their produce.

Agricultural business has to allude with price vacillate in usually, thereby, price risk is most inevitable wanions in physical markets. There is a long time gap between planting and harvesting. Therefore, price of final products is usually inconspicuous at initial stage of cultivation. The prices of this type of commodities oscillate not only in year to year but also month to month, day to day and hour to hour. So farmers are highly susceptible to price fluctuations of his produced commodities, in this case farmer's deals with the twin hype of lower returns and higher risks. All these expose farmers to high price risk that may impel to utter defeat of his business.

This has made farmers look for alternatives to mitigate the price risk. In this context the need of commodity derivatives market is arises. Commodity derivatives market is one such powerful tool to empower Indian farmers by allowing them to lock in the prices of their produce at a minimum cost and it will protect farmers in case of a price smash while giving them an opportunity to sell their produce at higher prices if the price increases.



Benefits of Commodity Derivatives Market for Empowering Indian Farmers

Commodities derivatives market is an emerging platform for investment in wide varieties of commodities for farmers as well as other stakeholder. In 2003 government has allowed electronic trading system in national commodity exchanges and let them allude in commodities future trade business. NMCE (National Multi Commodity Exchange) placed at Ahmedabad, NCDEX (National Commodity and Derivatives Exchange Ltd) situated at Mumbai and MCX (Multi Commodity Exchange) founded at Mumbai, were three national commodity electronic exchanges have been approved to commence business in both agricultural and nonagricultural

commodities. Among this three national commodity electronic exchanges, NCDEX (National Commodity and Derivatives Exchange) is the leading commodity exchange in agricultural commodities. Apart from national commodity exchanges, regional exchanges also permitting future trading in agricultural commodities. Now in India commodity exchanges offer different dimensions of contracts in agriculture commodities are futures and options. Since 2003, organized trading under commodity exchanges offers futures trading in agriculture commodity but options trading introduced in 2018. Guar seed is the first agriculture commodity options started in NCDEX (National Commodity and Derivatives Exchange).

Table .1. List of Future Trading Contracts of Agricultural Commodities in Indian Commodity Derivatives Market

Group of Agriculture Commodities	Name of the Commodities
Cereals(Food Grains)	Wheat, Small Millets, Rice or Paddy, Ragi, Peas, Mung, Mung Chuni, Moth, Maize, Lakh (Khesari), Kulthi, Jowar, Guar, Gram, Barley, Bajra, Arhar Chuni.
Fibers & Manufactures	Staple Fibre Yarn, Raw Jute Including Mesta, Kapas, Jute goods, Cotton Yarn, Cotton pods, Cotton Cloth, Art Silk Yarn.
Oil & Oil Seeds	Sunflower Seed, Sunflower Oil, Sunflower Oil Cake, Soybean, Soy Oil, Soy Meal, Sesame Sesame Oil, Sesame Oilcake, Safflower, Safflower Oilcake, Safflower Oil, Rice Bran, Rice Bran Oilcake, Rice Bran Oil, Palmolein, Mustard Seed, Mustard Seed Oilcake, Mustard Oil, Linseed, Linseed Oilcake, Linseed Oil, Kapasia Khalli, Groundnut, Groundnut Oilcake, Groundnut Oil, Crude Palm Olive, Crude Palm Oil, Cottonseed Oilcake, Cottonseed Oil, Cotton Seed, Coconut, Coconut Oilcake, Coconut Oil, Celery Seed, Castor Seeds, Castor Oil.
Plantations	Arecanut, Cashew Kernel, Coffee, Rubber
Pulses	Chana, Gram Dal, Masur, Mung Dal, Tur Dal, Tur, Urad, Urad dal, Yellow Peas
Spices	Cardamom, Chillies, Coriander, Jeera / Cumin Seed, Pepper, Turmeric.

Source: Securities and Exchange Board of India

Compared to other commodity groups in commodities derivatives market, a wide variety of future contracts are offering by agricultural commodities such as almond, black pepper, cardamom, castor seed, chana, chilli, copra, coriander, crude palm oil, guar gum, guar seed, maize, rubber, soyabean, soya oil, soyameal, sugar, turmeric, wheat, etc.

Commodities derivatives market offers a host of benefits for farmers as well as other stakeholder. Benefits of commodities derivatives market are given below:

Hedging or Price Risk Management

Hedging or price risk management is the activity of secure the value of investors transaction from the consequence of commodity price mutability.

Price risk management consist of anticipating price movement and shaping resource allocation. Farmers use the futures markets to protect against adverse price moves, primarily exposed to fall in price of agricultural commodities. Therefore, hedging is the eminently used method or price risk management process for protecting against financial losses. Price protection is the main benefits price risk management. Price risk management offer price aegis in two ways, one is the ascertain of a stable price where participants are guaranteed to receive or pay the agreed stable price even if commodity prices move worst and two is the liveness of an agreed adverse prices and the regnant benefit from positive commodity price saltation.

Price Discovery

It refers to the activity of deciding the price of an asset such as commodity through the interactions of buyers and sellers in the market. Futures and options are valuable as an instrument for serve all important functions of price discovery. Agricultural commodities markets have an inherent tendency towards volatility in price, This is mainly due to the supply and demand market fundamentals of it, production of agricultural product is seasonal one and it's basically consider as necessary item for consumers. Farmers are therefore much more vulnerable to price prevailing in the market. Therefore, commodity derivatives market provide a place on the electronic exchange platform where monger enters the quantity and the price at which he is willing to vend and the buyer enters the quantity and the price at which he desire to buy. Order of buyers and venders is matched a trade gets generated and thereby enabling a very transparent price discovery in the market.

Opportunity to Undertake Proper Crop Planning

Farmers obtain the virtue of the price signals that are emanate on the commodity derivatives markets. The market decidable price information suffuse by commodity exchanges would be decisive for their cropping patterns and investment decisions. For example, shortage of any major food grains will elevate the future prices of food grains which will carry a previous notice to the grower for making sowing decision.

Provide Adequate Warehousing Facilities

Lack of storage facilities farmers are enforce to vend their produce forthwith after the harvests at the existing market prices. This commodity exchange provides warehouse facilities to the farmers for larder their final out put in the exchange, till the time they get remunerable price.

Transparency

Commodity trading through electronic online platform systems which are vital tools for helping farmers in making a legibility in mechanism of price discovery and handle on their risk on the commodities future exchange without any interference by venders or buyers. This is only the way they get remunerate price for their produce through this transparent system.

Price Awareness

Price awareness is beneficial to the producers because he can get a versa of the market price likely to abiding at a future point of time and therefore, can decide between various contesting commodities and elect the best that seemly him.

Enhance Bargaining Power of the Farmer

Withal, commodity exchanges disseminate futures prices that ameliorate the bargaining power of the grower. Increasing the bargaining power of growers is essential and urgent, in this way they can improve production capacity better and increase the prosperity of growers as well as improve the prosperity of economy.

Conclusion

Agriculture sector consists of some of the essential commodities of life therefore price volatility in agricultural commodities seriously impact on economy. Agricultural business has to allude with price vacillate in usually. There is a long time gap between planting and harvesting. Therefore, price of final products are usually inconspicuous at initial stage of cultivation. Market participation of farmers is required for managing price risk in their agricultural business investment that not only match present needs but also futuristic developments in the market. Commodity trading through electronic online



platform systems which are vital tools for helping farmers from managing their risk. This is one of the ways they get remunerate price for their produce through this transparent system. For ensuring their active participation government or government agencies need to increase awareness and training programmes among farmers about commodity derivatives markets. The Indian commodity derivative markets are passing through multitudinous shifts due to the shifting world economic scenario, in this mechanism providing many facilities for all participants in this segment.

References

- Ahmad, M. J. (2014). Commodity and Derivatives Market for Agricultural Development . Annual Research Journal of Symbiosis Centre for Management Studies, 37–48.
- GoI. (2014). Annual Report 2013-14, Forward Markets Commission (FMC), Department of Economic Affairs, Ministry of Finance, Mumbai.
- GoI. (2016). Annual Report 2015-16, Security Board of India (SEBI), Department of Economic Affairs, Ministry of Finance, New Delhi.
- GoI. (2017). Annual Report 2016-17, Department of Agriculture, Cooperation & Farmers Welfare, Ministry of Agriculture & Farmers Welfare, New Delhi.
- K. Nirmala, M. R. (2015). Price Discovery in Commodity Markets: A Study of Indian Cardamom Market in Multi Commodity Exchange. *Indian Journal of Accounting*, 92-97.
- Mukherjee, B. G. (2015). How attractive is the Commodity Futures in India? *International Journal in Management and Social Science*, 444-453.
- Ranjith, R. (2018). Causes And Effects of Regulators Convergence on Commodity Derivatives Market in India. *An International Multidisciplinary Quarterly Research Journal Ajanta*, 120-129.
- Sehrawat, S. (2015). Impact of Futures Contract on Agricultural Commodity Prices: An Indian Perspective. *International Journal of Development Research*, 3740-3744.

Memorial Stones in Tiruchirappalli District A Study

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Abstract

Tiruchirappalli is reputed for the antiquity of its civilization cradled on the banks of Cauvery. It has been the centre of many empires and battle fields, besides being an important strategic place. It is also chiefly noticeable for its remarkable Rock and the group of temples clustered on and around it. Trichinopoly was a part of Uraiyur till the close of the 14th century and had no separate identity. In the weightings of early Greek travellers Uraiyur is figured frequently. The author of the Periplus of the Erythraean Sea mentioned Argaru (Uraiyur) as the centre of trade. It is also referred as Koli in the Sangam Literature. The anglicised form 'Trichinopoly' is the modification of Tiru-cinna-palli. To begin with, Trichinopoly was nothing more than the solid rock around which the city bustles today. During the sangam age (the first to third century AD) the area situated in both the banks of the river Cauvery and comprising the districts of Tiruchirappalli, Thanjavur and Pudukkottai and southern parts name Chonadu or Cholanadu. The History of Archaeology begins with the man's curiosity to knowing the past. Written records, monuments, Numismatics all are tells the chronological frame and information about what had happened in the past. This curiosity laid a foundation for archaeology.

Keywords: Tiruchirappalli District, Herostones, Memorial Stones, Veerakkal, Nadukkal, Mastikkal, Sicio And Cultural

Introduction

Tiruchirappalli district lies at the heart of Tamil Nadu. The district has an area of 4,404 square kilometres. It is bounded in the north by Salem district, in the northwest by Namakkal district, in the northeast by Preambalur district and Ariyalur district, in the south by Madurai district and Sivagangai district, in the southwest by Dindigul district and, in the west by Karur district. Cauvery river flows through the length of the district and is the principal source of irrigation and water supply. It is also known as 'TUCKER' Trichy.¹ The memorial stones are generally called hero stones available in large these stones are available in large number throughout Tamil Nadu. The stones were erected to commemorate some memorable heroic event of past in the Tamil country they go by name of Nadukal (erected stone) or Veerakkal (hero stone). The mentioning of these memorial stones starts with the earliest time of Tamil Country of Sangam age starting from sangam age and the end of Vijayanagar empire (16th century) we found especially in memorial stones in Tiruchirappalli region the practice was common. Lot of information regarding social and cultural conditions of the people. Memorial stones contain much of the Historical information. The sangam literature speaks that the death of king were marked by the erection of memorial stones. This was not a general practice. However, the King Koperucholan when he renowned his life (by facing north and meditating) his death remains was marked by the installation of a hero- stone.²

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The Historical Sketch of Tiruchirappalli

Trichinopoly is reputed for the antiquity of its civilization cradled on the banks of Cauvery. It has been the centre of many empires and battle fields, besides being an important strategic place. It is also chiefly noticeable for its remarkable Rock and the group of temples clustered on and around it. Trichinopoly was a part of Uraiyur till the close of the 14th century and had no separate identity. In the weightings of early Greek travellers Uraiyur is figured frequently. The author of the Periplus of the Erythraean Sea mentioned Argaru (Uraiyur) as the centre of trade.³ It is also referred as Koli in the Sangam Literature.⁴ 'It would appear that, upto Viswanatha's reign Uraiyur was the capital of the country, and that he found Trichinopoly, at all events, fortified and greatly enlarged it.'⁵ The Tamil name of Trichinopoly is Tri-sira-pilly (Tri-dira-puram) or place of the three headed demon⁶ and it is also called by European scholars – Cirutapalli or the holy Rock town and Tirucinna-palli or the holy little town. The anglicised form 'Trichinopoly' is the modification of Tiru-cinna-palli.⁷ To begin with, Trichinopoly was nothing more than the solid rock around which the city bustles today.

During the sangam age (the first to third century AD) the area situated in both the banks of the river Cauvery and comprising the districts of Tiruchirappalli, Thanjavur and Pudukkottai and southern parts name Chonadu or Cholanadu.

The earliest reference to the Sangam Chola dynasty appears in the second and their rock edicts of Ashoka, datable to the 3rd century B.C. Uraiyur, now is part of the Tiruchirappalli city was the ancient capital of the Sangam Cholas. The Sangam literature and the account of the classical writers mention that Uraiyur was the cleat city of Cholas.⁸

Krishnadevaraya (1509-1530) the celebrated ruler of the Vijayanagar dynasty organized the administration of the country. The created provinces in the south with Madurai as it head quarters and his general Viswanathanayak as it victory. Krishnadevaraya died (1530) and was succeeded by his brother Achutha Nayak to the Vijayanagar therefore Thanjavur victory readily accepted twin's proposal and gave away Tiruchirappalli to Vishwanatha Nayaka of Madurai lieu of Vellur.⁹

Tiruchirappalli is a blend of history and tradition and one of the important pilgrim centres in Tamil Nadu. Flowing of Cauvery adds to the glory of this land of temples. The district has quite a number of famous temples noted for sculptural beauty and excellent architectural compositions. Rock-Fort, Srirangam, Thiruvanaikkaval, Kumaravayalur, the Fort Gateway, the Grand Anicut, Upper Anicut or Mukkombu and Samayapuram are notable places around Tiruchirappalli.

History of Archaeology begins with the man's curiosity of knowing the past. In almost of the societies man's curiosity of understanding the past has been satisfied with myths and legends. In certain societies there are some reliable written records and visible monuments providing a chronological framework and information about what had happened in the past. Sometimes, these could not give complete picture of the past. Human interest in unrevealing or understanding their past gave a good thrust for locating, collecting and interpreting artefacts of their ancestors. This curiosity laid a foundation for archaeology. Man's quest for understanding the past had a long history. In this long history, archaeology passed through different stages of development. In global context, historical archaeology is the study of colonial and postcolonial settlements. In Indian context, particularly in the processed post-independence era, historical archaeology generally confines to the study of dynastic imprints. Historical archaeology has a great potential for testing archaeological theories as they provide verifiable documents to understand the processes of cultural change. They mostly involve in historical events rather than in ecological, subsistence, and functional or socio-cultural problems. In India the identification of historical places mentioned in literature was initiated as early as the 18th century. Therefore, the identification of historical sites like Lalgudi, Samayapuram, Musiri, and Manaparai. Hence we need to study the Early History of Archaeology in Tiruchirappalli Distict, in micro level.

Hero stone is nothing but memorial stones. Hero stones are called nadukal in Tamil, Veerakkal in Kannada and Verrasalu in Telugu.

The practice of erecting memorial stones in the sangam period continued the centuries and that was

followed by the pallavas, cholas and Vijayanagar periods also we found some of the memorial stones in this region it gives. Though these stones are not mentioned a much in literature and archaeological source. It cannot be far from truth, if we assume that these memorial stones were the forerunners of inscriptions also that are found in and around temples and other places.¹⁰

Kinds of Hero Stones

Hero stones can be classified into many types according to their structure and message were memorial stones were erected in the memory of the dead person for the various problems.

1. Veerakkal, 2. Nadukkal, 3. Mastikkal.

Veerakkal is established in memory of death of a person.

Nadukkal in memory of great person, heroic, acts, sometimes nadukkal are created for popular god.

Mastikkal they have given reference on the heroine acts of the women members in village masthikkal appears with symbol of hand or arms with bangles or with both elements. It represents the full women picture.¹¹

On the burial spots sometimes they erected the single slab which is called Men heirs. But , later this practice was modified slightly in nature as instead of erecting slabs without any carvings, a stone slab on which the name of the dead man and his heroic dead inscribed, if the man died after a fierce fighting or a man of royal born who died in the battle field. These are what we called the Hero stones or Virakals. References about these Hero stones and worship of them by the people are widely spoken in the sangam literature as;

“Peyarum pecdum Eluti-athar-torum,
pili-suttiya pirangu-nilai nadukal”

(Aham-13)

In Tamil

“ பெயரும் பீடும் எழுதி அதர் தோறும்
பீலி சூட்டிய பிறங்கு நிலை நடுகல்”

(அகம்-13)

Importance of Hero Stones

The image of the hero stones is shown by the act or fighting may encounter with tiger or other animals in this hero stone Korra vai is mentioned in the memorial stones can be classified into two stages as earlier and later of timing.

The earlier phase of memorial stones we have been seen the usage of ‘vatteluthu’ script up to the period of Nandhivarman 796 AD, an inscription is short and starts with the phrase like Kovisaya. Sculptural representation is simple without any upper panels the hero is depicted without any ornamentation.

Later Phase Memorial Stones

The script is changed from vatteluthu to Tamil and inscriptions are generally long and celebrate these stones for other then cattle raiders like these involved in animal fighting bull navakanta etc. Were found in large number new territorial divisions were also emerged during this period.

Origin of the Hero Stones

Hero stones were originated during the time of Jainism and Buddhism, the Buddhist and Jain practice of relic worship on the one hand and to the nadukkal practice of the tribal societies of the South India and other area.

What is Hero Stone?

The hero stones or memorial stones, generally available in late quantity throughout Tamilnadu. Hero stones are the outskirts of villages of many places normally in some places there is only one hero stone while in many places there are two or more everywhere they are rectangular in shape. Generally, the hero stones were erected by the people in memory of a great person for their heroes acts. Some time erected nadukkal for god but there are few instances in which they were erected by his elder son or by the younger brother of hero, who died in the battle field. Though we have passages in the Vedas eulogizing heroism and preserving some formalities reminiscent of sati certainly the origin of the memorial stones are not Vedic. It is to be traced to the Buddhist and Jain practices of the tribal societies of south India on the other in the northern districts of Tamil Nadu. The hero stones are called by the people as “Vediyappan”.¹²

Who are the Heroes?

Usually the hero stone was erected to a soldier who fell in the battlefield. Hero stones were planted to commemorate the death of a father and a son.



A hero stone to commemorate the death of a dog which helped the hero in cattle rescuing. The region of Pandiyas very few are found hero stones are available in Tiruchirappalli district.

Nadukkal in Sangam Literature

In Tamilnadu the earliest evidence on memorial stone is found in Sangam literature and has been described by more than twenty five posts. The archaeological date so far discovered goes back only to 4th and 5th century and the study of inscribed posterity from the Sangam age sites like Arikkamadu, Kodumanal, Uraiyur, Karur and Alagankulam. From the inscribed coins issued by the Chera kings Kollipporai and Makotai the Pandya king Peruvaluthi and from the cave inscriptions found throughout Tamilnadu. With help of the Sangam literature it is able to identify the nadukkal planting practice. Hindus have got the custom of Neertharkadan for the person who passed away for about 3-14 days the time for this ritual is at night. People call this ritual as Kal niruthal. One who deep into this word "Kal niruthal" it is revealed only one part of the whole ritual. Even now Tamil people used to worship these stone, these stone revealed the heroic action or the puram like of the people of the Sangam age. Sangam literature is the most valuable and copious source for the study of Sangam age. Various information regarding politics, society, religion, economy, and cultural activities of the Sangam period are useful to us to knowing the past. Many of the Hero-Stones are found in Tiruchirappalli district particularly the Pandya hero-stones are mostly available in Tirunelveli district and Kerala region part too.¹³

A hero stones erected by Thaila serintha Nanthivarman Pallava – III during his 21st year of reign is found in the south eastern side of the grand Mandapam. During the conflict between Saivite and Jains a matt see on fire and Shri Guruvar was killed. Therefore to safeguard this temple a hero stone was erected by a Brahmin in the form of god. It is also found in ancient inscription as evidence by S. Krishnamurthi.¹⁴

Uyyakkondan

Another hero stone was excavated from Uyyakkondan - Tiruchirappalli District on 1986. The

stone dated on 11th Century A.D. The breadth of the stone is 4'2. The height of stone is 1'5. A hero stone (T 28/86) from Uyyakkondan Thirumalai depicts the Navakandam posture. His left hand holds the hair and the sword on the right hand. This shows the action of cutting his head.

Thiruvanaikkovil

A hero stone is found in Thiruvanaikkovil. It is a splendid sculpture belonging to 9th or 10th century AD. The sculpture is identified near the base of the first tower of Jambukeswarar Akilandeeswari Temple at Thiruvanaikkovil. The hero stone (T 19/91) which measure 1.5 metre in height and half a metre in width has a male figure in standing posture portraying an excellent expression of anger and bravery. Top portion is not clear since it is slightly broken. Jatamuka is clearly seen. Ornaments adorn the neck and hand. Dress in the waist is secured tightly by a belt into which a short knife is inserted. Right hand holds a sword which is in action that is cutting the neck. Left hand is holding the hair tightly. The sword passing through neck is seen on the left. Hero stone depicting the offering of Navakandam is an ancient cult practiced in Tamil Nadu.

Samayapuram Nadukal

There is an unique Nadukal in Samyapuram. There are four decks in this column sculpture. One can find a king waging war being seated over an elephant and a chief warrior on the horse back in the first of second layer. At the third plane, one may find a warrior fighting with a horse warrior with his spear and sword. In the fourth plane, there are two pairs worshipping the image of Linga. There is an umbrella over the image a Linga and a pair of fans buried the image. It depicts the demised warriors reaching the paradise of Lord Sivalinga. The degree of dignity is revealed from the Elephant, Horse, Umbrella etc. One can also find the warrior being smitten by three arrows.

Manapparai

Valanadu is a small village situated 23 kms away from Manapparai. Nellai Valanadu, Sathuragiri Patanam, Sitraalai Patanam of Patoor are other names to this village found in the songs of Ammanai. Annanmarkal, Ponnar-Sankar who destroyed all the hurdles they faced were born here and constructed the fort. There are so many stories associated with it.

The fort ruled by Annanmarkal was in a dilapidated condition for so many years resembling only a huge hill of mud. But the proof for having a fort is intact. Kannudaiyan Fort was frequented by the Kongu people and for this Valanadu people constructed a temple in the 1990's and also herded a Kudamulukhu Vizha.

Manchampatti is situated in the Manapparai - Dindugal highway 8 kms North West. Annanmarkal - Athai Pillaigal and Sambavamoorthy waged a war to preserve the power. The Annanmarkal planned to construct a temple for Arukkaani Thangam. As per the Chola kings' direction hero stones were erected for those who died in war, Ponnar- Sankar were also killed and their hero stone are planted in memory of their bravery. Warriors were killed in heaps by Sankar and Veerabogan. The heads of the enemy could not be traced. Sankar was tired and thirsty. This was informed to Veerabogan.

Erakudi

Erakudi is located 25 kms away from Thuraiyur in Tiruchirappalli District. There are two hero stones found in two streets and inscriptions are found there. The stone is believed to be established in the times of Thottinayakkar. The hero stones specialty is that this is exclusively for the cattle, especially if a cow dies other cows are brought to here, grown bath, applied sacred arches, conducted services and then made to come round the hero stone. By this, they believe that they would bring healing.

Vairachettipalayam

In Vairachettipalayam near Thuraiyur, Nadukal has been found. Vedan Nadukal statue is found near, with a soldier breadth of 2 ½ feet and height of 3 ½ feet. It belongs to the period of Cholas in 19th century AD. It has an engraved figure of a man in the form of a hunter. It had been placed to protect the cattles from the area.

A hero stone is found in the midst of a canal that runs near the temple, the stone belonged to the Pallava period. A marks image with sword in the right hand and shield in the left hand is found carried on this stone. During Mummudi Chola in a village called Paranthagapuram a Siva temple is situated in this inscriptions.

Conclusion

The study on Memorial Stones in Tiruchirappalli District explains the Nadukarkkal in a more elaborated way fewer than five different headings. Nadukarkkal got an important place in the history. Some of the important messages that this Naukarkkal reveal are caste, culture, mannerism in societies, laws and war. With the help of the sangam literature we have found most of the Hero stone in Tiruchirapalli district. Hero stones which are discovered in Tamilnadu differs one another depend on the ages. It differs in size and letter style. Most of the stones give the details of cow capturing and these were planted for the soldiers who lost in the cow capturing battle. The importance had been given to the cattle shows that ancient Tamil people lived with the support of cattle breeding.

References

- N, Athiyaman. "Town planning in Ancient Tamil Nadu Proceeding of Tamil Nadu History". 1996.
- Balasubramaniyan. "Sanga Ilakkiyathil Purapporel". Chapter IV,
- Burton Stain. "State and society in medieval south India". Oxford university press Delhi - 1984.
- R.S., Chavrasia, "History of Ancient India". Atlantic Publishers, New Delhi, 2008.
- Ghosh, A. (ed.) An Encyclopedia of Indian Archaeology, New Delhi, 1989.
- Jamkhedkar A P J, Indian Archaeological Reviews 1981-82 ,New Delhi.
- Kramrisch, S., The Hindu Temple, Motilal Banarsidass Publishers Pvt. Ltd., Delhi, 1976
- Madhavan, Chitra. Hero, Sati, Memorial and Naga stones, Chennai Egmore Museum, (Archive) Vol. XXII NO. 24, April 1-15, Chennai, 2013.
- Moorti, U. S., Megalithic Culture of South India: Socio-Economic Perspectives ,Ganga Kaveri Publishing House, Varanasi. 1994.
- Moore, Trichinopoly District Gazetteer.
- Nagaswamy, R. (ed.) Seminar on Hero stones Tamil Nadu ,State Archaeology Department of Tamil Nadu, Madras, 1974.
- Neelakanda Sastri. K.A., - The Cholas, University of Madras, 1975.



Noboru Karashima, *State and society in Medieval south India from inscription study 850-1800 AD*, Oxford University Press, New Delhi, 1985.

Patil, D. R. *The origin of memorial stones*, New Delhi, 1982.

Ray Chaudhuri, H.C., *An Advanced History of India*, New Delhi Macmillan Publisher India, 1978.

Ramasamy.A., *Tamil Nattu Varalaru*, New Century Book House, Pvt. Ltd., Chennai, 2010.

Sharma. L.P., *History of Ancient India (Pre-History Age to 1200 A.D)*, Konark Publishers, New Delhi, 1996.

S. Settar, and G. D. Sontheimer (eds), *Memorial Stones: a study of their origin, significance and variety*, New Delhi, 1982.

Rajan, K. *South Indian Memorial Stones*, Manoo Pathippakam, Thanjavur, 2000.

Sundara, A., *The early chamber tombs of South India: a study of the Iron Age megalithic monuments of Karnataka*, University Publishers, Delhi, 1975.

Sundararaj, T., *Historical sketch of Tiruchirappalli Rock Fort*, *Journal of Indian History*, Vol. LIX, December 1981, Tivandrum.

Thapar B K, *Indian Archaeological Reviews 1961-62*, New Delhi, 1961.

Tripati, Sila. *Ships on Hero Stones from the West Coast of India*, *The International Journal of Nautical Archaeology*, New Delhi, 2006.

Velmani, . K.S.K. *Gazetteers of Tiruchirappalli*, Vol I. 1999, p.674.

End Notes

- ¹www.Trichy-tn.nic.in
- ²Chandni-Bi-S., “Hero stones of Tamil Nadu and some observations”, *Indian Historical Studies*, T. Sundaraj (ed), Department of History, St.Joseph’s College, Tiruchirappalli, 2005, p.1.
- ³Schoof, W.H. (tr.), *The Periplus of the Erythrean Sea*, (London, 1912), p.241.
- ⁴Ahananuru, 133, 329.
- ⁵Moore, *Trichinopoly District Gazetteer*, p.126.
- ⁶Pharoah, *A Gazetteer of Southern India*, (Madras, 1855), p.340.
- ⁷*Archaeological Survey of India*, (1903-04), p.275.
- ⁸K.S.K.Velmani, *Gazetteers of Tiruchirappalli*, Voll. 1999, p.674.
- ⁹Op.cit., p.676.
- ¹⁰Chandni-Bi-S., “Hero stones of Tamil Nadu and some observations”, *Indian Historical Studies*, T. Sundaraj (ed), Department of History, St.Joseph’s College, Tiruchirappalli, 2005, p.2.
- ¹¹Natana Kasinathan, *Hero stones in Tamil Nadu*, Arun Publications, Madras, 1978. P.2.
- ¹²Venkatraman, R., *Indian Archaeology a Survey*, Printed at Selvam, Madurai, 1985, P.146.
- ¹³Nagaswamy.R., – Seminar – Hero stones, The state department of Archaeology, government of Tamil Nadu. Madaras. 1974. P.80.
- ¹⁴K.Rajan, *Catalogue of Archaeological Sites in Tamil Nadu-Vol,I*, P.146.

India-Sri Lanka Relations in the Context of Geopolitical Dimensions

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Abstract

India and Sri Lanka, the two South Asian nations, are separated by 22 miles. A narrow stretch of water called Palk Strait separates the two nations. The history and mythology of the two countries are closely related and the social ties between the two are more than 2500 years old. To be said appropriately the legacy of intellectual, cultural, religious and linguistic intercourse between India and Sri Lanka exist since ancient times. Sri Lanka's strategic maritime position as a power base of the Indian Ocean Region (IOR) has historical connects starting from the recognition made by the Portuguese, later followed by the Dutch and the British. The British masters utilized Sri Lanka for the maritime purpose, and for a security base to safeguard the neighbouring British-India. Since independence, there were many convergences and divergences between India and Sri Lanka however; the strategic issue is one of the key determinants of India- Sri Lanka relations. India's territorial integrity is not threatened directly by Sri Lanka however if any other power gains their foothold in Sri Lanka and their activities become detrimental to the security of India and Sri Lanka was concern to India. The location of Sri Lanka in the Indian Ocean as an island and being only southern neighbour brings security perceptions in the minds of Indian naval defense perceptions. The other dimension of security can arise from the non-state actors of India and Sri Lanka and the linkages between these non-state actors. This article attempts to understand the security perceptions from the geographical condition of the two countries towards each other, especially since independence including during the ethnic conflict in Sri Lanka. This article will also explore China's aspiration in Sri Lanka and the necessity of intense relation between India and Sri Lanka in the geopolitical context.

Keywords: India, Sri Lanka, Security, Indian Ocean.

Introduction

The end of Cold War replaced the new world order that is the term 'Geo-economics' replaced the 'Geopolitics' as one of the most import driving force in international politics. The innovative technology forces the statesmen to enlarge their geopolitical vision. Throughout history, geography plays an important role and one of the fundamental factors in international politics because it is most permanent. At the regional and world level, it presents opportunities to, and imposes limitations on the state. Geo-political position – where a country is located relative to other countries is more important than size. However, there are significant factors which play an important role on the international relations includes population, economics, military power etc., but the above-mentioned factors are subject to change over time. Geography is constant, though its impact can change.

Geopolitical security perceptions between India and Sri Lanka

Sri Lanka, being an Island state, enjoys considerable advantages over India's other smaller neighbours in being more accessible by air and sea. However, Sri Lanka's geostrategic location in the



Indian Ocean area has always remained a significant parameter relevant not only to problems of India's own security but also to the general question of power rivalry in the whole Indian Ocean area.

From a geopolitical point of view, two influences in the Indo-Lanka relationship stand out as important: the locational factor, and disparity in size, population and power between the two countries. Sri Lanka's location at the southern tip of the Indian Peninsula separated from India by a narrow stretch of water, the Palk Strait, which is no wider than 22 miles in certain places, has continued from historical times, to exert a determining influence on the course of the island's history and now from security point of view. Sri Lanka is important from the locational point of view due to the existence of a strategic harbour at Trincomalee, facing the Bay of Bengal on the island's east coast. Sri Lanka's strategic location is concern to Indian security because of possibilities of the involvement of external power in the various conflicts. Sri Lanka's geographical position in Indian Ocean gives it an upper edge in terms of deep harbors. The depth of harbors, in Sri Lanka makes it easy for nuclear sub-maritime to go much below in water effectively avoiding radar and sonar detection. Moreover, Sri Lanka gets comparatively better satellite & communication signals due to its crucial position.

A concept of the strategic unity of India and Sri Lanka had emerged during the sixteenth century and, especially under the British, possession of Sri Lanka came to be regarded as a pre-requisite to the defense and security of India. The British therefore made Trincomalee an important bastion in their defense network in the East. However, Trincomalee no longer plays a role as a naval base, its strategic location makes it a matter of much international concern, and India, which has no natural harbour like that on the east coast, is most concerned about its potential status and uses.

Writing in the mid-forties, K. M. Panikkar, the well-known Indian scholar-diplomat had averred that strategic unity of India, Burma, and Sri Lanka was so obvious that one of the pre-requisites to a "realistic policy of Indian defense" was the "internal organization of India on a firm and stable basis with Burma and Ceylon."¹ Panikkar did not insist this point of view after the independent existence of these countries had become an accomplished fact, though he continued to advocate the concept of the Indian

Ocean as *Mare Nostrum* for India justifying an extended Indian security sphere in the Indian Ocean area.

Dr. Pattabhi Sitarammaya also clearly predicted such a situation. Similarly, in an interview with the 'Ceylon Daily News' of 23 April 1949, he said, "India and Ceylon must have a common strategy and common defense strength and common defense resources. It cannot be that Ceylon is in friendship with a group with which India is not friendship, nor that Ceylon has no right to make its own alignments and declare its own affiliations. But if there are two hostile groups in the world, and Ceylon and India are with one or the other of them and not with the same group, it will be a bad day for both."² Nehru himself, in 1945, had pointed to the ethnic, linguistic, and cultural unity of India and Sri Lanka to support the view that the latter would inevitably be drawn into a closer union with India, "presumably as an autonomous unit of the Indian Federation"³

Many of them sincerely believed that the British withdrawal had thrust the responsibility of the defense of the South Asian region on Indian hands, and threat India was the natural successor to Britain as the guardian of the Indian Ocean. Against what contingency a federated defense structure must be created under Indian auspices was not clearly enunciated by these people; nor did it occur to them that what the states in the Indian periphery might want to guard against was a precisely Indian interventionism or expansionism. Sri Lankan ruling elite feared that India has an expansionist policy *vis-à-vis* Sri Lanka and may take advantage of cultural and geographical proximity. Therefore, Sri Lanka opted for the commonwealth and sought, in the Commonwealth connection, to redress the balance against India. A former commander of the Indian Navy K.B. Vaidya also pointed out that "Sri Lanka is as important strategically to India as *Eire* is to the United Kingdom or Taiwan to China. As long as Sri Lanka is friendly or neutral, India has nothing to worry about, but if there is any danger of the Island falls under the domination of a power hostile to India; India cannot tolerate such a situation endangering her territorial integrity."⁴

The Maritime agreement between Sri Lanka and China in 1963 gave most favoured nation status to the contracting parties in respect of commercial vessels engaged in cargo and passenger services to and from the two countries or from a third country, the nature of the agreement became a great concern

in India. However, the Sri Lankan Parliamentary opposition itself felt that the agreement provided facilities to Chinese warships. Similarly, during the East Bengal crisis preceding the Indo-Pakistan war of 1971, the grant by Sri Lanka of air transit facilities through Colombo from West to East Pakistan after overflights by Pakistani aircraft had been stopped by India herself, caused considerable misgivings in Indian circles. Where it was believed that Pakistani troops disguised as civilians were being transported through Colombo on PIA flights to Dacca. Whether or not facilities would be granted by Sri Lanka to the United Nations Navy in Trincomalee in the context of the present escalation of Indian Ocean power rivalry between the US and USSR is a matter not only of Indian but also of wider concern.

It is very natural that India's own perception of her regional security interests that India should evince interest and concern over Sri Lanka's international relations. Nevertheless, it is also inherent in the geopolitical situation, in the locational determinism of Indo-Lanka relations, that a fear psychosis of India should persist in Sri Lanka to a greater or lesser degree, depending on the variables such as the international situation.

In the mid-seventies, in its bid to mobilize external resources for economic development, Sri Lanka has adopted an open door policy, which involves not only concessions to foreign investors but also has strategic implications for the neighbours. In the name of free enterprise, there is westward tilt. Of particular concern to India has been an agreement of Sri Lankan government with Oroleum Ltd in 1981 for construction of oil tanks in Trincomalee.⁵ Thus, the details of the agreement signify that the Sri Lankan government would be completely dependent on Oroleum Ltd for management of Tank Farm area and its use, which could turn out against Indian security. Hence, India was more concerned and protested, but the Sri Lankan ruling government rejected it.

The Jayewardene Government in 1981 also lifted the nine-year-old ban on foreign warship using the facilities at Trincomalee harbour. The US Navy sent a number of warships to Trincomalee on various missions in 1981.⁶ Indian External Affairs Minister, P.V. Narsimha Rao declared that the existence of any foreign military or naval base in the region "as a threat to the peace and tranquility" which would have "adverse consequences on our security environment".⁷ However, Sri Lanka did not give much importance to Indian protestations.

During the civil war of Sri Lanka, it was getting arms and military supplies from UK, USA, China and Pakistan and training facilities to their army from western countries. However, they none of them were ready to become Sri Lanka's strategic partners. When the situation was worsening in Sri Lanka due to the ethnic problem and economic blockade in Jaffna area India came forward to help the starving Tamils. This forced President Jayewardene to realize that friendship with India was essential to solve the ethnic problem. This led to a peace accord between India and Sri Lanka on 29 July 1987.

The post-Cold War period has virtually altered security perceptions of both India and Sri Lanka. India's perception and policy have also undergone a significant change. It is not any longer worried about the involvement of the international community or extra-regional powers in the restoration of peace and stability in its violent neighbourhood so long as such an external role do not pose any threat to its national interests and, importantly, is undertaken with its knowledge, if not its tactical approval.⁸ Sri Lanka's growing friendship with countries such as China and Pakistan on strategic matters is not a serious matter of concern for India. India understands the limitations of these countries in extending help and playing an active role. In its view, Sri Lanka's security is predominately linked to India and China may not be able to go beyond a point to help the island state.⁹ India then, since followed a non-intrusive approach towards the ethnic problem in the island country. The focus has shifted to cooperation in the economic areas. As a result, India and Sri Lanka went ahead and concluded the Free Trade Agreement in December 1998.¹⁰

India was concerned about China's aspiration in Sri Lanka during the post-civil war of Sri Lanka. China has funded projects of the worth of billion to build a city equivalent to the size of Monaco in Colombo near the port. In addition, China has planned to invest \$40 billion to fund infrastructure in Sri Lanka.¹¹ On the contrary, India has small projects that are based on a partnership model of development. Chinese involvements in Sri Lankan matters and Sri Lanka's inclination towards China have around the Security Concern of India. Therefore, India's has followed partnership based investment and development programs. To counter the closeness of China in Sri Lanka, US and India coordinating, an element Indo-American association in conjunction with strong US participation in Europe and Japan,



is presumably going to make an out and out various key future for Asia and the world than the Sino-driven one championed in Beijing however limited by practically every other power.

Conclusion

In Indo-Sri Lankan relations, geopolitical realities constitute an important factor. Their proximity and sharing of Indian Ocean space make their relationship special. The strategic and security interests of India and Sri Lanka are mutually interdependent. However, asymmetry stems from size, population, resources and military strength that infuses a degree of inequality of the relationship.¹² As per the growing regional importance of India, Sri Lanka needs to accept the geopolitical facts and manage its domestic politics without disregarding ambitious countries. India and Sri Lanka, both require to understand that the gap in their relationship be exploited by other countries as an opportunity of establishing their supremacy which will ultimately harm both the nations in future. India and Sri Lanka have great past, present and future. Though these may be timely resolutions, otherwise the effects can be long lasting and may offer opportunities to others influential countries to cash on bilateral discrepancies. To conclude the difference of opinion will always exist in the relations between the two countries, but there have been always intense relations is possible when there is cooperation between them.

References

- Behera, Ajay, Perspectives on National Security in South Asia: In¹³Search of a NEW Paradigm, P.R. Chari (ed.), Manohar Publishers, New Delhi.
- Choudhary, Rahul Roy., Sea power and Indian Security, Brassey's, London, 1955.
- <http://foreignpolicynews.org/2015/10/26/india-and-sri-lanka-new-epoch-of-bilateral-relations/> accessed on 10 March 2018.
- <http://mea.gov.in/articles-in-indian-media.htm?dtl/15281/Beyond+India+s+Monroe+Doctrine> C. Raja Mohan, Beyond India's Monroe Doctrine, accessed on 20 May 2017.
- Kaushik, Surendra Nath, Mahan, Rajan, & Ramakant (ed.), India and South Asia, South Asian Publishers, New Delhi.
- Kodikara, S.U., Foreign policy of Sri Lanka: A Third World Perspective, Chanakya Publishers, Delhi, 1982
- Kodikara, S.U., Strategic Factors in Interstate Relations in South Asia, ANU Press, Canberra, 1979.
- Moorthy, Padmaja, "Indo-Sri Lankan Security Perceptions: Divergences and Convergences" Strategic Analysis, Vol. 24, No. 2, 2000, PP. 343-360.
- Panikkar, K.M., India and the Indian Ocean, George Allen & Unwin, London, 1945.
- Sumanaisri Liyange, Sahadevan, P, & Kinra Anisha, (ed.), Intra-State Conflict and Inter-State Relations - Perspectives on India - Sri Lanka Relations, Manak Publications, New Delhi, 2011.

End Notes

- ¹K.M. Panikkar, India and the Indian Ocean, George Allen & Unwin, London, 1945, p. 95; S.U. Kodikara, Strategic Factors in Interstate Relations in South Asia, ANU Press, Canberra, 1979, pp. 17-25.
- ² S.U. Kodikara, Foreign Policy of Sri Lanka: A Third World Perspectives, Chankaya Publications, Delhi, pp. 23-26.
- ³ W.H Wriggins, Ceylon: Dilemmas of A New Nation, Princeton University Press, 1960, p. 399.
- ⁴ Ibid., p. 24.
- ⁵ According to Clause 23(1) of this agreement, the foreign investors shall take every step, reasonably within its power, to ensure that it does not rent or hire or service of supply bankers to any customer, naval bases or aircraft which may store or use such oil for military purposes. The words "reasonably within its power" confer enormous manipulative discretion to the lessee company. In any hour of crisis Oroleum Ltd can lend all the facilities at the Trincomalee Tank Farm to a power unfriendly to India without even informing the government in Colombo, because according to the same clause "the foreign investor shall have the power and authority to select its own customers".
- ⁶ Times of India, 6 May 1981.
- ⁷ Statesman, New Delhi, 28 November 1981.
- ⁸ Padmaja Moorthy, "Indo-Sri Lankan Security Perceptions: Divergences and Convergences" Strategic Analysis, Vol. 24, No. 2, 2000, pp. 343-360.
- ⁹ Sumanaisri Liyange, P. Sahadevan, & Anisha Kinra (ed.), op.cit, p. 176.

¹⁰ Ibid.

¹¹ <http://foreignpolicynews.org/2015/10/26/india-and-sri-lanka-new-epoch-of-bilateral-relations/> accessed on 10 March 2018

¹² Sumanasiri Liyanage, P. Sahadevan, Anisha Kinra,(ed), op.cit., pp. 150- 153.

¹³ Ibid.



The Elite Hunter as a Superhero -An Epitome of Courage and Masculinity

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Abstract

Hunting was practiced in India since time immemorial. The Mughal rulers perfected the technique of hunting, and had their Shikargarhs or hunting reserves. This tradition was continued by the Colonial rulers. Hunting, thus, was a symbolic form of displaying the masculinity, strength, and power of the mighty colonial state. Indian Princes and Civil servants pursued hunting not only for entertainment and recreation, but it gave them a chance of proving their virility and manhood to their subjects, and also playing the paternal role of the 'protector of the people.' Various forms of hunting were practiced in India like pig-sticking or hog- hunting, fox- hunting or jackal- hunting, hunting tigers and other wild animals with beaters and cheetah hunting,. These hunting practices led to the slaughter of a considerable number of animals and dwindling of wildlife in India.

Keywords - hunting, recreation, masculinity, slaughter, dwindling,

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Introduction

'Hunting' was defined as the activity of hunting an animal for sport or food, but in Britain, it also had a specialized meaning: namely, pursuing and killing a quarry - fox or stag (or drag) - with hounds, as opposed to shooting it. As in home, the British had their storied tradition of fox hunting, and in India, they substituted the fox hunt with jackals. Therefore, various hunting clubs were founded like, for instance, In 1862 the Bombay Hunt was founded under the patronage of the Governor, Sir Bartle Frere, by the residents of Bombay and Thana, but the venture met with scant success, and all the hounds nearly died in the early part of 1871. A fresh lot of hounds was annually imported, and hunting was regularly carried on over the southern portion of Salsette, until 1890, when, in consequence of a meeting held in December 1889, the Jackal Club, with its headquarters at Santa Cruz in Salsette, was established. In the military, almost everyone, from high ranking officers to white troopers, participated in hunting, in their respective places. Consequently, a taste for hunting was considered a good indicator of suitability for the Forest Service.

Various forms of hunting were the standard recreation of officers of the civilian, military and forestry establishments. Hunters themselves can be further divided into two broad sets. There was the gentrified lot -the British military men and officers, the civil servants, the Indian princes, aristocrats and landed gentry. They hunted For glory, for proving their prowess at arms, their skills of marksmanship, for leisure or pleasure. Over time, their ventures into jungles and hills became more of a ritual, with elaborate preparations to ensure a kill. Such shikar as the ceremonial hunt was often called, had long Indian antecedents but it reached a climax under the British.

Princely States and Hunting

Apart from British Officers and civilians, the rulers of princely states were involved in different forms of hunting like a tiger- hunting, pig-sticking, cheetah-hunting, etc.

Tiger -Hunting- The ambition of every shikari in India was to bag a tiger. A special method by which tigers were hunted came to be referred to as the "ring method." Elephants, with hunters on their backs, encircled the spot where tigers lay and gradually tightened the circle. Beats were arranged on a mammoth scale in which dozens of elephants and hundreds of beaters were pressed into service. The shikaris use to sit on the elephant back in a howdah and aimed the fleeing animals. Even a special weapon known as the howdah pistol was developed to shoot animals at close range .such was the eagerness to shoot a tiger. For shooting tigers in Kanara, sportsman took up position in trees, or on ladders placed against trees, or on foot standing behind some tree or bush. Occasionally, when the carcass of a bullock was found, a machan was made for the sportsman.

Pig Sticking - A very popular form of sport in British India was pig-sticking (or Hog Hunting, as it was known in western India. Many rulers had a passion for this sports, for instance, Shahu Maharaj of Kolhapur had a great fondness for shikar and would go for arduous hog -sticking exercise for hours on horseback.

Hunting with Cheetahs -The Maharaja of Kolhapur followed the old tradition of hunting with cheetahs, hounds, and falcons and maintained a large establishment for this purpose. During the later years of his life, his great love was the cheetah hunts. That was a form of Shikar which he developed to an extraordinary degree. Therefore, hunting was a form of preparation for battle, a display of physical courage, and occasionally an effort to protect one's subjects from destructive animals, particularly tigers.

Fairness to Animals and Rules for Hunters during Colonial times -

Hunting as a form of sports, thus, involved the British colonial hunters, the Princely states and the native hunting communities ,but there were no specific hunting codes followed by these

classes and despite their claims of adherence to the sportsman's code, British big -game hunters engaged in wholesale transgressions of the code and engaged in unsportsmanlike and unethical activities. They engaged in indiscriminate slaughter by firing into herds, shooting females and cubs, shooting by water -holes at night or escaping indifference to the escape of wounded animals. Moreover, the British policy towards animals was sometimes flawed,as it involved cruelty toward harmless animals, especially females and cubs.The collector of Thana wrote that if a comparison of the number of leopards with rewards showed that most of them must have been cubs, as it was believed that ' it was better job to kill a leopard young than old '. In another Division this doctrine was pushed to the extreme when rewards were given for killing three cubs in the womb. However, among the Indian princes, Shahu Maharaj of Kolhapur believed that shooting of helpless animals could not be called shikar at all', according to him it was butchery. He believed that a good margin must be given to the animal for saving itself or an opportunity to escape or attack the Shikaree. Otherwise, it was not shikar to hem the animal from all sides and to shoot it from one's easy chair in the tower," This showed a trait in his character which had its effect in everything he did. He called that true sportsmanship. Although no hunting rules were there for shikar ' in British India, the British criticized the tribals for their 'cruelty' ' waste' and ' recklessness.' During the passing of the game preservation bill, the native shikaries were criticized as a class who deserved little sympathy. The Phase Pardhi were considered not only experts in snaring game but also thieves. Stebbing labeled the local hunters as diabolical "butchers," "noxious individuals," and the "most inhuman class of slayers."

Paternal Approach-While hunting represented domination of nature and natives, the, colonial hunt' also came to signify a paternal benevolent British rule where the British believed that it was their duty to protect the natives from wild beasts, who caused terrible loss to life and property.

1. Hunting for Protection against Wild animals, Man-eaters and Cattle -lifters-

Before the British rule in India, there was no state



proclamation requiring the killing of wild animals or officially classifying them as dangerous. The idea of extermination of dangerous beasts was taken up in a handful of districts (with very mixed results), bounties or rewards were given out in various provinces to eliminate dangerous beasts and poisonous snakes.

Therefore, the aim of the “bounties or rewards” was to eliminate wild animals, to check the massive loss of human life, to get rid of cattle- marauding tigers, an extension of cultivation and prevent loss of revenue for the government.

After the 1857 rebellion, most Indians were not allowed to keep guns. The disarming of the peasants often deprived them of the effective means of self-defense against wildlife, and it was replaced by a new regime that sought to resolve the issue of human-wildlife relations conclusively. For example, the Arunodaya of 29th Dec 1879 in an article on the destruction of wild animals, observed that if the natives were given full liberty to use arms, there would be no necessity for a special department to destroy wild animals. However, as the government had assumed that responsibility by disarming the population, it had become the bounden duty to use every endeavor to preserve it from harm.

Eliminating threat from Man-Eaters - Eliminating threat from man-eaters was a constant source of worry for the colonial government. Usually, ordinary tigers never killed men for food; the terrible man-eater was a tiger, or perhaps more often a tigress, which, owing to age or partial disablement, or due to the need of finding food for its young when game was scarce, had through hunger got over its fear of man, and had learned that he was the easiest prey to find and kill. In the Janjira district, in the 1880s, Tigers and large panthers killed many cattle; The fear of the tiger was so intense in the district that people rarely attempted to shoot a tiger or take any notice of his killing their cattle. It is better, they said, “that tigers should eat cattle than that they should eat men.”

The ravages of wild animals, especially man-eating tigers, were more marked in Khandesh and Nasik. So dangerous and destructive were they that a special division of the Bhil corps was set apart to aid the Superintendents of Police, as a tiger -hunters.

From 1862 onwards the destruction of tigers was carried on under Police Major O. Probyn, due to his efforts, and rapid spread of agriculture and population, the loss of cattle and human life was comparatively lessened. In 1903, in the western subdivision of Khandesh District, 87 persons were killed by tigers and 20 by leopards. In Nasik district, there were 28 deaths caused by leopards and panthers, of which 25 deaths were due to one man -eating panther in the Baglan Taluka. The animal was eventually killed by Mr. Osmaston, the Divisional Forest Officer. Thus, due to the constant threat of attacks from wild animals and appeals from the people for protection, the colonial Government assumed the paternal role. This ideology of paternalism was realized in the figure of the hunter-officer, who assumed of the role of the benevolent saviour of the people.

2. Hunting For Crop Protection - Threat From Wild Pigs -

Crop Protection from wild animals was a major concern of the colonial government. Among the principal wild animals which caused damage to crops, the most widespread of these was the wild pig. The worst part of all was probably the area lying in the borders of the Dharwar and North Kanara Districts. Cattle. This damage undoubtedly took place more particularly in the Konkan, including Kanara, in the Mawal and Mallard tracts of the Deccan and Karnataka.

- a. Damage caused by Deer and Antelopes -The damage was done by deer and antelopes, including the Nilghai or blue bull was another source of menace for the cultivators.
- b. Damage caused by Other Animals- Apart from Antelopes, other animals which caused widespread destruction of crops, was undoubtedly the blackbuck and associated animals in the open country in the east of the Presidency.
- c. Hunting Parties And Gun Clubs - To curtail the damage to crops, various hunting clubs, and gun clubs were formed. Hunting parties were appointed in villages and various rules and regulations imposed on hunting. Many military officers, civil servants were involved in this form of hunting.

Concluding Remarks - Thus, by assuming the role of the protector, the colonial officers tried to display their masculine power as the saviour of the poor, and to a great extent, were successful in exterminating dangerous beasts, which were a threat to life and cattle. However, under the pretext of safeguarding local populations from attacks by predatory animals, the British ruling elite and the princely states managed to consolidate further their hunting privileges of big game, particularly tigers, leopards, and, to some extent, lions. Many times their hunting methods were brutal like, for example, indiscriminate slaughter of animals by firing into herds, shooting females and cubs, shooting by water-holes at night or indifference to the escape of wounded animals. The Colonial officials denigrated the methods of the native shikaris, like the Phase Pardhis as cruel and labeled them as inhuman “slayers of game.” Nevertheless, all the methods employed by a different class of hunters led to the large-scale dwindling of wildlife in many areas of western India. Secondly, hunting from machans, carrying out beats and encircling the tiger, or shooting from an elephant - back were methods which cannot be called manly and sportsmanlike.

References

Primary Sources

- Baskaran Theodore, *The Dance of the Sarus, Essays of a Wandering Naturalist*, Oxford University Press, New Delhi, 1999.
- Campbell James. M, *GAZETTEER, OF THE BOMBAY PRESIDENCY. VOLUME. XI, KOLABA AND JANJIRA*, Government central press, 1883, p.405-406. file:///E:/Users/admin/Downloads/GIPE-017845.pd, Accessed on 26th Apr, 2018. <https://archive.org/details/in.ernet.dli.2015.281425>,
- Campbell James *Gazettes Of The Bombay Presidency - Khandesh, Volume XII*, Printed at Government Central Press, 1880,p30.
- Edwardes .S.M, *THE GAZETTEER OF BOMBAY CITY and ISLAND. Volume III. (COMPILED UNDER GOVERNMENT ORDERS.)*, BOMBAY: PRINTED AT THE TIMES PRESS. 1910, p. 223-240 Imperial Gazetteer of India, v.1, p.218<http://>

dsal.uchicago.edu/reference/gazetteer/text.html?objectid=DS405.1.134_V01_248.gif Accessed on 22-4-2018.

LATTHE, A. B., 1924 *MEMOIRS OF HIS HIGHNESS SHRI SHAHU CHHATRAPATI MAHARAJA OF KOLHAPUR*, VoL. II. BOMBAY: PRINTED THE TIMES PRESS, p.435.

Maharashtra State Archives, General Department.

Secondary Sources

173. RIDLEY JANE, *The Sport of Kings? : Shooting and The Court of Edward VII* RIDLE, *The Court Historian*, 05 September 2017, At 05:33
- Greg Gillespie, *Hunting for empire -Narratives of sports in Rupert’s Land -1840 -1870*, UBC Press, 2007, Canada, p40.
- Mackenzie M John 1988, *The Empire of Nature, Hunting, Conservation and British Imperialism*, Manchester University Press, Manchester, p.168.
- Mandala Ramdas Vijaya 2015, *The Raj and the paradoxes of Wildlife Conservation: British Attitudes and Experiences*, *The Historical Journal*, Volume 58, Issue 1, Cambridge University Press, p. 81
- Mitra Sudipta 2010, *History and Heritage of Indian Game Hunting*, Rupa and Company Pvt Ltd, P. 228.
- Rangarajan Mahesh 2000, *The Oxford Anthology of Indian Wildlife:: Watching and Conserving*, Volume II, Oxford University Press, p. 3.
- Rangarajan Mahesh 2001, *India’s Wildlife History -An introduction*, published by Permanent Black, pp.26.
- Saberwal Vasant, *Rangarajan Mahesh, Kothari Ashish, Peoples, Parks, and wildlife -Towards Coexistence* Published by Orient Longman Limited, 2000, pp.57
- Sen Ronojoy, Nation At Play -A History Of Sport In India*, Published by Penguin Viking Books, Columbia University Press, 2015, p.45.



Tamil Muslims Under The Nayaks of Thanjavur- A Historical Perspective

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Abstract

A study of writings on Tamil Muslims and their attitudes reveals that various analyses concerning them have always been attempted within the viewpoint of their religion.' Only a few scholars have concerned themselves with the study of the social and economic behavior of the Muslims. Even such works concentrate more on the North Indian Muslims. However the customs and practices of Muslims in peninsular India, particularly the Thanjavur region coastal line, have been practically ignored. The Moplas of Western coast have received scholarly attention, but not the Marakkayars, Labbais and Rowthars of Coromandel. Hitherto no serious attempt has been made to study the conditions of the Muslims of Under the Nayaks of Thanjavur. The Muslims established in the coastal towns of Thanjavur region, speak Tamil and Tamil Language is their mother tongue. The progenitors of the early Muslims were the Arab Muslim merchants and navigators who settled in the port towns of Coromandel region right from the eighth century A.D. From here they continued their commercial activities, for which the local rulers willingly extended all facilities. The Thanjavur region, Coastal line was studded with ports like Porto Novo, Nagapattanam, Nagore, Karaikkal, and Adirampattanam, and they served as a way or journey points to Ceylon, Malacca, and other Southeast Asian lands. Guided by the previous experience the Arab Muslim continued their trade for which the local authorities offered facilities and concessions in view of the enormous profits from such trade contacts. The Tamil Muslim communities mingled with the local population and lived in peace. The Muslim merchant community wielded massive power in the courts of the local rulers and performed yeoman service as mariners, administrators, and guardians of the sea coast. They were the business princes in the real sense. They ruled the waves of the Indian Ocean till about the fifteenth century and they also established a network of overseas depots and branches in Ceylon, Malacca and other Eastern countries. The Mushrn population, which incorporated into the local society were influenced by Tamil culture. The early name "Yavana" vanished from common usage and the Muslims of the east coast were known better, as Sonakar, or Jonakar (also in the same name in Malabar), Thurukkar or Thulukkan (in Coromandel). Epigraphs and literatures of the period from 8-9th centuries have innumerable reference to the community. The Tanjore Committee Report of 1807 records that out of the 62048 Mirasdars (landowner) in Thanjavur district 1457 were the Muslims. Betel cultivation was their chief profession. The custom of giving tax free land to the Muhammadans for their service to the government is known through a Modi record. It further informs that in Pasupathykoil, near Ayyampettai, Sheik Ushman brother of Shah Kinasliah Pakkir got Sarvamarya land.

Keywords: 1. Muslim - Economic Life Of The Muslim In Madras, 2. Arab Muslim - Merchants, 3. Sonakkar - Muslim Of Koranmandalam, 4. Thulukkar- Means Of Turkey, 5. Rowthars - Calvary, 6. Marakkayars - Ship Owner (Weathiest People), 7. Labbai - Shopkeeper Workers, 8. Sonagankezuthi - Macronus Punctatus, 9. Sonakan Siddkku - Ornament Workers and 10. Yavana - Common Usage The Muslim Name.

A study of writings on Tamil Muslims and their attitudes reveals that various analyses concerning them have always been attempted within the perspective of their religion.' Only a few scholars have concerned themselves with the study of the social and economic activities of the Muslims. Even such works concentrate more on the north Indian Muslims. Mrs. Meer Hussain Ali's Observations on the Muslims of India, Jaffur Shureeff's Qanun - i - Islam, Shaik Akbar Hussain's Marriage Customs Among the Muslims in India, and Dr. Imlaz Ahamed's recent works and Sekh Rahim Mondal's works of West Bengal Muslims may be cited as examples.

However the customs and practices of Muslims in peninsular India, particularly the Thanjavur region coastal line, have been practically ignored. The Moplas of Western coast have received scholarly attention, but not the Marakkayars, Labbais and Rawthars of Coromandel. Hitherto no serious attempt has been made to study the conditions of the Muslims of Under the Nayaks of Thanjavur.

In the recent past, Mattson has produced some articles about the economic life of the Muslims in a suburb in Madras. But it is a study on the local level in an isolated pocket. Susan has brought out a good monograph on the Muslims of Tamil Nadu, which is a firsthand study of the social and cultural characters of the Tamil Islamic society.

But she devotes most part of the study to the religious aspects. Fortunately the obscured maritime history of the Coromandel Coast was brought to light by a few scholars, where we find references about the maritime activities of the Coromandel Muslims. Sanjay Subramanian's work on the Economic History of Coromandel Coast between 1500 to 1650, refers to the trading activities of some Marakkayars amidst the Portuguese and Dutch dominance.

The Muslims settled in the coastal towns of Thanjavur region, speak Tamil and Tamil Language is their mother tongue. The progenitors of the early Muslims were the Arab Muslim merchants and navigators who settled in the port towns of Coromandel region right from the eighth century A.D. From here they continued their mercantile activities, for which the local rulers willingly extended all facilities. The Thanjavur region, Coastal line was

studded with ports like PortoNovo. Nagapattanam. Nagore. Karaikkal. and Adirampattanam, and they served as a passage or crossing points to Ceylon, Malacca, and other Southeast Asian lands. Guided by the previous experience the Arab Muslim continued their trade for which the local authorities offered facilities and concessions in view of the enormous profits from such trade contacts.

The Tamil Muslim communities mingled with the local population and lived in peace. The Muslim mercantile community wielded enormous power in the courts of the local rulers and performed yeomen service as mariners, administrators, and guardians of the sea coast. They were the merchant princes in the real sense. They ruled the waves of the Indian Ocean till about the fifteenth century and they also established a network of overseas depots and branches in Ceylon, Malacca and other Eastern countries.

The Vasco da gama's epoch inflicted a severe blow to the commercial activities of the Tamil Muslims in the beginning of the sixteenth century. Misfortune came to them in succession in the form of Dutch and the English which proved fatal to their maritime activities. The monopolistic and restrictive policies of the colonial European powers and the unsettled political condition of Coromandel hinterland pushed back the Muslim mercantile community to a second rank. Bearing all the brunt the Muslim maritime community adjusted themselves to the changed situation and continued their activities with their available resources, even though the profits were lesser.

The Tamil Muslims share many customs and practices in common with their coreligionists, the Hindus. At the same time they identify themselves with their own customs and manners. They practice endogamous marriage. Marti local residence, house gift to the bride is some of the unique customs among the Marakkayars. As great fortune seekers, the material minded Muslims strictly perform their duties as expected of a devout Muslim. Charity, hospitality and philanthropy are in their blood. Apart from the policies pursued by the European powers, neglect of modern education and technologies, limited capital resources, non-cohesive nature of trade among themselves lack of Interest in joint



ventures and absence of political patronage were a few causes for the economic breakdown of the Maritime Muslim community.

As the socio economic profile of the Coromandel Muslims is not studied adequately a sincere attempt is made here to unfold the matrix of the maritime activities, economy and social customs of this community during 1750 - 1900. Thus this humble study is to bring to light the role of the community in maritime activities on the Coromandel Coast in various capacities, in overseas and coastal trade as traders, ship owners, shipping professionals; part played by them in pearl and chank, fishing and other maritime activities and also their social organisation and customs at a micro level.

The Muslim population, which integrated into the local society were influenced by Tamil culture. The early name "Yavana" disappeared from common usage and the Muslims of the east coast were known better, as Sonakar, or Jonakar (also in the same name in Malabar), Thulukkar or Thulukkan (in Coromandel). Epigraphs and literatures of the period from 8-9th centuries have innumerable reference to the community

Sonakar

The early Tamil name of the Muslims was Sonakar or Sonakan or Jonakan. Thivakaranigandu (treatise on synonyms and meaning of Tamil words) of 8th century calls the Yavanas as Sonakar. Pingalanthai Nigandu of a little later period also confirms this. The commentator Nachnarkninyar of Pathupattu, the Sangam poetry, uses the word Sonagan here ever the word Yawa

In Sinhalese tradition, the Yavanas were called Yonakas based on Pall Yonna, meaning Arabs. Later the word Yonakar corrupted into Sonakar and the Sonakars were recognised as the descendants of the Arabs. So Yonakar and the Sonakar were used to denote the same people. In Ceylon Sonakar street is also known as Yonakar street or Yon street even to this day. The official records of Ceylon called the Muslims population in Ceylon, as Sonakar. The earliest settlers among the Muslims of Ceylon are called as Ceylon Sonakar and the recent South Indian Muslim migrants are known as Indian Sonaka. In Malaya/Jam tradition also Yonaka stands for Sonaka. Sodem in Tamil stands for Arabia.

An inscription of Raja Raja I in Thanjavur Big Temple mention a Muslim merchant by name Sonakan Samur Paramch another inscription of the same temple gives the name of an ornament as "Sonakan Siddkku. An inscription of Maravarman SundaraPandia (1238 - 1257) mentions a mosque as Sonaka Palli (Palli-Mosque). We find ample references about Sonakars in Tamil literature. A folk dance of Tamil Nadu was called as Sonaka Manjari. The Arabs, later the early Muslims, were considered to be foreigners and a tax was collected from them known as "Sonaka Vari" Many other inscriptions also mention Sonakarss .

Thus the Muslim population of Coromandel, from the eighth century, came to be called as Sonakars. It is also interesting to note that the Mapilla's of Malabar were known as Sonaka Mapillas. Francis while writing about the Muslims of South Arcot district says that the term Sonagan applied (to both Labbais and Marakkayars) in the district. The Marakkayan of Ramanathapuram coast were known by the name Sonakar even in the last quarter of the nineteenth century, according to a family document of the year 1881. (document No.535/ 1881 registered Ramanathapuram Registration office).

The remnants of the word Sonakar can be seen even to this day in the Muslim society of Coromandel. Muslims who are engaged in fishing activities go by the name Sonakan in many coastal villages and their habitation settlement is called Sonakavadi. They are considered to be in the lower strata of the present day Muslim society . There are place names such as Sonakan Viki (Thinmelveli district) Sonakan Paffl (Ramanathapuram district). The old name of Kayalpattanam was Sonagapattanam. There are Sonakan streets in Cuddalore, Tuticorin, Kayalpattanam. PortoNovo, Thondi. Manadapam, Vedalai and Kilakkarai. The long association of the Sonakars in the seafaring activities is suggested by the name of the fish like Sonakan Thirukkai (String ray) Sonakan Valai (Trichiurus muticus) and Sonagankezhuthi (Macronus punctatus)

Thulukkar

The Muslims of Coromandel were also called as Thulukkar, along with Sonakar. Thulukkar, means the native of Turkey. Though all the Muslims who

frequented Coromandel Coast had not come from Turkey, this term is very commonly and popularly applied to all the Muslims by the fellow Hindus? While the word Sonagan is very sparsely used, Tulukkan is in popular use even to this day.

Adiyarkkunallar the commentator of Silappadhikaram translates the word “Yavana” as Yavanathurukkar. Several Tamil literatures of later period also refer to the Muslims as Thulukkar. According to some scholars the word Thurushka came into use, right from second, century A.D since emperor Kanishka was Thurushka by ethnicity as mentioned in Kalphana’s Rajatharangini. Sanskrit and Telugu literatures give the term Thurushka for Thumkkar. The Pmsasthis of Vijayanagar kings Include titles like Thulukka moham thavirthan, Thulukka thalavipadan etc., (i.e those who defeated Muslims.) The Sultanate of Madurai (14th century) was called Thulukkaniam and Thulukka avanam. Thulukkar settlements were called Thulukkanam.

The Muslims in Thanjavur region in the eighteenth and nineteenth centuries formed the second largest community next to the Hindus. In the beginning, especially from 7th century onwards they settled on the Coromandalcoast. The traders from Arabia came to India and settled from 636 A.D. onwards in the coastal regions. In course of time they adopted the language of the people and married the local women and by concubinage their strength multiplied. This caused the expansion of their settlement in Karaikal, Cudalore, Portonova, Nagore, Nagapattinam, Thopputhuri, Muthupettai, Pattukottai and Adirampatinam.

The prominent section among them were the Chulia Muslims. They were popularly known as Tamil Muslims and hailed from the descendents of Arab settlements. They were also described as Sonagars. They were grouped into Marakkayar, Labbais and Rowthars. In the Nayak and early Maratha periods, the Labbais and Rowthars crept into interior regions and got settled at Chakkarapalli, Naichiar Koil, Ayyampettai, Papanasam, Pandaravadi and Thanjavur. The Maraldcayars remained in the coastal region. Jesuit letters attest the large scale Muslim settlement at Ayyampettai, Pandaravadi and Thanjavur regions. They further say that they gave a lot of problems to the missionaries.

Among the three groups, the Marakkayars who were the owners of ships were the wealthiest. But Thurston viewed that Mrakkayar was a title of Labbai boatmen. Actually the Marakkayars represent the cream, the elite of all the sub-divisions. They considered the Labbais inferiors and on account of the fact that they were the descendants of the domestic slaves and their dark colour was attributed to their intermarriages with the natives.

The second group consists of the Labbais, who were all Tamil speaking Muslims. They received religious education and functioned as Muslim religious practitioners. In the Thanjavur region they constituted four-fifths of the total population. They were the growers of betel leaves round about the areas of Ayyampettai, Pandaravadi and Papanasm and its adjacent villages. They were also engaged in leather work and trade and some of them were shopkeepers. Their women were clever at weaving mat from Korai, which had grown abundantly on the river and canal beds.

Rawthars from the third group who were generally referred to as riders, particularly horse rider or cavalry soldiers to the local rulers. Tanjore district records inform that many of them were butchers and some of them were betal growers for a few generations.’ They were sometimes called ‘Terkattiars’ (Southerners) who migrated from Tinnavalley to Thanjavur. Like the Labbais the Rawthars do not claim any ancestors since they were actually the converted sons of the soil.

Generally, these groups did not dine together and were not allowed to celebrate intermarriages. They also had separate mosques which reflect the impact of caste system even after their conversion to Islam long before. The Muslims, under the rulers of Thanjavur were not disturbed, but enjoyed certain privileges. The Islamic words were freely used. The words, Khan Sahib. Lay am. Mama Sahib Mulai. Chanda Sahib, Darga, Irattai Masthan. Rajagori aware of Islamic origin.

The rulers of Thanjavur invited them From the south for trading and also for spreading the Unani system of medicine. They colonised the interior parts of the above mentioned places. In recognition of their services they got Inam lands from the rulers. In course of time, especially in the eighteenth century, some of them became landholders.



The Tanjore Committee Report of 1807 records that out of the 62048 Mirasdars (landowner) in Thanjavur district 1457 were the Muslims. Betal cultivation was their chief profession.

The custom of giving tax free land to the Muhammadans for their service to the government is known through a Modi record. It further informs that in Pasupathykoil, near Ayyampettai, Sheik Ushman brother of Shah KinasliahPakkir got Sarvamarya land.

The reference of Muslim, 'Hajira year' in some of the palace records was a sequel to the religions tolerance of the rulers of Thanjavur. Maratha inscriptions used the Islamic words. The words Amina. Havildar. Mahal. Gajana. Parkana, Tahsil are found in the Marathi inscriptions.

The Muslims in Thanjavur region were also influenced by the traditional caste system. The Marakkayars considered themselves as superior to the Labhais and Rawthar. The Labbais considered themselves superior to the Rawthars. Inter caste marriage and common dining were not allowed among them. Even though the Muslims and Hindus followed different customs and manners of their own, they maintained cordial relations. During the rule of the Nawabs in Thanjavur from 17.9.1773 to 11.4.1776, not even a single conversion took place by force and likewise no more single circumcision by force had taken place. A copper plate attests their unity that all the traders, including Muslimsmagnanimously contributed their mite to Lord Konkaneswara in Thanjavur town. Besides, 4-the Bada Hussain Durga at Thanjavur was under the management of Maratha palace Devathanam, which reveals strongly the cordial relation between the Hindus and the Muslims.

References

- Annual letter of Fr.Noel de.Bourges to General. 1715
Arasarathnam, Maritime India in the seventeenth century. Madras, 1994,p.206.
ARE 116 of 1903
ARE 172 of 1903
ARE 587 of 1902
Edgar Thurston, Caste and tribes of South India. Vol.IV, p.501.
F.R.Hemingway, Thanjavur Gazztter . p.90.
Ibid 132
Ibid p93
Inscriptions of Pudukkottai State No 669
K.A.Nilakanda Sastri, The Colas. p.604.
Kambaramayanam
Kambaramayanam, Sundarakandam 112:207;
Ottakkoothar's
M.M. Uwais and P.M. Aimalkhan, pp.9-10
M.M. Uwalse and Ajmalkhan, op.cit. 51
Modi record (T). B.no.95C
Patthupattu U.V.Swaminatha Aiyyer Ed P 337.
Pinganldai, p.131.
Pulavar Raju, T.M.I. (Editor's note).
South Indian inscriptions Vol II p.460
T.Venkasamy Rao, op.cit. Vol.11, p.204
T.Venkasamy Rao, Thanjavur Manual .. Vol.11, p. 153
Tamil Lexicon, (1932) p.3395; M Abdul Rahim".
Islam in Nagapattanam"
Tanjore Committee Report. 1807
W. Francis. op.cit. 56-58
Wilk, Historical Sketches of South India. Vol.1. Madras, 1869, p.243
Yalpana Manippayagdnti, Chandrasekara Pulavar. American Mission press,Jaffna 1842); p.21.

Magnitudes and Proportions of “Space”: Some Historical Dimensions

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Abstract

Spatial dimensions are a concern while placing events in the context of history and culture. This makes space an essential aspect of the historical construct. The emphasis of historians on chronology is driven by the need to explain any change with reference to time. Geographers charge historians for writing history as if it took place on the head of a pin. In fact, chronology and geography are the two ‘eyes’ of history. The ‘when’ of the event is as important as the ‘where’ of it. Ownership of space is equivalent to power whether one is speaking of tactics and approaches of geo-politics or about the arrangements of the environment. The use of space in early modern history shows us both: the geographies that have vanished and uncovers those that are recognizable to us as they came into being. The application of spatial concepts to history and its translation for practical and ideological purposes helps to fill several gaps. Whether social or cultural history, intellectual or imperial history, cartography or geography, spatial studies provides perspectives. This paper examines the concept of space with reference to some significant global political events of the 20thc. It also studies power play and space in Mumbai. The paper contextualizes ‘space’ within the models of ‘spatial practice’, ‘representation of space’ and ‘representational space’ as discussed by Lefebvre.

Keywords: space, history, geography, cartography, global events

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Introduction

The study of space is significant in humanities and social sciences. There is however, a dearth of definite literature on the magnitude and proportions of space in the context of history and the spatial approach to history is rather limited.

Historians focus on time. The emphasis of historians on chronology is driven by the need to explain any change with reference to time. Geographers charge historians for writing history as if it took place on the head of a pin.¹ It helps to remember, though, that chronology and geography are the two ‘eyes’ of history. The ‘when’ of the event is as important as the ‘where’ of it. This makes space an essential aspect of the historical construct.

Disputes and wars over resources, claims of citizenship and jurisdictions, border issues and sovereignty are issues of spatiality; of the political organisation of space. Geopolitical legacies are inherent to the understanding of history and history without positing space as a social construction is meaningless.



History, Cartography & Space

Cartography mediates the relationship between the human being and his environment. Images and maps help us to shape our beliefs about the world. Politicians and world leaders respond to the world as they perceive and imagine it and maps play a fundamental role in shaping these imaginations.² Maps help to shape the conduct of war and planning of peace. Maps provide images that are important in framing opinions. The spatial relationship between people and their physical environment has been mediated by maps. All cultures have had cartographies in various guises and this suggests the various ways of organising space politically.³ At sea, boundaries cannot be marked by erected stones. Maritime boundaries can only be defined with reference to maps or cartographically defined space.

A novel perception of space was advanced during the European Renaissance with the creation of maps and development in visual arts. Colonial maps were useful for colonial administrators as well as for the native populations for navigating their material environment.⁴ Historically, spatial measures were often tied to functionality, distance measured in travel time, agricultural land measured in terms of labour or grain input. Cartography has worked as technology, producing spatiality and spatial reference for socio-political organisation.

Demarcation of space: Contestation, Conflict & Negotiation

History provides us with various examples of demarcation of space in time that has led to contestation, conflict and negotiation, events that have changed the course of the world politics and international relations.

The first incident being referred to is the Zionist Movement; a movement that began in the late 19th c triggered by the growth of nationalism and the issues of living space. The Jews fled Palestine to escape the cruelty of the Romans while the Arabs stayed on in the shared space to face the Roman onslaught. In the late 19th c, the Lovers of the Zion, influenced by the unifications of Italy and Germany, with a huge corpus, engineered the movement of the Jews to their original home, Palestine. The offer of Uganda for a home was rejected by the Jews and the Jewish state

of Israel was carved out of Palestine in 1948. The fall out of this 'illegitimate' spatial creation continues even today: the Arab-Israeli Wars.

The seizing of Alsace and Lorraine by the newly created Germany deprived France of two very important geographical spaces rich in iron and coal deposits. As long as Bismarck was at the helm of affairs, his System of Alliances ensured that France did not have an ally. However, with the non-renewal of the Reinsurance Treaty, France got an ally in Russia and, being in two different geographical spaces, participated together in the Great War of 1914 against Germany.

The treaty following the defeat of Germany was a call for revenge. Space was a concern once again when the venue of peace was to be identified. France insisted on having the peace conference at Paris to avenge the 'unjust' Treaty of Frankfurt and get back Alsace and Lorraine. The venue for making peace was the same Hall of Mirrors and once again, this space sowed the seeds of the Second World War.

Hitler's defying the Anschluss clause of the Treaty of Versailles, re-militarizing Rhineland, seeking lebensraum in Eastern Europe, the mass exodus and annihilation of Semitics in Germany and Eastern Europe, the need for a Third Reich can be explained as spatial concerns. The democracies ignoring the Soviet Union at Munich in 1938, the coming together of Germany and the Soviet Union, the decision to divide Poland and Hitler's sweeping conquest of the Europe are the spatial dimensions of the Second World War.

The Pacific Ocean was yet another space that was a contention between the USA and Japan. American policies in the Pacific in the 19th c, the opening of Japan, the Washington Conference were some of the reasons for the Pearl Harbour and consequently explain Hiroshima and Nagasaki.

Japan's attempt to imperialize Asia and create the Greater Asia Co-prosperity Sphere was her attempt to control new spaces.

Dollar Diplomacy as well as Carrot and Stick Diplomacy were America's response to European colonization of Asia and Africa. The American fiasco in Vietnam can also be looked upon as a failed attempt at creating new geo-political legacies.

Space and Power

There exists a close relationship between space and power. A close study of the city of Mumbai and its expansion explains well, this relationship. David Harvey⁵ is of the view that the face of cities constantly change due to their extending geographic space through suburbanization.

Mumbai is essentially the result of processes of capital accumulation and physical expansion and in this city, space and power go hand in hand. Suburbanization and the creation of Navi Mumbai⁶ as well as Gentrification⁷ have been spatial movements that have seen the nexus of political and economic power; nexus between builders, politicians, upper class residents and chawl owners. The result of gentrification was the formation of gated communities within the neighbourhood and resentment and anger among the original inhabitants due to their eviction.

Gentrification in Mumbai has led to formal city spaces becoming globalized with the increasing presence of global consumer culture in retail shops, banks, services and recreational activities. We identify this, as the mill to mall culture-a transformation of city spaces.

Gentrification has also impacted the suburbs of Mumbai, thus leading to a re-figuration of urban spaces. Local inhabitants of the evicted spaces have moved into the suburban regions. This is how suburbanization has been happening within gentrification. The suburbs therefore have a multiple identity like in the erstwhile city that is reflected in their everyday lives. In the poorer parts of the suburbs, the slums and squatter settlements constitute a kind of other city linked strongly to a local informal sector.⁸ This process of rejuvenation of Mumbai has not only brought in structural and functional changes but it has also reshuffled the socio-cultural structure of the city. The city has surely got a makeover but has headed towards spatial inequality.

Spatiality

French historian, Henri Lefebvre in *The Production of Space* introduced a generation of historians to the idea that space is neither simply natural geography nor an empty container filled by history. It is rather something that human beings produce over

time. Lefebvre, who was a philosopher and not a geographer, organized his own work around three forms of space: spatial practice, representations of space, and representational space.⁹ Within the framework provided by Lefebvre we study these forms of space.

Spatial Practice

Spatial practice of a society is revealed through the physical and experiential deciphering of space. It embodies a close relation within perceived space: between daily reality and urban reality. Lefebvre defines daily reality as daily routine and urban reality by routes and networks that link up places set aside for 'work', 'private' life and 'leisure'. According to Foucault (1984) the function of what he calls "heterotopias" is in relation to all the space that remains: "either their role is to create a space of illusion that exposes every real space, all the sites inside of which human life is partitioned, as still more illusory."¹⁰ He posits that they can in turn "create a space that is other, another real space, as perfect, as meticulous, as well arranged as ours is messy, ill constructed, and jumbled."¹¹

The Kala Ghoda Arts Festival in Mumbai is a case of urbanity in the postmodern sense: of heterotopias very specific to India. Carnivals or village-melas have been the perfect spots for the amalgamation of the divine and mystical with the everyday providing an inexplicable and mysterious experience. The post-modern spirit has been rather evident during festivals, especially festivals that celebrate the divine. The heady mix of the local with the global with the cast offs and the confusions is clearly seen in these spaces. Carnivals and festivals in the western world has been a combination of the unusual and striking with elements of the semi-mystical. These events have seen the pulling around of animals and persons for making money and getting food on the one hand and on the other hand there have been men and women providing solutions-physical and spiritual to temporal problems. These have put philosophers and thinkers in a quandary to comprehend the exact function of spaces like halls and grounds conducting festivals and fairs.

An altogether new affiliation arises in the city of Mumbai during the Kala Ghoda festival. There is a



different bonding between economy and culture. The heterotopia created is an attempt to make-up for the horribleness and nastiness of the everyday life of the Mumbai resident. This explains why crowds inhabit this and other similar festivals that echo the interests, goals, desires of the Mumbaikar. There is a bonding between the individual and the space and this unfolds a sense of belonging. As Foucault suggests, “a society, as its history unfolds, can make an existing heterotopia function in a very different fashion; for each heterotopia has a precise and determined function within a society and the same heterotopia can, according to the synchrony of the culture in which it occurs, have one function or another.”¹²

The Kala Ghoda festival alters and renovates downtown Mumbai from what it is everyday into a provisional, momentary space that creates and invents culture for public consumption. Huge contestations of culture happen here. Environmental, aesthetic and everyday challenges are addressed here. Displays pertinent to heritage and conservation art décor to paintings for the home, music shows and dance performances on a make-shift stage is what the community gets here. It not only generates employment but shows the road to utilization of artistic talent whether culinary skills, sports or art. Pulling people, young and old from Mumbai and its suburbs, and visitors from outside the city, state and from various parts of the world, this festival had created a revolution since its inception in 1999. From ‘Clean Mumbai’ to ‘Beautiful Mumbai’, and ‘Safe Mumbai’, the Kala Ghoda has it all. These nine days, Art is more important in the financial capital of India. Commerce takes a back seat. The stake holders are many: tourists, sponsors, patrons and clients; and each one helps in fashioning the festival as a heterotopia: a very special space different from the everyday. It marks a movement towards a special kind of order; an order that brings in an altogether different community experience that continues for nine days although preparations are made through the year.

We understand thus the meaning of ‘shared interests’.¹³ The events that take place in the various venues of South Mumbai give us a peep into the creative and cultural expressions and experiences of the city. The festival caters to multiple visitors of

varying interest and it has something for everyone. The popularity of the festival tells a very likeable story and it has prompted several other community utilization of space over the last few years.¹⁴

Representations of Space

Conception, shaping and designing of spaces is spatial representation. Plans conceived by city planners, designed by architects and documents accepted by politicians and bureaucrats take the shape of space representation. They are hardly different from spatial practice that ultimately creates various spaces contained inside homes, public places and utility stations like airports and train stations.

Menu Cards shape and guide food orders in restaurants. They are the blue print for the served foods; an ideal representation of the culinary space. Maps are the representation of actual space, reference space of the real world. This space is distinct from the perceptions of space and from imaginary spaces. Maps represent geospace.

Post-the First World War, the map of Europe was radically redrawn; borders were redefined, and new nations born: carved from the Russian and Austro-Hungarian empires. Some ethnic and nationalist groups, which had long dreamed of nationhood and self-government, were finally given the opportunity. Independent states were created for minority populations previously part of the fallen empires.

The map of Europe changed, and the newly drawn maps became a guide to the changed, world. Maps established the relationship between political power and the spatiality of capital accumulation.

Negotiations at Versailles were negotiations in the politics of space. Constituting the decision-making establishment, the politics of space became a matter of identifying homogenous racialized populations and drawing a territorial line around them. The various claims that were compiled and ordered during the last phase of the First World War were within a cartographic space.

The humiliating treaties signed at the Paris Peace Conference conceived changes in the European map to shape what was to be lived and perceived. The Treaty of Versailles amputated several regions from Germany, and Eastern Prussia was isolated from the rest of the German territory.¹⁵

Austria was forbidden from an Anschluss/ integrating with or into Germany. The Treaties of Saint-Germain and of Trianon put an end to the Austro-Hungarian Empire. Many regions were lost by Austria and Hungary, their territory substantially reduced, and they became two separate nations. The Ottoman Empire was stripped of much of its territory and only allowed to keep a small foothold in Europe. Among the victors, several countries increased their territory: France regained Alsace and Lorraine in 1919 after approximately 200 years of French rule. Also, new nations were born based on the Wilsonian principle of 'Self Determination' as stated in the "Fourteen Points" outlined by President Wilson of the United States.¹⁶

Representational Space

Representational space refers to spaces that we subsist in and are involved with the help of certain emblematic or illustrative links. Here, the physical space is hardly important. It is the objects that are used in a representative manner. It is what marks a temple or a gurudwara; it is the impression and awareness that one experiences in a sacred space; it could be a museum or a confession box inside a church; it could be a graveyard.

While a study of the Ganesh Festival organized by Lokmanya Tilak that served as an ideal cultural space for organizing a mass movement in the context of the Indian freedom struggle is very appropriate here, it is rather well-known to bear repetition. A study of a genocide museum, in the context of representational space seems a better option. The Armenian Genocide Museum that represents a rather lesser known tragedy; the massacre of the Armenians by the Ottoman Turks.¹⁷ From the 17th century through the First World War, their most brutal invader, the Ottoman Turks, controlled major portions of Armenia. Nationalist stirrings among the Armenians were immediately quelled by the Turks by massacring them in the late 19th c. However, the worst happened in April 1915 when the Young Turks decided to annihilate the Armenians which they did by 1918.¹⁸ By 1923 when the Nationalist Turks founded the Republic of Turkey to replace the Ottoman state, for all intents and purposes Armenian society ceased to exist in Asia Minor.¹⁹

The Young Turk government took precautions and imposed restrictions on reporting and photographing by foreigners in the Ottoman Empire. Despite this, witnesses to the deportations send news to the outside world about the unfolding genocide.²⁰ Armenia, annexed by the Soviet Union in 1922, declared its independence from the collapsing Soviet Union in September 1991.²¹

The Soviet Armenian population wished a memorial monument to be built to commemorate the 50th anniversary of the genocide, and organized a huge demonstration on April 24, 1965. In response to this, the Soviet-Armenian government decided to build a monument in the memory of the genocide victims.²² On April 24th, 1965 massive demonstrations were organized in the central squares of the Soviet Armenian cities including Yerevan. Responding to this, the Soviet-Armenian government decided to build a monument eternalizing the memory of the victims of genocide.

The establishment of the AGMI at Yerevan in 1995, the first of its kind in the world focusing entirely on the mass murder of the Armenians, is proof that cultural trauma and destruction transcend space and time. The AGMI stands in solidarity for all victims of genocide condemning the tragedy brought upon the Armenian people. There is a need to confront and remember the trauma, as also to prevent future genocides. The Institute continues to document all evidences that support the Armenian genocide with the goal of opening academic dialogue keeping in mind the Universal Declaration of Human Rights.²³ Creating this representational space is in continuation with the hope that Turkey will, at some point of time, come to terms with its own history and open a discussion on the topic of Armenian genocide.

Conclusion

This study has concentrated on the mapping of real spaces more than the imagined and real-and-imagined ones.²⁴ There exists an intimate relationship between space and historical memory. Further study and research could concentrate on the deployment of spatial ideas to comprehend the functioning of societies and their cultural contestations. The use of spaces and spatial ideas for practical and ideological purposes in specific periods could also be studied and debated.



End Notes

- ¹For a detailed argument on this point, see, Allan R. H. Baker, *Geography And History Bridging the Divide*, Cambridge University Press, Cambridge, 2003.
- ²Jeppé Standsbjerg, “Geography and Territory in International Relations”, DBP Newsletter, May 2013 in https://www.cbs.dk/.../cartography_and_territory_in_international_relations_-_jeppe_... (Accessed on May 2, 2018).
- ³Jeppé Standsbjerg, “Cartography and Territory in International Relations”, *E-International Relations*, www.e-ir.info/2013/10/02/cartography-and-territory-in-international-relations (Accessed on May 2, 2018). Also see, Alan K. Henrikson, ‘The Map as an “Idea”: The Role of Cartographic Imagery During the Second World War’, *The American Cartographer*, (Edward Soja’s Theory of Spatiality where he speaks about the tripartite division of types of space).ol. 2, 1975, pp. 19-53. (Accessed on May8, 2018).
- ⁴Jeppé Standsbjerg, “Cartography and Territory in International Relations”, op.cit.
- ⁵David Harvey, *Explanation in Geography*, Sage Publications, London.1969.
- ⁶The creation of the counter-magnet of Greater Mumbai at the eastern side on the mainland-Navi Mumbai, to deal with the increasing migration and as a centre of tertiary employment was the process of suburbanization.
- ⁷Gentrification can be defined as the movement of middle and rich families into parts of the city, causing the property values to rise and having the secondary effect of driving out poorer families.
- ⁸See Dwinparna Chatterjee, “Gentrification in the mill land areas of Mumbai City: A case study, Paper Presented at the International RC 21 Conference on Resourceful Cities, Berlin, August 2013, www.rc21.org/conferences/berlin2013/RC21-Berlin...3/13-Chatterjee-Dwiparna.pdf (Accessed on May 13, 2018), The mill lands and the chawls went into a desolated condition after the great textile mill strike of the early 1990s. This phase was aggravated by the commercialization of the upper and the outmigration of the working class. The colossal structures are built juxtaposed to the old dilapidated chawls of the unfortunate mill workers. In an aspiring great city like Mumbai, the city space gets reoriented by the enthusiastic growth of the corporate world and the degradation of the ethnic world in the process of ‘creative destruction’. Government policies also played fundamental role in gentrification. As per the Mumbai regional plan, several textile mills shifted to the suburban areas. 600 acres of land was generated after the closure of the mills. These lands could have been judiciously used but these spaces became a matter of speculation for mill owners, builders and government.
- ⁹Henri Lefebvre, *The Production of Space*, Blackwell Publishing Limited, Chicago, Illinois, 1919, pp. 37-41. Also, Richard White, *What is Spatial History?* Spatial History Project, <https://web.stanford.edu/group/spatialhistory/cgi-bin/site/pub.php?id=29> (Accessed on May 19, 2018).
- ¹⁰Michel Foucault. “Of Other Spaces”, *Heterotopias*. Tr. Jay Miskowiec. *Architecture /Mouvement/ Continuité*, Berlin,1984.
- ¹¹Ibid. From Foucault’s discussion of the sixth principle of heterotopias.
- ¹²Michael Foucault, op.cit.
- ¹³R. Derrett. “Making Sense of How Festivals Demonstrate a Community’s Sense of Place”, *Event Management*, Vol. 8, Number 1, 2003, pp. 49-58(10). At Kala Ghoda there are museums and art galleries that is comparable to Art Districts in parts of Europe. The continuation of this festival and introduction of similar ones in future with a proper blue print could be the effective road for providing the city with distinct experiences.
- ¹⁴Mumbai celebrates festivals like the Celebrate Bandra Festival, Kitab Festival, Equal Streets to name a few. These take place in the pleasant months, November to February.
- ¹⁵Erstwhile German colonies were split between Belgium, England and some British Dominions, France, and Japan. Italy acquired Trentino and Trieste, Romania was given Bessarabia and Transylvania. Denmark obtained the northern part of Schleswig, while Greece extended its frontiers to cover large

territories in Bulgaria and Turkey. See clauses of the Treaty of Versailles, R.D.Cornwell, World History in the 20thc, Longmans, London, 1969, pp. 15-17.

- ¹⁶Ibid. In northern Europe were created Finland and the Baltic countries of Estonia, Latvia and Lithuania. Poland, which had disappeared at the end of the 18th century, was reconstituted. Then two new multi-national states were created: Czechoslovakia for the Northern Slavs (Czechs and Slovaks); and Yugoslavia for the Southern Slavs (Slovenians, Croats and Serbs).
- ¹⁷One of the world's oldest civilizations, Armenia was among the first to officially embrace Christianity as its religion. Over the centuries various invaders conquered Armenia.
- ¹⁸Arnold Toynbee, (ed.), The Treatment of Armenians in the Ottoman Empire 1915-1916: Documents presented to Viscount Grey of Fallodon, Secretary of State for Foreign Affairs, Sir Joseph Causton and Sons, Limited, London, 1916. Also see, Vahan M.Kurkjian, A History of Armenia, Indo-European Publishing, New York, 2008. Large numbers of Armenians were methodically massacred throughout the Ottoman Empire. Women and children were abducted and horribly abused. The entire wealth of the Armenian people was expropriated. By the 1920s, names of certain locations in Western Armenia had been changed and several Armenian cities and towns Turkified. Armenian architectural monuments and inscriptions had been systematically erased and the Turkish government had even converted Armenian churches into mosques.

- ¹⁹The Turkish government administered a calculated plan of genocide against the Armenians. See, Cynthia Wesley-Esquimaux & Magdalena Smolewski. Historic Trauma and Aboriginal Healing, Aboriginal Healing Foundation, Ottawa, 2004, p.62.
- ²⁰<http://www.armenian-genocide.org/genocidefaq.html>
- ²¹George A. Bournoutian, A History of the Armenian People, Vol. 2, Mazda Press, Costa Mesa, CA, 1994.
- ²²Interestingly, there are 135 memorials in 25 countries, including India, that have memorials and monuments dedicated to the memory of the victims of the Armenian genocide.
- ²³Preeta Nilesh 'History and Memory: The Armenian Genocide Museum-Institute', Contemporary Research In India, Vol. 2, Issue 1, March 2012, pp. 264-69.
- ²⁴See Edward Soja's Theory of Spatiality where he speaks about the tripartite division of types of space. E.W. Soja, Thirdspace: Journeys to Los Angeles and Other Real-and-Imagined Places, Blackwell Publishing, Oxford, 1996. Also see, R. Atkinson, Review on Thirdspace: Journeys to Los Angeles and Other Real-and-Imagined Places, http://findarticles.com/p/articles/mi_qa3780/is_199804/ai_n8796807/ (Accessed on May 18, 2018).



Denial of Spatial Justice: Building The BB & CI Railway (1855-1870)

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Abstract

Railways in India were a colonial project for furtherance of imperial interests. Nonetheless a network of railways obviously became the sinews of economic activity and unquestionably safest and fastest mode of transportation. Evidently, its construction had a revolutionary impact on the life, culture and economy of the Indian people. But concurrently as rightly pointed out by Iftekhar Iqbal in his article - "The Railway in Colonial India: Between Ideas and Impacts,"; "the railway was bound to come into a discursive relationship with many parts of the Indian landscapes resulting in various ecological crises affecting society and agriculture...." The paper attempts to highlight this aspect with particular focus on the building of the railway by the Bombay Baroda and Central India Railway Company (henceforth referred to as BB&CIRC), connecting the two metropolis Bombay and Ahmedabad, a distance of 309 miles during the period 1855-1870. This paper is completely based on archival source material of the Maharashtra State Archives. The railway, in the course of its construction, encroached on large patches of agricultural land, salt pans and grazing ground, affecting livelihood of many. Many instances are recorded in the official files where it caused enormous damage to crops and fields. It altered route of rivers, causing inundation in some places while drought in others. Moreover railway embankments obstructed free flow of water, and thereby affected crops. In spite of repeated pleas the railway company did not attend to the grievances of the farmers. Sometimes railway embankment blocked natural drainage of the area. The water, therefore, took long time to escape through the culverts and bridges which were usually insufficient. At times, the Railway Company broke the bunds that protected the land from water-logging; whereby the crops got spoiled. Many cases are found in the records where railway construction affected livelihood of the salt producers. Sometimes the railway-line cut off for limited the flow of the sea water that was conveyed for the salt-pans. Records are replete with complaints by salt makers against the BB&CIRC as the construction interfered with their salt pans and fields. It was mandatory for the railway company to restore and maintain them as before, should their activities were to disturb them. The company, however, took no notice of such complaints nor did they pay heed to their remonstrance from the district Collectors. Consequently, this affected income of many, who claimed compensation from the railway company. This paper seeks to explore the voices from the ground through the pleas and petitions made by the poor farmers, salt makers and shepherds to the government and railway officials seeking their attention for the redress of their grievances. It also attempts to reflect on the indifference of the railway companies to the impact of the building of the railways on the indigenous society, their physical landscape and source of livelihood.

Keywords: Bombay Baroda Central India Railway Company, Land encroachment, Spatial justice.

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Railways in India were a colonial project for furtherance of imperial interests. Nonetheless a network of railways obviously became the sinews of economic activity and unquestionably safest and fastest mode of transportation. Evidently, its construction had a revolutionary impact on the life, culture and economy of the Indian people.

But concurrently as rightly pointed out by Iftekhar Iqbal in his article - “The Railway in Colonial India: Between Ideas and Impacts,”: “the railway was bound to come into a discursive relationship with many parts of the Indian landscapes resulting in various ecological crises affecting society and agriculture....”¹ The paper completely based on archival source material from Maharashtra State Archives attempts to highlight this aspect with particular focus on the building of the railway by the Bombay Baroda and Central India Railway Company (henceforth referred to as BB&CIRC), connecting the two metropolis Bombay and Ahmedabad, a distance of 309 miles during the period 1855-1870.

Railways require mass occupation of space and consequently large acquisition of land occurred. This aspect with respect to India has drawn the attention two scholars, who have dealt with the Railways of Bengal. Smritikumar Sarkar (2010)² examines the legal and social issues involved in acquiring land for building the railway in Bengal with special focus to the opposition to land acquisition by the Indians and the reaction of the British government. Iftekar Iqbal (2006)³ highlights the negative impact of the railway especially with regard to displacement of the regime of agrarian Bengal and the changes brought in the food supply system. The aim of the present paper is to focus on the adverse effect of land acquisition on the livelihood of the people living along the railway line. It seeks to explore the voices from the ground through the pleas and petitions made by the poor farmers, salt makers, shepherds and other dwellers adjoining the railway line to the government and railway officials seeking their attention for the redress of their grievances. It also attempts to reflect on the indifference of the railway company to the impact of the building of the railways on the indigenous society, their physical landscape and source of livelihood.

Railway construction in India not only became important for connecting the hinterland to ports of importance for onward shipment to England, but excessive glut of capital that was formed from the early industrialization phase in Europe found secured place for investment. And when such railway construction was to be done in its colonies, guarantee for secured interest on capital were extended by

colonial government, making British investment of capital more secure. No wonder, India as a British colony was drawn into the vortex of European industrialization and therefore her economic interests had to be sustained by an iron political hand.

Railway was a capitalist venture. The imperative aspect in railway building was space-acquisition and correspondingly an intrusion on the social and economic processes connected with space. How a capitalist enterprise grew at huge social and human cost leading to denial of spatial justice has been rightly put forth by David Harvey in his seminal work, “Social Justice and the City”:

“Under the principle of social justice on the basis of merit, if individuals are forced by circumstances (such as lack of alternative choice) to live there (an area of damage) then the primary criteria of need may be to justify compensation.... Merit can therefore be translated in a geographical context as an allocation of extra resources to compensate for the degree of social and natural environmental difficulty.”⁴

The denials of spatial justice by the Bombay Baroda Central India Railway Company in its course of the construction are explained in this paper with actual examples to illustrate.

Spatial Acquisition by BB & CIR

The railways were inaugurated in India in 1849, with private railway companies entering into a contract with the East India Company(henceforth referred to as EIC)with the latter ensuring a five percent guaranteed-interest and grant of free land. The BBCIR was one such Company who originally constructed and owned the present day railway-lines of Western Railway. The line connected Bombay with the province of Gujarat. In this regard, it is imperative to historically situate BB&CIRC in the geographical environment of Bombay Presidency which included Bombay and Gujarat, so as to bring out its significance.

Bombay (presently Mumbai) with its geographical position and as a natural harbor was the “Gateway of India”. It was the nodal point on the west coast of the Peninsula and hence, the key possessions for the British. It was a center of dockyards, arsenals



and manufactories of ordnance and other stores.⁵ Ideally, Bombay was nearer to Europe as compared to other harbors. It was shorter, speedier, more convenient and direct than Calcutta and Madras.⁶ It was procurement of cotton that brought proximity of Gujarat with Bombay.

About one fourth of Gujarat belonged to the EIC. The rest of it was divided between the Indian Gaikwad rulers of Baroda (presently known as Vadodara) and the Kathiawar chiefs, numbering over two hundred. Generally termed as “the garden of Western India”, Gujarat was known for its fertile soil and sheets of unbroken cultivation, especially cotton. It possessed the longest sea-coast among the maritime provinces of India.⁷ Agriculture, salt making and cattle rearing constituted its major occupations.

Connectivity with the cotton growing areas was very important for the British textile industry. Therefore it is in this context that it is necessary to understand the necessity of connecting Bombay to Gujarat with a railway. The disadvantages faced by Indian exporters of raw cotton suppliers are best narrated by the contemporary newspaper, the Bombay Gazette:

“In the exportation of raw material, she (India) laboured under such disadvantages when compared with her rival America that she was not able to compete with her. Instead of steam mills, for clearing of the cotton, the Hindoo employed hand labour, which scarcely enabled him to pick a pound a day. Wretched beast of burden then carried it on wretched roads, and often over high mountain passes, to the coast, where it arrived sometimes after 50 or 60 days journey in a soiled or deteriorated condition.”⁸

It was Colonel J.P. Kennedy, the former Consulting Engineer to Government⁹ and later the Consulting Engineer of the BB & CIR,¹⁰ who in a Memorandum – ‘Indian Railways’, submitted on September 14, 1852 to the Court of Directors of the EIC emphasized the need for building a railway through the Tapi valley to connect the cotton growing regions of Khandesh and Berar from Bombay.¹¹ Meanwhile the Directors of the BB&CIR dispatched a Memorandum to the Court of Directors of the EIC proposing the opening of “cheapest and the most

effectual line of communication between Agra and Bombay, by the valleys of the Chumbul(Chambal) and Mhye(Mahi) rivers, Baroda(Vadodara) and the western coast, with such lateral branches from this line as the interests of adjacent districts may require”. It stated that the route was selected as it maximized advantages in terms of natural resources and raw materials, especially cotton, opium and salt.¹²

Lord Dalhousie in his minute of 20th April of 1853 recognized the validity of the proposals put forth by Directors of the Company and thereby set the wheels moving for the BB & CIRC.¹³ After a survey carried out by the Company engineers, highlighting the feasibility of the line, in 1855, the Court of Directors of the EIC sanctioned the line only between Surat to Ahmedabad and observed that the extension towards Bombay in the south would be permitted only after the first section was opened. They also declined to have any extensions to the north towards Neemuch and Delhi due to natural obstacles and doubtful remuneration.¹⁴ After repeated pleas the Court of Directors sanctioned the Surat-Bombay line in Sept 1857.¹⁵ Once the BB&CIRC got a sanction, the EIC entered into a contract with them on 21 Nov 1855, based on the system of guarantee and grant of free land.¹⁶

The whole stretch of the line was densely populated with a few exceptions like the section between Surat and the Vaitarna River. Yet while conducting the surveys, care was taken by the Company engineers to avoid encroachment of residential areas and landed property to reduce payment in the way of compensation.¹⁷ For instance, the Chief Engineer, A.W. Forde laid the line from Vaitarna through Vasa forming a junction at Dadur on the GIPRC line to avoid the populous part where land acquisition was the least, causing no obstruction to any important roads.¹⁸ Similarly requirement of additional land for railway purposes from Dadur to its terminal point Colaba was met by reclamation of sea. The project Backbay Reclamation was thus carried out providing space to the BB&CIR. If not for the reclamation, land had to be obtained through the suburbs at an exorbitant cost. Such acquisition was moreover inconvenient as it meant encroachment of a large number of houses. Therefore reclamation of land along the shore at a cost of Rs.6 lacs for railway was considered to be a more feasible option.¹⁹

Since government provided the land to the railway companies, they paid all compensation to the land owners whose land was acquired or affected for the building of the railways. Therefore the Government framed specific rules for the same. The rules were embodied in Act No.VI of 1857, named “Act for the Acquisition of Land for Public Purposes” which was passed by the Legislative Council on 9th May 1856, with the assent of the Governor General. In accordance to the law, land was taken by Government after a declaration by the Secretary to the Local Government with conclusive evidence that the land was required for a public purpose. The Collector of the District or any other officer specially appointed carried out the order for the acquisition of the land, by measuring it, giving notice to the occupier and other stakeholders. This was followed by a meeting where the collector put forth the amount proposed for compensation. In case the Collector and the stakeholders approved to the amount, then the award was finalized. However in case of disagreement, the disputes were referred to the arbitrators. Even after the compensation was determined by the arbitrators, and yet there was resistance in eviction, the magistrate enforced its surrender. The compensation was determined based on the value of the land and the amount of damage. If a land was taken temporarily for any public work, compensation was paid in the same manner as that of land taken permanently.²⁰

In case a land which was handed over to the Company by the Government was injured, the latter was liable. However if a property was not that of the Company and yet there was damage to it, then the Company was accountable. The records are replete with complaints by certain people living along the line against the Engineers of the Company who evaded or put off payments of just claims against the Company for losses sustained by them. Grievances were repeatedly expressed against the BB&CI Company for the interference of their works with salt pans, rice and other fields. In fact, it was mandatory for the railway company to restore and maintain them as before, should their activities disturb them. Moreover the crossings were closed on the line of the railway without any authority. Much inconvenience was also caused due to delay in arranging the

construction of necessary crossings, field roads and drains. Besides there were also acts in defiance of the law by the railway authorities, causing hardships to the indigenous population.²¹ The claims were often long standing and therefore the complainants often required the assistance of Government in obtaining an early settlement. However owing to the constant change of officers along the line, their frequent retirement or dismissal from service, considerable difficulty was experienced in the investigation of those claims.²² The railway company paid little attention even to the remonstrance from the Collectors and Revenue Commissioners of the Districts.²³ The railways therefore caused much immediate and long term impact leading to instabilities in the life of the people.

Denial of Spatial Justice

The Railway had an impact on the ecological system in general. In the course of its construction the route of rivers were diverted for its convenience. The Kauri River crossed the railway at two points. A cut was made to connect two bends of the Kauri River near Vijnool, midway between Ahmedabad and Mahemdavad. The alteration was intended to divert the channel of the stream from the railway and obviate the necessity of constructing two bridges having an aggregate waterway of 300 feet. The cost of the cut was estimated at Rs.6,250 while that of the bridges was nearly Rs.50, 000. Only a small bridge of 20 feet span for the local drainage sufficed.²⁴

However the diversion of the river made the town of Lalee prone to inundation every year. There was a fear that the river may cut a new channel for itself ruining the irrigation system below Lalee. The land of the village Ropra was reduced by 31 goontas. Apprehensions were expressed by government who suggested that remedial measures were required to be undertaken to avoid a catastrophe.²⁵

The railway encroached on plenty of agricultural land, affecting the livelihood of many. There were many instances where it caused enormous damage to standing crops. To cite an example, in Nov 1857 when the Chief Engineer proposed to commence the survey for the railway between Surat and Valsad in accordance to the directions of the government, the fields were covered with standing crops. The Collector



wanted the Chief Engineer to defer his survey until the crops were cut. Yet the Chief Engineer carried on with the work as he was not willing to lose a major part of the winter season that was favorable for his employees.²⁶ However compensation was paid for the crops that were removed and there seems to have been no complaints against the Company.²⁷

However there are numerous instances where the farmers repeatedly expressed their grievances due to the repercussions of the railway on their fields. The railway formed embankments causing obstructions to the passage of water. Two culverts were built by the Railway Company near the village of Panoli in Ankleshwar taluka to overcome the problem. But they were soon closed after the railway was opened for traffic. In consequence a tank on which the villagers depended for their supply of water was no longer filled in the monsoon and another tank on which much rice cultivation depended was not filled with enough water for the same number of fields as it formerly had. The official files show that there were repeated pleasto the Railway Company for the culvert to be opened by the Government officials, but they remained unheeded.²⁸ The Collector of Surat, Mr. Borrodaile, for example, personally applied thrice to the Engineer in charge throughout the year 1862. Though a commencement was made to clear out the culverts, yet the work was left incomplete. Again on 7th May 1863, J.M. Greig, the Officiating Deputy Consulting Engineer for Railways wrote to the Agent to open the culvert during the monsoons, to avoid causing inconvenience to the villagers and loss of revenue to the Government. Nevertheless no notice was taken to these repeated appeals. In fact, in July 1863, the Company claimed a payment of Rs.20 for having spent for altering the fences near those culverts. Yet it was found that the culvert was not opened out and in spite of repeated requests throughout the year 1863, no response was received from the Company officials. Consequently the rice cultivation had to be abandoned.²⁹

Sometimes the railway embankment broke up the natural drainage of the area, the outcome of which was the damage of the crop of the area. The water took a long time to escape through the culverts and bridges which were insufficient. It caused water-logging whereby the crops of the land rotted up.

To illustrate a few examples, there was a farmer Pandoorang Chimnaje of Eksur at Dahisar who complained that a bund protecting his land and also that of Davejee Guduva and Shimgia Gunnia from the salt water was broken down by the railway bank and side trenches and the land was thereby thrown out of cultivation since 1863. Similarly at the north side of south Vaitarna Bridge, Ganesh Kanoo and others complained that their fields were overflowed with water from the side trenches.³⁰ There were several such instances whereby the Railway Company cut through old bunds in their land and it was their duty to restore and maintain them. The Government officials repeatedly warned them that if they failed to do so they were liable for all damage that occurred in consequence. However these were of little consequence.³¹

In some cases salt pans were affected by the railways. To cite an example, in the year 1858, the Government salt works at Bassein (presently Vasai) were leased to one Khhandass Sewucklal at a rental of Rs.4,500 per annum for a term of ten years. The line of the Railway passed through Suza Anchola whereby the channel through which the sea water was conveyed to the salt works was almost entirely cut off. The Railway authorities provided for one culvert which was insufficient for effectually flooding the works in question. The Contractor claimed a deduction of Rs.1000 per annum in the rent paid by him to Government. The average yield for four years before the Railway was built was found to be 89,699 maunds per annum.³² But with the coming of the railways the average yield was reduced to 10,651 maunds. The proportionate deduction in the quantity was calculated to Rs. 534 by the Government officials and not Rs.1000 as claimed by Khhandass. Therefore the Government was requested to remit an amount of Rs.550 to the Contractor for the losses incurred by him. Besides this particular salt pan, there were two more agari or salt works which belonged to private individuals and claims had been put forward for compensation by the owners. It was suggested by the Government officials that the railway company could either construct five more culverts required for effectually providing sea water for all the salt works or pay compensation for permanently doing away with the rights of the private proprietors and

of government.³³ After a year there was a similar appeal by the same contractor of the saltworks for the compensation for loss sustained by him. The amount of Rs.550, sanctioned in 1861-62, was again asked in 1862-63. The circumstance under which the last grant was accorded was in every way identical with those upon which the former compensation was given.³⁴ The Bombay Government sanctioned the amount. However the Railway Company seemed to be reluctant to build the culverts and again an order was made by the Government official regarding the same.³⁵

In another case, Vithul Huree Naique and Shiwram Abajee petitioned to the Governor of Bombay regarding a piece of ground belonging to the saltwork called Pat coolee in Monjry Ancholey, Taluka Vasai through which the line of the BB&CI Railway passed. The ground in question was used as a reservoir for supplying the work with sea water. It was encroached upon by the Railway to the extent of about 2 bighas. As the line ran directly across damming up the mouth of the water course, the supply of water was cut off and no salt was consequently produced. The year before 1361 maunds salt had been manufactured.³⁶ However in this instance, the railway company complied to the pleas and built the required culverts to facilitate the supply of water to the salt pans.³⁷

Very often the Railway Company locked the level crossings causing inconvenience to the people living near the railway line. As a policy, both the Company as well as the Government officials preferred to put up level crossings rather than over-bridges on the line. They were cheaper to be maintained than that in Britain.³⁸ Besides the number of trains proposed then, being less than four in 24 hours, on the line, the delay caused to the passers-by was expected to be very insignificant. In fact J.S.Trevor, the Deputy Consulting Engineer considered the climb over the high slope of the bridge to be more bothersome to the public than rare delay.³⁹ Moreover since the over bridges were proposed to be of 10 feet width, they were inadequate for the animals of burden like camels, elephants with heavy loaded cart unlike the level crossings which were broader by 2 feet.⁴⁰

However there were frequent complaints of these level crossings being closed. The Engineers

kept them sealed according to their own whims and wishes, irrespective of a regulation that the existing level crossings could not be abolished without the consent of the Revenue authorities who ought to be consulted.⁴¹ The Resident of Baroda often protested against the closing of crossings of the railway. However very little attention was paid by the railway company to his remonstrance.⁴² For instance the railway authorities obstructed a village thoroughfare by locking up a gate at the level crossing near the tank in Amulsar in the Soopa Talooka. After being repeatedly appealed for a span of two years, the company erected the gate at Amulsar, at a spot much frequented by the villagers, both as a way to their grazing ground as well as the most valuable land of the village. However the gate was kept locked. The villagers consequently suffered a lot of inconvenience.⁴³

Similarly in the Kaira Collectorate, the villagers of Vasad demanded a crossing, as the owners of the land on the west side of the cutting was deprived of a road to their fields.⁴⁴ However the railway company failed to do so. Therefore from time to time the Government Engineer, Percival brought to the notice of the Railway Company of the need for constructing the level crossings and irrigation drains between Mahi and Nadiad and Mehemdavad and Barejadi. In fact a meeting was held on 15th January 1863, where Percival accompanied Gair, the Resident Engineer of the Company along the whole length of the line from Mehsuar Bridge to the Mahi. All the inconveniences faced by the different villages were brought to the latter's notice. The villagers who had complaints also met the engineer. Gair gave assurances of undertaking the tasks at the earliest. In fact the Deputy Consulting Engineer had been in correspondence with the railway authorities since 1861. However till the end of 1863, no steps were taken, causing difficulty to the villagers.⁴⁵

Due to such cases the Government threatened to take legal action against the Railway Company. In fact, the same legal measures could be enforced for obstruction to access to public property as that of encroachment on a highway. It was clearly stated in Clause XIX of Act XVIII of 1854, that in case of a railway, crossing any public carriage road, it was mandatory for a Railway Company to erect and also



maintain good and efficient gates on each side of the railway line. If the Company failed to do so, it could be fined a sum of Rs.200 every day after the period of deadline specified by the Magistrate for constructing the gates. The Government authorities warned that due to the failure of the Agent of the Company in controlling the Railway authorities it was time for the Government to monitor them.⁴⁶

However these were mere warnings and the railway engineers acted in an authoritative manner, very often taking law in their hands. The Assistant Engineers often cut off private crops and trees in the vicinity of the Railway without the permission of the owner. In an instance, the engineers of the Railway Company entered on 12 November 1862, the private property of Vittoba Wassoodearjee near Tardeo on the pretext of measuring the ground. Without prior information, consent or permission of the owner they entered into his garden and forcibly cut down several trees and pulled down its wall, causing considerable damage to his property.⁴⁷

Very often they fined the owners of stray cattle.⁴⁸ To cite an example, Bayly, an Assistant Engineer in the employment of the BB&CI Railway, took upon him the functions of a Magistrate and fined people for allowing their cattle to trespass on the line, at the rate of 8 annas per head. He took a total amount of Rs.12 for twelve head of cattle. The illegality of this act was brought to the notice of the Resident Engineer by the Government authorities.⁴⁹

Besides there were other crimes committed by the railway officials, like taking into custody the sheep against the will of the owner.⁵⁰ In one instance, eighty-five sheep were seized from a dealer by the name Khodabux by Howard of the Railway Department on 13th May 1862 while the former was passing through the village of Dongree in the Valsad Pargana with a large flock of sheep, on his way from Deesa to Bombay. He was reluctant to sell the animals and least of all at the price of one Rupee per sheep as tendered by Howard. He was also threatened by Howard who claimed to have command over a thousand men. When the Magistrate of Surat, E.W. Ravenscroft summoned Howard, he showed his inclination to pay a higher amount for the sheep but was unwilling to part with them.

When Ravenscroft threatened to take legal steps and sent the Superintendent of Police to take action, the sheep were returned. What was more alarming was that Howard claimed that he was told by a senior colleague that this was a usual practice in India. When Ravenscroft clearly labeled such action as highway robbery as that in England, he apparently repented for his misdeeds.

However within a week, some subordinates of Howard were again charged for seizing twelve sheep in a neighboring village. The person who was violently deprived of his property at once petitioned the Mamlutdar begging that his sheep might be recovered from Howard. When the Mamlutdar issued a warning that the information would be sent to the magistrate, nine sheep were returned and payment was made for those which had been killed. This act brought out the utter disregard of law by Howard. Ravenscroft then gave him a final warning and threatened to book him for any such cases in the future.⁵¹

The Government reprimanded the Collector and the Magistrate of Surat for showing leniency and forbearance in each instance of misconduct by the railway authorities. The Magistrate of Surat was asked to enforce the law in all such future cases.⁵²

In all these cases the Government officials seemed to be helpless onlookers. Records show that the constant efforts made by Government officials, to enforce the Railway Company to undertake the necessary tasks for the benefit of the local population was neglected. They appeared to have no means to coerce the Railway Company in fulfilling the necessities. It was observed that once a line was opened and sanctioned the railway authorities paid little attention to the government's observations. In fact Captain Hancock, the Deputy Consulting Engineer once remarked "It was not easy for the omissions to be supplied after a portion of line had once been passed by the Government Inspector. It was found impracticable afterwards to induce the Company to make arrangements necessary for the convenience of the villagers adjoining the line."⁵³

Conclusion

A railway, per se, is only a means of transport, serving the personal need of moving from one place

to another. It afforded facilities for rapid, cheap and regular inter-communication for all classes between the cities and provinces through which the line passed. It was a compelling force in modernizing India. However with modernity came space occupation and disruption of economic life of a certain sections of the population. As David Harvey has rightly stated in his work, "The Enigma of Capital and the Crises of Capitalism", "...The Railroad Companies with land grants ...led as might be expected to cycles of boom and bust, generating innumerable local crises as it went."⁵⁴

The railways thus had an adverse impact on the lives of the displaced population and also of those who were affected due to the encroachment of the line on their means of livelihood. Although the people faced innumerable hardships, the Railway Company took little steps for any corrective measures to improve the lot of the people. In fact a guaranteed company need not trouble themselves to do more than fulfill their contract. They often did so in a morally disagreeable way. While the railway company was constantly under pressure from various quarters to complete the line and meet the targets for opening miles after miles, it was blind to the needs of the people. Once a particular section of the line was opened, they hardly paid heed to the grievances of the people facing hardships due to problems created by the line. Being complacent and indifferent, they were insensitive to the complaints of the Indian passengers as winning the goodwill of the people was not their motto.

The Government apparently seems to be sympathetic to the wants of the people, constantly acting as a watchguard, reminding the railway authorities of their duties towards the fulfillment of the requirements of the peoples. However the Government did not use its coercion power to compel the Company to fulfill its obligations. While the Government kept sending petitions to the railway authorities year after year, no legal action was taken against the railway authorities. Therefore while the railway was directly responsible for the plight of the people, the state too was accountable, as they were almost passive onlookers taking no adverse action against the railway authorities.

The network of railways certainly brought development in certain areas; however it had in its course hauled out the innards of the earth, the habitats and indeed the livelihood of many. Perhaps Ian Kerr, rightly states that, "They were the iron stakes the colonial state and British commercial and industrial interests drove into the heart of India's socio-economic order..."⁵⁵

End Notes

¹Iftekar Iqbal, "The Railway in Colonial India: Between Ideas and Impacts," in *Our Indian Railway: Themes in India's Railway History*, ed. Roopa Srinivasan et al, (New Delhi: Foundation Books, 2006), 183

²Smritikumar Sarkar, *Land Acquisition for Railways in Bengal, 1860-1862: Probing a Contemporary Problem*, *Studies in History*, 26(2010), 103-142.

³Iftekhhar Iqbal, op.cit. 173-185.

⁴David Harvey, *Social Justice and the City*, (Oxford: Blackwell, 1993), 106-107.

⁵Thomas Williamson, Late Revenue Commissioner, Bombay, wrote Two letters on the Advantages of Railway Communication in Western India, addressed to the Lord Wharncliffe, Chairman of the Great Indian Peninsula Railway Company, (London, 1846), p.6.

⁶Edward Davidson, *The Railways of India: With an Account of their Rise, Progress and Construction*, (London: F.N. Spon, 1868), 22.

⁷Imperial Gazetteer of India, Provincial Series, Bombay Presidency, Vol.1, (Calcutta, 1909), 2.

⁸The Bombay Gazette, 6 Feb 1863.

⁹Edwin Arnold, *Marquis of Dalhousie's Administration of British India*, Volume second, London: Saunders, Otley & Co., 1865), p.225; R.R. Bhandari, *Western Railway: A Glorious saga*, (Mumbai: Western Railway, 2008), 21.

¹⁰Davidson, op.cit. 72.

¹¹MSA/1853/ PWD/Railway/13/21/Kennedy, Memorandum on Indian Railways, 14 September 1852, 95-111.

¹²Lord Keane, Acting Chairman, BB&CI Railway Company to the Honorable Court of Directors, East India Company, dated 21 Dec 1852, PP.MF, Reel no.60, Correspondence regarding the Railway Communication in India, pp.21-25, NAI, in *Railway*



- Construction in India, Selected Documents, ed, Bhubanes Misra, (New Delhi: Northern Book Centre, 1999)523,524.
- ¹³The Marquis of Dalhousie, Governor General of India, Minute, Railways in India, 20 April, 1853, 3-20.
- ¹⁴MSA/1854/PWD/Railway/1/1A, C.Allen Esquire, Officiating Secretary to Government of India to Goldsmid, No.1159, 3 Nov 1854, 346.
- ¹⁵MSA/1857/ PWD/Railway/4/129., Court of Directors to the Governor, Letter no.42 of 1857, 30 Sept 1857, 271-273&287.
- ¹⁶Juland Danvers, Secretary, Railway Dept, India office, Report to the Secretary of State for India to the end of the year 1859, 20; Papers East India (Railways etc.), Contract Between the East India Company and the Bombay, Baroda, and Central India Railway Company, dated 21st Nov 1855, 108; S.M.Edwardes, Gazetteer of Bombay City and Island, Vol.I, (Bombay: The Times Press, 1909), 350.
- ¹⁷MSA/ 1856/PWD/ Railway/4/14, 20-21 & 23; MSA/1857/ PWD/ Railway/4/143, 509-511, 521-528, 531&545.
- ¹⁸MSA/1858/PWD/Railway/15/376, 231, 248-258, 259-263.
- ¹⁹MSA/1862/ PWD/Railway/20/166, 192, 198, 223-224.
- ²⁰MSA/1862/PWD/Railway/5/356/Act No.VI of 1857, 51-57.
- ²¹MSA/1862/PWD/Railway/9/147/Captain Humpkins Consulting Engineer, Report no.1974, 9 Aug 1860, 60
- ²²MSA/1862/PWD/Railway/9/249/H.Rivers, Consulting Engineer for Railways, Report, unnumbered, 13 Oct 1862, 89.
- ²³MSA/1864/PWD/Railway/28/178/J.S.Trevor, Deputy Consulting Engineer for Railways, Memorandum no.1249 of 1863, 25 Aug 1863, n.p.
- ²⁴MSA/1862/PWD/Railway/27/342/J.S.Trevor, Deputy Consulting Engineer to C.Sanderson, Chief Engineer, Letter no.2674 of 1861, 31 Dec 1861, pp.226,227; MSA/1868/PWD/Railway/21/188/J.S.Trevor, Consulting Engineer for Railways to Secretary to Government, Letter no.2096 of 1868, 29 May 1868, n.p.
- ²⁵MSA/1868/PWD/Railway/21/188/ Superintending Engineer, Northern Division, Report no.829, 24 Feb 1868, n.p.; MSA/1868/PWD/Railway/21/188/ Collector of Ahmedabad to Revenue Commissioner, Letter no.477, 5 May 1867, n.p.
- ²⁶MSA/1857/PWD/Railway/4/129/George Inverarity, Collector of Surat to William Hart, Secretary to Government, Letter no.1094 of 1857, 5 Nov 1857, 307-309.
- ²⁷Ibid., William Hart, Secretary to Government to George Inverarity, Collector of Surat, Resolution no.965 of 1857, 19 Nov 1857, 311.
- ²⁸MSA/1863/PWD/Railway/13/444/H.Rivers, Secretary to Government to J.B.Lane, Letter no.2584 of 1863, 30 Dec 1863, n.p.
- ²⁹Ibid., H.Rivers, Secretary, Bombay Government to J.B.Lane, Managing Agent, Letter no.2584 of 1863, 30 Dec 1863, n.p.
- ³⁰MSA/1869/PWD/Railway/14/262/List of claims and complaints preferred in the Tanna Collectorate, J.S.Trevor, Consulting Engineer for Railways to Government, No.1453 of 1869, 11 May 1869, n.p.
- ³¹Ibid., Under Secretary to Government to the Consulting Engineer for Railways, Resolution no.1086 of 1869, 3 June 1869, n.p.
- ³²1maunds=40 kg
- ³³MSA/1862/PWD/Railway/37/364/E.L.Jenkins, Acting Commissioner of Customs to A.D.Robertson, Acting Chief Secretary to Government, Letter no.1417 of 1862, 25 Oct 1862, pp.5-7.
- ³⁴(MSA/1863? PWD/ Railway/ Vol.13, Compl 321, W.H.Payne, Deputy Commissioner of Customs, Salt and Opium to George Inverarity, Commissioner of Customs, Salt and Opium, Letter no.381 of 1863, 27 May 1863, n.p.
- ³⁵MSA/1863/PWD/Railway/13/321/H.L.Anderson, Chief Secretary to George Inverarity, Commissioner of Customs, Salt and Opium Resolution no.1921 of 1863, 12 June 1863, n.p.
- ³⁶MSA/1863/PWD/Railway/34/146/Report of Acting Commissioner of Customs, Salt and Opium, 25 Oct 1862, n.p.
- ³⁷Ibid., J.M.Sleater, Resident Engineer to F.Mathew, Deputy Engineer, Extract paras 2,3 & 4 from a letter No.1406 of 1862, 26 Sept 1862, n.p.
- ³⁸The wages of a gatekeeper in England being 2 s per day amounted to £700 annually while in India the yearly wages were £100 as the daily wages were only 4d.
- ³⁹MSA/1856/PWD/Railway/21/99/ pp.3-4,6-8, 33-

- 35,42-43& 47-48; MSA/1857/PWD/ Railway/4/128/ pp.25-29.
- ⁴⁰MSA/1857/ PWD/ Railway/4/143/ 509-511, 521-528,531&545.
- ⁴¹MSA/1862/PWD/Railway/9/223/ J.M.Greig, Officiating Deputy Consulting Engineer for Railways, Lettter no.1o77 of 1862, 15 July 1862, pp.235-236.
- ⁴²Ibid., J.M.Greig, Officiating Deputy Consulting Engineer for Railways, Lettter no.1312 of 1862, 12 Aug 1862, .227.
- ⁴³MSA/1862/PWD/Railway/9/325/W.R.Pratt, Acting Second Assistant Collector to E.W.Ravenscroft, Acting Magistrate of Surat, No.25 of 1862,dated 25 July 1862, 263-264
- ⁴⁴MSA/1863/PWD/Railway/13/232/ Thomas Fry, Assistant Engineer to W.C.Bayly, Deputy Engineer, Letter no.400 of 1863, 13 June1863, n.p
- ⁴⁵Ibid., J.W.Hadow, Collector of Kaira to R.H.Elllis, Revenue Commissioner, Letter no.459 of 1863, 2 May 1863, n.p
- ⁴⁶MSA/1862/PWD/Railway/9/223/ Major Robert Malcolm, Deputy Consulting Engineer for Railways, 1 12 Aug 1862, 237-238.
- ⁴⁷MSA/1862/PWD/Railway/9/215/Wittobe Wassoodrejee to H.Rivers, Consulting Engineer, 23 Nov 1862, 74
- ⁴⁸MSA/1862/PWD/Railway/9/325E.W.Ravenscroft, Acting Collector and Magistrate to Major R.P.Malcolm, Secretary to Government, No.819 of 1862, dated 28 July 1862, 245, 246
- ⁴⁹Ibid., W.R.Pratt, Acting Second Assistant Collector to E.W.Ravenscroft, Acting Magistrate of Surat, No No., dated 24 July 1862, 267-269
- ⁵⁰Ibid., E.W.Ravenscroft, Acting Collector and Magistrate to Major R.P.Malcolm, Secretary to Government, No.819 of 1862, dated 28 July 1862, 245, 246
- ⁵¹Ibid., E.W.Ravenscroft, Acting Magistrate of Surat to Managing Agent, No.357 of 1862, dated 22 May 1862, 249-254
- ⁵²Ibid., Memorandum by Under Secretary to the Magistrate of Surat, No.912 of 1862, dated 26 Aug 1862,.,275
- ⁵³MSA/1863/PWD/Railway/13/232/J.W.Hadow, Collector of Kaira to R.H.Elllis, Revenue Commissioner, Letter no.459 of 1863, 2 May 1863, n.p
- ⁵⁴David Harvey, *The Enigma of Capital and the Crises of Capitalism* , (New York:Oxford University Press,2010), p.187-188.
- ⁵⁵Ian.J.Kerr, *Railways in Modern India*, (Delhi:Oxford University Press,2001), p.16.



Constructing Urban Comforts: A Review of the Sanitary Developments in Colonial Bombay City- 1860-1947

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Abstract

This article explores the trajectory of the development of urban comforts such as hydraulic water supply and underground sewerage and drainage and their manifestations in the domestic realm, in colonial Bombay (Mumbai) city from 1860, the year which marked the emergence of the first urban hydraulic water supply, to 1947 when India attained independence. Though the new centrally executed sanitary comforts only selectively improved the quality of domestic life, while jeopardizing urban life as a whole, they were imposed upon the people by the colonial authorities in order to push their personal agenda of safety and control over the city leading to their eventual adoption and perpetuation as ideal forms of urban comforts. It also highlights the role of technology, engineers, physicians and administrators in this rugged path of transformation which continues unabated in independent India.

Keywords: comfort, water supply, drainage and sewerage, sanitation.

1. Introduction

The word 'comfort' has been described by Shove as a feeling of contentment, a sense of cosiness, or a state of physical and mental well-being.¹ The word acquired a physical emphasis thereby giving impetus for the redesigning of man's material and culture environment (read comfort). Social reformers further naturalized, universalized and legitimized these new norms of comfort which came to be used as yardsticks for measuring societal development.² By the nineteenth century, scientific and technological development as well as the prevailing anxieties about public health also began to figure in the definition of comfort which thence came to be especially associated with sanitary reform. The Industrial Revolution of the same period, with its concomitant insanitation, diseases and death among the poor working classes, prompted the Victorian social reformer Edwin Chadwick, to establish a link between the quality of water supply, drainage and sewerage, and the health and productivity of the nation. Here onwards, provision of these sanitary services, by municipal government, in Britain, came to be regarded as vital to the promotion of the nation's health and sanitary development, underscored by the ideas of morality and comfort, metamorphosed into projects of social improvement which soon began influencing its colonies as well. Colonial Bombay city was not an exception. This article, therefore, documents the trajectory of the colonial sanitary mission in the city from 1860, the year which saw the inauguration of the Vihar piped

water supply system, to 1947 when India attained independence. Drawing on archival and contemporary data this article explores the role of technology, sanitarians, urban planners and engineers in scripting novel ideas of urban sanitary comfort, which completely changed the habits of the indigenous people. In trying to figure out why meanings of these comforts take the form they do today, in Mumbai and India, this article pays particular attention to the forces that have shaped the evolution of water supply, drainage and sewerage and their influence on house forms as also the materials used for their construction. It asserts that the new sanitary technology was imposed on the colonial city purely for the comfort of its British citizens and later, on the entire city for purely commercial purposes. I feel therefore that it is important to examine these developments and their impact on the past as well as the present.

2. The Hydraulic Empire: The Journey from Vihar to Tansa

The traditional water management systems in Bombay city consisted of tanks and wells; many of which were constructed by its wealthy residents of various creeds. Rainwater harvesting was not uncommon and scarcity, an accepted problem, confined only to summer, prompted the improvement of, and addition to existing tanks and wells since native attitude towards water was one of charity. As a matter of fact, the concepts of water scarcity and need, a creation of the eighteenth century scientists, engineers and entrepreneurs who tried to convince the government that there was a lack of water³ paved the way for the inauguration of Vihar water works for Bombay city, in the neighbouring island of Salsette. The water crisis in the island city of Bombay, of 1845, provided just the opportune moment for this. The astute Henry Conybeare, who engineered the project, saw in its execution a massive commercial advantage, apart from its promised sanitary benefits, for a city which held the potential of a flourishing centre of commerce and trade due to its excellent port. Besides, it would also subsidize water for the Europeans in the city! The long drawn out project, mired in controversies,⁴ emerged finally in 1860, as an extremely defective structure⁵ causing immense problems to the public, apart from imposing a huge

debt on the fledgling municipality of Bombay. Nevertheless, it set the blueprint for the future growth of the hydraulic systems, for urban water supply management, all over the country.

Rapid demographic and commercial growth of the city that followed the increased water supply, as well as the emergence of sanitation as a new tool of social control and conquest, particularly after the Indian revolt of 1857, eventually aided the spread of the hydraulic tentacles in a 'ratchet-like path'.⁶ From 1860, up to independence, the city executed four such projects each bigger and more distant from the city than the previous ones.

Yet the modern hydraulic system fraught with defects, risks and inequalities as its diffusion, was based on the priorities and assumptions of the colonial masters of the city benefited initially only government institutions, the army and rich private parties situated in the southern region of the island city while, the masses, with their houses built 'indifferently' and their reputation as "drawers of water"⁷ unsurprisingly, continued to depend on the wells made by charitable Indians as well as standpipes and public fountains.

Institutional and political factors too shaped the planning of the water technology. Its thoroughly investigative nature facilitated the colonial project of establishing a complete hold over the city as well as the otherness of poorer Indian citizens; a concept that was always used to justify the treatment meted out to them. Ironically though all extension projects, post Vihar, were based on the assumption that Indians needed more water. With their engineering and financial bias all such projects, defined 'need' with reference to the future, thereby establishing new normative standards of urban water requirements. But planning of this vital aspect of minimum water requirement, per head per day (phpd) was vitiated due to the contradictory perspectives of planners, engineers and sanitary authorities who despite ceaseless discussions could not reach a consensus. Wastage of water during its, distribution and consumption completed as well as leakages, completed the chaotic scenario.⁸ Professional rivalry, conflicting opinions on engineering practices together with experimentation in the arena of water supply engineering made dam construction a dubious



activity.⁹ All schemes that followed Vihar had controversial beginnings, long gestation periods and ended finally with drastic changes in their original size and nature. The rather theoretical process of technology transfer resulted in frequent failures of pipes and structures and all subsequent works proved the defects of the preceding technology, thus showing that engineers learnt from their failures and that though the cheapness of the project was the guiding factor, the end costs exceeded the original estimates. From the 1880s the new trend in dam construction for urban water supply, from distantly located dams considered the 'perfect source' of water and the modern engineering vision that water must flow from regions of plenty to regions of scarcity¹⁰ resulted in far away Tansa Dam from which an inexhaustible quantity of water was expected.

Taxes imposed by the new system increased the overall cost of living in the city. Hereafter, each extension of water supply led to a rise in town duties (duties leviable on articles imported into Bombay, for use of consumers, such as cows, calves, sheep, ghee, grain of all sort, chunam, timber, wood, firewood) making urban life more difficult. The increased taxation, coupled with a steady rise in prices of commodities in Bombay, resulted in strikes for a raise in wages.¹¹ To deal with the myriad problems created by the new supply system, the colonial government centralized authority in the hands the Municipal Commissioner who, after the enactment of the Municipal Act of 1865, emerged as a sanitary despot. Far-reaching rules were framed for the conveyance of water to people with the intention of realizing revenues from it irrespective of its actual beneficiaries.

Water famines nevertheless continued and the city had to consider innovative means to alleviate these problems, which ranged from opening up of closed wells to considering boring operations and seeking services of water diviners.

3. Drainage and Sewerage

The foundation of social improvement and comfort in the Victorian society lay in the construction of houses with proper sewerage, privies and internal water supply.¹² However in Bombay city, provision of water supply was not immediately followed by

the introduction of drainage and sewerage leading to immense problems of flooding and insanitation. In the latter half of the nineteenth century, the spectacular growth of the city, towards the North; need for additional land for building purposes and the insistence of the Army Sanitary Commission to get rid of the high maintenance open drains, regarded as the main source of mortality, Governor Sir Richard Temple's reign saw the introduction of the new underground system of sewerage with the water carriage system (1877), with the sewerage outfall established at Love Grove on the Northwestern side of the island. The location apparently offered the twin benefits of cheapness and flexibility; one from where the sewage could be diverted to another place, if required, or defecated if a project of sewage utilisation was carried out. From 1881, the sewage in Bombay began travelling 4.25 miles before it reached its resting place.

Sewering of the city beginning from 1881, without any monetary assistance from the government, proved to be a herculean task for the Corporation due to the difficult Indian terrain and flora such as the Banyan tree and resistance of natives from whose lands the system had to pass. The sewerage, which ultimately which came into being, was an invisible network of drains, defective, incomplete and inchoate, as it did not cover the northern parts of the city, and did not solve the problem of flooding or insanitation. Within a decade and a half of its completion, the entire system, including the outfall at Love Grove, was condemned by sanitary experts from England, Mr. Baldwin Latham and later Mr. Santo Crimp. Nor did it solve the biggest problem that is disposal of night soil. Further, since it failed to match up with the demands of the growing population, the modern structure continued to co-exist with the inhuman practice of night soil collection by halalkhores. Besides, the huge quantity of sewage, its acidic nature and large detritus component made its disposal an energy intensive area with high maintenance costs.

The institutionalization of the water closet, an adjunct to the sewerage system, proceeded apace, but it failed to capture popular imagination on account of leakages, offensive odours and diseases attributed to the latter. As a matter of fact the very idea of underground sewerage and particularly

house closets was widely resisted by the people who regarded it as an imposition of a European system with utter disregard of the city's climate and culture. Anxiety also prevailed regarding the constant visits by municipal officials in case the system failed. Unwilling to accept the responsibility to keep them clean there was a common demand for the former open surface drainage in which drains could be regularly flushed and disinfected. Chronic water shortages, complexities of the designs, which even led to collapse of houses, its foreign nature¹³ and caste compunctions, apart from the cost of construction it forced on the people, often delayed the process of the adoption of the house connections. The Indian habit of misusing the system as a result of which sewers clogged up often added to the problem. Yet each bout of disease in the city reinforced the idea of house connections.

Once again the municipal arm was flexed to resolve these troubles. The Municipal Act of 1888 made it compulsory for new buildings to be supplied with sufficient water closet or privy accommodation.¹⁴ By the beginning of the twentieth century, house owners were expected to construct house drains up to the boundary of their property to connect them with the closed municipal drains. Water closets, though still unpopular, came with various prescriptions such as a three gallon flush tank situated in a suitable place. Glass was recommended for the privies so that the faecal matter did not cling to the surface.¹⁵ A variety of urinals and soil pans were manufactured for exclusively European buildings; others for the use of the masses. To meet the requirements of additional water it was suggested that ground water of the city be tapped.

The colonial sanitary policy also saw to the creation of public conveniences in the form of lavatories and urinals to prevent committal of nuisances in the streets. But these public comforts, while representing progress, also highlighted various contemporary notions of urban social politics and sanitary control. While on the one hand they sought to educate lower classes about the necessity for sanitation and the desirability of decency, on the other, the size and pattern of their construction was determined by the class of the people for whom they were to be made, based on the assumption that

certain classes of people would not use them under any circumstances, and others classes were not yet sufficiently educated to use them properly.

4. Imperial Scourges and Sanitary Housing

Modern sanitary measures notwithstanding, epidemics continued to batter the imperial trading bastion. Economic imperatives therefore compelled the colonial government to take further measures leading to the development of new normative housing standards as well as a radical spatial transformation of the city. Cholera and malaria epidemics, linked to defective drainage, well water and faulty water distribution primarily, threatened the image of the city as an international trading centre and led to an intensification of the drainage and sewerage operations, but only an experimental basis, as well as the drive to fill up wells and tanks. Once again amendments to the Municipal Act suitably fortified the Municipal Commissioner in this move. Nuisance laws were also came to his aid. Though these measures aroused universal protests and criticism right from town planners such as Patrick Geddes,¹⁶ to engineers and especially the natives for whom well water held a cultural economic and religious significance, a callous government nevertheless went ahead with its campaign and was able to acquire several acres of open spaces leading to a complete transformation of the city landscape.¹⁷

The move to exterminate malaria also impacted the domestic water supply arrangement. By the Second World War, malaria control measure required provision of iron ladders, within houses, to make them accessible for the sake of inspection by the malaria branch of the municipality. Changes were brought about in the structures of the manhole covers of these cisterns while flushing tanks were mandated for water closets.

But it was the plague of 1896 that brought about the most far reaching changes. Obsessed with the excision of 'plague spots' buildings were characterized as Unfit for Human Habitation (UHH) and the Commissioner was authorized to order the demolition of those that could not be adapted to sanitary requirements. The sanitary policy now dictated new norms in terms of space, ventilation and



plinth in house construction, as also water supply arrangements, within, wherein specifications were made for all washing places, courtyard and nahanis. (small washing places with a sink and waste pipe connected to the drainage system). At the same time it also catalyzed the government's move towards sanitary housing for the workers. In 1898, the City of Bombay Improvement Trust (BIT) and in 1920, the Bom-bay Development Department (BDD), inaugurated a new era in the housing of the working class of the city.

Inspired by European experience, both the BIT and the BDD tried to construct sanitary dwellings unsuccessfully. With construction of rooms which varied from 80-120 square feet, the BIT proudly but prophetically claimed to have set minimum sanitary standards for the poorest class of people, who would learn to appreciate higher standards of comfort, so that when their wages rose they would demand higher standard and be willing to pay for it. The BDD chawls (tenements with a mandatory corridor and common facilities), containing four storeys due to scarcity of land, provided for rooms 16'x10'x10' feet containing a 'nahani' with a screen wall, loft and a fire place with a flue. Blocks of water closets and bath rooms, provided with taps, and a spiral staircase, fitted to give access to sweepers, were located at the end of the chawls. However, high rents deterred occupancy in most of these chawls.¹⁸ But the heightened urbanization of the 1930s and the concomitant housing crunch prompted the government to force the working class to occupy these chawls. By this time the changed models of domestic technology came with an associated rise in the expectations of these menials who now demanded water pipes in every room and separate latrines for men, women and children.

Urban sanitary comforts finally entrenched themselves even among this class in Bombay on the eve of the Second World War. Stringently critical of their abysmal housing standards the Report of the Rent Enquiry Committee, 1939, strongly recommended that every new type of tenement was to be provided a "Nahani", a partition to separate the kitchen from the living room and impervious flooring; and the building with a sufficient number of latrines, washing and bathing places, and so on.

In order to secure adequate water supply, a direct water-connection from the main for each floor and a storage tank were also recommended as a part of minimum equipment of a building.¹⁹ These were carried out.

Contemporary India is witnessing a renewed sanitary crusade under the Swacch Bharat Mission which aims at building more water carriage driven toilets in rural India too. The Open Defecation Free (ODF), under its aegis, currently in its fourth year, has however failed to deliver the promised results since the age old problems of water availability, resistance to the use of such structures and the gender factors continue to bog the system as they did in the colonial period. Beyond the ODF, lie other challenges too such as hand washing, rural fecal management, solid and liquid waste management and toilets that need upgrading.²⁰

Conclusion

The urban sanitary comforts, which every one of us takes for granted in contemporary Mumbai, were introduced initially in Bombay city primarily for the sake of maintaining the health of the army and European residents, by its colonial masters. Perhaps the most important in terms of health was the extension of piped water supply which permitted the extension of water-closets. However, the complex and monetarily burdensome technology was bound to enjoy only a limited success. Matters were further complicated by its uneven spread, careless construction and unsuitability of climate and terrain. Nor were people willing to accept easily its intrusive potential in their cultural domain. This often delayed its adoption. Its invisibility far from solving the problem of insanitation, entrenched the latter in the city's metabolic system by giving rise to both scarcity and flooding, periodically. But once standardised in the city, via strengthening of the municipal laws, it developed in a ratchet like manner, leaving people and government without an alternative vision of making themselves comfortable.

At the same time sanitary technology was used as a means of imposing social order. It defined sanitation as well as how, when and for whom the measures were to be taken. Technology also assumed a moralising tone and divided the urban classes into

haves and have-nots. Yet it excited the imagination and expectations of the marginalized classes, right from the time of its inception, ultimately leading to recognition of their right to a bare minimum level of comfort, just before independence. Finally, while the technology of urban comforts has undoubtedly made life convenient, it is deleterious from an environmental perspective since intense and careless use of water has made the benefits of such comforts unsustainable in the long run.

End Notes

- ¹Chappells, H. & Shove E, *Comfort*, 2004, A Review Of Philosophies And Paradigms, University of Lancaster, p3
- ²Shove, Elizabeth, 2003, *Comfort, Cleanliness and Convenience, The Social Organization of Normality*, Berg Editorial Offices, p24
- ³Graber, Frederic, 2007, *Inventing Needs: Expertise And Water Supply In Late Eighteenth –And Early Nineteenth Century Paris*, *British Journal for the History of Science*; 40, pp 315-316.
- ⁴'Conybeare vs. Crawford', *Bombay Times and Journal of Commerce*, , December 5th 1859, p 2301, Maharashtra State Archives (MSA), Mumbai
- ⁵General Department (G.D.) 1860, Vol. 44, Letter from Rowland, Chief Resident Engineer, to Crawford, 14th March 1860, p 261, MSA, Mumbai
- ⁶Shove, Elizabeth, 2003, *Converging Conventions of Comfort Cleanliness and Convenience*, *Journal of Consumer Policy* 26: 395-418, Kluwer Academic Publishers. Printed in the Netherlands,
- ⁷Public Works Department (P.W.D) General 1868-89, Vol. 423, Minutes of Evidence, Bombay Drainage and Water Supply Commission. 1869. pp29-35, MSA, Mumbai
- ⁸Cursetji, Jehangir J. and Dinsha Bomanji Master 'Unhygienic Bombay, Its Causes and Its Remedies', *Transactions of the Bombay Medical Congress*, 1909, Bombay, Printed and Published by Bennett. Coleman & Co. The Times Press, p 376
- ⁹Capt. Tulloch, Hector, RE Executive Engineer, 'Vehar Lake Dams, Report to the Municipality of the City of Bombay' in 'Professional Papers On Indian Engineering' (second series), Major AM Lang (editor), Volume I published at the Thomason College Press, Roorkee, 1872. No. XXV. pp 259-268)
- ¹⁰Broich, John London, 2013, *Water and the Making of the Modern City*, University of Pittsburgh Press, pp 20-23.
- ¹¹Martineau, John, 1895, *The Life and Correspondence of Sir Bartle Frère Vol. II*, John Murray, London, p 8
- ¹²Rawlinson, Robert, 1876, *Lectures, Reports, Letters and Papers on Sanitary Questions*, London Par-liamentary Bookseller, p26.
- ¹³Proceedings of the Corporation 1892-93, Vol. XVI Pt. I, Petition by Dinshaw Maneckji Petit, 23rd June 1892, pp 111-112, and Petition by Bomanji Pestonjee Master and about 60 others, 27th June 1892, p 113, Asiatic Society of Mumbai (ASM)
- ¹⁴Bombay Municipal Corporation. *City of Bombay Municipal Acts from 1865-1907, Volume II*, p 202, M.S.A Mumbai
- ¹⁵CCJames, *Oriental Drainage A guide to the Collection and Disposal of Sewage in Eastern Cities, with a Glossary of Sanitary and Engineering Terms*, Times of India Press, Bombay, 1902, pp 126-129
- ¹⁶Geddes, Patrick 1915, *Reports on Re-planning of Six Towns in Bombay Presidency*, Government Central Press, Bombay 1965, Note on Thana, p 3.
- ¹⁷Chopra, Preeti 2010, *A Joint Enterprise: The Creation of a New Landscape in British Bombay (1839-1918)*, Mumbai Readers Urban Design Research Institute, (2011), p 329
- ¹⁸PWD, Development Department 1927-30, File No. 53/36 Pt. I Bombay Industrial Housing Scheme, p 2. M.S.A, Mumbai
- ¹⁹Report of the Rent Enquiry Committee, 1939, Volume I Parts I, II and III, Government Central Press, Bombay p 43
- ²⁰Robert Chambers, Andres Hueso, VR Raman and Jamie Myers, *The Swachh marathon*, *The Indian Express*, 3rd November 2017, p13



Menstruating Goddess of Kamakhya Temple: A Critical Analysis

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Abstract

Menstruation taboos have been practiced for a long period in many communities of India. Though menstruating is a natural as well as biological process and essential for the creation of humanity, yet menstruating women are treated as impure and unclean. Many restrictions are put on menstruating women, particularly entering in a temple or holy places, performing rituals, cooking food etc. But it seems really mysterious and surprising when such types of restrictions are imposed even on Goddess. The devotees are prohibited to take darshan of mother Kamakhya at Kamakhya temple, Guwahati (Assam) for three days in the month of June because it is believed that Goddess menstruates during this period. The festival Ambubachi Mela has been celebrated on this occasion. Such a myth or a superstitious belief has been perpetuated through centuries and transmitted from generation to generation. The paper is an attempt to gather the comments of devotees on such superstitious beliefs. The study will explore the history and mythological stories related to this temple. An attempt will be made to highlight the sculptural features of this temple. The paper will be an endeavor to investigate the impact of commercialization on the rituals performed inside and outside the premises of the temple.

Keywords: Kamakhya, Guwahati, Kamarupa, Pragjyotishpur, Menstruation, Yoni, Ambubachi

Introduction

Kamakhya temple is an ancient Hindu pilgrimage centre dedicated to Mother Goddess Kamakhya. It is one of the oldest 51 Shakti Peethas (Sacred places) and an epicenter of Tantras. It is located in the Nilachal hills in the western part of Guwahati, Assam. The references of this temple have been found in several ancient literary sources like Devi Bhagvata, Kalika Puran, Yogini Tantra, Devi Puran, Hevajra Tantra and Tantra Chudamani.¹ The place was surrounded by two hills of two ethnic groups, the Khasis of the Austro-Asiatic family and Garos of the Mongoloid group², who follow matriarchal system. Their impact can also be seen on the religion of Assam which is also matriarchal in nature. As the continuation of Indus Valley civilization; this temple has inherited the Yoni worship. Kamakhya temple where the Yoni symbol is worshipped is a living relic of an ancient custom. Yoni (Vulva) and womb symbolize the power of female to create and regenerate the humanity. It is considered to be an abstract representation of Shakti, a creative force that moves through the entire universe.³ According to Sir E.A Gait (1905), Shaktism was in predominant form in this part of India.⁴

Along with Yoni worship the uniqueness of temple is that it glorifies the natural biological process of menstruation. Lekshmi Priya(2017) comments, "Contrary to the shaming treatment that menstruation gets elsewhere in India, at the Kamakhya temple it is revered as the ability

of a woman to conceive”⁵ This process is the indication of puberty of a girl which empowers the female body for giving birth to a child. It is believed that Goddess Kamakhya menstruates for three days in month of Ashaad (June). It is also said that three days blood oozes out from yoni of Kamakhya and because of that water of Brahmaputra turns red. The most surprising fact is that this temple symbolically celebrates the menstruation period of Mother Kamakhya in the form of a festival popular as Ambubachi Mela.

There are lots of controversies over the redness of water which flows from that yoni shaped stone. Some people say that the priest pours lot of vermilion into water and some have the opinion that water turns red due to excessive sacrifices of innocent animals. Reference of redness of water in the cave is also found in Yogini Tantra.⁶ Kalika Puran describes the colour of yoni is like vermilion.⁷ According to the geological study, the land of Assam is very rich in iron content. Very truly a Geologist Ishita Roy (2015) asserts no mystery, no Theology only Geology. She explains, the presence of iron content in the soil makes the water red. Another fact is that Kamakhya temple is situated on a mountain which has rich deposit of Cinnabar. Cinnabar is Mercury Sulphide and looks reddish.⁸

By celebrating the period of menstruation in the form of a festival, the temple reveres the process of creativity but on the contrary menstruation taboo is also practiced. Three days goddess is kept in seclusion as traditional women. During this period doors of temple are closed for devotees and priests. After three days Goddess is given ritualistic bath to regain purity. Temple is opened on fourth day for Darshan. A research scholar Sangeeta Das rightly commented in her research paper, menstruation has been always considered an impure process, in which women and

Goddess alike goes through a period of seclusion.⁹ Many of the communities still today put several restrictions on menstruating women. But it seems very ironic when such human created restrictions are imposed even on Goddess. Sangeeta Das (2018) remarked, Ambubachi festival exhibits a dichotomous character. This dichotomy is reflected between the orthodox rules of purity by which

Goddess Kamakhya is kept isolated as traditional menstruating women and the Prasad in which symbolic menstrual blood stained water and cloth are distributed among devotees. This is purely violation of orthodox rule.¹⁰ Kali Prasad (1998) mentions that it is also considered to be the menstrual ceremony of Goddess Earth. Therefore during these days cultivation, digging, ploughing, felling trees, building houses etc. are prohibited.¹¹

Study Area

Guwahati, the gateway of North-East India, is the largest and ancient city of Assam situated at the bank of Brahmaputra River. From epic period to till date Assam has been popular as an important religious Centre. Discovery of ruins in different places in and around present Guwahati witnesses the existence of the city of Pragjyotishpur. Reference of Pragjyotishpur is found in Ramayana, Mahabharata¹² and Kalika Puran. This place was impregnable in ancient time as mentioned in Ramayana and Mahabharata.¹³ The ancient name of Assam is found in historical resources as Kamarupa. In Allahabad pillar inscription (4th century AD) there is a reference of Kamarupa.¹⁴ Kamarupa became powerful during Pala rule.¹⁵ The evidences afforded by copper plates which have been discovered in Kamarupa, Nowgong and Darang suggest that Pala kings ruled over Kamarupa in the 11th Century AD.¹⁶ In 16th century, it was under Koch kings.¹⁷ Later during 17th century AD it was ruled by Ahom dynasty.

Research Methodology

This study is based on both primary and secondary data. Information has been extracted from ancient literary sources like Kalika Puran, Yogini Tantra, Assam Gazetteers, Journals, Research Articles, Website, Interviews and by personal observance.

Mythological Stories

The literary meaning of Kamakhya is given in Kalika Puran. Kama means love or desire and akhya means well known or renowned. Kamakhya means renowned Goddess of love or desire. As mentioned in this Puran, this was the spot where Sati secretly made love with lord Shiva. Due to Shiva and Shakti's union humanity is created.



There are several mythological stories and legends behind the existence of the temple. Kalika Puran (10thAD) mentions the story behind the creation of Shakti peeth, of Kamakhya. Once Daksha, the father of Sati performed Yajna "Sarvajivana"¹⁸ for the welfare of all living beings. He invited all living and non-living creatures except Sati and Shiva¹⁹. Sati thought her father must have forgotten to invite them hence she insisted Shiva to go to his father's house. When Shiva refused to go, she herself went to her father's house and asked her father the cause for not inviting them. Instead of giving explanation, Daksha rebuked Shiva.²⁰ Sati could not bear the humiliation of his husband and she gave up her life by jumping into the fire of Yajna.²¹ The shocking news made Shiva furious. In distress he took the dead body of Sati on his shoulder and roamed around the earth, causing destruction wherever he put his steps.²² All God and Goddess became fearful and requested Vishnu to pacify Shiva. Vishnu started to destroy the body of Sati with his Sudarshan Chakra. One by one the organs of Sati were cut down by chakra. The places where her body parts fallen down became popular as Peethas. It is believed that the womb and Yoni were fallen down at Kamarupa.²³ It is also believed that Kamadev with the help of Vishkarma constructed this temple. According to one reference from Mahabharata Narakasur the ruler of Pragjyotispur erected this temple. Narakasur was a tyrant ruler. He enchanted with beauty of Kamakhya and expressed the desire to marry her. To protect her from this danger, Kamakhya put an impossible task in front of him. She asked Naraka to build four staircases from the bottom of the hill to the top and one resting room for her at the top. The challenge was put to complete the task in one night before dawn. Narakasur started the work with a great speed. At the rapid work of Naraka, Kamakhya got puzzled. She made a rooster to crow before dawn, which compelled Naraka to give up the work instantly. However, soon after he realized that it was not dawn. He chased and killed the rooster. The spot where he killed the rooster is now known as Kukurakata.²⁴ Still today rooster sacrifice is practiced here

History

The temple was reconstructed many times. There are lots of controversies over the accurate date of construction of original temple. The literary sources Hevajra Tantra (8th Century AD) and Kalika Puran (10th century AD) mention that the temple of Kamakhya in Kamarupa had become already established religious centre for Tantric worship.²⁵ Through these sources it can be assumed that construction would have taken place in before 8th century AD. The Department of

Geo-Sciences, University Of Guwahati conducted a Radio Carbon Isotope age determination experiment. The result indicates that the bottom layer of the temple is 2200 years old and the second layer is 1500 years old.²⁶ Narkasur episode of Mahabharata also indicates that temple might be very old. There is less controversy over the construction of the upper part of Kamakhya temple, as there are written records available from the period of king Bishwa Singh of Koch Behar Kingdom. He discovered the original ruins of lower part of the temple²⁷ and rebuilt it within the period from 1515AD to 1525AD. A Mughal invader Kalapahar destroyed the original form of Kamakhya temple between 1553.²⁸ Koch king Naranarayana reconstructed the temple over the ruins of the old structure in 1565 AD. After Koch Kingdom the temple got patronage of Ahom rulers.

Architectural Features of the Temple

The sculptural composition of this temple indicates that it was destroyed and reconstructed many times. Some of the stone carvings reflects the Gupta art and Orissa art but mainly erected in Nagara style. The most important part of the temple is the "Garbhagriha" which is a cave below 20 feet from the ground level. It is an ancient worshipping place. The cave is a small and dark natural chamber which can be approached by climbing down narrow and difficult stone steps. Inside the cave temple there is a Yoni shaped stone always remained covered with flowers and garlands. A natural perennial spring flows out from the stone. Kalika Puran gives a detailed description of yoni manadala. "Inside the cave there is a lovely pudendum in the form of stone which is 12 angulas in width and 20 angulas in length, gradually narrowing and sloping and lying along the

Bhasma soil. It is reddish in colour like vermilion or saffron, which fulfills all desires.”²⁹ Apart from deity Kamakhya, the temple houses the other avatars of like Kali Dhumnavati, Matangi, Bagola, Tara, Kamala, Bhairavi, Chhinamasta, Bhuvanewari, Tripura Sundari. Many life size scriptures are carved out on outer walls of garbhagriha. Influence of Gupta artistic style can be clearly seen on sculptural carvings. The walls of temple are beautifully sculptured with different religious motifs, images of Goddesses, floral and geometric designs. Research Scholar Mausumi Deka (2013) stated in his research paper, amalgamations of different myths as well as sculptural parts enhanced the grandeur of the whole architectural part of Kamakhya temple.³⁰

Rituals and Rites of the Temple

Kalika Puran gives detailed information about the rites and rituals of Kamakhya. This temple is hub for Tantra Sadhna. Animal sacrifice is done every day before opening the gate of the temple and head of the animal is offered to God. Goat, sheep, pigeons and buffalo are sacrificed as an offering to Goddess. This age old rituals of animal sacrifice has been vehemently criticized by several NGOs. One of the popular NGOs “People for Animals” has been constantly raising voice against animal sacrifice at Kamakhya temple.³¹ During Ambubachi Mela a variety of Tantric clans from different parts of India visit here for Tantra Sadhana. Many tantric sadhus display their Tantrik psychic powers. After completion of Ambubachi or menstruation ceremony, ritualistic bath was given to goddess.³² A ceremonial puja is performed and gates of temple are opened for devotees. Prasad is distributed in two forms Angodak and Angabastra. Angodak is water from the spring and Angabastra is a piece of the red cloth used to cover the Yoni shaped stone during the days of menstruation of Devi.³³

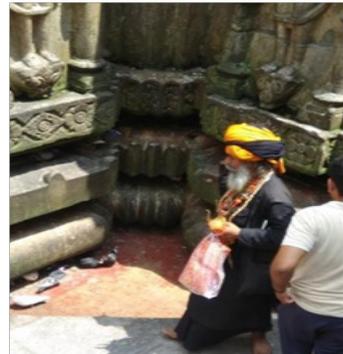
Conclusion

Kamakhya temple is a popular religious centre for both Vedic and Tantric practices. Enchanting scenic beauty and elegant architectural style are hallmarks of the Kamakhya temple. Elaborate yajnas, loitering sacrificial animals, unending queue of devotees, busy priests in red ochre are some of the common

features of the temple. A sincere scrutiny has been done through informal interviews to discern the truth behind the reddish water oozing out from the yoni shaped stone inside the inner shrine of the Kamakhya temple at the time of Ambubachi. The investigation did not receive any positive response. The priests averted the question pointing out that since no one is allowed to go inside the temple during that time, they could not divulge much about this. A clear impact of commercialization is marked on the rituals and businesses which have been flourishing inside and outside the premises of the temple. To give an easy entry to the temple there is a special ticket provision made at the cost of Rs.501 per person which is quite expensive for a lower middle-class or poor family to afford. The temple organization is accumulating a huge amount of money through this ticket system. Common people stand in queue for 7-8 hours where as those having special tickets get direct entry to the sanctum. One thing is admirable here that unlike other temples, priests do not accost people for performing puja. Yet if anyone willingly requests them, they would oblige them for a decent amount of dakshina. Price surging can clearly be seen for puja thalis and other offerings. From ancient time to this modern era, the temple has been witnessing people spending huge money on elaborate yajnas and offering innocent animals for sacrifice in the name of pleasing God. It can be stated that this temple seems to be a good example of an amalgamation of superstitious and religious beliefs. As a religious tourist centre, the temple attracts many devotees and tourists from India and Abroad. It has also significantly augmented the growth of tourism industry in Assam. Various shops selling local handicrafts and items required for puja, different types of food stalls and restaurants have mushroomed in the surroundings of the temple. The place has good connectivity to Guwahati and other parts of India. The temple has facilitated the growth of tourism, transport, employability for the locals and is a massive source of revenue for the state. In concluding remark, it can be stated that this unique religious heritage is a boon for the state of Assam.



Images of Kamakhya Temple



End Notes

¹A Historical note on Sri Sri Kamakhya Temple, Jai Maa, www.jaimaa.org/articles/a-historical-note-on-srisri-kamakhya-temple

²ibid

³Jones Constance; Ryan James D. 2006, Encyclopedia of Hinduism infobase publishing, p,156&157, ISBN0816075646

⁴Gait E.A, A History of Assam, Guwahati, 1905 cited in Goswami Kali Prasad, Kamakhya Temple Past and Present, p4, <https://books.google.co.in> retrieved on 5/5/2018

⁵Priya.s Lekshmi ,The legend of Kamakhya: How the Bleeding Goddess Celebrates the Shakti Every Woman Has, Sep 2017, <https://www.thebetterindia.com> retrieved on 9/5/2018

⁶Shastri Biswanarayan, Yogini Tantra, Bhartiya Vidya Prakashan, Delhi, Varanasi 1982

⁷Shastri B.N, Kalika Puran, Nag Publisher, 2008, Chapter no.62 shloka 89-90, p 918

⁸Roy Isitha, Hinduism is an Indic Religion of Federal Nature. Sep 8th 2015

⁹Das Sangeeta, Ambubachi Mela in Assam's Kamakhya Temple: A Critical Analysis, Vol. 5, Issue I, Jan-March 2018 <http://ijrar.com/>

- ¹⁰Ibid, p294
- ¹¹Goswami Kali Prasad, Kamakhya Past and present, APH Publishing 1998 Chapter IV, P114,Shodganga.inflibnet.ac.in
- ¹²Political Background and geographical Existence of Pragjyatishpura-Kamarupa in the Early Period, Shodhanga.inflibnet.ac.in/bitsream 14
- ¹³Political Background and geographical Existence of Pragjyatishpura-Kamarupa in the Early Period, Shodhanga.inflibnet.ac.in/bitsream
- ¹⁴Goswami Kali Prasad, Kamakhya Temple Past and Present,p1,<https://books.google.co.in> retrieved on 5/5/2018
- ¹⁵Assam District Gazetteers-Kamrup,Vol-4, B.C Allen, 1905,Allahabad Pioneer Press, Chapter II,p,18
- ¹⁶Assam District Gazetteers-Kamrup,Vol-4, B.C Allen, 1905,Allahabad Pioneer Press, Chapter II,p,21
- ¹⁷Assam District Gazetteers-Kamrup,Vol-4, B.C Allen, 1905,Allahabad Pioneer Press, Chapter II,p,18
- ¹⁸Shastri B.N, Kalika Puran, Nag Publisher,2008Kalika Puran Shloka 15,p166
- ¹⁹ Kalika Puran,Chapter 62,Shloka 53,P 912
- ²⁰ibid, Chapter 17 ,shloka 12,p 179
- ²¹ ibid, Chapter 17 shloka 16,p 179
- ²²ibid, Chapter 18 shloka 36,p 193
- ²³ibid, Chapter 18 shloka 42,p 194
- ²⁴Assam District Gazetteers,Kamrup,Vol-4, B.C Allen, 1905,Allahabad Pioneer Press, Chapter II,pp,20
- ²⁵A Historical note on Sri Sri Kamakhya Temple, Jai Maa, www.jaimaa.org/articles/a-historical-note-on-srisri-kamakhya-temple
- ²⁶ibid
- ²⁷Assam District Gazetteers-Kamrup,Vol-4, B.C Allen, 1905,Allahabad Pioneer Press, Chapter II,p,20
- ²⁸Assam District Gazetteers-Kamrup,Vol-4, B.C Allen, 1905,Allahabad Pioneer Press, Chapter II,p,26
- ²⁹Shastri B.N, Kalika Puran, Nag Publisher,2008, Chapter no.62 shloka 89-90,p 918
- ³⁰Deka Mausumi, Sculptures of Kamakhya Temple; An Aesthetic View, International Journal of scientific and Research Publications, Volume 3,Issue 10,Oct 2013,p 3
- ³¹Killing the festive Spirit with Animal Slaughter, The Times of India, 5th Oct.2011
- ³²Goswami Kali Prasad, Kamakhya Past and Present, Chapter IV,P114,Shodganga.inflibnet.ac.in
- ³³<http://en.wikipedia.org/wiki/AmbubachiMela> xx



Postmodernist Critique of Nineteenth Century Socio-Religious Approaches in Western India

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Abstract

Postmodernist historical attitude considers a fact that the study of historical writings and perception about present depends upon the position of a person in society. The relativity of the truth and perception about the events is shaped by the power structure of the concerned person he belongs to. The postmodernist viewpoint considers various outcomes of the historical narrative. A personal bias, ideological influence and misjudging the facts due to the circumstances becomes the chief hurdles in writing and understanding true history. British rule in the nineteenth century brought Indians into the contact with the western thoughts. The western educated Indian were influenced by rationalistic and modern thinking. They clearly understood the importance of the modern education in the process of nation building. They traced the liberal western philosophical discourse in their writings, yet they had different interpretation regarding the condition of the masses and the future course to be taken for the development of the country. The western education and progressive concepts were applied by them to retain the cultural supremacy of upper castes intact. This close ended religious and social system was used as a tool to keep cultural hegemony in educational, social and religious matters. The present paper examines the socio-religious writings of the nineteenth century reformers and reactionaries under influence of post-modernist tenets.

Keywords: postmodernism, truth, rationalism, humanism, slavery, cultural hegemony

Introduction

The historical and literary writings bear the inference of personal views and cultural environment a person belongs to. The nineteenth and twentieth century witnessed the development of new historical perspective and new methods of historical writings. The positivists, Marxist and Empiricists schools in history writings separated history from myths and legends. They relied on evidences and rationalistic analysis of the facts. The subaltern and postmodernist views developed in the twentieth century. The postmodernist viewpoint considers various outcomes of the historical narrative. A personal bias, ideological influence or misjudging the facts due to the circumstances become the chief hurdles in writing and understanding true history.

Postmodernist Tenets of Historical Writings

The postmodernism stresses fact that the study of historical writings and perception about history depends upon the position of person in society. The relativity of the truth and perception about the events shaped by the power structure the concerned person belongs. Michel Foucault gives a new perspective of postmodernist history writing. He traced the view of history writings in subsequent words- "the historical

sense gives rise to three uses that oppose and correspond to the three Platonic modalities of history. The first is parodic, directed against reality, and opposes the theme of history as reminiscence or recognition, the second is dissociative, directed against identity, and opposes history given as continuity or representative of a tradition; the third is sacrificial, directed against truth, and opposes history as knowledge.”¹ While offering new standpoint to the historical understanding, he professed that the traditional devices for constructing a comprehensive view of history and for retracing the past as a patient and continuous development must be systematically dismantled.²

His attitude towards history can be summarized in subsequent ways. Firstly, he declared that, “I am well aware that I never write anything but fiction. I do not mean to say, however that truth is therefore absent.”³ He talks about the influence of personal bias and interpretations of the facts in writing history. Individual bias is unavoidable factor as each and every person follows particular presuppositions regarding any events or any social group. Even if impartiality in historical writings and interpretation of the political, social and cultural facts is followed by the narrator, the impact of upbringing and socio-political atmosphere through sub conscious mind is inevitable.

Secondly, the presumption of the post-modernist theory highlights that each and every individual is influenced by the existing knowledge system like education, social condition or contemporary customs. Hence, even if the researcher or historian tries to remain unbiased in historical facts and interpretations, the impact of the atmosphere in which he or she is raised is unavoidable.

Thirdly, Foucault offers that truth and knowledge are constructions we offer to persuade others. Foucault’s point is rather that, at least for the study of human beings, the goals of power and the goals of knowledge cannot be separated: in knowing we control and in controlling we know.⁴ Post modernists doubt that an accurate telling of the past is possible because the difference between facts and fiction depend upon the ideology of the observer. Some went further to claim that all historical accounts are fictions. The present socio-political scenario is

difficult to be understood by different sections of the people. Hence it is highly impossible to claim the understanding of the past.

The present paper examines of the socio-religious writings of the nineteenth century reformers and reactionaries with the application of the postmodernism tenets. The understanding of facts or true history differ in the account of the four leaders-Jotirao Phule, Vishnushastri Chiplunkar, V. K. Rajwade and B. G. Tilak from western India regarding their thoughts on social reforms and historicity of the caste injustice. These thinkers share common historical facts.

1. The British destroyed the Native American culture.
2. They followed slavery in America
3. The British exploited the India economically.

Hence the early hurdle professed by postmodernism of understanding the true nature of the historical events seems to be overcome. However their reaction to these fact is different. The personal viewpoint, the social structure in which there were raised played instrumental role reacting to the above fact in Chiplunkar, Tilak and Rajwade justified the upper castes’ supremacy in religious and social matters and opposed the revolutionary methods and measures proposed by contemporary reformers including Phule.

Jotirao Phule started social revolutionary by starting first public school for women in 1948. Jotirao opened an orphanage to save lives of such destitute women and infants. On 24th September 1873, Jotirao founded Satyashodhak Samaj. (Truth Seeking Society). Vishnushastri Chiplunkar was the earliest nationalist but social reactionary leader. He believed in the supremacy of English language yet advocated the supremacy of Brahmin over the other castes. B. G. Tilak was the leader of extremist in congress party. He demanded self rule under the British government and led political struggle hence sent many times in imprisonment. He did not favour the social reforms hence opposed social reformers. V. K. Rajwade was noted historian of his age. Yet, he was staunch opponent of social and religious reform movement. He believed in practice of untouchability and other social evil practices.



These noted western educated figures bear the influence of rationalistic and modern thinking impact. They clearly understood the importance of the modern education in the process of nation building. They traced the liberal western philosophical discourse in their writings yet they had different interpretation regarding the condition of the masses and the future course to be taken for the development of the country. It is interesting to know that Vishnushastri Chiplunkar, V. K. Rajwade, Lokmany Tilak and Jotirao Phule shared the rationalistic principles in theory and thought yet they had remarkable differences in understanding of the society and course of action to be taken for the society. They bear the influence of western rationalism and science. Yet they shares divergent views regarding the evil of caste discrimination, social reforms and practice of untouchability.

Shankar Ramchandra Rajwade, a self proclaimed rationalist, disciple of Vishnushastri Chiplunkar was greatly influenced by the philosophy of Aristotle and Nietzsche. Another disciple of Vishnushastri Chiplunkar, Vishwnath Kashinath Rajwade, well known historian and rationalist applied rationalistic impact of Nietzsche to criticize Christianity.⁵ Phule was also influenced by the deist rationalism-the liberal and rationalistic western school of thoughts. It accept the existence of God as a creator and reject the orthodox beliefs, superstitions and religious dogmas.

Prevailing Orthodoxy in Society

The upper caste had the exclusive right to preach religious doctrines and to study all higher religious scriptures. The other castes were forbidden the privilege of education, in the name of religion. Women and lower class people hardly received any education. The untouchables were not allowed to use the public streets. They were socially and legally prohibited from employing themselves in any other profession. They had no right to study religious scriptures. They had to live in a separate and restricted area. The general condition of women was derogatory in society. The high caste women suffered due to the heavy restrictions on their day to day life. The social evils like sati, prohibition on widow remarriage, child marriage and prohibition of women education made their life miserable. The

orthodox forces prevailed on the Indian society at larger extent. The killing of female children, burning the widows, forced widowhood and many other inhuman practices were carried by the people.

Bias and Construction of reality: Caste and Education

Phule made a critical assessment of the social problem created due to the caste distinctions and the religious hegemony of the Brahmin caste. As he was born in Non Brahmin caste, he faced the obstacles as lower caste supposed to face in his life. The radical social reform movement was initiated to oppose the caste system and caste discrimination whereas his contemporary leaders Chiplunkar, V. K. Rajwade and B. G. Tilak were born in higher Brahminical caste hence tried to solve the caste and education problem in their own knowledge system as Foucault suggest “even if the researcher or historian tries to remain unbiased in historical facts and interpretations, the impact of the atmosphere in which he or she is raised is unavoidable” become valid regarding the caste system and education of the lower castes in India.

Opposition to the lower caste’s education

The rationalism of Rajwade stood not to reform society but to assert the superiority of the Brahmins in the society. He professed the superiority of man over women. He also believed that caste system and untouchability should be integral part of Hinduism.⁶ He applied rationalism to criticize Christianity. He also was a great admirer of Nietzsche. He applied the rationalistic thoughts to defend the ills in the religion. He defended the dominance of the Brahminism in society. He advised Sayajirao Gayakwad, the ruler of Baroda princely state, not to support social reforms.⁷ He warned that if the lower caste were educated, they will not work and that would be a great loss for nation. They will be intolerant and useless for anything.⁸ He further added that the untouchables education will make them anarchist and there would be religious, social and political problems in the society. He further asks that why on the earth the social reformers, Christian missionaries and Sayajirao Gaikwad care about the lower caste education. On the contrary, Jotirao Phule expected the promotion of the lower caste by Sayajirao Gaikwad.

Chiplunkar professed that though the Brahmins were offenders, devious and egoistic, one thing is undisputable, it is that the Brahmins hold the keys to knowledge and without their assistance the gates of knowledge will not be opened to all classes. It may be that the chitpavans have been born of the dead corpses or they might have come from Iran, but the qualities they have displayed and are displaying will not be a whit diminished.⁹

Chiplunkar compared social reformers with the Muslim and Buddhist and concluded that still the Brahmins were the superior in India. He classified Fourth class as stupid and unintelligent and propagated that they were entitled to enjoy religious scriptures through Puranas.¹⁰ He not only defended social evils, but also criticized Prarthana Samaj, Brahmo Samaj and other social reform movements for initiating reforms in society. He described reforms as a great calamity.¹¹ Rajwade opposed the primary education to the masses. He declared that primary education will not change the condition of the cultivators, workers and women.¹²

B. G. Tilak criticized Sayajirao Gaikwad for his initiative in social reforms. He also criticized the social reformers for their advocacy in inter-caste marriage and justified the caste differences with the racist policy followed by the white American in America with the coloured population. Since the White people misbehave with the Black African, he profess that there was nothing wrong in Caste differences.¹³ He also attracted attention to the facts that the original inhabitant of the America were killed by the European settlers. Hence the he credited the Aryans (the Brahmins and other higher castes) to have not killed the original inhabitants of India. Instead of killing the defeated Dasyus were involved in society as lower castes. Later on, he declares that, this Varnashrama system got converted into caste system.¹⁴ He did not believe that reforms were needed for society and the establishment of the British rule had nothing to do with the existing social evils in religion. He offered the examples of Ireland that this country did not have ban on widow remarriage, there was no caste system and the adult marriage prevailed there as social reformers.

Jotirao put forward a theory that the differences among the human being in religious and social matters

are not natural. They are borne equal and later on the differences has taken place. The caste system was invented by the Brahmins to keep Shudratishudras divided to keep cultural supremacy intact.¹⁵ The humanistic work of Theodor Parker and Thomas Paine appealed Phule to work or downtrodden.

His opinion on Malabari's note on child marriage and Enforced widowhood shows his radical rational and human approach towards the women.¹⁶ Jotirao described the agonies of child bride in his educational statement given before the Hunter Commission. He suggested the government to raise marriageable age up to the nineteen year to boy and eleven up to the girl. He asked the government to levy the penalty against the braking of law and that money should be utilized for the education of lower caste.

He recommended certain measures for the improvement of the condition of the primary education.¹⁷

1. Teachers in primary schools should properly be trained.
2. The course of training for them ought to include an elementary knowledge of agriculture and sanitation.
3. The teachers should be given better salary.
4. The teaching course should laid great emphasis on reading, writing, accounting and rudimentary knowledge of general history, geography and grammar.
5. Lessons on technical education, morality, sanitation and agriculture should be imparted.
6. The funds collected in the form of taxes should be utilized for primary education.
7. The supervising body over primary school should be effective.
8. The local self bodies like municipalities should be compelled to maintain the primary education.

So it clearly shows that Phule wanted education imparted on the masses including lowers caste and untouchables whereas the upper caste thinker were opposing it as they interpreted in a different manner. Phule believed that education will emancipate the masses whereas V. K. Rajwade professed that they will become lazy and a whole country will be ruined. Phule urged Sayajirao Gaikwad to impart education on the masses, V. K. Rajwade and Tilak criticized Gaikwad for education them and wished



to refrain him from education the lower classes. Phule and other social reformers thought that caste discrimination should be ended whereas Rajwade and Tilak wanted its continuance forever. Phule depicted the worst condition of women in society because of child marriage and prohibition of widow remarriage whereas Rajwade and Tilak neglected it and they did not find any fault in it. The third principles of postmodernism- truth and knowledge are constructions we offer to persuade others and they need not correspond to reality can be experienced through the differences in opinions of the social thinkers in nineteenth century western India.

Conclusion

The western concepts like liberty, equality, democracy, rationalism and humanism highly influenced the Indian thinkers in the nineteenth century. The materialistic and moral developed appealed them, yet they did not wish to apply them thoroughly to the Indian society. The use of this concept was applied to retain the cultural supremacy of upper castes intact. This close ended religious and social system was used as a tool to keep cultural hegemony in educational, social and religious matters intact.

End Notes

¹Michel Foucault, "Nietzsche, Genealogy, History." In *Language, Counter-Memory, Practice: Selected Essays and Interviews*, edited by D. F. Bouchard. Ithaca: Cornell University Press, 1977, p. 160

²Ibid., p.153

³<https://www.allaboutworldview.org/postmodern-history.htm>, 11.33 am, 19/04/2018.

⁴Gutting, Gary and Oksala, Johanna, "Michel Foucault", *The Stanford Encyclopedia of Philosophy* (Summer 2018 Edition), Edward N. Zalta (ed.), forthcoming URL = <https://plato.stanford.edu/archives/sum2018/entries/foucault/>.

⁵V. K. Rajwade, *Sanskri Bahashaani Bhashashastryi Lekh* from *Samagra Sahitya*, Part Third, ed. By B. M. Shah, Rajwade Sanshodhan Mandal, Dhule, 1995, p. 1.

⁶Mathew Lederlay, *Philosophical Trend In Modern Maharashtra*, Popular Prakashan, Bombay, 1976, p. 306-307.

⁷V. K. Rajwade, *Samajkaranani Rajkaran*, (From *Itihasachary Rajwade samagra Sahitya*, Part seven and Eight) edited by M. B. Shah, *Itihasachary V. K. Rajwade Sanshodhan Mandal*, Dhule, 1998.

⁸Ibid., p. 623

⁹VishnushastriChiplunkar, *Nibandhmala*, (edited by VinayakSathe), Third Edition, 1926, Published by Shankar Joshi, p. 1024.

¹⁰Ibid., p. 1187.

¹¹V. K. Rajwade, *Samajkaranani Rajkaran*, op. cit., p. 63.

¹²V. K. Rajwade, *Badodyatil Sudharna*, in *Nivdak Lekh*, Samnvay Prakashan, Kolhapur, 2012, p. 175.

¹³The *Essays of LokmanyTilak*, ed. By Ram Shewalkar (Originally written in Marathi-LokmanyTilkanche Nibandh) NBT, 1996, p. 213.

¹⁴Ibid., p. 217.

¹⁵Complete work of Mahatma Jotirao Phule, Compiled and edited by Y. D. Phadkeas *Mahatma Phule Samagra Wangmaya* Published by, Maharashtra Rajya Sanskriti Ani Sahitya Mandal (in Marathi), Mumbai, 1991 p. 137.

¹⁶Behramji Malabari the contemporary social reformer sent his two petitions regarding child marriage and forced widowhood to the Viceroy Lord Ripon on 11 September 1884. The government sent it to well known personalities including Jotirao and requested them to send their opinion. The orthodox leader opposed the inference of the government in religious matters. JotiraoPhule, justice Ranade, Lokhitwadi and other social reformers appealed the government to take essential steps by passing the necessary laws.

¹⁷Complete work of Mahatma Jotirao Phule, op. cit., 238-239.

Photography's Surrealism: The Objectivity of History's Subconscious and Unconscious

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The camera's twin capacities, to subjectivize reality and to objectify it, ideally serves these needs and strengthen them

- Susan Sontag¹

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Abstract

The major concern of this paper is to find out relationship between emotion and subconscious in construction of the historical knowledge. If history is considered constant interaction between past and present to determine future², then photograph is the fact that depicts unspoken realities of the past. When in some occasions, historical facts in textual format become insufficient; - the photograph catch holds the graph of emotion. Such feelings often find in surrealist photographs, writing and speech.

Introduction

On January 30, 1948 in the evening Mahatma Gandhi assassinated at Birla House in New Delhi while he was joining the prayer meeting. A few hours later in that very particular evening Prime Minister Nehru addressed the nation over All India Radio. His speech was delivered in English, spontaneously and without preparation. The question raised herein is that what was going in Nehru's mind during that period? In this regard the paper discusses a couple of photographs that taken by a French photographer Henri Cartier-Bresson of Jawaharlal Nehru after the death of Mahatma Gandhi and a photograph of Gandhi's secretary during Gandhi's last rites and its connection with the circumstances. The immediate reaction of Nehru after the death of Mahatma and some natural photographic shots of Cartier-Bresson had knitted abstract surrealism in perceptible sense in the construction of history's objectivity. Surrealism in speech and surrealism in photographs have the power that impelled objectivity over subjectivity of the unseen past. First the paper focuses surreal connection of Nehru's speech and the immediate circumstance and second its connection with the photographs.



The Facts



Henri Cartier-Bresson, identity pass of a photo-journalist in India³

Henri Cartier-Bresson a French photographer arrived in India in December 1947⁴ while India had emerged as an independent country a few months before.⁵ During the same year before arrival in India he established an agency of co-operative photography called Magnum Photos with co-photographers Robert Capa, David Seymour (Chim), William Vandivert, and George Rodger. And he left country for the search of new photographic subjects during the second half of the year.⁶ Henri Cartier-Bresson reached to India as his first assignment of Magnum Photos was with the Asian countries. He had got the right to entry into the independent India's political surroundings for photography with the help of Dorothy Norman – an American writer, photographer, editor. In January, 1948 Cartier-Bresson reached to Delhi from Bombay to photograph India's political figures. During this period it was very common stance wherein many photographers, writers, journalists flocked down to India and stayed especially in the surrounding of Gandhi to extract a chance to interact with him for their professional interest. Cartier-Bresson was one of them. He had taken the photographs of Lord Mountbatten, last Viceroy of India, Jawaharlal Nehru, the first Prime Minister of India, Sardar Vallabhbhai Patel, Minister of Interior and many others. Author of the book *Visual Histories Photography in the Popular Imagination* Malavika Karlekar wrote about Henri Cartier-Bresson – ‘camaraderie between Edwina Mountbatten and Jawaharlal Nehru have an immediate mnemonic resonance for many Indians.’⁷ Cartier-Bresson was fortunate enough as a photographer who was with Gandhi in his final hours. He photographed Gandhi just hours before he was assassinated. His photographs of Gandhi's cremation are the only source to visualize the candid

moments of the individual's personal grief. Satyajit Ray says about his work, ‘the unique skill and vision that raise the ordinary and the ephemeral to a monumental level, and you have the hallmark of the greatest photographer of our time’⁸

Cohesion between reality and the subconscious

The founder of the surrealist concept Andre Breton wrote *Surrealist Manifesto* in 1924. He defined the term as, ‘Surrealism, noun, masc. Pure psychic automatism by which it is intended to express, either verbally or in writing, the true function of thought. Thought dictated in the absence of all control exerted by reason, and outside all aesthetic or moral preoccupations.’⁹ Surrealism, the thought Breton conjoined with the art movement in the 1920s. Freudian psychiatry connected surrealism with subconscious and unconscious. Before Freud's explanation, these intangible realities of one's mind used to become insignificant; and remained unworldly affair in psychology. It is needless mention here few hours later after Gandhi's death Nehru addressed to the people which was broadcasted in the All India Radio. He said in the speech, ‘The light has gone out of our lives and there is darkness everywhere. I do not know what to tell you and how to say it. Our beloved leader, Bapu as we called him, the Father of the Nation, is no more. Perhaps I am wrong to say that. Nevertheless, we will never see him again as we have seen him for these many years. We will not run to him for advice and seek solace from him, and that is a terrible blow, not to me only, but to millions and millions in this country.’¹⁰ The speech of Nehru on Gandhi's death disseminates the message to an art history reader that he was a surrealist. Surrealism transmits the subconscious and it left impression in the tangible outcome of process of thought. Nehru's speech after Gandhi's death delivered to the public in the radio was his first reaction which was can be considered as unprepared speech. The speech was an immediate reaction where there was no scope of conscious thought built up. There is another photo-journalist of Life magazine present in the Gandhi's surrounding from 1946 was Margaret Bourke-White. She was on her way to the airport on that particular day when Gandhi was assassinated. She returned to the spot after hearing the news of Gandhi's death

when it was still very fresh. She said, ‘I was only a few streets away when the assassin’s fired the bullet on Gandhi.’¹¹ She notes in her memoir *Half Way to Freedom*, ‘I slipped away from the wordless tragedy in that little room and pressed through the sorrowing crowds to the garden path where Gandhiji had met his end.’ She described, ‘Already a radiance hung over the spot. Someone had marked the place with a candle and its beam was steady and golden in the black Indian night.’¹² Bourke-White’s these few lines insist to link Nehru’s first subconscious awareness – ‘the light has gone’. Bourke-White described he climbed up the gate of the Birla House, the place was illuminated with street lamp and he started making aware to the people with his speech, ‘Mahatmaji is gone and the great light is extinguished.’¹³ Henri Cartier-Bresson with great difficulty photographed Nehru during his speech in the dark night. The reflection of street lamp was continuously hindering with the focus on Nehru’s face.



In midst of the crowd lonely Nehru looking back



Gandhi’s secretary watches first flame of funeral¹⁴

The Surrealist Photography

In the above photograph Jawaharlal Nehru standing in the crowd looking back. The photograph of Nehru was taken after Gandhi’s death. In the other photograph, Gandhi’s secretary was looking at the first flame of Gandhi’s funeral.

Henri Cartier-Bresson was known for his surrealist photography. It was a history that his friend photographer and cofounder of Magnum Photos, Robert Capa warned him not to label as a surrealist in photography. Rather Capa encouraged him to adopt the identity of photo journalist.¹⁵ Instead of his warning Henri Cartier-Bresson’s training went in surrealism. To him, surrealism was a private affair of a photographer – a self understanding. Founder of the surrealism Andre Breton had emphasized on the automation of mental act. Cartier-Bresson never believed in arranged photography. His clear submission on surrealism thus, ‘Manufactured or staged photography does not concern me. And if I make judgment it can only be on a psychological or sociological level. There are those who take photographs arranged before hand and those who go out to discover the image and seize it. For me the camera is a sketchbook, an instrument of intuition and spontaneity, the master of the instant which, in visual terms, questions and decides simultaneously. In order to “give a meaning” to the world, one has to feel oneself involved in what one frames through the viewfinder. This attitude requires concentration, a discipline of mind, sensitivity, and a sense of geometry-it is by great economy of means that one arrives at simplicity of expression. One must always take photographs with the greatest respect for the subject and for oneself.’¹⁶ His association with Andre Breton was also one of the motivational forces to turn him towards surrealism. His tendency was to capture human’s intangible phenomena. ‘His interest in Buddhism and his association in the early 1930s with Andre Breton for example – in drawing comparisons between his photographic technique and either Zen practice in archery or the “automatic writing” advocated by Breton.’¹⁷ In the photograph of Nehru and in the photograph of Gandhi’s secretary in both there Cartier-Bresson captured the unconscious of these two intimates of Gandhi. Surrealism avoids conscious interference. Nehru found himself alone in the surrounding of crowd. He was unaware of camera, turned aside with a vacant look. His face seemed ‘ashen grey’ as Margaret Bourke-White marked it during his speech on Gandhi’s death in the close look, seemed lingered the same in the photograph. A surrealist captured the



other surrealist. Margaret Bourke-White observed Nehru's vulnerability during the cremation, 'most of them would continue to watch until the flame burned low, until at dawn Nehru, more lonely-looking than ever would speak a few sad words over the ashes, saying, "We have failed to protect our greatest treasure".'¹⁸ The feeling of Nehru resonates in the photograph. During the photographic event Gandhi had passed and become a past. Nehru in the photograph was not looking to the front but aside and absorbed in his inner search. Nehru and the secretary both were looking past to grasp the then present. The automatism of surrealist art had vividly captured in Cartier-Bresson's photography. Nehru here takes Nietzsche's 'super historical standpoint'. In his *Use and Abuse of History* Nietzsche says, 'the glance into the past pushes them into the future fires their spirit to take up their light for a longer time yet, kindles the hope that the justice may still come and the happiness may sit behind the mountain towards they are walking.'¹⁹ Here the subjectivity of history comes. Nehru says, 'in strength and in unity, face all the troubles that are in front of us. We must hold together, and all our petty troubles and difficulties and conflicts must be ended in the face of this great disaster.'²⁰

In the other photograph Gandhi's secretary is sincerely looking at the first flame of Gandhi's cremation. Usually he used to execute Gandhi's mission and plan. He was with Gandhi in his last hours. He prepared Gandhi's body for cremation. The sincere look that Cartier-Bresson captured in the second photograph was not a created art or the performance for the camera. Some days before his death Gandhi received a letter from a Hindu on the issue (How can one be friendly with Pakistan and turn every Muslims India into a traitor) that was causing his death. He responded to the letter, 'It is this attitude that was responsible for the partition of the country. Today the poison around us is only increasing. Kashmir has added more poison.' Gandhi was more inclined to the negotiated settlement with Pakistan during the war driven situation where the others were not. Gandhi had given an ultimatum with his fasting.²¹ In the announcement of Gandhi's death Nehru says, 'We must face this poison, we must root out this poison, and we must face all the

perils that encompass us, and face them not madly or badly, but rather in the way that our beloved teacher taught us to face them.'²² The paper here found the word 'poison' in the comment of both – Gandhi and Nehru. In the photograph, Nehru seemed perplexed as the India's situation with Pakistan in the Kashmir issue, though the stand point is clear – a solution without violence.

Conclusion

It is true history doesn't have hundred per cent objectivity. But here in the rare occasions through the speech of Nehru, Bresson's photographs and Margaret Bourke-White's rumination congregated at some point in a same line. These factual elements of the past made the history a tangible fact. It is not foolproof to state that the paper has been able to capture the subconscious and unconscious of the past, but it is true it has drawn a connection between the factual elements and the subconscious & unconscious mind of Nehru and the secretary of Gandhi. Cartier-Bresson's photograph revives the memories of Gandhi with him at various interactions. The subject 'History' doesn't provide the feeling of the past, but it is able to provide a glimpse of inner sense of the past even after many years through the photographs. The objectivity of history depends on re-search and new interpretation. But these factual elements leave a scope to acquit exaggeration from the history.

End Notes

¹Susan Sontag, *On photography*, Rosetta Books, New York, 1973, P – 140

²E.H. Carr, *What is History*, Penguin Books, London, 1990

³<http://www.henricartierbresson.org/en/hcb/biography/>, accessed on 6.2.2018

⁴William Meyers, *Henri Cartier-Bresson: India in Full-Frame*' Review: *The Subcontinent*, Uncropped, *The Wall Street Journal*, May 1, 2017

⁵William Meyers, *Henri Cartier-Bresson: India in Full-Frame*' Review: *The Subcontinent*, Uncropped, *The Wall Street Journal*, May 1, 2017

- ⁶<http://www.henricartierbresson.org/en/hcb/biography/>, accessed on 6.2.2018
- ⁷Malavika Karlekar, Ways of Engaging, compelling images by Danielou and Burnier, The Telegraph, February 21, 2010
- ⁸Satyajit Ray, Forward, Henri Cartier – Bresson in India by Henri Cartier-Bresson, Thames and Hudson Ltd., London, 1993
- ⁹Andre Breton, The Surrealist Manifesto, republished in The Message of Surrealist Art by Dan Turkel
- ¹⁰Nehru's address broadcast over All India Radio on January 30th, 1948, <http://www.thehindu.com/opinion/op-ed/we-must-hold-together/article4358063.ece>, accessed on 4.2.2018
- ¹¹Margaret Bourke-White, Half Way to Freedom, Asia Publishing House, Bombay, 1950, P – 186
- ¹²Ibid. P – 187
- ¹³Ibid., P – 187
- ¹⁴<https://qz.com/india/1145191/henri-cartier-bressons-historic-photos-of-india-are-to-be-auctioned-in-new-york/>, accessed on 6.6.2018
- ¹⁵Catherine E. Clark, Getting the Picture: The Visual Culture of the News, ed. by Jason Hill, Vanessa R. Schwartz, Bloomsbury Academic, New York, 2015, P - 57
- ¹⁶Henri Cartier-Bresson, <http://www.henricartierbresson.org/en/hcb/>, accessed on 12.2.2018
- ¹⁷David Davies, How Photographs “Signify”: Cartier-Bresson’s “Reply” to Scruton in Photography and Philosophy, Essays on the Pencil of Nature, ed. Scott Walden, Blackwell Publishing, UK, 2008, P - 169
- ¹⁸Margaret Bourke-White, Half Way to Freedom, Asia Publishing House, Bombay, 1950, P - 192
- ¹⁹Nietzsche, Use and Abuse of History, P – 13
- ²⁰Nehru's address broadcast over All India Radio on January 30th, 1948, <http://www.thehindu.com/opinion/op-ed/we-must-hold-together/article4358063.ece>, accessed on 4.2.2018
- ²¹Stanley Wolpert, Gandhi's Passion, the life and legacy of Mahatma Gandhi, Oxford University Press, New York, 2001, P - 253
- ²²Nehru's address broadcast over All India Radio on January 30th, 1948, <http://www.thehindu.com/opinion/op-ed/we-must-hold-together/article4358063.ece>, accessed on 4.2.2018



Village Pantheons of Mandangad

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Abstract

Among the diverse forms of worships prevalent in India, the Village Deities occupy an important place. Village Communities or Gram Samstha, which exist since Ancient times, believed in a group of deities are responsible for the protection of the entire village. Figurines of Female Goddess found during the Indus Valley Civilization is a solid enough reference that agrees to the existence of such belief system. The Devi Yamal Treatise states that some of the local deities are an outcome of a natural fear or sense of insecurity in people's mind. It is an herculean task to count and clarify the number of deities that are worshiped in the interiors of India. However, the study of them is extremely important as they associate with History, Culture, Heritage and Philosophy of the country.

Purpose

Mandangad is one ninth and the biggest Tehsils in Ratnagiri District of Maharashtra which is decorated with the ornaments of rich historical heritage. The Tehsil is comprised of 109 villages and each of them consist temples of village deities. The research article majorly highlights the local deities, their temples, nature and their importance in the communities. During Holi – a festival celebrated to welcome the arrival of spring – these deities are adored in a special way. Study of such traditions is helpful to bring out the unravel the social, religious and cultural scenario of Mandangad Tehsil in front of the world.

Introduction

Mandangad is one of the nine Tehsils of Ratnagiri District which is closer to the Raigad District of Maharashtra. Although Mandangad has less population compared to other Tehsils of Ratnagiri, this hilly region is not only on the way of development but also has rich historical background. The fort of Mandangad was once visited by Chatrapati Shivaji Maharaj. Velas is a birth place of Nana Fadanvis who belonged to the Peshwa Period. Bankot is the first port of built by the British in the Konkan Reion. Asud Murud is the native place of Bharat Ratna Dhondo Keshav Karve. Village Ambavde was the native place of Bharatratna Dr. Babasaheb Ambedkar.

This historically rich Mandanad Tehsil inhabits 109 villages which are adorned and protected by the temples of the Village Deities. Among them majority are female goddessed and the others are male. As it is mentioned earlier, these deities were worshiped out of a sense of fear. The villagers believe that these deities will protect them from any harm such as epidemics, droughts, floods etc.¹ Few of them are mentioned in this article.

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Late Mr. N. G. Chaphekar has done an extensive study of village deities of southern Ratnagiri District. His book “Chittapavan” gives an account of all the village deities in the region. Among which three might be from Mandangad which are Kalkai, Manai and Somjai.²

A few temples of the deities which are mentioned in the article are presently renovated and have lost the original appearance. To locate the icons is also a difficult job. Sometimes hoisted flags, sceptres or broken platform may give away the hideouts the deities. The temples of such deities are normally situated outside the brink of the village and are in very poor condition.³ Such temples of female goddesses at Mandangad are seen along with the temples of Lord Shiva and Lord Harnuman, whereas Hero Stones, Sati Stones and other sculptures are also found around the temples.⁴

Important Village Deities Mentioned in the Article

1) Somjai Devi – Goddess Somjai

Temple of Somjai Devi is located on the outskirts of Dhutroli Village which is 2km away on Mandangad-Mangaon way. Somjai is an important deity of two important colonies (Somjai and Hanuman Wadi) of the village. The temple has been renovated in 1989. Like many other village deities, the antiquity of Goddess Somjai is not known. The goddess probably acquired her name Somjai from Goddess Parvati which might be the combination of Som mean Shiva and Jai mean Parvati. The temple is made in typical Konakni style, with thatched roof. In the sanctum the Icon of the goddess is kept on a raised platform (Chauthara). The goddess is wearing an ornamented nose-ring and is leaning against either lion or tiger. The sanctum also has many other unidentified and weathered sculptures and a miniature sculpture of Goddess Somjai which is worshipped and carried on special occasions. The Mandapa of the temple is adorned with a Palakhi (a wooden facility to carry the deity around, during special occasions like Holi festival.) Not far from the Somjai temple, a Shiva Temple is found which has a Sati Stone in the compound. The Sati stone shows images of two seating idols.

During Navaratri Festival, the goddess is worshipped in different ways such as “Gondhal”, “Bhajan” etc. During Shimga or Holi Festival the goddess is carried around in Palakhi so that the Villagers can take her blessings. However, it is not taken out of the two colonies.⁵





2) Shri Bhairi Devata

The temple of Shri Bhairi Devata or God Shri Bhairi is located at a small village called Aatkhol which 8 km away on Mumbai – Mandangad Highway. Situated at a very secluded place, this newly renovated temple is dedicated to Shri Bhairi or Bhairav – a form of Lord Shiva. The idol is made of stone and bears a pellet drum in upper left hand and a trident in upper right hand whereas the lower hands hold a snake. The main idol has a female deity at its left hand – probably Parvati who is also shown with same attributes as God Bhairi. On the right side a miniature sculpture of the main idol is seen. A big stone lamp adorns the inside of the sanctums whereas; the Mandapa displays seven mounds which originally belonged to either Seven Apsaras or Saptamatrika. On the other side, two sculptures carrying swords are seen. There is a wooden palakhi at upper side of the sanctum temple whereas Lord Ganesh's idol is seen at right hand side. At the backside we find standing Idol of Shri Hanuman, which is also considered as Village Deity.

The antiquity of the temple is not known. However, the Palkhi Festival during Holi takes place regularly. This deity is said to be worshipped by two villages namely Athkhol and Shirgaon.⁶



Bhairi – Shiv – Parvati



Saptmatruka

3) Kalbhirav at Soveli

Village Soveli is very famous for its Deity. Though this temple has been renovated, the idols of the deities were not immersed and are still surviving. The temple hosts the idols of Kalbhairav or Lord Shiva and his consort Parvati. They seem to bear the attributes like drum, trident and snake etc. and they seem to be wearing copper masks. However, the sculptures are very much weathered

Another small Shiva temple is seen near to the main temple. The Shiva lingam is below the level. The upper part of the temple hoists Ganesh Idol and a sculpture of Nandi – the vehicle of lord Shiva. Few remains are seen at the right side of the temple, which include hero-stones, sati-stone and few unidentifiable sculptures. A circular water tank is also found in the temple arcade which serves to give water to animals and birds.⁷



Kalbhirav



Shivling



Lord Ganesh & Nandi



Copper Mask - Mukhavta

4) Bhairi way to the Mandangad Fort

Another temple can be traced at the end of the Buddhist Colony situated on the way to the Mandangad Fort. This thatched roofed temple still maintains its original style. However, very less information is available about this temple. The temple shelters two stone idols. One, among them is a male deity and has four arms. The details on the Idol cannot be identified properly, as it is in distorted shape. The other smaller idol is probably a Female Goddess. Apart from this, two sati stones are also found around the temple.⁸



Bhairi Temple - Mandangad

5) Bhairi Jogeshwari Manai Temple at Ghosale

Another famous temple in Mandagad Tehsil is Bhairi Jogeshwari Manai Temple. The temple is located in Ghosale village. Renovated in May 2018, the old idols were immersed and replaced with the new ones. The temple belongs to Bhairi or Lord Shiva and his consort Parvati. Both the idols are seen holding same attributes such as drum, trident and snake. Some other old sculptures are found inside the sanctum whereas; a Sati – Stone is found outside the temple. Holi Festival is hosted extensively in the temple.⁹



6) Bhairi - Kalkai Temple at Konjar

The thatched roofed and recently renovated temple at Konjar belongs to two Deities Bhairav and Kalkai. The idols are in black basalt stone and are adorned with copper masks. The temple hosts not only the Festival of Holi but also extensively celebrates Navaratri. This temple is famous for taking verdict about personal matters of the villagers.¹⁰

7) Padmavati Temple at Shigavan

Not far from Ambavde village at a place called Jhigvan, there is a temple of Goddess Padmavati. Apart from the standing idol of the Goddess, other idols such as Shiva, Ganesh, Hanuman and Dutta are also found in this temple. This temple was renovated in the year 2016 and the old idols were immersed at Harihareshwar.¹¹

Conclusion

The Konkan region always has been holding to its tradition. The tehsil of Mandangad is not an exception. The ancient tradition of worshipping a local village deity is seen in Mandangad even today. The adoring and worshipping the deities as well as celebration of religious festival is a mirror that reflects the clear images of Cultural and Religious Traditions and heritage of the less spoken region of Konkan. Hence, through this article an attempt to throw a light on the hidden and forgotten heritage of an Ancient Region of India. The above study also shows that the majority of the temples are dedicated to God Bhairi who seems to be most worshiped village Deity in the region.

Bibliography

1. Prabhudesai Pralhad Krushna – Devikosh Vol. IV, Anjali Publishing House, Pune 30 December 1968.
2. Pandit Joshi Mahadevshashtri – Bhartiya Samskrutikosh Vol. III, Pune 30 Sept. 1993.
3. Tarktirth Joshi Laxmanshrstri – Marathi Vishwakosh Vol. V, Wai 1973
4. Interview = i) Sukhadare Mohan ii) Ghosalkar Dipak iii) Mahajan Waman iv) Mahajan Damodar v) Nigudkar Rajkumar
5. Observation in Field Visit = i) Ghosale ii) Dhutroli ii) Soveli iv) Shigwan v) Atkhol vi) Adkhal

End Notes

¹Devi kosh – pg. 870

²Ibid – pg 873

³Bharatiya Sanskriti Kosh – pg 247

⁴Observation in field Visits

⁵Interview of Mr. Monah Lakshman Sukhdare

⁶Interview of Mr. Rajkumar Nigudkar

⁷Observation in Field Visit

⁸Observation in Field Visit

⁹Interview of Shri Dipak Ghosalkar

¹⁰Interview of Shri Vaman Mahajan

¹¹Ibid



Photographs of Remains





Secularism in India

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Abstract

Before the arrival of Islam in 12th century, the Mughal and Colonial following, Indian religions have evolved and co-existed for many centuries. Equal treatment of all religions by a state, means secularism in India. A common civil code is difficult to practice in India, as each religion has its own laws on marriage, divorce, inheritance and alimony. Secularism is a divisive, politically charged issue in India, hampering her progress in several fields. In Modern India, Secularism means every state is neutral to all religious groups. India or any Indian state purports to be officially neutral in religious matters and do not support neither religion nor irreligion. Historical, political and social factors of India have to be considered to accept, modify and understand the principle of the secular state. The concept of a secular state involves interrelated relationships between the state, religion and the individual. The most common serious problem that India faces is that Communalism. Great harm has been done by central and state governments to define economics, educational and social need in terms of caste groups. State interference in Hindu religious institutions is a major problem for the secular state. The secular project of the Indian state must necessarily be a project of equal human rights and uniform conditions of citizenship of democratic citizenship.

Keywords: religion, co-existed, common civil code, divisive, hampering, purports, neutral, modify, communalism.

Introduction

The word 'Tu' here refers to India, a country which is 'Advitya' meaning incomparable 'Akala' referring to 'all times' and 'Nirbhaya' stressing 'free from fear'. Such is the 'Religion' in India, where religions coexist with a spirit of tolerance and acceptance of different faiths. Before the arrival of Islam in 12th century, the Mughal and colonial following, Indian religions have evolved and co-existed for many centuries. About 2200 years ago during the rule of Emperor Ashoka and about 1400 years ago during the rule of King Harshavardhana, different religions were patronized and accepted.

Equal treatment of all religions by a state means Secularism in India. The constitution requires every state to recognize and accept all religions equally, enforce parliamentary laws and no religious laws, and respect 'unity in diversity' which is India's motto, i.e respect pluralism. A common civil code is difficult to practice in India, as each religion has its own laws on marriage, divorce, inheritance and alimony. Conflicting interpretations of religious books, create several issues in the practice of Secularism in India. Secularism is a divisive, politically charged issue in India, hampering her progress in several fields.

In modern India, secularism means every state is neutral to all religious groups. Indian culture is a product of all our comprehensive religious asserting the right to be free from religious practices upon people is Secularism. India or any Indian state purports to be officially neutral in religious matters and do not support neither religion nor irreligion. Indian constitution declares in the preamble freedom of thoughts, expression, belief, faith and worship for all Indian citizens of the country. Dr. Radhakrishnan, India's second President opined that no one religion will be given preferential status or unique distinctions, no special privilege in natural life or international relations, which would go against the basics of democracy. The concept of a secular state involve interrelated relationships between the state, religion and the individual. Here the religions and the state form the base, making the individual to represent the apex. Every individual is considered as the citizen of the country, not belonging to any particular group.

The concept of secular state originates from the west. Several Indian religious ideas are opposite to those of the west. Historical, political and social factors of India have to be considered to accept, modify and understand the doctrine of secular state. During their rule British followed a policy of 'religious neutrality' in India. During Indian National Movement, Gandhiji, Nehru strove incessantly to promote Hindu – Muslim unity, which even today inspires secularism in India. Secularism is not religion, but a way of life in India. For Savarkar, India includes several sects practicing various religious traditions. He used the term 'Hindu' as a race and nationality and not as a religion. He defined Hindutva not in religious and spiritual terms but more as a civilization and politico – cultural category.

Problems for Secular India

The most serious problem that India faces is that communalism. Casteism, community rivalry, underrates the forces of secularism at all times. Loyalty to the interests of own ethnic group, instead of society, as a whole easily erupts communal violent conflicts.

For a truly secular state, emotional integration should be such that conscience of social class not be

a priority, with utmost importance given to Indian citizenship. Government policies should be such as to achieve the desired result, i.e of maintaining secularity and peace in the country. Preservation of law and order is the state's prime responsibility as also prevention of communal violence.

Great harm has been done by our governance, education and social need in grouping our social class to help them for better prospects to each of them. Reserved posts in government, reserved seats in colleges, scholarships and economy aid is extended to not only to officially designated groups of historically disadvantaged people of India. This offer helped to encourage casteism, caste consciousness as also serious injustices done to cases where there is not connection between economics necessities and social order.

State interference in Hindu religious institutions is a huge challenge for secular state. The governing body justifies its involvement by taking up the responsibility of allocating public funds and resources and ensures that the government has enough money to fund all its activities. This makes the state an important agency of Hindu revivalism. The distinction between regulating temple administration and promoting understanding between different religions is ignored and not clarified. Separation of state and religion is an essential component for a healthy secular state.

Present day India is governed by different inheritance laws, for different religious, giving implications for gender justice as non – state laws. India's present status of having citizens from different religions, is governed by different inheritance laws is indeed anachronism and exactly opposite to the fundamental principles of secularism. A common set of rules should govern the country, which is a distant dream even today.

Determining the interpretation of secularism in Indian situation is a herculean task. Whether the state being secular means the governing body follows religious impartially that particular system of faith and worship it will be partial to no religion or conduct any worship of any faith. The 'no – preference' doctrine must be adopted, promoting 'universal religion of man'.



The secular project of the Indian state must necessarily be a project of equal human rights and uniform conditions of citizenship of democratic citizenship. The rights of the minority must be safeguarded against disadvantages to minority. Gender or religious identity must be avoided in all cases, providing sufficient space for the articulation, expression and recognition on the principles of equality and justice. India is secular and secular as it does not have any one religion of its own. Secular is a positive concept, as it implies mutual respect for all religions, assure the prestige, unity and integrity of both citizens and country. Secularism is very important for India as it is the thread of secularism that holds the country united along with Parliamentary democracy and rule of law. Secularism is one of the basic pillars of Democracy in India.

Secularism in its place

Indian constitution aims to establish a secular state. Each Indian citizen is allowed to profess a particular religion, which will not determine his involvement with the governing body at any thris party states that India opposed to organised religious practices. In historical context.

Indian Constitution emphasis

1. India has no national religion.
2. Every citizen is assured right to follow any religion of his / her choice. All religions are equal before law.
3. Religion or faith is never a criteria for any discrimination.
4. Every citizen has the right, commonly, to access any office of the governing body, without any fear or favour.

The heart and soul of Secularism, as conceived by the constitution, is to encourage political equality to all citizens of India, to hold the highest office under private or public undertaking as it is difficult to separate religion from politics. For most of the people, secularism is an inanimate, inexpressive concept, which makes it difficult to decide if religions should be privatized or not.

At best Indian Secularism can be defined as “An Attitude” i.e “Goodwill towards all religions” Sarvadharmā Samābhav is a protective, principle of

action for not discriminating among religions also known as Dharma Nirpeksha to be practiced by the governing body. Tolerance is a value enshrined in all the great religions of mankind. It is the obligation of every state to ensure that every religion would develop its tenets according to its natural ability and skill and no religion will depend upon governmental support. Religion and state should be separate with the role of state limited to a “ Secular Welfare ”, without religious interference.

In a multi-religious society like India, Secularism may also be related to rationalism which finds proper means for its expression. Secular humanism needs to address scientific temperament to be recognized. Secularism implies that those who profess no religion have a place in society to that of others, not higher or lower.

The fate of Secularism

The word secularism used in the west for over three hundred years plans an area for masses in general, where religion does not play a significant role. Religion is only an area of own’s life where one can be a pious Hindu, good Muslim, good Sikh, good Buddhist. But when they leave their homes and enter public life they leave behind their faith and religion and give their identity as “ Indian ”. Most Indian politicians have depended on the accommodative interpretation which accepts as scientific and rational approach to religion. To several Indians, secularism has an established standard set of ideas and social systems with greater scientific development and safety for the nation. Skepticism about Indian secularism takes many different forms :

- a) The ‘Non – existence’ critique: Indian secularism is regarded as essentially non – existent, when they speak about Hindu – India or Muslim Pakistan.
- b) The ‘Favoritism’ critique: In the guise of secularism, the Indian Constitution, political and legal traditions actually favor the minority status of Muslims not enjoyed by the majority community of Hindus.
- c) The ‘Prior Identify’ critique : This explains that identity of being a Hindu, Muslim or Sikh is prior to being an Indian.

- d) The 'Muslim Sectarianism' critique : Dominance of Hindu identity in ' Indianness ' is forced on the Hindus due to their numbers, than by the 'failure' of the Muslims to see themselves as Indians first.
- e) The 'Anti – modernist' critique: Attacking secularism as a part of the fully of 'modernism'. It is noted that as the culture of India is undergoing modernization. Traditional way of life is appreciated as it developed tolerance towards all faiths.
- f) The 'Cultural' critique: The foundational view that India is in essence, a 'Hindu Country' and it is this Hinduism that makes India what it is and requires secularism, taking complete care to commit political blunders on grounds of religion.

Conclusion: Indian Secularism

Secularism in India needs to check growth of fanaticism and manage interreligious conflicts. Indian state has excluded religion on political grounds by not encouraging separate electorates, Religion is not a criteria for any form of reservation for jobs. Internal reform of each religion must be kept distinct from questions of forming a common public space acceptable to all religious groups. India having a heterogeneous society, must practice politics of the common good. Secularism today in India means a strong defense of minority rights, deploying freedom of religion to accommodate all people and consolidate all natural resources for the benefit of all. The successful working of a democratic constitution requires patriotic citizens who are willingly respecting others view points, have a capacity of compromise and accommodate tolerance. Today India is leaping towards social, economic development and is a widely recognized and acknowledged democracy striving to fulfill to cherish ideals for all social classes as embodied in preparatory statement of the constitution. We can still work out the constitution and uphold secularism well and provide an opportunity for the masses of people in India an opportunity to live a good life and live up to the challenges of globalization, improvements in science and technology and sustain development in all fields.

Present day Indian citizen must develop the following traits to practice secularism in India –
S – sincerity equality, E – equality, C – Calm, Confident, U – uniformity, L – lawful,
A – authentic, R – respect.
Indianess above all religions.

References

- Democracy in India – Edited by Niraja Gopal Jayal, Oxford University Press 2001.
- Indian Political Thought - Themes and Thinkers, M. P. Singh & Himanshu Roy Pearson – 2011.
- India's Constitution, M. Y. Pylee, S. Chand & Company Ltd, New Delhi Edition – 2013.
- Secularism and its critics, Rajeev Bhargava, Oxford University Press – 1998.
- The Indian Constitution – Corner Stone of a Nation, Granville Austin, Oxford University Press – 1966.



Status of Women among Dalit Communities of India with Special Reference to Certain Incidents in Kerala State

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Abstract

The concept of dalit is inherent in Indian society and will continue unless and until the inequality is ended by taking up a daring step by each and every individual in society. Dalit and their misfortunes had an age old history starting right from the inception of caste system in the holy scriptures. In fact the whole mischief based on caste started due to the misinterpretation of occupation based classification into something that determines one's caste by his birth. While analyzing in a scrutinized manner, it is very much clear that the rigidity of caste never even existed in the early vedic period. Thus, the whole caste drama plays and subsequent can be considered as the vested interests of an elite class always keen enough to inject the venom of caste in the society then and now. In the pre-colonial India, one can witness a society full of caste dogmatism and segregations, and even during the reign of British the situation didn't change as the imperial powers exploited the same situation for their own benefit. However, the condition still continued and is still going on as dalits and their problems. Dalit women are considered as dalit among dalits as they are already suffering discriminations on the ground of being belonging to a certain category of so called weak sex. This pathetic conditions further aggravates when they belong to dalits or the weaker sections of the society, who according to some high caste individuals are enjoying all concessions and benefits of the present society. Anyway, this is a fact that need to be addressed in a serious manner as most of the benefits that are meant for them is not reaching and are benefitted by some selfish individuals. The same scenario continues more or less everywhere in India. This is again affecting the progress of dalit woman as they are suppressing oppression in their own home, needless to say about the preservation of their rights in the present society. In fact they are not even aware of the opportunities provided over by the society for their upliftment, and even if somehow they know it nobody is there to rescue them from oppression and guide them in the right path. The situation gets special attention when analyzed from the society of Kerala, which is considered as the most literate among its other counterparts. This paper tries to assess the credibility of the same issue in the society of Kerala.

Keywords: Amnesty, Community, Concept, Dalit, Declaration, Gender, Human, Indian context, Knowing, Legislative, Rights, Sufferings, Universal.

Introduction

Human Rights derived from the UN summit is capable enough to provide each and every citizen of the world with rights that can ensure a better living condition from the perspective of the concerned individual as well as that of the society. Now, tracing back to the history it is very much clear that Human Rights have been initiated to bring about a drastic change in the society with a humanitarian view point addressing the various grievances of people all around the world.

However, ever since its inception to the mainstream society, lots of discussions, debates and other related activities have taken place so far, then also as one sees it people suffers in various countries owing to the inefficiency of the governing body of the concerned country to implement the same laws applicable to each and every individual all around the world irrespective of any cast, creed sex or community. In the Indian perspective , it seems as if it is an utopian concept to be enacted in a faster phase since, a society with caste and community thoughts still persist in the minds of people no matter how advanced they claim themselves to be. The case of women in India is yet another caste of study, with all the opportunities being opened right in front of them, still they are not able to access since, the restrictions that already persisted in the society regarding them are being enacted silently by the family members, relatives and concerned personals of the society or one can state that “Many of the ideas of gender equality that the earlier women’s movements fought for have been observed into society. Having taken advantage of equal education and opportunities, women today want to demonstrate their calibre.¹ though the destination point is known, pathway to the destination is unknown”, this is the better way to put the condition of women in India. Kerala, which is considered as the most literate state in India, is also not free from the clutches of this scenario, especially when it comes to the case of Dalit women. As it is said, Kerala society is the product of a long and complex historical process.² A lot of work needs to be done in order to bring them to the mainstream society. Hence, one should focus on the measures that need to be adapted to achieve the same.

Women and their Rights: Concept of Inequality in India

As mentioned earlier, women were denied the basic rights from the beginning itself save for certain time periods even before the inception of a male dominated society in this world. An ancient society where women enjoyed equal rights is an utopian concept as such, since most of those stories pertaining to the same are still to be established with ample evidences and thereby use its scope in the present society to address the grievances faced by women

of our society. The concept of women empowerment and gender inequality is not a novel one since many discussions and debates were conducted on the same. This particular notion is a necessity as far as society is considered since it ensures the all-round progress ranging from social to political level with impacts going globally. It is tempting to describe the history of human rights as a succession of intellectual breakthroughs and revolutionary declarations. Such an account, which has long dominated the study of human rights.³ As a matter of fact first ever world conference to address the issues pertaining to the problems faced by women was held in Mexico, 1975. This was followed by subsequent conferences in Copanhagen (1980), Nairobi (1985), Rio (1992) etc. which again dealt with the same issues faced by women all over the world. Among these conferences the most important one being that one held in Vienna in the year 1993 popularly known as the World Conference on Human Rights. It is here where women rights were given prior importance and their “cry” for gender equality received an international attention.⁴ In fact, the whole world along with its rulers approved to the very fact that gender equality and empowerment is absolutely necessary along with other aspects such as productivity, better job prospects, poverty eradication and social integration. Further developments and international co-operation were procured for the same on the fourth and fifth conferences subsequently. Furthermore, UN provided the base foundation for standing up for such a concept as gender equality among sexes by eradicating all those concepts that form the corner stone of such a discrimination. United Nations Human Rights Declaration needs special mention in this regard as it is” the one bridge/thread” that connects between women and their basic rights in the society. In fact, Universal Declaration of Human Rights (UDHR)⁵ is a historic document adopted by the United Nations General Assembly at its third session on 10th December in Paris, France. Though, Human Rights doesn’t have any gender based criterion as such, it just puts up certain characteristics that are applicable to both sexes despite any caste discriminations. This eventually paved way for creating International Bill of Human Rights in the year 1966 and ultimately in its execution in 1976. It contains over 30 Articles



stating the basic rights of human beings starting from universal brotherhood and equality up to the ways in which it can be brought to the practical world/experience without hampering the same rights enjoyed by one's fellow being. Each word in this charter speaks a lot about the wide perspectives held by the then rulers and the hidden meanings behind the clauses. The rules and regulations thus formulated show the significance they had given to such a concept. The very fact that 48 nations out of 58 approved to the charter itself bears testimony to its universal acceptance. Subsequent organizations such as Amnesty International,⁶ American Library Association, Youth for Human Rights International etc. took inspiration from the charter or document to formulate itself and thereby become champions of human rights in their own way of action. The Commission of Women/ Women's Commission can be considered as one such body formulated to protect them and raise their voice for equality in the society. This organization was also formed with the ardent support of United Nations Organization. When one tend to view the entire concept in the view point of India it is pretty much clear that Commissions and Organizations like Human Rights Commission and Women's Commission came into being by taking inspiration from Human Rights Declaration, as well as our own constitution where every article from 14 to 51 are stated as coming under the category of Human Rights. The negation and violation of these rights ends up in either the violation or negation of rights which is liable for punishment and further actions against the concerned individual or any number of personals. They contributed to this continuing effort in two important ways : "what are rights" and the concept of "humanhood", that is, "who is counted as a full person human being entitled to enjoy them"; and second by inquiring into multiple source of human right violation and monitoring compliance with human rights standards mainly by highlighting violations or abuse.⁷ In India Human Rights act was passed by the central government in the year 1993 with the help of NHRC of India, Which is an autonomous public body constituted on 12th October, 1993 under the Protection of Human Rights Ordinance of 28 September 1993. It is the statutory body formulated for the Protection of

Human Rights as such. The commission provides the provision to look after genuine matters and thereby take necessary actions. It has the sole capacity to co-operate with government and Supreme Court to resolve any issue, stating as the negation of human rights. A series of procedures are undertaken in each offices of Human Rights Commission in other states as well as in the center starting from tapal section up to the procedure of recommending suggestions to the concerned parties of the case. The composition of the panel consists of a Chairperson, who should be a retired Chief Justice of India. One member who is, or has been, a Judge of the Supreme Court of India. One member who is , or has bee, the Chief Justice of a High Court .Furthermore, two members also to be appointed from among persons having knowledge of, or practical experience in matters relating to human rights. In addition, the Chairpersons of four National Commissions (Scheduled Tribes, Women and Minorities), serve as ex officio members.⁸

Their duty being to inquire into the violations of human right violations, to intervene in court proceedings, to study detainment cases properly, review the safeguards provided under the constitution, to study about matters involving terrorism, treaties and other international issues, to suggest remedial measures, to promote research works involving human rights, encouraging NGO organizations and its growth, ensuring the proper execution of human right laws based on time to time amendments brought about in the laws governing different 'human societies'. In fact, those who have concentrated on the post-colonial developments in Kerala society and polity have rightly noted the wrong directions and distortions that had by then set in Kerala's social development.⁹ Following this pattern regional commissions and organizations came into being based on the proportion and functioning pattern followed by the central government through or with the guidelines provided in the Human Rights Act issued by the central government. In this manner, regional prototypes of National Human Rights Commission came into being as per the Act. As a matter of fact, Madhya Pradesh Human Rights Commission came into being in the year 1995 and that of Assam in 1996. Likewise, Kerala State Human Rights Commission came into being

on 11th December 1998 as per the law initiating its formation. Now a days most of the states in India have their own statutory body to safeguard the rights and privileges of their beloved population.¹⁰

However, one question arises pertaining to the whole thing about gender inequality and human rights. whether is it right to discuss about gender inequality in the context of Human Rights even when the concept of gender itself is not applicable to human rights as such. In the present world, one can witness the advances of women in various fields at a rampant rate. Here is where the problem arises even when they are advancing just like their male counterparts their rights are being restricted by the persisting society based on certain beliefs and customs which does not have any meaning at all. The people who propagate and their by limit the possibilities of women in the present world are using religion, culture, tradition male domination etc. as the tools to restrict and hamper their advances and to safeguard the interests of such culprits who are nothing but a burden and inerasable mistake of the society. Moreover, finally though it had been suggested that the historical configuration of new social power and the attendant imagination of a cultural totality was peculiar to Kerala, it certainly was not unique to the region even within the subcontinent.¹¹ According to a report by the United Nations, women earn less and are subdued to live the life of a house wife, even though they possess better qualification and better skills than males in doing any kind of job. Similarly, another survey by a private organization bears testimony to their honesty and sincerity in works assigned to them which again depicts an impressive graph better than men

This is not the case with job alone, even in this so called technological era they are denied their basic rights which is evident from the formulation of adequate laws and regulations to safeguard their rights and subsequent formulation of committees, commissions and organizations to ensure the safe running of the society and its mechanism without hampering even the basic rights to the female members. Kerala, which ranks first among the Indian States in terms of Human Development Index (HDI) and Gender Development Index(GDI), presents, however, a poor picture in terms of female work

participation.¹² The same process involved in it is a fake attempt to fool and trick the inmates of the society in making them believe that everything is going perfectly alright in the society, which however in reality is absolutely not right at all. In relation to this matter one need to understand that a society which is self-sufficient and capable enough to meet the basic requirements of every member in the society does not need rules, laws and regulations “to run the show for them”.

Since, this being a “fools game” being played upon the society one need to clearly understand that though society gives a clear picture where the women are enjoying equal rights and privileges as that of men. For example, now a days women are stated as being provided with equal opportunity in politics with seats allotted to them in constituencies, even in this case the whole truth is concealed.¹³ The clause to provide them equal opportunity is already inherent in our constitution still the governments adequately failed in implementing the same until this period a, and even when it is implemented they are being exploited by others and are being used as mere “nominees” without apt knowledge about politics and pol tricks regarding the same. In fact, they are acting as mere puppets at the hands of their masters (shrewd politicians). Now, in the cultural and religious field also one can witness the same discrimination being meted out day in and day out.¹⁴ If it is a society as it claims it is why is there separate competition sector for men and women. Moreover, in cultural and cinema field also they always tend to promote male dominated performances and story lines. Even if somehow they make it to the top other barriers makes it difficult for them to show to the entire the society. Finally, no matter whatever they does in this society they had to face severe criticism from a society which is keen enough to see their flaws rather than their merits. Women have been walking on a tightrope since the time they took up leadership positions in local bodies. Women were being pulled in two directions – on the one side, by the political party that supported them and on the other side, by the women’s organization, which clamored for justice.¹⁴ In fact the problem is with the present society who with the help of medias and other sources is depicting women as mere sexual objects who is inclined to



sex and they are not interested in any other factor other than this. The same can be seen in the issues related with religion caste and community as well. They are even denied their basic right for choosing a partner of their liking for they are divided based on the criterion of caste community religion social status, financial background etc. Every religion speaks about universal brotherhood gender equality and "love all songs" every now and then, but when it comes to the practical life are they following it. If yes, then why when it comes to the matter of love and other relations the same factors which are supposed to unite them becomes the greatest barriers ever. D.N.Jha suspected Gupta Age as Golden Age based on its social flaws, especially due to its disrespectful and maltreatment towards women. In this manner, why can't we analyze the condition of gender inequality persistent in our society. In his book he rightly points out that the condition of women continued to decline. In this period certain features emerged which became characteristic of their position in subsequent times.¹⁵ One need to clearly understand that advances in a society is nothing if it haven't achieved social stability and gender equality in every aspects of life.

Even when society is demanding full credit for uplifting women's condition one should overlook this very fact by stating the number of domestic violence reported per year, divorces, child abuses, increasing number of rapes, denial of educational rights to children, cases of female infanticides etc. Now and then society maintained a discriminative as well as subjugated attitude towards women. Gender inequality in the field of education is a serious issue which must be dealt with better education that can ensure the upliftment as well as holistic development of women of India and other states. Female infanticide is yet another contested issue in this respect. Between 1965 and 1975, the concept of emancipation became the central concept even in educational science where, for a number of authors, it actually replaced the concept of education itself.¹⁶ This usually takes place in rural areas as their mindset and beliefs adamantly make them believe in the fact that a "female child is a burden rather than an asset". Hence, this particular thought influences them to do atrocities to female child including that of

female infanticide, depriving them of their nutrition, education etc. As a result of this sex ratio is very less in other states as compared with that of Kerala. Sex ratio is considered as one of the indicators of social development. Another problem that persisted in our society was that of early child marriage and early conception. This practice was prevalent in the early society as the hierarchical structure of the then society necessitated and supported such kinds of activities. These activities faced strict resistance only after the inception of reform activities undertaken by Brahma Samaj and its stalwarts. Native Marriage act of 1872 declared child marriages as offence and by 1891 Consent Act was also passed which started the destruction of this particular evil practice. In the same way, other evil practices pertaining to women such as sati system purdah system polygamy, polyandry etc. met a major set-back due to the valiant efforts by the social reformers of India with the help of the then government that ruled over India. Likewise, the valiant efforts of social reformers like Ishwar Chandar Vidyasagar could not be forgotten especially in the case of Widow Re-marriage Act (1856)¹⁷ and later efforts were made by certain leaders regarding their right to vote in the elections, which however was inspired by such great movements from other nations. Taking these things into consideration one must understand that women empowerment and eradication of gender inequality is a must for the overall development and progress of the society since it empowers women with economic, social, political, educational spiritual and gender strength. In fact it is the sole key to social development. Even in those days, native women were able to inject something of India into the world of the British.¹⁸ However, in the light of contemporary cases of rape and other atrocities against the women one must abstain from doing such things since, a traditionally and morally rich country like India when resort to activities such as rape, child abuse, immoral trafficking, dowry killings etc. can destroy the dignity and identity of our country.

Dalit Women and Human Rights: A Case Study Based in Kerala State

Dalit is a boarder term signifying a larger section of the people who were once termed as untouchables by

the Indian caste system. They were mostly classified as those belonging to fifth varna or caste system. They were denied almost every rights enjoyed by other four varnas¹⁹ of Indian caste system. The word meaning Dalit, means “oppressed” in Sanskrit and “broken/scattered” in Hindi. They now are the champions of various religious beliefs, including Buddhism, Christianity and Sikhism. The term dalits was in use during the reign of British Raj census classification. It was further popularised by Dr. B. R. Ambedkar (1891–1956), himself a Dalit, Later, in the 1970s, the term Dalit was termed unconstitutional and was replaced by the term “ scheduled Castes “. This particular group as one knows it suffered great social, cultural, political, religious and economical disabilities during the ancient period right from the inception of varna system into the society. Furthermore, the slave castes were so badly placed in traditional society that these abnoxious usages were also to be strictly observed in every day life.²⁰ Even when India was under the control of foreigners , the condition was not different , that is what the records related with the corresponding period speaks for itself. The only thing that happened out in there was conversion to other religions other than Hinduism by the so called Dalits, in order to escape caste related discriminations and the denial of Human Rights. Then also the condition never changed since, the same type of discriminations already prevalent in the society still persisted in another form among the newly emerged “converts” in varying religions. The situation was somewhat like an “old wine in new bottle”. The situation of Dalits still continued to be in a pathetic state. In most of the cases the Montagu-Chemsford reforms provided a spark for this organization of dalits but the crucial background was the massive economic and political upheavals of the post-war period.²¹ However, during the tenure of British Raj some reformers with the help of the officials in British regime , tried to bring about certain changes in the society which directly or indirectly addressed the issues of depressed classes as well. The issues related with the award of communal awards was yet another issue related with depressed classes having far reaching socio-political impacts. Even at this juncture it is astonishing to see that Gandhi, Father of Our Nation opposed it stating

that it will bifurcate the entire society based on communal lines. One of the major Advocate for considering this award was Dr. B.R. Ambedkar. However, at the end it went in favour of Gandhi and his supporters and the communal award was not granted to the segregated section of the society. Two reasons that have been suggested are the unanimous dalit opinion , aside from Ambedkar, was in favor of separate electorates, and that Ambedkar felt bound to represent this; and Ambedkar’s personal experience of Gandhi’s hardlin and even arrogant attitude.²² Anyway, after Independence and subsequent drafting of Constitution gave much hope to the so called Dalits or depressed classes, since it contained clauses ensuring the protection as well as the ways that can provide for the upliftment of these low castes. However, in the post-independent era also they are facing social disabilities since the procedures that are already meant for their advances are either not reaching them or they are being exploited by the so called “mediators”, who seems to act for their own personal benefits. Ever since independence many commissions and organizations have been formulated in India along with certain laws to safeguard the rights of human beings and put everyone in the same footing in all spheres of life. Furthermore, many measures were also taken by central as well as corresponding state governments of India to ensure proper functioning of the system again ensuring equal rights for all despite caste, creed, community or sex. One need to admit to the very fact that India is one among those countries who is experiencing discrimination in all, levels including gender. Religion was the most important site of conflicts between the Dalits and the dominant castes in the late nineteenth century and early twentieth century in Kerala. From the mid-nineteenth century onwards, these conflicts had brought European missionaries and Dalits into a ‘contact zone’ that had substantial potential for latter’s transformation.²³ In a caste and community ridden society like India, the case of Dalit women and the protection of their Human Rights deserves special mention. Hence, the case study of Kerala is taken since it is considered as one of the most literate and socially advanced state in India. The study related with the same reveals shocking facts. Human Rights Declaration contains about 30



Articles, the negation of which can be considered as the denial of human rights. Let's take the fact of atrocities against them, according to a recent report, released by National Commission for Scheduled Castes ,atrocities against Dalits were increasing in Kerala and the state government has failed to ensure their safety accordingly. In fact , they have been receiving lots of complaint of atrocities especially against Dalit women and on diversion of funds meant for the Scheduled Castes for other purposes.²⁴ Based on the figures of the Crime Records Bureau, as many as 883 cases of atrocities have been reported against Scheduled Caste people in the state between June 2016 to April 2017. Furthermore, 12 murder cases were reported along with 155 rape attempts. This all incidents points out to the inefficiency of Kerala state government to ensure their safety based on the criterions of Human Rights. The cases related with the shaming of Dalit women is yet another instance where members of political parties are also involved. Another fact that need to be given much more importance is about the fact that in which ever society whether it be Kerala or any other, Dalit women are suffering discriminations among their own caste because of the very reason that their castes are probably male dominated ones.²⁵ In the educational sector also they are facing discriminations as far as the faculty members and student proportion is considered .Mostly during admission procedures and related academic activities, often their posts are called forth again for the want of desired number of candidates.²⁶ This eventually happens either because of the unawareness of these information or they are restricted by the male dominated counterparts in going in to the main frame society. According to 2001 census the overall literacy rate of SCs which was 79.7 per cent at 1991 census, has increased to 82.7 per cent at 2001. This is significantly higher than the national average of 54.7 per cent overall of SCs. Male literacy has increased from 85.2 per cent to 88.1 per cent while female literacy has gone up from 74.3 per cent to 77.6 per cent during 1991-2001.. The literacy rates for SC and ST population, though lower than those of the general population in the state, are higher than even the literacy rates for the general population in India. SC students constitute 10.7 per cent and ST students 1.2 per cent of the total

enrolment in schools. Their share in enrolment is commensurate with their share in the school going age group population (10.4 per cent for SCs and 1.2 per cent for STs).Likewise, in educational sector in Kerala also they form a sizeable amount in agricultural sector as well as other daily wages jobs.²⁷ Here also they are facing discrimination as they are mostly under paid and are not even aware about their basic rights. This eventually leads to the exploitation of the same by other authorities with evil intentions. Domestic violence in the households of Dalit families is a fact hitherto unknown to the public .In fact they are the ones who are suffering the most regarding the same. However, the main stream society is unaware of it since most of the cases are not reaching family courts or other concerned authority for the want of adequate financial assistance and adequate knowledge regarding it. Government must take immediate measures to ensure their rights by promoting the works of the commissions authorized to ensure their safety and preservation. Their security in the Kerala society is always at stake as shows the incidents related with them, which again government must take initiative to ensure it by the use of effective policing technique and enforcing laws that can ensure their protection at any cost. Moreover, awareness programs must be initiated to bring forth drastic changes in the society so that they will know about their position in the society; their rights and the methods and ways to access it without exploitation from other selfish minded people in the society. However, in this context one need to mention that , a small number of Dalit civil society activists located both within India and South Asian diaspora took steps to internationalize their grievances as human rights issues beginning in the early 1980s.²⁸ Justice delaying is another instance one can witness in Kerala society .Many of the Dalit households are not aware about the details of judicial system in our country, which in long run is adversely affecting them as when instances of approaching a court for justice comes in their way, they completely lose track as of what to do and which way to do it. In this scenario they are often misguided and the deserved justice to them is delayed to them by certain parties always aiming selfish gains in terms of money and other luxuries, which are being taken away from

them in the pretext of giving them justice. The same goes with arrest and the justice given by certain tribunals. An effective monitoring system must be put into action to check the corruption nepotism and other types of vagaries. Now a days one can witness most of the women being offered job outside India as servants, house maids or as nurses. Most of the households especially that of the Dalit due to financial constraints fall in this offers and give their money to go out of India. Women who are exported to other countries are not ensured any safety as of about the work or any other details regarding the same. As a matter of fact a lot of cases are being reported in the police stations about fraud being conducted in this area. The women who go out there are either sexually exploited or maid to work in a low paid jobs. Some cases are even reported about deaths of dalit women in foreign lands. This eventually shows that their safety is at stake everywhere even outside India. Again this can only be resolved with the help of emigration agencies and their utter vigilance in this matter. Moreover, government must publish the list of those agencies that are legal and are authorized to help people migrate outside India for job and other related purposes. Dalit women falling into the hands of sex rackets now a day is not an uncommon phenomenon for the want of money. Gender appears as a status differentiation endowed with sexuality-like characteristics. When viewed under this aspect, gender injustice appears as a species of misrecognition that cries out for redress via recognition.²⁹ State government and Central governments should give importance to initiate plans that can ensure job to people of these dalit households so that they don't have to sell their daughters and wives to immoral trafficking as a means of procuring money through illegal means. Furthermore, one can witness that these dalit women are also being exploited in the name of community and religion. They often fall prey to these kinds of exploitation due to the lack of proper guidance. Besides they also suffer discrimination in marriages, birth and death as the society considers them as second grade citizens and are treated in that manner ensuring their suppression and discrimination in every aspect of social sphere.³⁰ Though they are given equal participation in adult franchise, their

participation in politics is still a matter of debate and question. Even though they had executed the plan of equal proportion of constituency seats to women, The fact still remains as of how many dalit women are given the opportunity in the same, is a fact which the concerned government need to take into consideration seriously. Moreover, they are also experiencing segregation in the field of health sector as well as in the cultural field., which can only be resolved only with the active involvement of ngos, government agencies sports councils and other organizations that are entrusted to ensure equal participation in all aspects of human life. Organizations who are entrusted to do the same with the help of other subsidiary organizations also play a vital role in this regard.

Conclusion

Human rights was in fact formulated to ensure equal rights for everyone in the world regarding various aspects of life. However, one can witness the denial of the same in various countries due to n number of reasons. This aspect attains a new dimension when one tends to view the entire scenario in respect of India which depicts a bifurcated society in terms of caste community, religion, economy and gender. Even when considering about all these aspects and its adverse impact upon the delivering of human rights to each and every citizen in the country, there is no area which deserves serious study as that of the area related with dalit women The idea of human equality does not deny the importance the importance of heredity, character and all those incalculable factors that mould the lives of people.³¹ Their cases in all other states are even worse than in Kerala one of the highly educated and socially advanced state of India. However the recent studies concerning the same reveals the dreadful picture of dalit women in Kerala which need to be resolved with certain effective measures that needed to be implemented as soon as possible to ensure their safeguard and protection which otherwise can affect the entire developmental phase of the society in an adverse manner.



End Notes

- ¹Mukta Mittal, *Women Power In India*, New Delhi, 1995, p.9.
- ²P.F.Gopakumar, *Faces Of Social Reform In Kerala*, Thiruvananthapuram, 2015, p.3.
- ³Thomas Poell, *Studying The History Of Human Rights*, *Krisis: Journal For Contemporary Philosophy*, New York, 2007, p.43.
- ⁴<http://www.ohchr.org/>
- ⁵Universal Declaration of Human Rights (UDHR) is a milestone document in the history of human rights drafted by representatives with different legal and cultural backgrounds, Declaration was proclaimed by the United Nations General Assembly in Paris on 10 December 1948 (General Assembly resolution 217 A) as a common standard of achievements for all peoples and all nations..
- ⁶Amnesty International is a London-based non-governmental organization focused on human rights. The organization claims to have over 7 million members and supporters around the world.
- ⁷Sukhadeo Thorat, *The Hindu Social System & Human Rights of Dalits*, New Delhi, 2004, p.1.
- ⁸Interview with Adv.Sivaraman, a personal working in the Human Rights Department Plamoodu, Trivandrum, dated 19-03-2018.
- ⁹M.A.Oommen, *Dreze-Sen Theory of Public Action And Kerala's Development Experience*, New Delhi, 2000, p.27.
- ¹⁰Kerala Gazette Extraordinary, G.O(P)No.523/98/ Law, S.R.O. No.1065/98, Vol.XLIII, Thiruvananthapuram, 11th December, 1998.
- ¹¹Articles 243D(3), 243D(4), 243T(3), 243T(4) etc. provide equal opportunity for women in Panchayath, Municipalities and other Constitutional bodies in India.
- ¹²Lakshmy Devi K.R.,*Education, Employment and Job Preference of Women in Kerala: A Micro-level case study*, Discussion Paper No.42, Thiruvananthapuram, 2002, p.7.
- ¹³G.Aloysius, *Interpreting Kerala's Social Development*, New Delhi, 2005, p.23.
- ¹⁴S. Radha, *Bulu Roy Chowdhury, Women in Local Bodies*, Discussion Paper No. 40, Thiruvananthapuram, 2002, p.9.
- ¹⁵D.N.Jha, *Ancient India: in Historical Outlines*, New Delhi, 2008, p.159.
- ¹⁶Christoph Wulf, *Critical Educational Science*, New Delhi, 2015, p.26.
- ¹⁷*Widow Re-Marriage Act*, The Hindu Widows' Remarriage Act, 1856, also Act XV, 1856, enacted on 26 July 1856, legalized the remarriage of Hindu widows in all jurisdictions of India under East India Company in the then Indian scenario.
- ¹⁸Amar Mishra, *Writing Nation's History: A Study of Three Postcolonial Texts*, Jaipur, 2014, p.19.
- ¹⁹Varna system says about the four-fold division of the caste where the whole Indian society was divided on the ground of their occupation. In this manner, they were classified as Brahmana (Priestly-Class), Kshatriya (Warrior/ Kings), Vaisya (Merchant-Class) and Sudras (The last class doing menial jobs for the other three castes.
- ²⁰K.K.Ramachandran Nair, *Slavery In Kerala*, Delhi, 1986, p.38.
- ²¹Bharat Patankar, Gail Omvedt, *The Dalit Liberation Movement in Colonial Period*, New Delhi, 2004, p.13.
- ²²Philip Mason (ed.), *The Gandhian View of Caste and Caste after Gandhi, India and Ceylon: Unity and Diversity*, Oxford, 1967, p.37.
- ²³P.Sanal Mohan, *Modernity of Slavery: Struggles against Caste Inequality in Colonial Kerala*, New Delhi, 2015, p.152.
- ²⁴The Hindu, July 1st 2017, Chennai, p.12.
- ²⁵<http://www.dnaindia.com/india/>
- ²⁶Field survey conducted on certain corporations and panchayaths dated 17-03-2018.
- ²⁷Reports and statistical data released by National Commission for Scheduled Caste and Scheduled Tribes.
- ²⁸Clifford Bob, *Dalit Rights are Human Rights*, New Delhi, 2008, p.9.
- ²⁹Nancy Fraser, *Social Justice in the age of Identity Politics*, New Delhi, 2008, p.11.
- ³⁰Field survey conducted among the dalit households of a backward area dated 19-03-2018.
- ³¹K.M.Panikkar, *Caste & Democracy*, New Delhi, 1933, p.18.

Dr. Babasaheb Ambedkar's Perspective on Universal Education System in India to Establish Casteless Society

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Abstract

Unity in diversity is the unique features of India, where we find different language, caste, creed, race, religion, region, colour and sub culture. Even though, India has a glorious history and cultural heritage. Geographical factors of this country are responsible to bring out all the sub cultures of Indian sub continent together irrespective of their differences. But the socio-political and economic conditions of this country has divided people in the various groups based on their regional factors. Therefore, we find disparity and discrimination among the Indian society. Dr. B.R. Ambedkar a renowned philosopher and makers of the modern India has observed and understood the Indian psyche. He pointed out that the educational disparity and discrimination need to be alleviated and that can be brought out by establishing a new society based on equality. According to Dr. Ambedkar Liberty, Equality and fraternity are the basic fundamental principles of every human being in the society. Further, he says that none of the society can achieve the code of a common culture based on the basic fundamental principles and it is the keystone of the democracy. The same has been reflected in the Indian constitution. In fact, it is the soul of the Indian constitution. Dr. Ambedkar wanted social justice through the education to remove the inequalities and according equal opportunities to all citizens of India in social, economic and political affairs. Education is the only tool to remove the discrimination and inequalities available in the Indian orthodox society. Therefore, he has included basic democratic human values in the Indian constitution. He also pointed out that the state should promote and frame the welfare schemes and policies based on fundamental principles of democracy like liberty, equality, fraternity and social justice. This paper attempts to critically evaluate Dr. Ambedkar's perspective on universal education system in India that would create a 'new casteless society'.

Keywords: Heritage, Diversity, Universal System, Sub-Continent, Disparity, Discrimination, Fundamental Values, Liberty, Equality, Fraternity, Democracy, Dignity, Integrity, Quality, Curriculum, Opportunity

Introduction

Dr. B.R. Ambedkar a renowned international scholar has spent his whole life for the uplift of downtrodden people in India. His highest priority was to provide education to the downtrodden people in this country. Therefore, he spent his whole life for the welfare of weaker sections of society and the center point of his whole struggle was the liberation of the downtrodden from orthodox Indian society. Dr. Ambedkar believes that education is the only key to overwhelm the downtrodden people from the orthodox society and their mentality. The discriminations in Indian society based on race, religion, caste, region and so on was depressed the lower caste Hindus and Indian women. Therefore, they became slaves. Dr. Ambedkar wanted to abolish such kind of social slavery.



Therefore, he has focused on education and used education as a tool to abolish social slavery from Indian society. Dr. Ambedkar belongs to untouchable community from the lower caste Hindus and great sufferer in every field including education. He was prevented for taking formal education from a common education system. He pursued his study in such crucial conditions where he was not allowed to drink water in public place, was not allowed to sit in class room. None of the conditions and educational atmosphere was favorable to him. Even then he proved his ability and became a symbol of knowledge and icon for the whole universal society.

As he was trying to abolish orthodox mentality, socio-economic inequality, social atrocities, injustice, exploitation and evil practices and caste-based discrimination amidst Indian society, he was confident about bringing about desired changes through the education.

While delivering a speech on the Bombay University Act amendment bill in the Bombay Legislative Council on 5th October 1927, Dr. Ambedkar gave a message to his followers: 'Educate, organize and agitate'.¹ It was a strong message to the downtrodden people for their uplift and awakening. Dr. Ambedkar also warned to his followers that nothing can be happen without education. Therefore, he has given importance to universal education and its need to emancipate the downtrodden people from their worst condition.

Again, while delivering the welcome speech at Milind College Aurangabad, Ambedkar's educational thoughts were reflected in it. He pointed out the value of education in the following words: "Coming as I do from the lowest order of the Hindu Society, I know that what is the value of education. The problem of raising the lower order deemed to be economic. This is a great mistake. The problem of raising the lower order in India is not to feed them, to clothe them and to make them serve the higher classes as the ancient ideal of this country. The problem of the lower order is to remove from them that inferiority complex which has stunted their growth and made them slaves to others, to create in them the consciousness of the significance of their lives for themselves and for the country, of which they have been cruelly robbed of the existing social

order. Nothing can achieve this purpose except the spread of higher education. This is in my opinion the panacea of our social troubles."²

It is apparent from his view that 'education' is the only tool to provide strength and opportunity to the downtrodden and women to fight against inequality, caste discrimination, poverty, civil rights and for their dignity. Dr. Ambedkar emphasized that inferiority complex was prime hurdle for their stunted growth and made them slaves. Through proper education consciousness can be created among themselves which will ensure dignity of their life.

The broad and clear vision of Dr. Ambedkar was to create a new casteless and egalitarian society in India through universal education system which will be based on the democratic principles of liberty, equality, fraternity and social justice for the nation building and to maintain communal harmony and peace in society and prosperity of the individuals as well as society at large. While drafting the Indian Constitution Dr. Ambedkar took care about it and therefore he rejected Marxist Ideology and adopted Buddhist philosophy that enshrines the basic principles of liberty, equality and fraternity. Thus, Dr. Ambedkar declared in the preamble of Indian Constitution that, we, the people of India having solemnly resolved to constitute India into a Sovereign, Democratic, Republic and to secure to all its citizens.³ The Constitution of India was adopted on 26th November 1949 by the constituent Assembly.⁴ The preamble of the constitution has been amended by the 42nd constitutional Amendment Act (1976) which was added two new words- Socialist and Secular. The original preamble included only three words (Sovereign, Democratic and Republic) and in the 42nd Amendment Act 1976 the remaining two words (Socialist and Secular) were incorporated in the preamble of the Constitution.

While drafting the constitution Dr. Ambedkar focused on welfare of the downtrodden people of India. Therefore, through the basic fundamental rights, educational rights and protections of reservation he provided special constitutional safeguards to the SCs and STs for their social security. Even though the guiding principles of the constitution have also insured that the state shall promote the welfare schemes to the Scheduled Caste and Tribes

for their uplift. It is also suggested that the state shall work to reduce the socio-economic inequality and to provide equal opportunities and status to the downtrodden peoples not only individuals but also people residing in groups of society at various places in the different areas or engaged in different vocations.⁵ Dr Ambedkar wanted to establish the principle of one man, one vote and one value not only in the political life in India but also in social and economic life. His vision was to have a political democracy to be accompanied by social democracy.⁶ The path to establish social democracy in India was started by Dr. Ambedkar forcefully put forward the principle of 'one man, one value' while addressing in the second roundtable conference at London on 19th January, 1931. Dr. Ambedkar declared in the roundtable conference as 'I belong to that class which takes its stand on democracy and which seeks to destroy monopoly in every shape and form. Our aim is to realize in practice our ideal of one man, one value in all walks.'⁷ He wanted to establish socio-political democracy based on equality. But political democracy cannot last unless there lies at the base of it social democracy. While speaking on social democracy he says that, social democracy means a way of life which recognizes liberty, equality and fraternity as the principles of life.⁸

The debates and speeches of Dr. B.R. Ambedkar in the constituent assembly on the draft constitution were the milestones in the history of India. His arguments and justifications on each concept or word in the constitution reflect his philosophy and vision to making the Modern India. His dream of egalitarian and casteless society to some extent remains a dream until it is transformed into reality.

His philosophical bent of mind, his profound knowledge of all religions with their philosophical and epistemological foundations and his clear understanding of Caste and Class based Indian society and their psyches made him see India as a completely diverse nation and hence it was very difficult task to tie them in a single thread. But he did it in a very systematic way without hurting their religious sentiments. Therefore, through his dedication, scientific temperament, sincere efforts and his patriotism and unbiased attitude he succeeded to provide great and rich Constitution to the nation.

The nation will always remember to Dr. B.R. Ambedkar for his great contributions, service to the nation. But his vision and dreams are yet to come in reality to establish casteless society which is only possible through education.

Dr. Ambedkar's Philosophy of Education

According to Dr. Ambedkar the real purpose of education is to gain knowledge. He lists two purposes of knowledge: First, to acquire it for betterment of others and secondly to use it for one's betterment. This makes it clear that the tool of education will be useful for the betterment of self and the others too.

Dr. Ambedkar's approach towards the universal education system was not only to secure socio economic equality but it will promote dignity, equality, fraternity and assuring dignity of individual and unity and integrity of the nation. The idea of universal education system is enshrined in the Indian Constitution through the articles 14,15,21A, 39 and article 46 and preamble of the Indian Constitution assured the dignity of the person and equality of the status of every individuals irrespective of his or her race, religion, language, region, caste and community. Therefore, free and compulsory primary education of all the children up to the age of 14 years in the country must be ensured and promoted. While taking stock of the development of education in Indian society before colonial rule, Dr Ambedkar found that the education was available only to the higher castes.⁹ It means the lower caste in India was completely restricted from pursuing any kind of education. The untouchables and women in India were cut off from main stream society they were not given common rights even the basic rights which are supposed to get any human being by birth. He writes in his Writing and Speeches, "Education is something which ought to be brought within the reach of everyone. The education department is not a department which can be treated on the basis of quid pro quo. Education ought to be cheapened in all possible ways and to the greatest possible extent".¹⁰ To him education is not the matter of just quid pro quo meaning a return gift given to those who have rendered something to the education department, but it must be made open to each and every individual. His clear intention was to provide education without



discrimination based on caste, creed, race, religion, and gender. He repeatedly emphasized on equal opportunities in education to all people of the country irrespective of their caste, race and religions.

Ambedkar's social and educational thought remains surprisingly neglected in Indian educational discourse. Education was assigned a revolutionary role in Ambedkar's conception of social progress and in his vision of a just and egalitarian society. It was identified as a key instrument of liberation from oppressive structures of Hindu caste-patriarchy as well as of reconstruction of a new social order.¹¹ The social progress of any society depends upon the human values and it can be transformed through the education. Therefore, it is a responsibility of any state to provide value education to its society to promote spiritual development of the citizens of the society and to maintain the communal harmony for the progress and prosperity of any country.

Pooling System

To ensure the quality in higher education he devised a system of developing expertise through pooling system. By 'pooling system' in the field of education he meant that instead of engaging many teachers of the same subject at different colleges in a particular city, these teachers in a particular subject should work together as a homogeneous group. To put in his own words "If these colleges could be induced to pool their teaching and library resources it would not only produce a strong specialized professoriate, over and above this, it will produce a professoriate adequate to deal with both under-graduate and post-graduate work and thus obviate the wastage of university resources". (Government of Maharashtra; 1982:45-48)

Conclusions

Dr Ambedkar's thoughts on education emphasize the importance of education in liberating people from slavery. It's only education that establishes an egalitarian and casteless society. He has taken every effort to make it the constitutional provisions. He promoted the idea of universal education system wherein no one is deprived of the fundamental rights of education. He disliked the idea of discrimination in terms of giving education to the select few. He

furthered the notion of pooling system to give maximum quality at minimum cost. Thus his vision and action on education certainly create a society protecting human rights that is still relevant.

End Notes

¹Sirswal, R. D. (2011): Dr. Ambedkar's Ideas on Education and social change, *Weslyan Journal of Research*. Vol.4, No.1

²Fernandes Ana Leeta, (2003). An In-depth Educational Study of the Life & Work of Dr. Babasaheb Ambedkar with Special Reference to Philosophy & Sociology of Education (Unpublished doctoral Thesis) submitted to University of Pune.

³<http://www.constitution.org/cons/india/const.html>

⁴https://en.wikipedia.org/wiki/Forty-second_Amendment_of_the_Constitution_of_India,1976.

⁵https://en.wikipedia.org/wiki/Directive_Principles_Constitution_of_India-Part_IV_Article_38_Directive_Principles_of_State_Policy

⁶Ibid,,Pg.76

⁷Lokhande, G.S: Bhimarao Ramji Ambedkar: A study on Social Democracy, Intellectual Publishing House, New Delhi, 1982 Pg.38

⁸Sudhi Mandloi an article entitled 'Dr. Ambedkar's Philosophy on Democracy and his Dissent: An Analytical Study of Ambedkar's Socio-Political Ideas' published in *Online International Interdisciplinary Research Journal, {Bi- Monthly}, ISSN 2249-9598, Volume-V, Jan 2015 Special Issue, Pg.248*

⁹https://www.researchgate.net/publication/322695770_DrBR_Ambedkar's_views_on_Education [accessed May 02 2018]

¹⁰Babasaheb Ambedkar: Writing and Speeches, Vol II, pp. 40-41

¹¹Velaskar, Padma, Education for Liberation: Ambedkar's Thought and Dalit Women's Perspectives. Sage Journal, 2012



Dr.B.R.Ambedkar's Perception of Labour Consciousness in India with Special Reference to Strikes in Bombay (1924-1938)

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Abstract

Dr. B.R. Ambedkar was a great socio-economic and political thinker who has made outstanding contributions in the overall development of India in various capacities. He was instrumental for initiating number of enactments of labour legislations for the development of Indian labouring class which has become a central theme of India's labour policy. He was a prominent labour leader and saw the problem of labour from both economic and social point of view. He argued that the problems of labour are lies in the social economy of our country. His scientific approach combined with different policies including economic and political reforms led to the strengthening of Indian Labour Movement. The Indian labour movement was dominated by the Communist-led trade unions in the first half of the twentieth century and several calls were given for strikes by textile unions. Dr.Ambedkar was not in favour of continuous strikes because of its politically motivated nature and due to its impact on depressed classes.During these strikes, Ambedkar, through his speeches and articles in his newspapers, Bahishkrit Bharat and Janata, appealed to the Dalit workers to refrain from joining the strikes on the grounds that they were politically motivated and would bring economic distress to them.As a being 'Organic Intellectual', his perception of labour was differed with the leaders of his times. In this paper, an attempt is made to study Dr. Ambedkar's perception towards the Labour consciousness in India with special reference to strikes in Bombay from 1924 to 1938.

*Keywords:*B.R. Ambedkar, Communists, Consciousness, Indian Labour movement, Strikes.

Introduction

The history of labour movement has been focused on strikes and cotton textile industry as these two regions were dominated by labour leaders.The history of labour movement written by progressive Indian upper caste and western scholars and historians failed to sensitize the scholarly world on the question of caste.About writing history of labour movement, SumitSarkar is of the opinion that history from below in this largely unexplored field would probably lead to a greater emphasis on the forms of consciousness and self-activity of the working class, without belittling of course the indispensable and often heroic role of pioneer labour organizers.”¹ Whereas in the view of Sabyasachi Bhattacharya, “although some of the works purport to cover the ‘labour movement’ actually it is a species of institutional history disarticulated from the deep-structure of its socio-economic context.



Finally, some of these trade union histories also appear to merit Hobsbawm's criticism of a similar tradition in British labour history: it tended to identify class and movement and organization or leadership of organization, thus by-passing actual social realities.²² Therefore the study of consciousness of Indian labouring class is required to study with the Indian labour movement.

Dr. B.R. Ambedkar has emerged as the prominent figure and a great socio-economic and political thinker in the first half the twentieth century who has made outstanding contributions in the overall development of India in various capacities. He has established Independent Labour Party in 1936 to address the grievances of landless labourers, industrial workers and agricultural labourers and poor tenants. He has worked for the abolition of MaharWatan and Khoti system. He was also worked as labour minister in Viceroy's Executive Council from 1942 to 46 and was instrumental for initiating number of enactments of labour legislations for the development of Indian labouring class.

The Indian labour movement was dominated by the Communist-led trade unions in the first half of the twentieth century and several calls were given for strikes by textile unions. Dr.B.R. Ambedkar's approach towards these continuous strikes was different than other labour leaders. He was not in favour of continuous strikes and during these strikes, Dr.Ambedkar, through his speeches and articles in his newspapers, Bahishkrit Bharat and Janata, appealed to the Untouchable workers to refrain from joining the strikes on the grounds that they were politically motivated and would bring economic distress to them. In this paper, an attempt is made to study Dr.B.R. Ambedkar's perception towards the labour consciousness in India with special reference to strikes in Bombay from 1924 to 1938.

Theorising Labour Consciousness

Consciousness characterizes an individual's or community's cognitive comprehensibility of its objective conditions as well as its subjective awareness that, in turn, forms through social experiences, political struggles and cultural traits. According to Susan Blackmore, "Consciousness means subjective experience or phenomenal

experience."²³ Consciousness is moulded by the gamut of experiences, right from childhood we gather that makes our consciousness consolidated and that fixed our views, our perception, our psyche, our capacity to understand.

For the study of the concept of Labour consciousness, Marxism is the most notable school that attempts to deliver both a 'Theory' and 'Method' for understanding the term consciousness. Since nineteenth century disciplines of different events influenced the course of human journey and perception of human existence and perceptions of the past. Marx and Engels expressed their views on the term 'Consciousness' in their various writings by giving importance to economic factors. Marx and Engels wrote in the Preface of 'A Contribution to the Critique of Political Economy', "the mode production of material life conditions the social, political and intellectual life process in general. It is not the consciousness of men determines their being, but on the contrary, their social being that determines their consciousness."²⁴

The problem of caste hierarchies persisting among working class people, despite the equality of class, has not been adequately problematised. Caste hierarchy is rooted in oppressive Hindu religious and social practices, but it is not merely ideological as it has a material dimension as well. Labouring activities in India have been and continue to be performed by those belonging to underprivileged castes. An exclusive focus on class tends to obscure this central dimension of Indian social reality. Moreover, despite their contribution to labour and labour movements, Dalit voices are not heard adequately in these contexts. Further, as the experiences of many from underprivileged castes reveal, the acquisition of economic rights has not necessarily freed society from the scourge of caste. Hence, one cannot assume that class consciousness will automatically rid society of caste discrimination, or that the struggle against exploitative class relations is identical to a similar struggle for removal of caste inequality.⁵ Therefore the study of labour consciousness is necessary to understand their psyche and socio-economic, religious and political factors which makes their consciousness consolidated in the Indian context.

Strikes in Bombay and Dr. Ambedkar's interventions

Due to rapid industrialization number of textile mills was started by business communities in India in the early beginning of the Nineteenth Century. The modern period in the history of Bombay can be said to have dawned in the eighteen thirties. The various developments in and around Bombay paved the way for the pioneering of the cotton mill industry in Bombay. Between 1860 and 1920 the entire market economy of the city grew a pace in association with the growth of the mill industry.⁶ By the end of the 19th Century Bombay had become, with its over eighty textile mills, India's largest textile centre. It was the largest employer of workers. Most of the workers employed by the mills were came mainly from Deccan and Konkan and lived in close proximity of their place of work in the regions of Lalbaug, Sewri, Parel, Currey road, Dadar and Byculla. By 1921, an enormous 84 per cent population of the city had been born outside it.⁷

The Indian labour movement was dominated by the Communist-led trade unions in the 1920s and several calls were given for strikes by textile workers in 1924, 1925, 1928, 1929 and 1934. During these strikes, Dr. Ambedkar, through Bahishkrit Bharat and later, Janata, appealed to the Dalit workers to refrain from joining the strikes on the grounds that they were politically motivated and would bring economic distress to them. Not surprisingly, Ambedkar came to be branded by the Communists as an 'enemy of the labour'. He criticized communist leaders being for using the weapon of strike again and again for their political benefit. He viewed that the weapon of strike should be used carefully and accordingly for making it successful rather than using it often.⁸

Dr. Ambedkar's initial opposition to communist-inspired strikes in the late 1920s and early 1930s and his subsequent participation in the general strike of 1938 with the lion's share in its success had remained a paradox in the labour movement of Bombay. A careful analysis of the situation reveals a completely consistent pattern based on sound reasoning and judgment. Ambedkar firmly believed in the workers right to strike, but that weapon, he argued should be used judiciously and always in the interest of worker, not for political gains.

Dr. Ambedkar analysed the textile strikes of Bombay and expressed his views of on it in his newspaper Bahishkrit Bharat. He criticized the communist leaders for using the weapon of strike for their political purpose and not addressing the issues of Dalit labourers working in cotton textile industry of Bombay. He did not favour the strike for many reasons. One the poor untouchable workers was the worst sufferers. Two untouchable workers were not allowed to work in profitable departments like weaving. Three in his view, strike and communism were inseparable twins. The fact that during the last eighty years of existence of the textile mills, the Dalits were not allowed to work in any profitable departments like weaving was troubling his mind. No labour organization had so far cared to remove this blot and serious hindrance to the welfare of the Untouchables in the textile industry. In order to address these issues, he wrote articles in his newspaper Bahishkrit Bharat.

Dr. Ambedkar wrote an article on Textile Strike of 1928, in Bahishkrit Bharat on 29 March 1929 entitled 'Giryanche Malak Va Kamgar' (Mill Owners and Workers).⁹ Due to strike of 1928 which lasted for nearly six months, and subsequent strikes of various mills, the condition of untouchable workers was very severe and difficult and indebted heavily as their salaries were also very low. Ambedkar was contended with the fact that now there will be no strike otherwise it would have devastated the life of untouchable workers, as their economic condition was not sound.

The April 1929 strike covered as many as 75,000 workers from 43 textile mills. The Mill Owners' Association took an aggressive attitude after the strike became a reality. According to Richard Newman, "Dr. B.R. Ambedkar also urged the backward class workers to return to work".¹⁰ He argued the role of Dr. Ambedkar as a strike breaker but he did not explain why Dr. Ambedkar said the untouchable workers for resuming work. Dr. Ambedkar has explained his views on strike in his newspaper Bahishkrit Bharat and criticized the trade union leaders for not addressing the grievances of untouchable workers of cotton textile industry. Thousands of Dalit textile workers were thrown out of job and their condition become worst due to continuous strikes.



Dr. Ambedkar initiated extensive counter-campaigns against the GKU in 1929. In Bahishkrit Bharat, Ambedkar argued that he was not in favour of the 1929 strike because the condition of the untouchable workers had already been worsened by the previous strikes, with the result that the creditors and the money-lenders grip was more tightened on their neck and honour. Ambedkar, who believed in the workers' right to strike, said that the weapon of strike should be used sparingly and to the advantage of the workers, and not for political objectives of the communist leaders. With his characteristic boldness he reiterated his view that the communists were impelled to resort to a strike more with political objectives than with the object of bettering the lot of the workers. Dr. Ambedkar said, "In last year (1928) strike, mill workers participated in large numbers in spite of their differences, the mill workers respected the views of labour leaders and due to fear of their committee members and volunteers, and they closed down all mills and engaged with the activities of strike against their will."¹¹ Thus Dr. Ambedkar opposed the textile strike of 1929. He emphasized the requirement of labour union for the protection of the interest of labourers. He said that we want labour movement but we did not want labour movement's transformation to unnecessary starvation and bankruptcy.

Dr. Ambedkar did not oppose the use of strikes as a weapon but he asked the labour leaders to use this weapon for the benefit of labouring class rather than to fulfil their political motive. As Dalit workers were not able to sustain in long drawn strikes, he opposes the continuous strikes occurred in Bombay. He had criticized the communist leaders for using the weapon of strike for their political purpose and to create a condition of anarchy and disorder in society for their communist revolution. They laid the emphasis on the working class solidarity and class consciousness but ignored the issues of untouchable workers and their problems and grievances were not addressed. Therefore Dr. Ambedkar has suggested the untouchable workers to form their own union and accordingly the first union was established in 1934 as 'Bombay Municipal Labour Union' and became its founding president.

Dr. Ambedkar published three important articles

on Indian labour movement in 1934 in his Marathi weekly 'Janata' and expressed labour consciousness in India. These three articles are path finding in the study of Indian labour movement which throws light on his views related with Indian labour leaders, capitalism, communism and socialism. His first article entitled 'Majuranchi Dainaavastha'¹² (Deprecated Conditions of Labourers) published on 3 February 1934 which criticizes the behaviour of capitalist class and mill owners of Bombay for wage cut, reduction in dearness allowance, closing of the various departments of mills, unemployment and the exploitation of labourers of Bombay. Ambedkar published his second article on 17 February 1934 entitled 'Mumbaiteel Girmi Kamgaranchi Daina'¹³ (Pathetic life of Textile Mill Workers of Mumbai) and discussed the economic plight of labourers in Bombay. In his third article entitled 'Majuranchi Dainaavastha'¹⁴ (Deprecated Conditions of Labourers) published on 24 February 1934, Ambedkar discussed the problem of growing unemployment due to closure of number of mills and labour unrest due to that. He warned the mill owners and government to tackle the problem soon otherwise they have to face strike once again. Ambedkar also wrote on the condition of textile labourers working in Mumbai, Sholapur and Ahmedabad in his newspaper and published the articles criticizing the failure of moderate and communist leaders in labour movement.

Dr. Ambedkar opposed General Strike of 1934 of textile workers of Bombay and wrote an editorial in his Marathi weekly 'Janata' entitled 'Sarvatrik Sampa Va Kamgaranche Bhavitavya' (General Strike and Future of Workers) on 28 April 1934.¹⁵ He also wrote on the behaviour of Bombay government in his editorial entitled 'Sarvatrik Sampa Va Sarkar' (General Strike and Government) published on 5 May 1934 and criticized it for their failure in handling the labour disputes in Bombay.¹⁶

Though Dr. Ambedkar criticized the communist leaders for the strike but he was not against their contribution to the labour movement. He fought the judicial case of communist leaders' no.394/W of 1934, King Emperor Versus (1) Shrinivas Ganesh Sardesai and (2) Bhalchandra Trimbak Randive and the judgment was delivered by Chief Presidency

Magistrate, Bombay.¹⁷ This shows that Dr. Ambedkar's consciousness towards the labourers and their leaders. Though ideologically he was not in favour of communism and strikes but helped their leaders for the benefit of labourers.

In this way Dr. Ambedkar addressed the problems of untouchable labourers and industrial workers in India and makes them conscious about their exploitation from the hands of capitalists' class and higher castes. He criticized the continuous labour strikes which has adversely affected the economic progress of untouchable labourers in Bombay and becomes the jobless during the strike period. They were also exploited by Saokars (moneylenders) and therefore Ambedkar opposed the communist inspired strikes held in Bombay during the late 1920s and early 1930's.

Strike of 1938 and Dr. B.R. Ambedkar

The Congress government of Bombay introduced the Industrial Dispute Bill in Bombay legislature to replace the Bombay Trade Disputes Conciliation Act of 1934. Dr. Ambedkar staunchly opposed the Industrial Disputes Bill of 1938 as the Bill proposed to make the strike illegal in certain circumstances. His speech delivered on 15 September 1938, in Bombay Legislative Assembly as its Member is very important to understand his vision of Indian labour movement. Dr. Ambedkar observed that "a strike was nothing else than the right to freedom of one's services on any terms that one wanted to obtain. If the right to freedom was a divine right, then, he contended that the right to strike was a divine right."¹⁸

Dr. Ambedkar not only supported labourers' right to strike, but also mobilized the public opinion against the bill. The voice of Ambedkar had created a big tide of opposition outside the Legislative Assembly, in the industrial towns and cities which voiced disapproval of the Bill. The forceful arguments of Dr. Ambedkar to which the entire house was responding by clapping throughout his speech as a mark of support. On his convincing intellectual legal arguments and such a historical speech all the leaders of the workers present in the house were impressed and they reckoned him as a real saviour of the labour.

One day strike was declared by the Independent

Labour Party and the Bombay Province Trade Union Congress on 7 November 1938. Addressing the workers rally in the evening that day, Dr. Ambedkar congratulated the workers, stressed the need for capturing political power by electing their own representatives.¹⁹ The Industrial Dispute Bill was nevertheless passed easily in the Bombay Legislative Council and the agitation subsided.²⁰ Ambedkar and the Communists made a united front on the issue of labour welfare. Ambedkar, however, had shrewdly kept his party and organization intact and aloof from those of the Communists and yet could effectively dominate the field.²¹ Dr. Ambedkar's reputation as a labour leader was established, and it prepared a background for his future relationship with the All India Labour Problems. He was appointed as labour minister in Viceroy's Executive Council in 1942.

Fractured Indian Labourers and their Consciousness

Dr. Ambedkar did not consider 'Labour' as the monolithic category. He was aware of the condition of fractured Indian labourers and their caste demarcated consciousness. All these labourers were existing in the varied production and service providing units of modern economy with traditional overtone of socio-cultural asymmetrical relations. He said labour is divided on the basis of caste along with class and accordingly their consciousness gets expressed. He understood that though workers – as a category of labour – all of them are same but they have their isolated consciousness demarcated by their caste status in Hindu social structure. At work place also one can see this division. Untouchable workers have in their mind the limitation of their caste and upper caste workers have the tendency to dominate at workplace and their residential areas, also. Power relations in labourers and consciousness plays very important role here. Due to the traditionally low and backward nature of caste, untouchable workers were ready to do all menial, unclean and impure occupation as imbibed in their mind and consciousness whereas upper caste labourers always try to always humiliate, demanding, oppressive and dominating. They established their 'hegemony' over untouchable workers and they also accept such 'dominance' due to their caste construed consciousness as prescribed



in Hindu social structure and religious scriptures.

Untouchables were working in various other departments but prohibited in high paid weaving department. Due to the stigma of caste, Maratha and other such castes were not ready to work with Mahar, Chambhar caste labourers as workers had to keep dobbin in their mouth which other caste workers had to keep in their mouth during their work and due to the notion of purity and pollution, Maratha and other castes didn't want to keep that in their mouth whereas they were ready to work with Musalmans.

During the strike of 1929, Untouchable workers under the leadership of Dr.Ambedkar decided to continue their work and they were supported by Mill owners. Dr.Ambedkar tried to run two mills with the support of untouchable workers who were staying at Damodar hall, Parel.Those who were on strike were known as LalBavtewale (Red Flag Union) and those who were going on work called as Kale Bavtewale (Black Flag Union). This episode became very popular during these days. LalBavta union people had thrown stones on them. There was also threat to life of Dalit leaders. At the time of a night LalBavte union people attacked all Kale Bavte people. Strike was ended after six months. This shows that workers were living with class consciousness; howevercasteconsciousness was more dominating amongst them which made them to deny the equal rights to the Dalit workers.

Conclusion

Dr.Ambedkar had evolved his understanding about labour movement in India that it was focused on strikes as this movement was provided leadership by upper caste communists therefore, the expressions for mass consciousness in labour movement got superfluous face and the spectra of grievances, shortcomings and community specific personal experiences were never addressed. He realized that Indian labour movement was controlled by Indian communists whose programmes, agenda and decisions were completely influenced by Marxism and Leninism but they had been awfully far from Indian existing reality of labour and labourers. He has also highlighted the limitations of European Marxism in Indian contexts. He criticized the Indian communist leaders and their continuous declaration

of strikes in India for their political motives.

It is to be understood that Dr.Ambedkar never opposed strike whereas he considered it as a major weapon of labourers but said it should be used carefully and not often. He had criticized the communist leaders for using the weapon of strike for their political purpose and to create a condition of anarchy and disorder in society for their communist revolution. They laid the emphasis on the working class solidarity and class consciousness but ignored the issues of untouchable workers and their problems and grievances were not addressed. Dr.Ambedkar, through his newspapers,Bahishkrit Bharat and Janata, appealed to the Dalit workers to refrain from joining the strikes on the grounds that they were politically motivated and would bring economic distress to them. As Dalit workers were not able to sustain in long drawn strikes, he opposes the continuous strikes occurred in Bombay. Thus, Dr.Ambedkar's contribution in the field of Indian labour movement is important even in present times. He saw the problem of labourers from both the class and caste point of view which is very much evident in his writings. As a being 'Organic Intellectual', his perception of labour was differed with the leaders of his contemporary times. He established number of tools for the emancipation of Indian labouring class. He was aware of intensity and degree of exploitation of all kinds of labourers. He had understanding of varied images of labourers in India and accordingly he evolved his perception and remedies for their problem, specific to Dalit's socio-cultural and economic ambience.

End Notes

¹SumitSarkar, 'Popular movements and middle class leadership in late Colonial India, Perspectives and Problems of a 'History from Below',Centre for Studies in Social Sciences, Calcutta, 1983 and M. Lakshmanan, 'Labour Movement in Madras City: 1918-1939', (Ph. D. Thesis), Centre for Historical Studies, School of Social Sciences, Jawaharlal Nehru University, New Delhi, 1991, p.7.

²Sabyasachi Bhattacharya, 'History from Below',

- Social Scientist, Vol.11, No.4, 1983, p.9
- ³Susan Blackmore, *Consciousness: A Very Short Introduction*, Oxford University Press, New York, 2003, p.7
- ⁴Terry Eagleton, *Marxism and Literary Criticism*, Methuen and Co. Ltd., London, 1976, (Reprint 1983), p.4
- ⁵KanchanaMahadevan, 'Essays on India's Working Class', Book Review Article on 'Working Class Movement in India in the Wake of Globalization' edited by Jose George, Manoj Kumar and DharmendraOjha, *Economic and Political Weekly*, Vol. XLIX, No.1, Jan.4, 2014, p.32
- ⁶K.K. Chaudhari, *Maharashtra State Gazetteers, History of Bombay: Modern Period*, Gazetteers Department, Government of Maharashtra, Bombay, 1987, p.95
- ⁷Census of India, 1921, IV, p. 15
- ⁸NarendraJadhav, *Dr.Ambedkar's Economic Thought and Philosophy*, Popular Prakashan, Bombay, 1993, p.49
- ¹⁰Richard Newman, *Workers and Union in Bombay, 1918-1929 A Study of Organization in the Cotton Mills*, Australian National University Press, Canberra, 1981, p. 247
- ¹¹Bahishkrit Bharat, 4 October 1929
- ¹²Janata, 3 February 1934
- ¹³Janata, 17 February 1934
- ¹⁴Janata, 24 February 1934
- ¹⁵Janata, 28 April 1934
- ¹⁶Janata, 5 May 1934
- ¹⁷Maharashtra State Archives, Mumbai, Home Department Special Branch, No.543 (49) A, 1934, pp.55-77
- ¹⁸Bombay Legislative Assembly Debates, Vol. IV, dated 15th September 1938 pp. 1330-1359
- ¹⁹Janata, 12 November, 1938
- ²⁰Jaffrelot Christophe, *Analyzing and Fighting Caste: Dr.Ambedkar and Untouchability*, Permanent Black, Fifth Edition, Delhi, 2012, p. 79
- ²¹DhananjayKeer, *Dr.Ambedkar: Life and Mission*, Popular Prakashan, Bombay, Fourth Edition, 2009 (Reprint 2011), p.306

⁹Bahishkrit Bharat, 29 March 1929



A Study of Kunkana Adivasi Ramkatha

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Abstract

From the ages and ages, the Ramkatha has an eternal place in the hearts of people in India and abroad where the Indians live, through various traditions like oral tradition, memory, drama, poetry etc. Originally Ramkatha was edited and put into an epic poem by Maharshi Valmiki but various deviations and adaptations of Ramkatha in different linguistic areas and social setups are found. Out of these, some of the Kathas are preserved through oral tradition, which is enjoyed through listening only. The orator sings and presents the Katha before audience assimilating they're own regional, cultural, social histories and traditions and adding a flavor in it through gestures, changing the pitch of the voice and his expressive abilities make it a memorable religious-aesthetic experience. This Ramkatha of Kunkana Adivasis raises several questions as it blends the sociality, traditional routine and local culture into the delineations of the main source of the story. The characters and their relations to one- another are shown differently in this Ramkatha than other Ramkathas. Besides, the birth of Sita, incident of Matsya vedhan(shooting of the fish), the first meeting of Hanuman and Rama, the conversion of Ravana into a Ten faced and eighteen handed monster, the event of Makar Dhvaj, the secret of Ravana's death, the event of Vasudeva's encounter with the deer, the story of Shravana etc. are preserved vividly in a slightly different note. Since this RamKatha has been popular in oral tradition only, the traces of the influence of other Ramkatha can be found on it.

From the ages and ages, the Ramkatha has an eternal place in the hearts of the people in India and wherever the Indians live, through various traditions like oral tradition, memory, drama, poetry etc. By going through the history of Ramkatha, it is found that the first Ramkatha was written in Jain tradition and then it was edited and put into an epic poem by Maharshi Valmiki. However, today in almost all the valid cultural languages of India has its own Ramkatha along with the Ramkathas of Adivasi people living in every corner of India. The Dungari Garasiya Bheel people(hilly tribe of Adivasi having their own land and areas) of North Gujarat region have their own Ramkatha as well as the Adivasis of Panchmahal district and Kunkana adivasis of Daang district of Gujarat have their own version of Ramkatha.

Kunkana Ramkatha of Daang is very fascinating and full of interest. The Kunkana people still believe that the Dandakaranya region in Ramayana is the region of Daang district. The Subir village of this district is associated with the name of Shabari and there is a beautiful forest named Sitavan in Daang too. Even the people have their names resembling the characters of Ramayana. In all the villages where this tribe resides, there is a temple of lord Hanuman. We can see a major influence of Ramkatha in their routine domestic life too. For example, they have a tradition of saying Ram-Ram, unfailingly, when they part from one another. In fact, the Ramkatha of these people is preserved intact in the oral tradition. Their Ramkatha is sung along with the special ancient musical instruments by the Bhagat who is a person who has undergone a special training for this and attained permission from the Guru. The Bhagat is helped in his performance of Ramkatha by some members of a chorus group known as "Honkariyas" (the sound makers).

This Kunkana Ramkatha begins with three sub-plots. The first sub-plot depicts the story of conversion of crippled Ravana into the form of a Rakshasa along with the story of Sita's birth. The second sub-plot tells the story of Vasudeva and Rukhmai as well as the story of the death of Shrivana. The third sub-plot covers the story of Ahilya, daughter of Mahadev, and Gautama Rishi. Leaving the second and third sub-plot half finished, the story moves ahead to the original story of King Dashratha of Ayodhya.

In the first sub-plot, crippled child Ravana abandoned the normal life in wake of his pain of disability and went to the mountain Dhavalegir and practised deep meditation and self mortification to please lord Shiva. The God was pleased by his hard austerity and wanted to compensate his act with a boon, but before giving him the boon, the god left for the Mrityuloka (mortal world), asking Ravana if he wished to rest, he should go to the lighted room and not to the dark one because the dark room would fetch him death. But Ravana was very irritated and disappointed with his debilitating self and he felt the words of lord Shiva insulting, he chose the dark room to enter. Upon entering the door he fell in a small pool filled with Amrita (nectar) but before drowning in the pool he swallowed nine sips of

nectar and a miracle happened. He suddenly turned into a demon with ten heads and eighteen hands. Lord Shiva returned soon and Ravana requested the lord to reinstate him in his original form but the lord denied that. After multiple urges and prayers the god offered him the throne of Golden Lanka and two wrestlers named Ahi and Mahi. Besides that Ravana lured Lord Shiva in his talks and asked the hand of Parvatiji as his wife. The gods and goddesses of Devloka were shocked to know this. They put the responsibility of bringing back goddess Parvati from Ravana onto the shoulders of Lord Narandev (Vishnu). Narandev produced suspicion in the mind of Ravana that that was not the original parvati so he returned back to Shiva. Meanwhile, Narandev formed Mandaldharini (Mandodari) from a she frog and sent her to the house of lord Shiva. On seeing the awesome beauty of Mandaldharini Shiva lost his control and discharged. She instantaneously became pregnant. Ravana thought Mandaldharini original Parvati and took her with him towards Lanka, leaving Parvati back to home. On the way to Lanka, they stopped to bath in the river PanGanga, where Mandaldharini had a sudden miscarriage. The live foetus floated through the canal of the river reached the city of Vanzianagar where the king Jambumali ruled. The foetus stopped at the small chasm in the Garden where a baby was born of the foetus, the barren garden suddenly bloomed. The girl being found from the chasm (Sita) was named Sita by the barren King and taken to the palace. When the girl became seven years old, she had to her credit several adventures and became famous. King Janaka, having known about her, adopted her as a daughter from Jambumali.

Once upon a time, king Dashrath went to his sister Jaanki's place. He puts down his giant bow (savaakhand) and heavy arrows (weighing thirty kilos) resting to the wall and had a conversation with king Janaka. At that time Sita came there and started playing with the giant bow making it horse as if it was a wooden stick. Both the kings got awestruck by seeing this. King Dashrath then asked king Janaka to organize a great swayamvara (marriage ceremony) for this awesome girl. He asked him to plant a tall pole, with a whirling fish at the top, in a large round pan filled with boiling oil. The young



prince who would shoot that fish standing in that pan with the same bow and arrow and then dive into this boiling oil pan and chew paanbeeda and by spitting it make the forest burn would be able to hold her hand. Dashratha asked Janaka to marry Sita to such a brave man and left his bow and arrow there for this purpose. The first sub-plot ends here.

The second sub-plot consists of a story of Vaasudeva and Rukhmai. King Dashratha had two sisters, Jaanki and Rukhmai. Jaanki was married to king Janaka and Rukhmai was married to Vaasudeva who lived in forest. When an ascetic was busy enjoying copulation in form of a deer, he was killed by the arrow shot by Vaasudeva, the female deer cursed him that he would too be blind during copulation. On one night, during copulation, Vaasudeva and Rukhmai suddenly became blind. Vaasudeva had a son named Shrivana and Shrivana had a wife named Changona. The blind parents had a wish to visit Kashi before they die, so Shrivana made sitting containers suspending on either side of the pole and (KAAVAD) and had them sit in them embarked on a pilgrimage of Kaashi. On the midway somewhere, they got thirsty so Shrivana hanged the Kaavad to a branch of Kadamb tree and went to fetch water from the nearby Dudhiya Pond. At this point, second sub-plot is left unfinished and the story moves to third sub-plot.

The third sub plot begins with the story of Ahilya's marriage, a daughter of Mahadev of Dhavalegir (Dhavalgiri or Kailash mountain in Himalaya). The condition for Ahilya's marriage was that the man, Ahilya would marry, would be able to revolve around the earth in one day and night. People from all around the world flocked there. Even the sage Gautam who had been in penance for last twenty four years also came there to visit the Dhavalegir. He met Devbahula (Kaamdhenu) on the mid way, Kaamdhenu, on meeting sage Gautam, had a vicious thought of conspiring a marriage of Ahilya and Gautam and thus to make Mahadev pride less. So she told sage Gautam to begin Aarti of the people present in swayamvara when she indicates and signal. The sage could not deny the proposal as he used to rub the ashes made from the dung of Kaamdhenu.

Then the sage Gautam, when Kaamdhenu signalled, began to perform Aarti (worship) and

Kaamdhenu made it a point that the sage had worshipped all the people here which metaphorically meant that he had completed the circle of the world and thus he would be eligible to marry Ahilya. The people present there accepted this logical argument and so the marriage ceremony of Ahilya and Gautam was performed. Since the Sun and Moon also had completed the revolution of the earth in the specified time, they felt annoyed against this conspiracy. They decided to avenge their insult. On the first night of their marriage, the moon transformed himself into a rooster and when the time of copulation of newly married couple began, he made a false crowing indicating the day-break. The sage, bound by the austerity, took it normal and left the sexual activity and went to river for the bath. Meanwhile the Sun entered the hut and corrupted Ahilya. When the sage Gautam reached the river, he sensed some conspiracy as the indications of time seemed wrong. He immediately returned to the ashram but not before the Sun and Moon had run away. His wife Ahilya also knew about her seduction and fallen on the floor like a stone. After some time, she became pregnant and delivered a girl child named Anjana. As Anjana grew young she came to know about the wicked experience her mother had undergone, she felt the woman body as cursed one. She started keeping distance with the men and began a hard penance by digging her half body in the earth. The sub-plot is left here unfinished and the main story begins from here.

Gori Lakshmi was the only queen of king Dashratha. She was under a curse and so was barren. The solution of the curse was if her husband kills two male and one female by shooting a single arrow, she would have a child. King Dashratha was gone on hunting and accidentally killed by his arrow his own nephew Shrivana who went there in search of water. Mother Rukhmai ordered Dashrath to set a funeral pyre for Shrivana and set on the pyre with her husband Vasudeva, keeping the head of Shrivana in her lap. Before her death she gave two curses to Dashratha that his wife Gori Lakshmi would die on the twelfth day of her child birth and that Dashrath too would die in the detachment of his son. Now as the Dashratha had killed one female and two males by one arrow, the curse was withdrawn by the lord BhagvandeV. The lord made nine pindas (rice balls)

and put them all into the flow of the river. He asked Dashratha to let go the pindas which float with the water and take the rest others which float against the flow of river. Dashrath took the three pindas with him and set out for Ayodhya. While on the way, a bird named Dhar suddenly picked the one pinda from the hands of Dashratha and released it in the air from the sky. The pinda straightly fell into the hands of Anjana who was asking for the blessings of God after her penance completed. She took it as a blessing from the god and ate it. She became pregnant but as her half body was dug into the earth she gave birth to a child from her ear. Since the child was born through the ear ,he was known as ‘ Hanumaan.’

Mahadev had told Ravana that he would die in the hands of a son of Dashratha, so Ravana abducted, by a fraud, Dashratha to Lanka before Gori Lakshmi could become mother. But Narandev himself made a conspiracy and released Dashratha from the clutches of Ravana. Then he made a palace of fire before the Lanka and brought together the king Dashratha and Queen Gori Lakshmi there. Dashratha offered one pinda out of the two with him to the queen and asked her to eat. She gave birth to Rama then. As Rama was born Ravana was gripped by fever with chills. Ravana then went to Pataaloka and brought a child of SheshNaaga as his adopted son and sent the child to kill Rama. But as soon as the child saw the divine face of Rama, he turned into a human child. Dashratha , pleased to see this child, adopted him as his son and gave him the name Lakshmana. Now as per the curse Gori Lakshmi died on the twelfth day of Rama’s birth but before her death she took a promise from Dashratha not to marry again for the security of Rama. However, Dashratha married to Kaushalya and brought her home as his second wife but kept it secret from his sons Rama and Lakshmana. Dasratha offered her the last and third pinda and she became pregnant and delivered twins; Bharat and Shatrughna. She felt overjoyed to the fact that her sons would be the heirs to the throne of Ayodhya. But later on she came to know about Rama and Lakshmana as the elder sons of Dashratha. She felt deceived and knew that Dashratha had played a dirty game with her, she decided to keep Rama away from the throne of Ayodhya.

Once, Dashratha had a war with mighty Sukhasena. Dashratha won the battle with help of Kaushlaya and overjoyed Dashratha promised her to fulfil two of her wishes anytime she would desire. When the day of Rama’s coronation came, everyone of Ayodhya including Kaushalya was happy and cheerful. But suddenly Kaushlya reminded Dashratha of the promises he gave after the war with Sukhasena. She asked exile for Rama in the forest and coronation of Bharat. Being a devoted son, Rama started preparations to leave and Laxmana accompanied him.

All the subjects of Ayodhya and king Dashratha bade farewell to the princes and walked together with them until they reached a place where Shrivana, Vasudev and Rukhmai had died. There the desolate and bereaved king Dashratha died of the curse of Rukhmai. Rama cremated the body of his father and again marched towards the forest. They came to a cave in the forest and decided to stay overnight here. As the night passed they heard the sounds of vivid birds and animals urging them to let go out. On being asked by Laxmana who they were, they answered that they were birds and animals and they had a great awe of Ravana who had forbidden them to go out in the day and could only get out after the dark. Rama assured them their security and made them free from the cave and from the awe of Ravana.

Once they heard the sounds of musical instruments in the forest, they moved towards the direction of sound in anticipation that they would get good food. On reaching there they found a Swayamvara being organized for the marriage of Sita. They saw Ravana there crushed under the weight of a great bow during the Matsyavedhan (shooting of a fish). Soldiers were trying to remove the bow from him but they could not lift it. So Laxmana , by using the toe of his foot, released Ravana from the weight of the bow and Ravana fled from there . Then Laxmana asked for Rama’s permission for Matsyavedhan and when Rama nodded positively, he shot the fish with the arrow. All the people present hailed him for his feat. When Sita came with the wedding garland he requested Sita that in fact Rama is a Royal son and he had done this act as per his instructions and only he would be rightful for this wedding garland. Thus the marriage of Rama and Sita accomplished and they left for the forest on the next day.



They reached a forest known as Dandakaaranya and build a hut for them. Nearby somewhere in the bushes of Bamboo trees, Ravana's sister Shuparnakha's son Sabreshur was practising austerity and meditating there. Every six months Shuparnakha would go there and had him the Amritbhojan. His Tapasya was going to be over soon so the gods thought that he would be able to get a place in the Devloka. The gods then with intention to kill him threw a flying sword. Laxmana saw the sword flying towards him, as he was unaware of the presence of Sabreshur nearby, caught the sword and in order to check its blade slashed it on the bush of bamboo trees where Sabreshur had been sitting, cutting him into pieces with the bamboos unknowingly. But at the same time Shuparnakha came there with the food for her son and saw the foot marks of a human being. She thus reached to Laxman. However, she was aware of the presence of these two princes Rama and Laxmana, and she also knew that if she touched him, he would be burnt to ashes so to lure him she transformed herself into a beautiful girl of sixteen years. She proposed him to marry her. Laxmana, on the other end, to divert her, send her to his brother Rama for asking his permission. Rama knew that Laxmana would not send any woman to him without any cause so by his divine powers he knew about her as being the sister of Ravana and the intentions of her arrival there. So to save Laxmana, Rama used a trick. He wrote a chit to his brother and informed him that this lady was Shuparnakha and instructed him not to touch her as she could burn him by her powers and finally ordered him to kill her. Rama gave that chit to Sita and instructed her to paste it on the back of Shuparnakha. He also told Shuparnakha about his positive reply. Laxmana read the chit and in order to kill her smashed his sword but Shuparnakha turned away. The sword only cut her nose and she fled away.

Shuparnakha directly went to Ravana and instigated him to take revenge of her insult and the murder of his nephew Sabreshur. Ravana was already angry with Rama as the son of Sheshnaag whom he brought to kill Rama was on his side and he was insulted by Rama at Sita's swayamvara. Moreover they insulted his sister and cut her nose and killed his nephew. So he transformed him into

a beautiful peacock and went to Dandakaranya in order to abduct Sita. When Sita saw the beautiful peacock, she desired to make a choli (blouse) of its skin. Sita sent Rama to kill the peacock but at that time Ravana reached the hut of Sita. When he found Laxmana there, in order to send Laxmana away from there, he replicated the voice of Rama and cried, "Laxmana, run for my help". Sita heard the cry and told Laxmana to go for the help of his brother. But Laxmana sensed some foul play there and denied to go for help as he knew that it was not the voice of Rama. But when Sita insisted more and more He went to help his brother after making a limit of three steps of hut to Sita. Ravana in the form of a sage went to hut and begged for alms. Unfortunately Sita forgot the limit of three steps and went down to be abducted by Ravana.

On the midway, Laxman had a suspicion about this call so he returned to hut but could not find Sita there. After a while Rama also came back to hut. Laxmana made him aware about Sita's absence. In the morning both the brothers began a search for Sita and a bird(Holi) told them that Ravana had abducted Sita. On the way they met Hanuman. Hanuman felt glad to see Rama there, but before offering his help Hanuman wanted to test the character of Rama so he abducted a woman before them and bullied her. Laxmana interfered on the spot, warned him and strung the bow. Hanuman got pleased and promised the help of the whole army of monkeys.

Then they travelled towards Lanka and made a hut on the shore of a great ocean. Hanuman in order to search Sita in the Lanka began swimming in the sea. He was sweating; suddenly a big fish swallowed the drops of sweat that fell from Hanuman's body. She instantly became pregnant and delivered a son who grew young immediately. When Hanuman returned from Lanka having met Sita there, he found a tunnel in place of the hut. Through this tunnel even Rama and Laxmana were abducted.

Again when Hanuman began his journey to Lanka, he came to know that two human sacrifices would be offered in the annual festivity at the temple of Goddess Kalika at the sea shore. Hanuman worriedly waited for the night. As he was entering the gate of the temple, he was stopped by MakarDhwaj, and had a duel with him. Finally Hanuman warned him and

asked to remember his parents, he uttered the names of his parents as Hanuman and Matsyagandha. Makar Dhvaj narrated the story of his birth to Hanuman and they knew that they were father and a son. They embraced each other and then released Rama and Laxmana from there.

Hanuman then went to Lanka as an ambassador of Rama and tried to convince Ravana to release Sita, but Ravana insisted on taking Sita after winning the battle. Finally the war began and fought for the days fiercely. Once Hanuman conspired to become a shepherd and reached the palace of Ravana to deliver milk. He took into confidence Mandaldharini, wife of Ravana, and knew the secret of Ravana's death. Mandaldharini said, "when the parrot of the palm tree on the Jambubet Island in the midst of seven seas will die, Ravana will die." Hanuman straightly rushed to Jambubet and killed the parrot. As soon as the parrot was killed Ravana too was killed by the arrow shot by Rama in his navel.

Rama was saddened by all these happenings and was not ready then to meet Sita immediately. After Sita's fire ordeal, they all returned to Ayodhya. Their return was celebrated everywhere enthusiastically. Festivities were held. Rama became the king of Ayodhya and held the throne. But queen Kaushalya was disappointed because her son Bharat had lost the throne. During this time Sita got pregnant but Kaushalya sown the seed of suspicion about Sita's character in the mind of Rama by telling him about the might of Ravana and Sita's fickleness as woman. Rama finally ordered Laxman to send Sita in the forest. Laxman left Sita on the ground and before leaving he put one bowl, made up of leaves and filled with water, at her feet, to drink and the other one near his hand to wash the face. When Sita woke up and stretched her hands and legs, both bowls were spilled. From one bowl originated the river Ganga and from the other the Jamuna.

Sita stayed in the ashram (hermitage) of blind sage Valmiki (Valmiki). She gave birth to Kusha there. Kusha was greatly taken care of by the Sage. Once when Sita was going to fetch water in the pots, she encountered a monkey mother who hanged her child to her breast and was jumping here and there. Sita showed her concern and asked, "if the child will fall off, aren't you worried? The mother monkey replied

her," my child is with me but what about your child. it is with a blind sage. If some animal will attack him how will the blind sage save him? "On listening this Sita hurriedly returned to the ashram and found Kusha sleeping in the cradle but the sage was nowhere seen, so she took the boy with her. When the sage came back he found the cradle empty and the boy was not there but found a plant named Lava, so he, by his powers, transformed the plant into a human child and started swinging the cradle. When Sita returned she saw the sage swinging the cradle with a boy in it. She inquired him about the boy. The sage weeping, narrated the whole incident. But Sita told him that Kusha was with her. She understood the matter and finally gave the boy the name of the same plant Lava and accepted him as her second son. When Rama and Lakshmana came to know about Sita's sons, they went there to take Sita back but Sita preferred to submerge in the earth.

Thus the subject matter of this Kunkana Adivasi tribe's Ramakatha differs from the original one at several places. This Katha has been preserved in the oral tradition and thus we can see in it the sociality, living style, folk traditions and culture of these people. Besides that it has some deviations and contradictions from the original story and different and strange relationships between the characters. One can see the influence of Mahabharata here too in the incidents of shooting of the fish at the swayamvara and the story of Vasudeva with male and female deer.

The transformation of Ravana into a ten headed and eighteen handed monster, the story of Sita's birth, the story of Ahilya, Anjana and Hanuman, the transformation of the son of Sheshnaag into Laxmana, the story of Shabresur and Shuparnakha, Ravana taking form of a peacock, the limit of three steps by Laxmana, meeting of Rama and Hanuman, incident of Hanuman and Makardhwaj, the secret of Ravana's death, the story of Lava's birth etc. are the surprised elements in the story and takes the listener to a newer world. At several places, there are confusions and contradictions in the story but there is no doubt that this Ramkatha has its own merits and proves to be a newer experience.



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Family vs Marriage: Sociological Perspectives in Select Plays of Girish Karnad

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Abstract

Although both Literature and Sociology primarily deal with society as their subject matter, we seldom hear the two subjects taking help of each other's tools and methodologies. Literature, as it is often said, reflects the social realities of its times whereas Sociology tries to objectively study various social institutions and processes. If there could be more synergy between the two disciplines, there are chances of a better understanding of both the subjects as well as the society under scrutiny. The present paper is an attempt to critique two plays by the famous contemporary Indian playwright Girish Karnad with the help of some sociological tools, to establish how the narrative in the two plays consciously or unconsciously, both on the part of the writer as well as the readers, presents a battle between two important social institutions of Marriage and Family. The two plays selected for the purpose of study are Bali. The Sacrifice and Boiled Beans on Toast. A point worth mentioning here is that the seemingly confrontational scenario between the family and marriage, as mentioned in the title is in a particular context. The modern state-approved legal/court marriage and the traditional family structure, particularly in India provide the context where the two social institutions seem to be diverging towards different paths. This paper will try to look into the matters related to the aforementioned problem with special reference to the two especially selected social plays by Karnad, whose plays are otherwise popular for their historical or mythological themes.

Keywords: Society, Family, Marriage, Social Institution, Narrative

Literature is often referred to as 'mirror of life'. We can see the 'life' of people in general and some individual(s) in particular in their 'social' background in literature, because as we know man is essentially a 'social animal'. On the other hand Sociology is the objective and systematic way to study society. So if we look at any particular society from a sociological perspective, we will observe a direct, although not completely objective, image of society. And looking from the literary perspective, we might find ourselves staring at the virtual image of the society, as perceived and represented by the author. These multiple perspectives add new dimensions to our understanding of individuals and society. The two subjects have a great potential to complement each other.

In literature, drama is probably the only genre, which requires more than the holy trinity of a writer or poet, a publisher and a reader for its complete fructification. Drama requires actors, directors, producers, sound and light experts, costume designers and a many other professionals, apart from a playwright, some audience and publisher (if the play is to be published). As it can be either read or watched



by people, its audience base increases to accommodate even those people who are either illiterate or too busy or lazy to read anything apart from their Facebook or WhatsApp posts. Even from the ancient days, through medieval era and to the contemporary modern time, we find plays to be quite powerful as they directly connect to the masses unlike poetry or novels, which please the book worms. Although the format and themes of plays changed considerably according to the changing times and climes, the fundamentals like a story being acted out for an audience remained somewhat grounded. To illustrate the power of drama in human life, we can look at the play titled *Justice* written by John Galsworthy in 1910. It was watched by Winston Churchill, then the Home Secretary of England. He was so moved by the plight of the protagonist as portrayed in the play that he initiated 'prison reforms' in his country. A *Doll's House* by Henrik Ibsen opened the path for serious, open discussion between husband and wife. It helped to make such discussions "normal". George Bernard Shaw, throughout his life, constantly kept challenging the "normal" Victorian middle class morality of the British, through his witty and humorous plays.

Moving towards east, we find in *Natyasastra*, probably the oldest classical treatise in Sanskrit on aesthetics in general and dramatic art in particular, describing its own origin as well as of the drama, for the benefit of the common people, as the sacred knowledge of Vedas was reserved only for the eligible intellectuals. So to educate as well as to please the masses, drama was given by Lord Brahma as a means to humans, as the myth states so. But the mention of "common man" as the consumer of drama signifies the fact that this Visual Medium of literature was closer to the hearts and minds of the people and probably held some influence to implant some new idea in the mind of the audience or to change their mind in a very subtle way.

Drama's connect with audience had substantially declined over the past few decades in India, especially as the regional film industries across the nation extended their footprint. But among the classes, especially the intellectuals, the rich, the powerful elite, it still holds the sway. And it is usually this group that helps in moulding and shaping the perception of things in a society, which

are usually followed by the masses. They are usually the trendsetters and if something could grab their attention, for example a critically appreciated novel, play or movie etc. then the chances of it affecting the masses increases substantially. Now we know that novels, dramas and movies are not just means to pass time anymore, they can and do serve as a conduit for ideas and ideologies. This is just an observation and not a criticism of these art forms.

So the ideas expressed in the literary as well as other art works can influence the elites and help them build a discourse, which may or may not suite some ideology. One thing to keep in mind here is that the artist, literary or otherwise, is also usually a natural or honorary member of this elite, intellectual group, and elite here does not just means rich but socially and politically powerful and well connected as well. Ideologically the artist might be on the either side of the centre. It is well documented in the critical corpus of the left oriented intellectuals that 'family' & 'culture' which includes literature, arts etc. are "Ideological State Apparatus" as termed so by Louis Althusser in his treatise *Ideology and Ideological State Apparatus*. So the knowledge and the awareness of this situation logically take us to the next step which is to influence and manipulate these social and cultural institutions in such a way that it suits their narrative.

If we leave the shores of critical theories and move towards the other side of Sociology, we will find things analysed first, terms of reference defined beforehand and then being analysed. Let's look at the social institutions of marriage and family, but before we proceed further it will be proper to define what we mean by the phrase social institution. "A social institution may be defined as an organized, culturally approved way of meeting major social needs". (Woods 371) Further, family is described as a universal institution supported by strong sanctions. It "consists of two or more persons related by ties of blood, marriage or adaption, who are residing in a common household, interacting and communicating with one another in their respective familial roles, and maintain a common culture." (Woods 373) She classifies Family into two categories. Family of Orientation, in which an individual is born and Family of Procreation, which comes into existence when

an individual marries. This brings us to Marriage, another important social institution. It actually starts a Family in most of the cases. According to Ashley Crossman, “Marriage is a socially supported union involving two or more individuals in what is regarded as a stable, enduring arrangement based at least in part on a sexual bond of some kind. Depending on the society, marriage may require religious and/or civil sanction.” These social institutions are not the creation of some modern sociologists. They have passed the test of time and have existed since the beginning of human civilization and still continue to exist despite the rapidly changing social and cultural scenario across the globe.

In his book *Marriage and Family in India*, prominent Indian sociologist K M Kapadia reiterates the acknowledged fact that among Hindus, marriage is not just a contract, it is a sacrament. It is considered to be a sacred bond between two individuals for their entire life. It covers a major part for one of the four Ashramas i.e. Grihastha. So marriage is not something trivial nor it is antagonistic to the very important institution of Family. But it seems to be a trend since last few decades, especially among the intelligentsia, to criticise Family (especially the Family of Orientation) as an oppressive institute and to promote Marriage (especially love marriage) or even Live-In relationship to subvert the prevailing social order, not just in West but also among many developing nations of the east. Patriarchy is used as a punching bag for any and all social evils. It is castigated and stigmatized with adjectives like ‘Toxic’. The question which might be asked is what exactly has been done by patriarchy to be called by such names. Why family of orientation is shown in bad light in most of the narratives and discourses and why the individual freedom to choose one’s mate supersedes the responsibility towards the parents in particular and community in general.

To provide evidence to the accusation, let’s examine the two plays-Bali. The Sacrifice and Boiled Beans on Toast. The former draws its inspiration, as the playwright mentions in the Preface, from “ the thirteenth century Kannada epic, Yashodhara Charite, by Janaa, which in turn refers back through an eleventh-century Sanskrit epic by Vadiraja to the ninth-century Sanskrit

epic, Yashatilaka, by Somadeva Suri” (Karnad 70). Although the play deals with the fundamental question of Violence, perpetrated by humans on other living beings, in the name of sacrifice to their gods, the issue here in this paper is the depiction of the two families, that of orientation and procreation, in two very different lights. The King is advised by his mother to sacrifice a cock to gods to bring normalcy not just in the kingdom but in his own marital life as well. His wife advises him otherwise. Until here there is no problem, but it starts when the family of king’s forefathers are shown in a negative shade, as if they are somehow either naïve, at their best or cruel, at their worst. The queen, although shown to be indulging in an extramarital one night stand with the royal elephant keeper, still manages to garner some sympathy. This subtle way of presenting a story with one side or institution in sympathetic way and other side in an unsympathetic way raises doubts in the minds of some readers, who are aware of the ideological biases of the author. Here is a series of dialogue between the King and the Queen, where he is requesting his wife to make a symbolic sacrifice of a dough cock and she is reluctant to follow the advice. It might help to illustrate the point made above:

KING. Because we are husband and wife – coupled in the eyes of God, joined together with the sacred fire as the witness. We are bound by our vow – to do everything together.

QUEEN. You want me to play your wife so I can damn myself as an adulteress?

KING. Look, we don’t know everything about this world. There may be... powers... forces we know nothing about. (Pause.)

Who knows, if we had listened to Mother we may not have lost our child...

(She looks at him horrified. Pause).

QUEEN. What did you say?

KING. I don’t know- I mean- what do I-

QUEEN. So I lost my baby because I didn’t follow your mother’s orders? Because I didn’t kill and maim?

KING. I am not saying that....

KING. I am not holding you responsible for your miscarriage. But you can’t blame it on me or my Mother either.



QUEEN. Sometimes I've felt – I had to abort to prove to you I was pregnant. To show you the proof.

KING. What are you talking about?

QUEEN. And I suppose that's why I haven't become pregnant since then. Your mother's goddess in her wrath has made me sterile! (113-114)

Although the dialogue has a background and a context which has not been shared here completely because of the constraint of space and the format of the research paper, but whatever has been presented here, should be sufficient to throw some light on the portrayal of the characters. The dominant wife accusing mother-in-law and the subservient husband trying to defend his family traditions and members are becoming common sight or news in the present times. This does not imply that I favour a dominant husband and a subservient wife, but both of them considerate towards each other and their respective in-laws.

In the play *Boiled Beans on Toast*, which is a play about contemporary life in the beautiful city of Bengaluru. There are many characters who cross each other's path in the play, but some of them are worthy of our consideration here. Shankara, brother of Muttu accuses his widow mother of not doing anything for him, when she arrived at his home for a family function, clearly shows his preference towards his Family of Procreation over his Family of Orientation. His baseless accusations towards his mother and sister, to be fair towards the writer, are not shown in a positive light. But when it comes to another important character Prabhakar, the depiction again changes considerably. Prabhakar and his wife are packing his bags for his upcoming Singapore trip and his wife's stay at her in-law's home about which she seems to be quite upset. Here follows a brief conversation between Prabhakar and his wife Sumitra, which might make the point clearer:

PRABHAKAR. Where's the fourth box? Ah! Yes. What's this, Sumitra? Why are you being so silly? It's a question of only a month. Then we'll all be together in Singapore.

SUMITRA. I don't want to go to Singapore. I was so happy when you got a job here. Our own house. Our own life. No parents or parents-in-law to breathe down our necks. No interfering relatives. We were so happy. What more do you want?

PRABHAKAR. No, Sumitra. I'm rotting in this place. I must thank Dolly for making me realize I'm wasted here. I deserve a better job. I can't go on forever with this grind. And you deserve something much better. I'll see to it that you get the best in the world. I shall make you a queen.

SUMITRA. I don't want to go back. Why can't I just stay on here? Vishoo and I could join you in Singapore when you've settled down there. I just hate the thought of going back to the cesspit (1.7 34).

As we can see, the contempt and disdain is not just for native place, but for the parents, parents-in-law and relatives as well. It definitely is a matter of personal choice for individuals to choose their residence, but the negative comments were uncalled for and could have been avoided. Here the author is not being blamed for using these phrases as it is the character who is saying them in a particular context. The presentation of Prabhakar and Sumitra as victims of Dolly's prank, in the later part of the play, while completely ignoring their own improper thoughts and behaviour towards their elders and native land is a matter of concern. In earlier times, it might have been interpreted as poetic justice (the dashed dreams of Prabhakar for a job at Singapore), but in modern day it comes out as tragedy of common man's life.

Now the aim of this paper is neither to criticise the writer for what he believes in nor for what he writes or even how he writes, the attempt here is to bring into fore the ideological bias of the writer, in favour of some and against some, ideas and institutions. The objective is to reveal the possibility of writer's ideology being subtly propagated in the guise of literature, and to clarify further, there is nothing wrong about it. But then if someone, like this researcher, encounters a pattern in some writings of a particular author and wants to reveal it to the interested readers, then it should also get some space in the academic discourse. It is just an attempt to engage with a different kind of ideology and there is nothing personal about it.

References

- Althusser, Louis. (2012) *Ideology & Ideological State Apparatus. New Delhi. Critical Quest*, Print.

- Chakraborty, Kaustav. (2011) *Indian Drama in English*. New Delhi. *PHI Learning Pvt Ltd*, Print.
- Crossman, Ashley. (2017) *The Definition of Marriage in Sociology*, Web. <Ashley Crossman <https://www.thoughtco.com/marriage-3026396>>
- Kapadia, K. M. (1966) *Marriage & Family in India*. London. *Oxford University Press*, Print.
- Karnad, Girish. (2004) *Bali: The Sacrifice*. New Delhi. *Oxford University Press*, 2004. Print.
- Karnad, Girish. (2014) *Boiled Beans on Toast*. New Delhi. *Oxford University Press*, 2014. Print.
- Leslie, R. G. (1976) *The Family in Social Context*. New York. *Oxford University Press*, Print.
- Woods, S.F.J. (1966) *Introductory Sociology*. New York. *Harper & Row*, 1966. Print.



How [a] Historical is James G. Farrell's *The Siege of Krishnapur*?

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Abstract

*Can a piece of fiction be considered a historical document? If yes, why? If no, why not? Such questions have continued to perplex historians, literary artists, critics as well as common readers. One such piece of fiction with historical elements in it is *The Siege of Krishnapur*, a Booker Prize winning novel by the famous British novelist James Gordon Farrell. In this novel, Farrell has alluded to the historical 'Siege of Lucknow' during the Indian Rebellion of 1857. He has fictionalized one of the most memorable events in the history of British rule in India. The setting of the novel is Krishnapur, a fictional village somewhere near Calcutta (initially India's capital under the British East India Company rule). The novel describes the siege of a British Residency from the perspective of few British residents who are beleaguered by the Indian Mutineers. The paper also takes into account a diary entitled *A Diary Kept by Mrs. R. C. Germon, At Lucknow* written by an eyewitness and an affected party of the historical event. Using New-historical approach as its theoretical premise the research paper attempts to establish the historicity of the novel as well as the fictionality of the diary. It also tries to look into the similarities and/or differences in the portrayal of the event of the siege to study, how [a] historical is the novel?*

Keywords: New-historicism, J. G. Farrell, Indian Rebellion of 1857, British East India Company, Siege, Lucknow, Fiction, Krishnapur.

Introduction

The Siege of Krishnapur is the second novel of the Empire trilogy by James Gordon Farrell, others being the *Troubles* and *The Singapore Grip*, the first and the third respectively. The novel *The Siege of Krishnapur* was written by Farrell in 1973 after he went back to England from his visit to Lucknow in India, to where he has come, to procure materials as well as to witness the places which were going to influence his upcoming novel. Lucknow, witnessed a major event during the 1857 Sepoy Mutiny. The famous siege of British Residency during the 1857 mutiny took place here. Indian historian R.C. Majumdar writes in this regard, "A small force of British soldiers and civilians and loyal sepoys, altogether numbering less than seventeen hundred, burdened with a number of women and children, had to defend themselves in an ordinary building (British Residency), with mud walls and hastily improvised defenses, against six thousand trained soldiers, who were soon reinforced by a constantly increasing number of Talukdars and their retainers (Majumdar 59). However, the Residency was relieved on 25th September 1857, when British troops finally managed to take

control over the situation in Lucknow but the event accomplished a special place in history as it is ‘perhaps the most amazing episode in the whole military history of the mutiny’ (Majumdar 58). Since then, the siege has been the subject of the writings of many authors. Famous Victorian poet and British Poet Laureate Alfred Lord Tennyson wrote a poem ‘The Defense of Lucknow’ based on the historical siege in Lucknow. Farrell, has also chosen the famous siege as the setting of his novel *The Siege of Krishnapur*, alluding to the historical siege. New Historicism as a mode of literary study developed in response to the obsession of the formalist school of New Critics, who treat any literary text as an autonomous and independent entity and believes that it must be approached ignoring the extra-literary things i.e. ‘isolating the text from history and context’ (Barry 15). Unlike the New Critics who simply ignore the contextual details of a text, the new historicists, ‘in place of dealing with a text in isolation from its historical contexts attend primarily to the historical and cultural conditions, of its production, its meanings, its effects, and also of its later critical appreciation and evaluation’ (Abrams 244). So, ‘Diaries and autobiographies, records of dreams, chronicles of festivals and local fairs, protocols of witches burned at the stake and of exorcisms, primers on sexuality, descriptions of clothing and cosmetics, eyewitness accounts and illustrations of disease, insanity, birth and death, and so on’ (Kaes 1992) all these documents become the object of interpretation, acting as co-texts to the selected text for study as ‘these nonliterary texts are themselves complex material and symbolic articulations of a society’s imaginative and ideological structures’ (Kaes 1992). Being a piece of an artistic and fictional work, Farrell’s novel can be critically scrutinized and appreciated like any other literary work but it would not be just, if we read and appreciate the novel, ignoring the context which frames it.” A Diary Kept by Mrs R.C. Germon at Lucknow between the Months of May and December 1857” is a firsthand account, written during the siege days by Maria Germon, who herself, was present in the Residency during the siege. The diary was first published in 1870. Taking, the diary as a co-text, and by situating both the text and the co-text on the same

platform, the paper seeks to establish the historicity of the novel as well as the fictionality of the diary i.e. how historical or ahistorical is the novel. So this study attempts to conflate history and literature. There are some parts which establish the novel as a historical text and some parts which makes the diary fictional, but then there are other things also, which if we focus, will make the novel something more than merely a piece of historical fiction. My purpose in this paper, is only to study how [a]historical is *The Siege of Krishnapur*? and not to go into the details of various intricacies, which the novel poses, however, I will be hinting at those things very briefly in the paper. Thus, first I will discuss the historical and the ahistorical things in the novel, and then will conclude how [a]historical is this novel? To begin with, the historical elements i.e. few important historical incidents/events which are generally associated to the mutiny of 1857, as described in the novel.

Circulation of Chapattis

There was a wide circulation of chapattis (a kind of whole wheat flour flat Indian bread, commonly known as roti) just before the start of the mutiny in 1857. ‘It is proved on undisputable authority that about the beginning of year 1857, these chapattis were passed on from village to village over a very wide area’ (Majumdar 207) and thus it was a very important incident of that time. Farrell gives prime importance to this phenomenon in his novel as he introduces this incident in the first chapter of the novel. Remembering the past of Krishnapur, Farrell tells about the inception of the mutiny in Krishnapur. He writes, ‘The first sign of trouble at Krishnapur came with a mysterious distribution of chapattis, made of coarse flour and about the size and thickness of a biscuit; towards the end of February 1857, they swept the country like an epidemic’ (10). One of the mysteries till now, is the reason and purpose behind the distribution of chapattis among the Indian Sepoys deployed in the service of East India Company during 1857. There had been many speculations by the characters in the novel like it was by “the order of the Government, that the purpose had been to see how quickly messages could be passed on” (19) or like “it might be a superstitious attempt to avert an epidemic of cholera” (20) but the exact reason was



neither known to the characters in the novel nor is known to the readers even today. Indian historian R. C. Majumdar writes in this connection, 'The bearers of the chapattis were ignorant of the source whence they originated and the object for which they were circulated. Naturally there was much speculation on this subject, but no one appeared capable of elucidating the mystery (Majumdar 207). Unfortunately, the diary by Mrs. R.C. Germon doesn't have any mention about the circulation of chapattis anywhere in it. Maybe because this circulation of chapattis was noticed only in the beginning months of 1857 while the diary of Mrs Germon starts from 15th May 1857. According to the known historical facts, the chapattis were basically circulated among the sepoy's deployed in the service of the British East India Company and not to the British folks but Farrell in his novel, has manipulated this fact, as in the novel, we see that it is not only the Indian Sepoy's who are getting chapattis, but also, the British Officials like the Collector, the Magistrate, the Padre, Mr. Barlow from salt agency, Mr. Rayne from opium factory etc. who find chapattis at their places and not only once but many times. It is only the Collector of Krishnapur, who finds this circulation unusual and takes it seriously. Smelling the impending danger, he starts alerting other officials in Calcutta as well as in Krishnapur, of the prospective insurrection. Though nobody takes him seriously till the mutiny occurs. Farrell, by introducing this incident in his novel and involving the British officials into it, is perhaps trying to foreground the non-serious attitude of the British officers, who were not even aware of any such circulation under their nose. Had they known and smelt the danger, the course of mutiny might have changed and the mutiny, as is known to us today, might have been different.

Barrackpur, site of the first mutiny

The Indian Sepoy Mutiny is generally believed to have started first in Barrackpur when Mangal Pandey, a sepoy of the 34th Native Infantry openly rebelled over the issue of the greased cartridge. Then the 19th N.I. revolted which was stationed at Berhampur a few kilometres away from Barrackpur. Though, at both places, situations were brought under control by the British Officials and the two regiments were

disbanded. The mutiny which is supposed to have its first appearance in Barrackpur and then the mutiny of 19th N.I. at Berhampur, finds a very short mention in the novel where 'the collector had been astonished, on hearing of the mutiny of the 19th at Berhampur, at the lack of alarm in official circles over this development' (33). Farrell has used the actual historical records here when he writes about General Hearsey, as he was the commanding officer at Barrackpur during that time. But how factual is, Gen. Hearsey's address to the sepoy's just before the mutiny, as given in the novel, is yet not confirmed.

Cawnpore Massacre

The famous Cawnpore massacre also finds a brief mention in Farrell's novel. As he writes, "It was said that a massacre had followed the surrender of General Wheeler at Cawnpore" (208). The massacre here about which Farrell is writing, is the famous 'Bibighar Massacre'. Farrell has not written about it in length, but adheres to the known historical fact that General Wheeler was the commander of the garrison at Cawnpore during that time. On the other hand, Mrs Germon has given considerable space to the massacre in her diary. She writes, "I suppose he (Nana Sahib, Rajah of Bithoor) had heard of this (prize of Rs one lakh on his head) and became frightened, for he offered General Wheeler to conduct them all down to Allahabad safely, if they would lay down their arms and give him a lac of rupees. This Rajah is a Mahratta, a notably treacherous race so that we are glad to hear firing had commenced again at Cawnpore; proof that, of course, Gen. Wheeler would not agree to such a treaty" (Diary 26). Later on, she writes in her diary that the firing, which had commenced, was actually the massacre, in which many European women and children were killed. She received the detailed information about the massacre by a British Army captain a few days after the bloody incident. Strangely enough, we don't find proper attention given to this important incident (Cawnpore Massacre) by Farrell in his novel. This seems to be a selective representation of historical facts on the part of Farrell and one wonders what might be the reason behind it.

[Non] historical elements

There are many things which are not covered by history due to its disciplinary boundary but find traces in literary texts. Thus literature becomes important as it covers and tells about those things and experiences which are skipped by history. History only talks in a cause-effect sequence, where an action, event or incident leads to another consequential action, event or incident. That's why the new-historicists consider history as half-truth. The questions become pertinent here that; Is history all about great heroes and great events? Is there no need to talk about ordinary people who often got ignored by history? In order to answer such questions, the neo-historicist refers to co-texts (diary, letters, medical treatises etc.) while studying literature(s). There are many things written by Mrs. Germon in her diary which we won't find in history books. Farrell seems to have used the records of the diary to create his own fictional characters based on real persons. On reading the diary, one thing becomes clear that the siege of Krishnapur in the novel is an allusion to the historical siege of Lucknow. But as the novel is a fictional work, Farrell has made it different from the factual account of the happenings. The siege mentioned by Farrell in the novel has many similarities with the actual siege of Lucknow, held during the mutiny of 1857. When foregrounding the actual details of the siege of Lucknow described by Mrs. Germon in her diary, we find many similarities in the action and the characters of the diary and the novel. But then there are many things which do not find place in Farrell's novel. According to the diary it is on May 25th that all women and children of Lucknow cantonments were shifted to the British Residency Office as the mutineers were approaching towards the British residential areas. The diary shows one part of the picture while the novel shows the another part. Farrell tells us something more regarding the transfer than the normal transfer of the civilians to the Residency. In the seventh chapter of the novel, Farrell writes that a warning about the danger was given and all indigo planters were asked to come inside the residency as it was going to be danger outside. So just before the siege, all Europeans gathered in the Residency for their safety but the magistrate, in the novel is partial, while allowing the Eurasians and the native Christians into the safe enclave while such issue finds no mention in the diary.

Cholera epidemic was devouring lives in 1857 and finds mention in both the novel and the diary. Mrs Germon in her diary records many deaths due to cholera during the Siege. The diary establishes a fact that there were two doctors in the Residency during the siege Dr. F. and Dr. D. Dr. Dunstaple in Farrell's novel is an allusion to Dr. F., the resident surgeon of the Residency. Cholera epidemic becomes more prominent in Farrell's novel as it is over cholera's treatment the two doctors of the novel dissent and each has his own way of treating cholera. The diary describes that Dr F. used to treat cholera using opium and mustard paste. Dr Dunstaple in the novel is also a surgeon and is treating his cholera patients with opium and mustard. The diary didn't mention any resentment amongst the patients regarding cholera treatment or any dissent between the doctors but the novel devotes many pages over the dissent between Dr Dunstaple and Dr MacNab on the methods of treating cholera.

The British in India used to keep (depending on their affordability) servants in their daily household services like punkahwallah⁴, cook, washer man, ayah⁵ etc. Nupur Chaudhuri in her article notes, 'British families in India usually employed more servants than did comparable middle or upper-middle class families in the metropole' (Chaudhuri 551). During the siege, the servants also accompanied their masters to the Residency. Mrs. Germon in her diary mentions that when attacks on the residency increased, the servants started deserting their work and fleeing to save their lives. So the besieged were forced to do their work themselves. She writes that after many fled, only one dhobi (washer man) left, and he was charging 'twenty-five rupees per 100! (clothes) more than eight times the usual charge' (Diary 49) to wash their clothes. Farrell, in his novel has used this fact and describes it in his novel that the dhobi is charging more and the besieged are ashamed of washing their clothes themselves. Farrell, exposes this snobbish conduct of the British and produces a different picture through the character of the collector. The Collector, when comes to know that the dhobi is charging more than the usual charges during this crisis, he washes his clothes in open to 'help those (British folk) who were ashamed to be seen washing their own clothes but could not afford the dhobi's new prices (235).



According to the diary, there were two priests in the Residency during the Siege. One was Protestant Mr. P. and the other was Mr H. a Roman Catholic. As the British East India Company included staffs of both the faiths, so both Protestant and Roman Catholic priests were available for religious services. Mrs Germon writes in her diary that a confusion aroused over the dead bodies when a Roman Catholic and a Protestant dead body had to be buried the same night. It was not clear that who was of which faith. This incident is alluded by Farrell in his novel where he is trying to show the conflict between the two faiths, even in such distant location and in such a desperate time.

Things that vary

There are many things in the diary which do not find space in Farrell's novel like the spread of chickenpox in the Residency about which Mrs Germon has written in her diary. Then the diary also records that Elephants were brought inside the residency in the evening to entertain the ladies during the siege, but we do not find any such mention in the novel, rather the ladies have nothing to entertain with when they are besieged. Similarly, there are many things in the novel which are not found in the diary like the character of the Collector who is obsessed with the Great Exhibition etc.

Conclusion

We can get many facts from history but there are other records which the neo- historicist consider as co-text like the diary and other things from which we can learn about the things of past. Thus this paper concludes that this novel is a perfect blend of fact and fiction. There are historical elements in it as discussed above and when compared with a historical co-text (the diary) many other facts come out. By alluding to the events of the diary, Farrell has tried to showcase the mid-nineteenth century Victorian British life and manners, that he sometimes praises and at many times reprimands in the course of the novel through his characters. His manipulation of the event of circulation of chapatti, his depiction of the fight between the two doctors, his criticism of the British ladies who were too soft to their own work, his portrayal of the Priest and the Roman

Catholic Chaplin in the novel, their fight and the question of their authority etc. raises more questions than answer in the minds of readers and are more important ahistorical issues to be discussed upon. Is the novel idealizing the Company's rule or 'so-called' better civilization which the British brought with them or does it try to bridge the gap between the two civilizations? are some issues, which are deftly dealt by Farrell in his novel. Thus it will not be right to consider it as only a historical novel. It is both historical and ahistorical at the same time and it is as much historical as it is ahistorical. Fiction cannot be taken as an exact, real, historical document but fiction may propose a view that is sometimes different from the common historical perception i.e. to look some other aspects which may not find mention in history. As this study has concluded, the novel, not only refers to the factual historical incidents but also hints at various important issues, which are more ahistorical.

Notes

1. See R.C. Majumdar (1957) *The Sepoy Mutiny and The Revolt of 1857*. Page 47.
2. The name of those who were actors in the fearful scenes have been omitted, from a feeling of delicacy towards some who are still alive (Preface of the Diary).
3. If we don't consider the diary taken for study as history (which is against the new historicist's premise) it will be non-historical elements.
4. A Punkahwallah is a manual fan operator. Before the invention of electric fan, cloth punkah (fan) were used in India. Punkah made of cloth were suspended to the ceiling and a cord was attached to it. Punkahwallah were employed to pull the cord using pulley, making the punkah to move.
5. A native Indian nursemaid or nanny employed by the British in India to look after their children.

Works Cited

- Abrams, M. H. (2012) *A Glossary of Literary Terms*. Delhi, *Cengage Learning, Print*.
- Barry, Peter. (2009) *Beginning Theory: An Introduction to Literary and Cultural Theory*.

New York, *Manchester University Press*,
Print.

Chaudhuri, Nupur. (1994) “Memsahibs and their servants in nineteenth century India”. *Women’s History Review*, vol.3, no. 4, pp. 549-562.

Farrell, James Gordon. (2007) *The Siege of Krishnapur*. London, *Phoenix Orion Books Ltd*, Print.

Germon, Maria Vincent. (2014) *A Diary Kept by Mrs. R.C. Germon at Lucknow between the Months of Pickle Partners Publishing*.

Kaes, Anton. (1992) “New Historicism: Writing Literary History in the Postmodern Era.” *Monatshefte*, vol. 84, no. 2, pp. 148–158.

Majumdar, R.C. (1957) *The Sepoy Mutiny and The Revolt of 1857*. Calcutta, *Calcutta Oriental Press*. Print.



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मलनवलल वरदलन ठरलेलुया वलकलस प्रकुलयेत षलकुषण हल नेहमलक एक अननुयसलधलरण मलहतुवलकुी बलब ठरलुी आहे. ऑनलरुऑन आणल सुसंस्कृत सलमलऑवुवरुथेके नलरुमलऑन हे षलकुषणलमलगके मलहतुवलके उदुदेश हुते आणल आहेत. अधुयन अधुयापन प्रकुलल हल प्रलकुीन कलळलपलसून अरुसलतुवलत असलुी तरुी आधुनलक युगलत तलकुी षलसुतुरषुदुध मलंडणुी करुणुयाके अनेक तऑऑ मंडळुीनी प्रयलतुन केलेले दलसुतलत. तुयलतून षलकुषणषलसुतुर अरुसलतुवलत आले. रुसुी, पेसुतुऑलुऑुी, फुीबेल, मऑनुतेसरुी, ऑऑन डयुऑुई इतुयलदुी अनेक मलनुयवर षलकुषणतऑऑलनी अधुयन प्रकुलल, अधुयन-अधुयापन पदुध तलती, मूलुयमलपन अषल वलवलध अंगलनी कुऑतुन केले आहे. कलळलकुषल ऑुघलत वेगवेगळुया कुषुतुरलत नवनवुीन षुध ललगत गेले तसे षलकुषणकुषुतुरलतहल ननुयलने भर पडत गेलुी आणल षलकुषणलकल अधलक वुयापक दृशुतीने वलसुतलर हुत गेला.

षलकुषण महुणऑे कलय?

प्रुीढ मलणसुलनी आपलुया ऑनललकुी व अनुमवलकुी ऑलप लहलन मुललंवर पलडणे महुणऑे षलकुषण कुलवल वुयवहलरलतुल कलमलके वळण मुललंनल ललवणे महुणऑे षलकुषण अषल षलकुषणलकुषल कलहल सलमलनुय वुयलखुयल केलुयल गेलुयल. परंतु ' षलकुषण महुणऑे नलसुगलकुषल नलयमलप्रमलणे मुललंनल ऑसल वलकलस ऑललल पलहलऑे तसल तुी हुीणुयलस मदत करणे.' अषुी वुयलखुयेकुी मलंडणुी रुसुी, मऑनुतेसरुी, रसेल, व नुील यलंसलरखुयल नलसुगलवलदुयलंनल केलुी आहे. तुयलंनुयल मते 'षलकुषण महुणऑे आतुन षलकुषण हुीय'. षलकुषणलकुी वुयलखुयल करतलंनल फुबेल मनुशुयलंनुयल अंतुगुत षकुती बलहेर कलदून तुयलंनल वलकलस करुणुयलवर भर देतुी. तर हलरुवत 'मनुशुयलके षुील कुडवणे हे षलकुषणलके कलरुय मलनतुी. वुयवहलरलक ऑुीवनलवर भर देणलनुयल ततुववेतुतुयलंनल षलकुषणलतून उतुतुत नलगरलक बनवलणुयलवर भर दललेलल आहे. ऑेम्स, डयुऑुई, षुीअसुं इ. वलसलवुयल षतकलतुल ततुववेतुतुयलंनल, 'षलकुषण महुणऑे हुीवतललकुषल नैसुगलक वलतलवरणलषुी व सलमलऑलक वलतलवरणलषुी सलमरस हुीणुयलकुी पलतुरतल मुललंनुयल अंगुी आणून देणे असे महुतले आहे.

'लुकषलहलवलदुी वैऑनलनक दृशुतीकुीण असलेलल, देषलप्रतुी कुरुतुवुय आणल अभलमलन असलेलल उतुपलदनकुषम, संवेदनषुील, सरुवधरुमसमभलवुी दृशुतीकुीण असलेलल नलगरलक तुयलर करणे' हे षलकुषणलके उदुदशुत मलनले तर षलकुषणलतून आदरुष नलगरुीकलकुी अपेकुषल वुयकुत केलुी ऑलते. यल नलगरलकलने लुकषलहलकुी मूलततुवे अंगलकलरलुी पलहलऑेत. तुयलने वैऑनलनक दृशुतीकुीण सुवीकलरलेलल असलवल. यलकल अरुध अंधशुरुदुधेला बळुी पडू नये. तुयलने वलवेकषुील आणल संवेदनषुील असलवे. उतुपलदनकुषम असणुयलबुरुीवर देषलप्रतुी कुरुतुवुयदकुषतल आणल अभलमलन असलवल अषुी अपेकुषल केलुी ऑलते. सुवतःकुषल धरुमलबुरुीवर सरुवधरुमलबदुल आदर वुयकुत करणलरल संवेदनकुषम नलगरुीक कुडवलणे असे वुयलपक उदुदशुत षलकुषणलतून सलधुय करलरुयके असते.

भलरतुीय षलकुषणलकुी दुीरुध परंपरल

प्रलकुीन भलरतुीय षलकुषणलकुी परंपरल इ. स. पूरुव 2500 इतकुी मलगे ऑलऑन पलहलतल येते. हे षलकुषण वैदुिक परंपरेतुलल धलरुमलक ऑललुीरुीतुीषुी व संसुकुतुीषुी नलगऑुीत हुते. ततुकललन वरुणवुयवसुथल, ऑुीवनपदुधतुी मूलुयवुयवसुथल व ऑनलवलशुयक संकलुपनल यलंनल षलकुषणलवर

प्रभाव होता. समाजातील विविष्ट वर्गालाच शिक्षणाची संधी होती. समाजव्यवस्थेतील रचनेनुसार आपल्या व्यवसायाचे शिक्षण त्या त्या कुटुंबात दिले जात होते. या काळात शिक्षण ही प्रायः वैयक्तिक बाब होती. प्राचीन भारतीय विद्यापीठीय पाठळीवरील पैक्षणिककेंद्र तक्षशिला, नालंदा, वलभी, मिथिला, नाडिया आदी ठिकाणी होती. भाशा, न्यायशास्त्र, तत्वज्ञान विविध कला कौशल्ये यांच्या अध्ययनासाठी देशाच्या कानाकोपऱ्यांतून, परदेशांतून अभ्यासार्थी विद्यापीठांत येत. इस्लामी आक्रमणानंतर हळूहळू ही विद्यापीठे बंद पडली.

आधुनिक काळात भारतीय शिक्षणाचा प्रणेता म्हणून मेकॅलोकडे पहावे लागते. इंग्रजी राजवटीला पूरक ठरणारी कारकून निर्माण करणारी शिक्षण पद्धती मेकॅलोकडे सुरू केली असे आपण जरी म्हणत असलो तरी इंग्रजांनी निर्माण केलेल्या शिक्षणव्यवस्थेने भारतीय समाजाला आधुनिक जगाची ओळख करून दिली. नवनव्या विशयांचा परिचय घडवला. शिक्षण समाजाच्या तळापर्यंत पोहोचवावे ही त्यांची निखळ भूमिका होती. 1854 साली wood's Despatch (वूडचा खलिता) ब्रीटीषानी या देशात पाठविला आणि भारतीयांना पारखती दिली की 'एखदया विद्यार्थ्याला तो विविष्ट जातीचा आहे म्हणून त्याला सरकारी पाळेत प्रवेश नाकारता येणार नाही.' परंतु एतददेशियांच्या धर्म व्यवस्थेमध्ये ढवळाढवळ न करण्याच्या मुंबई सरकारच्या धोरणामुळे त्यात सोईस्कर बदल करण्यात आले. पण इथली कर्मठ समाजव्यवस्था, धर्मकल्पना आणि एतददेशियांच्या धर्म व्यवस्थेमध्ये ढवळाढवळ न करण्याच्या इंग्रजांच्या धोरणामुळे इंग्रजी राजवटीतील शिक्षणव्यवस्था मूठभर उच्चवर्णीय भारतीयांसाठी लाभकारक ठरली.

जवळजवळ 95 ते 97 टक्के बहूजन भारतीय समाज शिक्षणापासून वंचितचराहिला. पुढील काळात समाजातील सर्व स्तरांपर्यंत शिक्षण पोहोचवावे म्हणून महात्मा जोतिबा फुले, महर्षी कर्वे, महर्षी विठ्ठल रामजी शिंदे आदि मान्यवर महर्षींनी अथक प्रयत्न केले त्याचे परिणाम काय झाले हे सर्वश्रुत आहेच.

स्वातंत्र्योत्तर भारतातील सरकारची शिक्षणविशयक भूमिका

स्वातंत्र्योत्तर भारतीय शिक्षणाची वाढ, त्याचा विस्तार आणि विकास यांचा अभ्यास करतांना या संकल्पनांमधील सूक्ष्म साम्यभेद समजून घ्यायला हवेत. वाढ व विस्तार या संख्यात्मक संकल्पना आहेत तर विकास ही गुणात्मक संकल्पना आहे. शिक्षणातील वाढ किंवा विस्तार समजून घेतांना स्वातंत्र्यापासून आतापर्यंत शिक्षणाच्या सर्व स्तरांवर संख्यात्मक वाढ आणि विस्तार कसा आणि किती होत गेला याचा विचार करता येईल तर विकासाचा विचार करतांना भारतीय शिक्षणाच्या दर्जाचे स्वरूप लक्षात घ्यावे लागेल.

स्वातंत्र्योत्तर भारतातील शिक्षण विशयक धोरण ठरविण्यासाठी आतापर्यंत अनेक आयोग आणि समित्या स्थापन करण्यात आल्या. यामध्ये डॉ. राधाकृष्णन समिती(1950), डॉ. मुदलियार समिती (1951), डॉ. कोठारी समिती (1964) आणि 1986 चे राष्ट्रीय शिक्षण धोरण यांचा खास उल्लेख करायला हवा. 1964च्या कोठारी समितीचा अहवाल आणि 1986 चे राष्ट्रीय शिक्षण धोरण हे सर्व स्तरावरील शिक्षणाचा लेखाजोखा मांडणारे अहवाल आहेत. कोठारी समितीच्या अहवालातील शिफारशीनुसार भारताने 1974 पासून त्रिस्तरीय शिक्षण पद्धती स्वीकारली प्राथमिक (पहिली ते आठवी प्राथमिक), माध्यमिक

(नववी दहावी माध्यमिक, अकरावी बारावी उच्चमाध्यमिक) आणि पुढे उच्चशिक्षण असे स्तर होय. थोडक्यात घालेय शिक्षण आणि उच्च शिक्षण असे प्रामुख्याने दोन भाग केले जातात. या संपूर्ण शिक्षण व्यवस्थेसाठी भारत सरकारकडे विसाव्या शतकाअखेरपर्यंत स्वतंत्र शिक्षण खाते नव्हते. गृहमंत्रालयाकडे हा कारभार होता. आता कुठे मानव संसाधन मंत्रालयाच्या रूपाने शिक्षण क्षेत्राला स्वतंत्र मंत्रालय मिळाले आहे.

देशातील शिक्षणावर होणाऱ्या खर्चाविशी सुद्धा शासनाची भूमिका अनुदारच असलेली दिसते. कोठारी कमिशनने राष्ट्रीय उत्पन्नाच्या 06 टक्के इतकी रक्कम शिक्षणावर खर्च व्हावी अशी शिफारस केलेली होती. परंतु आज सुद्धा भारत सरकार 3 ते 4 टक्के रक्कम शिक्षणावर खर्च करते. देशातील नवी पीढी घडविण्याच्या दृष्टीने आणि एकूणच राष्ट्राच्या विकासाच्या दृष्टीने शिक्षणावर केलेला खर्च महत्त्वपूर्ण ठरतो. परंतु ही गोष्ट आपल्या राज्यकर्त्यांच्या गेल्या सत्तर वर्षांत लक्षात आलेली नाही. जर्मनी, रशिया या सारख्या विकसित देशांत संपूर्ण शिक्षण मोफत दिले जाते. भारतात फक्त सयाजीराव गायकवाडांनी आपल्या संस्थानात शिक्षणावर मोठा खर्च केला होता तर राजर्षी बाहू महाराजांनी कोल्हापूर संस्थानात 1918 साली प्राथमिक शिक्षण मोफत आणि सक्ताचे केले होते. एवढेच नव्हे जर मुल पाळेत आले नाही तर पालकांना आर्थिक दंड आकारला जायचा.

शिक्षण हक्क कायदा – मोफत आणि सक्तीचे शिक्षण

भारतीय राज्य घटनेच्या मार्गदर्शक तत्वातील कलम 45 मध्ये शिक्षण विशयक तत्वे मांडलेली आहेत. या तत्वानुसार 0 ते 14 वयापर्यंतच्या मुलांना शासनाने मोफत आणि सक्तीचे शिक्षण दयावे असे नमुद करण्यात आले आहे. कालपरत्वे घटनेत वेळोवेळी ज्या दुरुस्त्या करण्यात आल्या त्यापैकी 2002 मध्ये झालेल्या 86 व्या घटनादुरुस्तीनुसार 'शिक्षणाचा हक्क हा मूलभूत अधिकार म्हणून संमत करण्यात आला. तेव्हा 21 (अ) हे कलम घटनेत नव्याने समाविष्ट करण्यात आले. आणि 06 ते 14 ही वर्षे मोफत आणि सक्तीच्या शिक्षणाची आठ वर्षे निश्चित केली गेली.

नवीन बदलानुसार शासनाने मुलाच्या शिक्षणातील संवेदनशील अशी पहिली पाच वर्षे गाळून टाकली आणि 06 ते 14 वर्षे अशी वयोमर्यादा मोफत आणि सक्तीच्या शिक्षणासाठी निश्चित केली या निर्णयानुसार या वयोगटातील मुलांच्या शिक्षणाची म्हणजे पूर्वप्राथमिक शिक्षणाची जबाबदारी शासनाने झटकून टाकली आहे. एवढेच नव्हे तर 2002 मध्ये घटना दुरुस्ती होवूनही त्याची राजपत्रातून अमलबजावणी मात्र 2014 मध्ये केली जाते यातच शिक्षणाबाबतची शासकीय आनास्था निदर्शनास येते.

वास्तविक शिक्षणतज्ज्ञांच्या मते या वयोगटातील मुलांमध्ये ग्रहणक्षमता जास्त असते. प्राथमिक कौशल्य या वयोगटातील मुले सहज आत्मसात करतात. मुलांची समायोजन क्षमता वाढीस लागते. मुलाचे व्यक्तिमत्व विकसित करण्यासाठी हा वयोगट अतिशय महत्वाचा असतो. असे असतांनाही नर्सरी/किंडर गार्डन/बालवाडी यांची जबाबदारी शासनाने 0 ते 6 वर्षे वगळून नाकारली. पूर्वप्राथमिक शिक्षणाबाबतचे कोणतेही नियम अथवा पैक्षणिक आकृतीबंधही तयार केलेले नाहीत. किंवा तज्ज्ञ व्यक्तिकडून अभ्यासकमही तयार करून घेतलेले नाहीत. त्यामुळे ज्याला जे वाटेल ते पिकवले जाते अथवा



षिकवायला लावले जाते. पासन जसे अभ्यासक्रम निष्पत्तीबाबत उदासीन आहे तसेच अध्यापकांच्या वेतनाबाबतही उदासिनच आहे. आजतागायत पासनाने या संदर्भात कोणतीही मार्गदर्शक सूचना केलेली नाही. त्यामुळे खाजगी शिक्षणसंस्थांचालक अत्यल्प वेतनावर शिक्षकांना राबवीत असतात. अंगणवाडी प्रकल्प हा राज्यसरकारच्या महिला आणि बालविकास मंत्रालयाच्या अखत्यारितील असूनही तेथेही पासन फारसे लक्ष देत नाही.

शालेय शिक्षण –प्राथमिक

प्राथमिक शिक्षण मोफत आणि सक्तीचे फक्त कागदोपत्री आहे. त्याचा कायदा दिरंगाईने का होईना करण्यात आला. ही वस्तुस्थिती आहे परंतु प्रत्यक्ष वास्तव फार वेगळे आहे. राज्य पासनाच्या वतीने जिल्हापरिशदा, महानगरपालिका आदी आस्थापने प्राथमिक शिक्षण ाची सोय करीत आहेत. या शाळांतून अनेक गुणवान विद्यार्थीही तयार झाले.परंतु प्राथमिक शिक्षणाचे सार्वत्रिकीकरण करतांना, वाढत्या लोकसंख्येच्या दृष्टीने शिक्षणाची सोय सर्वांना पुरवतांना पासनयंत्रण ा कमी पडू लागली, तेव्हा त्यांनी खाजगी संस्थांना अनुदानित, विनाअनुदानित तत्वावर शाळा सुरु करण्यास मान्यता दिली.

बरे ज्या सरकारी शाळा चालविल्या जातात त्या तरी परिपूर्ण आहेत का? तर त्याचे उत्तर नाही असेच दयावे लागते. अपुऱ्या साधन सुविध ा, मूलभूत सोयींचा अभाव, शिक्षकांवर सोपविली जाणारी शालाबाहय कामांची जबाबदारी, खात्यातील भ्रष्टाचार, त्यामुळे शिक्षकांची शाळेतील अनुपस्थिती इत्यादी सगळ्या गोष्टींमुळेसरकारी शाळेतील शैक्षणिक गुणवत्ता घसरली. या कारणाने पालकांचा निमसरकारी आणि खाजगी शाळांकडील ओढा वाढला आणि सरकारी शाळा ओस पडू लागल्या.

त्यातच शालेय शिक्षणाच्या माध्यमाच्या मुद्दयाची आता भर पडली आहे. वास्तविक भारतीय समाजात इंग्रजी भाशा आणि तिच्याशी जोडलेल्या खोट्या प्रतिश्ठेच्या कल्पना याची सुरुवातीपासूनच ओढ आहे. त्यातच जागतिकीकरणाच्या प्रकियेत इंग्रजी भाशेला अवास्तव महत्त्व येवू लागले त्यामुळे मातृभाशेत/प्रादेशिक भाशा माध्यमात मुलांना शिकवण्याऐवजी इंग्रजी माध्यमाच्या शाळेत शिकवण्याकडे पालकांचा ओढा वाढत गेला. त्यामुळे मातृभाशेतून शिक्षण देणाऱ्या शाळा बंद पडू लागल्या. शिक्षणातील स्पर्धा वाढल्यामुळे सी.बी.एस.सी, आय.सी.एस. सी असे विविध मंडळांच्या शाळांची संख्या वाढली.इंटरनेशनल स्कूलस् आली. त्यांच्या भरमसाठ फी आणि डोनेषन यांतून पालकांची आर्थिक लूट सुरु झाली आहे.

खाजगी विनाअनुदानित शाळांना, पासनाने अभ्यासक्रम पूर्ण करण्यासाठी लागणारा निधी फी मधून उभा करण्याची अनुमती दिलेली आहे. त्यामुळे सोई-सुविधांचे अमिश दाखवून भरमसाठ फी घेतली जात आहे.

सक्तीने आणि मोफत प्राथमिक शिक्षण पुरविणाऱ्या सरकारी शाळा मुलांअभावी रिकाम्या आहेत. आणि भरमसाठ फी देऊनही इंग्रजी माध्यमाच्या खाजगी शाळेत प्रवेश मिळत नाही. प्रवेशासाठी चढाओढ सुरु होते. मग मागेल ते डोनेषनदेणाऱ्या पालकांच्या मुलालाच प्रवेश मिळतो. गुणवान गरीब मुलं या शिक्षणापासून वंचित राहातात.

1854 सालच्या wood's Despatch (वूडचा खलिता) खारखा खलीता आज का निघत नाही ? की, फी साठी पैसे नाहीत म्हणून

गुणवान विद्यार्थ्याला कोणत्याही शाळेत प्रवेश नाकारता येणार नाही.

वास्तविक असा खलिता निघणे शक्य नाही याचे कारण पासन चालविणारे राजकर्ते हेच मोठे शिक्षण सम्राट आहेत. सुरुवातीला सरकारी अनुदानं लाटण्यासाठी अनुदानित खाजगी शाळा सुरु केल्या. त्या शाळांमधून पै-पाहुण्यांची, नातेवाईकांची आणि राजकीय कार्यकर्त्यांची वर्णी लावली. साखर सम्राटांचे शिक्षण सम्राट झाले. अनुदानित नवे वर्ग मिळणे बंद झाल्यावर भरमसाठ फी आणि मागेल ती देणगी देणाऱ्या इंग्रजी माध्यमांच्या आणि विविध बोर्डांच्या नॅशनल आणि इंटरनेशनल शाळा सुरु करून. दर्जेदार शिक्षणाची अपेक्षा करणाऱ्या पालकांची आर्थिक लूट करीत आहेत. अशा लूटारूकडून गुणवान विद्यार्थ्याला मोफत शिक्षण मिळेल अशी अपेक्षा करणेच चुकीचे ठरते.

आर टी ई अंतर्गत गोरगरीबांच्यामुलांना खाजगी शाळांतही 25 टक्के प्रवेश आरक्षित ठेवण्यात आले आहेत. त्यांचा खर्च पासन करणार आहे. पण पासनाने या खर्चाची अद्याप तरतुद केलेली नाही. हा आर्थिक भार संस्थांचालकही आपल्या अंगावर घ्यायला तयार नाहीत. संस्थांचालकांनी खूबीने हा भार इतर पालकांवर लादलेला आहे.

गेल्या सत्तर वर्षांत शालेय शिक्षणाचा प्रचार आणि प्रसार बऱ्यापैकीझाला आहे उत्तम नव्हे कारण आजही शालाबाहय मुलांची संख्या खूप मोठी आहे. 2002 सर्वशिक्षा अभियान सुरु केले तेव्हाच्या सर्वशिक्षात 15,00,000 (पंधरा लाख) मुलं शालाबाहय होती. आणि सतत गैरहजर असणाऱ्या मुलांची संख्या दोन लाखावर जाते. तर 2005 सालच्या झटपट शिक्षण सर्वशिक्षात अडीच लाख मुलं शालाबाहय असल्याची नोंद आहे. (प्रथम संस्थेचे अहवाल- असर) महाराष्ट्रात बालकामगार, तुरुंगात असणाऱ्या महिलांची मुलं, अस्थायी झोपडपट्टी धारकांची मुलं, पारधी बरेड्यांची मुलं, आदिवासी मुलं, गुरं चारणारी मुलं, वेष्ट्या व्यवसायातील महिलांची मुलं, स्थलांतरीत कामगारांची मुलं, वीटभट्टी कामगारांची मुलं अशी कितीतरी मुलं शालाबाहय आणि गळती मध्ये आहेत. यांच्या प्राथमिक शिक्षणाची सोय व्हावी म्हणून पासनाबरोबर अनेक संस्था आपापल्या परीने काम करीत आहेत. अनौपचारिक शिक्षण केंद्रे चालवली जात. जसे वस्ती शाळा, महात्मा फुले शिक्षण हमी केंद्र, राजीवगांधी संधी शाळा, सेतू शाळा, हंगामी वस्तीगृह शाळा. सिग्नल शाळा इत्यादीमार्फत अनौपचारिक प्राथमिक शिक्षणाची सोय केली जात होती परंतु सर्वशिक्षा अभियानानंतर पासनाने हे सर्व प्रकल्प बंद केले आहेत.

शालान्त परीक्षेचा बागुलबुवा

माध्यमिक शालान्त परीक्षा (इयत्ता 10 वी) अणि उच्च माध्यमिक शालान्त परीक्षा (इयत्ता 12 वी.) म्हणजे गुणांच्या फुगवट्याची चुरसच लागलेली असते. या परीक्षांसाठी वापरलेली मूल्यमापन पद्धती ही सदोश आहे. दीड दोन वर्षे केलेल्या अभ्यासाचे मूल्यमापन तीन तासांच्या लेखी परीक्षेत करायचे हे एकांगी आणि सदोश मूल्यमापन आहे. एखादया मुलाला 90 टक्के गुण मिळाले याचा फक्त संख्यात्मक अर्थ कळतो, गुणात्मक अर्थ कळत नाही. या गुणवृद्धीच्या चढाओढीत विद्यार्थ्यांचा मानसिक ताण वाढतो. तसेच भरमसाठ मार्क मिळाल्यामुळे फाजिल आत्मविश्वासही बळावतो. आणि भविष्यात वैफल्य येण्याची शक्यता वाढते. असे असले तरी दुर्दैवाने आपल्याकडे बुद्धिमत्ता मोजण्याचा मानदंड म्हणजे परीक्षेत किती गुण मिळाले हाच आहे.

उच्च शिक्षण / करिअर अभ्यासक्रमाची निवड करतांनाचे सदोश मार्ग – उच्च शिक्षण घेतांना किंवा करिअर साठी योग्य मार्गाची / अभ्यासक्रमाची

निवड करतांना या गुणांनाच मध्यवर्ती धरले जाते. तसेच पालकांच्या अपेक्षा मुलांवर लादल्या जातात. मला जे करता आले नाही ते माझ्या मुलांने करावे अशी अपेक्षा केली जाते. तसेच पालकांच्या काही व्यवहारिक अपेक्षा असतात. जसे उद्योगपतीच्या मुलांने उद्योगास पुरक अभ्यासक्रम निवडावा. डॉक्टरच्या मुलांने डॉक्टर व्हावे. असे प्रतिश्ठीत व्यवसायातील पालकांना वाटते ते व्यवहारिक असते, परंतु मुलांना खरंच त्याकरिअरमध्ये अभिरुची आहे? त्यांची ती कुवत आहे? अशा प्रश्नांचा विचारच केला जात नाही. दुसऱ्या बाजूला कोरडवाहू शेतकऱ्याला किंवा कामगार, मजुराला असे वाटते की आपल्या मुलांने पगारदार व्हावे अशी अपेक्षा धरून करिअर अभ्यासक्रमाची निवड करावी अशी व्यवहारिक अपेक्षा असते.

करिअर अभ्यासक्रमाची निवड करतांना कुवतीनुसार अभ्यासक्रमाची निवड केली जात नाही. तर विशयाची सामाजिक प्रतिश्ठा पाहिली जाते. तसेच त्या ज्ञानशाखेतून होणाऱ्या अर्थार्जनालाही केंद्रस्थानी धरले जाते. अशा सदोश मार्गाने उच्च शिक्षण किंवा करिअर अभ्यासक्रमाची निवड केली तर त्यातून शिक्षणाचे हेतू साध्य होत नाहीत. नवे ज्ञान निर्माण करण्याची क्षमता निर्माण होत नाही शिक्षण पूर्ण झाल्या बरोबर सज्जद पगाराची नोकरी पोधली जाते. जास्तीत जास्त धनसंचयन करण्याची ओढ लागते. 1950 मध्ये भारतात 25 विद्यापीठांच्या 700 संलग्न महाविद्यालयांतून लाखभर विद्यार्थी शिक्षण घेत होते आजच्या घडीला 47 केंद्रीय विद्यापीठे, 384 राज्य विद्यापीठे, 123 अभिमत विद्यापीठे आणि 296 प्रायव्हेट विद्यापीठे अशा एकूण 850 विद्यापीठांच्या जवळजवळ बारा हजार संलग्न महाविद्यालयांतून लाखो विद्यार्थी शिकून बाहेर पडत आहेत. गेल्या सत्तर वर्षांतील ही लक्षणीय वाढ आहे. भारताची वाढती लोकसंख्येच्या प्रमाणात विचार केला तर ही महाविद्यालये खूपच कमी आहेत. शालेय शिक्षणाचा झालेला लक्षणीय विस्तार लक्षात घेता निदान एका तालुक्यात एक तरी महाविद्यालय असावं अशी योजना घासनाने राबविली. नगर, महानगर तर लोकसंख्या वाढीचा विस्फोट झाला आहे. अशा नागर शाळा, महाविद्यालयात प्रवेश मिळवणे म्हणजे एक दिव्यच होवून जाते. घासनाला पारंपरिक शिक्षण आसाठी लागणाऱ्या सोयी सुविधा पुरवणे अवघड होवून बसले. तेव्हा खाजगी शिक्षण संस्थांना विना अनुदानात तत्वावर पारंपरिक आणि व्यावसायिक महाविद्यालये सुरू करण्याची परवानगी देण्यात आली.

महाराष्ट्रात 2000 सालापासून घासनाने विनाअनुदानाच्या तत्वावर शैक्षणिक संस्थेला मान्यता देणे सुरू केले. कायम विनाअनुदान तत्वावर अनेक शाळा, महाविद्यालये, व्यवसायिक महाविद्यालये, अभिमत आणि खाजगी विद्यापीठांना घासन परवानगी देत आहे. संपूर्ण खर्चावर आधारित फी आकारण्यास तसेच विद्यार्थीसंख्येच्या 15 टक्के जागा संस्थाचालकांच्या अखत्यारीत भरण्यास परवानगी दिली गेली. गेल्या दहा पंधरा वर्षांत व्यवसाय शिक्षण देणाऱ्या संस्थांची संख्या तिप्पट वाढून पंधरा हजारावर गेली. पण शैक्षणिक दर्जा खालावल्यामुळे यातूनही अपेक्षित यश हाती लागत नाही.

याच काळात संगणकशास्त्र, व्यवस्थापनशास्त्र, माहिती तंत्रज्ञान हे विशय आघाडीवर आले. या विशयांचे फक्त उपयोजन समजून घेतले गेले. मुळाबरहुकूम विशय समजून घेतला गेला नाही. नवे संपोषण केले गेले नाही. त्यामुळे या नव्याज्ञानक्षेत्रातही पारंपरिक शिक्षण आसाखी अवस्था झाली. पारंपरिक महाविद्यालयांप्रमाणेच नियोजनपून्यपण

े अभियांत्रिकी आणि शिक्षणशास्त्र महाविद्यालयांना परवानगी दिली गेली. संस्थाचालकांनीही भरमसाट फी आणि डोनेषनच्या लोभाने अभियांत्रिकी आणि शिक्षणशास्त्र पदवी आणि पदविका वाटणारी दुकानं सुरू केली. याचा परिणाम असा झाला की गुणवत्तेच्या निकशांवर प्रवेश देण्याऐवजी नेमलेली फी आणि मागीतले तेवढे डोनेषन देणाऱ्या प्रत्येकाला प्रवेश मिळाला. गरजेपेक्षा जास्त पदविधर निर्माण झाल्यामुळे त्यांना बेकारीच्या समस्याला तोंड द्यावे लागले.

या सर्व शैक्षणिक दुकानांमधून अनानुभवी आणि शैक्षणिक अर्हता पूर्ण नसलेलेही अध्यापक अत्याल्प वेतनावर नियुक्त केले गेले. एक वर्षापुरती तात्पुरती नियुक्ती करून शैक्षणिक वर्ष पूर्ण केले जावू लागले. पुरेशी क्षमता नसलेला विद्यार्थी व शिक्षक आणि आर्थिक, शैक्षणिक घोशण करणारे संस्थाचालक यांची ही शैक्षणिक दुकानदारी चार-पाच वर्षे जोरात चालली. शैक्षणिक दर्जा नसलेल्या पदविधर तरुण – तरुणींच्या फौजा बाहेर पडल्या पण या दर्जाहीन आणि वारेमाप, बेहिषेवी तयार झालेले अभियंते आणि शिक्षक रस्तो रस्ती दिसू लागले. तरुणांची एक पीढी बेकारझाली. उत्पादन पुन्य पीढी समाजात वावरू लागली. असाच प्रकार पारंपरिक शिक्षणातही प्रकर्शाने दिसू लागला. या ‘‘उच्च शिक्षण घेणाऱ्या लाखो विद्यार्थ्यांपैकी फक्त बारा टक्के विद्यार्थी व्यावसाय शिक्षण घेतात. आणि 83 टक्के विद्यार्थी पारंपरिक शिक्षण घेतात. त्यांतील फक्त 20 ते 25 टक्के नोकरी देण्यायोग्य असतात. हे उपयुक्त नी गुणवंत शिक्षण की फक्त आकड्यांची वाढ?’’(नेगवेकर अरुण पृ 53) असा सवाल उपस्थित करून उच्च शिक्षणती फोलपण मांडला आहे

असे असले तरीही दुसऱ्या बाजूला भारतीय उच्च शिक्षितांना जागतिक पातळीवर चांगली मागणी आहे. अमेरिकेत उच्च दर्जाच्या ज्ञानावर आधारित उद्योगांत 40 टक्के भारतीय आहेत. तसेच मध्यम व कनिश्ठ दर्जाच्या उद्योगात 20 टक्के भारतीय आहेत. युरोप, ऑस्ट्रेलिया, पूर्वकडील देश, चीन आदि देशांमध्ये ज्ञानाधिशिष्ट अर्थरचनेत भारतीयांना खूप मोठी मागणी आहे. पण हा ज्ञानाधिशिष्ट अर्थरचनेत प्रवेश मिळविणारा भारतीय तरुण हा भारतीय लोकसंख्येचा विचार कल्यास अत्यल्प आहे.

शिक्षण क्षेत्रासंदर्भात स्वयंनिर्भरतेचा अर्थ

विसाव्या शतकाच्या अखेरच्या काळात खाजकीकरण, उदारीकरण आणि जागतिकीकरण यांमुळे सर्वच घटकांत बाजारीकरण सुरू झाले. बाजारीकरणाचे मुलभूत लक्षण म्हणजे प्रत्येक गोष्ट स्वयंनिर्भर (self supporting) झाली पाहिजे. त्याला सरकारी अनुदान असता कामा नये. ‘मार्केट इकॉनॉमिचा मूलभूत सिद्धान्त असा की सरकारी अनुदान अत्यंत घातक आणि विशारी गोष्ट आहे. ती ताबडतोब बंद झाली पाहिजे.

अशा स्वयंनिर्भरतेचा (self supporting) शिक्षण क्षेत्रासंदर्भात अर्थ असा होतो की, शिक्षण देण्यासाठी जो खर्च होतो तो शिक्षणक्षेत्रानेच उभारावा. हा खर्च भागविण्यासाठी फी वाढवावी. शिक्षणाचे जे जे अभ्यासक्रम असतील त्यांची फी अशा पद्धतीने वाढवावी की ज्यामुळे सरकारी अनुदानाची आवश्यकता राहाणार नाही. निदान ते कमी होत जाईल व एक काळ असा येईल की ते द्यावेच लागणार नाही.’

आता नवने अभ्यासक्रम तयार करून स्वयंनिर्भरतेच्या तत्वाने विकले जात आहेत. त्यामुळे शिक्षण क्षेत्रात अभ्यासक्रमाचे पुष्क



मोठ्याप्रमाणात वाढत आहे. अशा अभ्यासक्रमांना मध्यम वर्गीयांना प्रवेश घेणे शक्य नाही तेथे गरीबांच्या मुलांनी कसे जावे? प्रवेश गुणवत्तेवर नाही तर जास्त फी आणि मोठे डोनेशन देणाऱ्यालाच आहे. असे प्रश्न उपस्थित करित सुधीर पानसे म्हणतात, "वाढत्या शुल्कातून निर्माण झालेली आर्थिक कोंडी आणि जागतिकरणास सामोरे जाण्यासाठी गुणवत्तेला नसलेला पर्याय ही सार्वत्रिक जाणिव अशा परस्परांला छेद देणाऱ्या गोष्टी एकीकडे आणि दुसऱ्या बाजूला नोकरीचे क्षेत्र प्रचंड विस्तारलेले आहे. नोकरीला स्वयंउद्योगाचे वेगवेगळे पर्याय यामुळे तरुण गोंधळलेला आहे. (सुधीर पानसे, पृ.136) तरुण असा गोंधळून जाणे हे राष्ट्र हिताच्या दृष्टीने हानीकारक असते.

शिक्षणाची वाटचाल— शिक्षण महर्शा ते शिक्षण उद्योगपती

गेल्या सत्तर वर्षांत घालेय शिक्षण, उच्च शिक्षण आणि व्यावसायिक शिक्षण क्षेत्रात ज्ञानदानाचे काम समाज प्रबोधनासाठी, माणसा—माणसांतील समानतेसाठी झपाटलेल्या शिक्षण महर्शांनी आपले सर्वस्व पणाला लावून केले. या शिक्षण महर्शांची जागा पुढे शिक्षण सम्राटांनी बळकावली तेथूनच शिक्षणाचे बाजारिकरण सुरु झाले शिक्षणावरील अनुदाने कमी होत गेली विनाअनुदानाचे पर्व सुरु झाले. शिक्षण ाबददल अनास्था असलेल्या शासनाने (महाराष्ट्र शासनाने) तर आपल्या आदेशाद्वारे शिक्षण उद्योगपतींच्या हाती सोपवले आहे. 'शिक्षण उद्योगात' उद्योगपतींनी गुंतवणुक करावी आणि नफा कमवावा. असा शिक्षणाचा धोकादायक प्रवास सुरु आहे.

स्थापत्यशास्त्र, वैद्यक, डिझायनिंग, विज्ञान— तंत्रज्ञान, विविध कला यांत मूलभूत संशोधन करणाऱ्या केंद्रांची इथे वानवा आहे. आय.आय.टी., टी.आय.एस.एस., आय.आय.एम. आयसर अशा हाताच्या बोट्यावर मोजण्याइतक्या संस्था कार्यरत आहेत. त्या उत्कृष्ट काम करित आहेत. संशोधनातून नवी ज्ञाननिर्मिती करित आहेत. त्यामुळेच तर जागतिक पातळीवर भारतीय तरुणाना मागणी मोठी मागणी आहे. या मागणीच्या अनुषंगाने दर्जेदार विद्यार्थी घडवणाऱ्या अधिक संस्था असाव्यात. भारतीय लोकसंख्येच्या प्रमाणात या दर्जेदार शिक्षण देणाऱ्या संस्थांची संख्या वाढली पाहिजे. या संस्थांमधून गुणवत्तेच्या निकशांवरच प्रवेश दिले जावेत. इथल्या प्रवेशासाठी खेडया—पाडयातल्या, डोंगर—दरितल्या आणि झोपडपट्टी पासून महालापर्यंतच्या मुलाला समान संधी उपलब्ध झाली पाहिजे. त्यासाठी शासनाने आपल्या उत्पन्नाचा मोठा हिस्सा खर्च केला पाहिजे. तरच या तरुणांच्या देषाला अखंड तरुण राहाता येईल.

पोटार्थी शिक्षण बंद होवून जिज्ञासेसाठी शिक्षण सुरु व्हायला हवे.

आरंभी पाहिलेले शिक्षणाचे उद्दिष्ट साध्य करावयाचे असेल तर शासन, समाज, पालक, तज्ज्ञ, शिक्षक, आणि विद्यार्थी या सर्वांनीच जोखिम घेतली पाहिजे. नोकरीसाठी शिक्षण ही पोटार्थी शिक्षणाची भूमिका प्रथम पुसून टाकली पाहिजे. गुणवत्तेला प्रधान्य देवून सुज्ञ, सुसंस्कृत, विवेकी आणि क्रियाशील नागार्थी घडविण्याचा प्रयत्न झाला पाहिजे. त्यासाठी प्राथमिक शिक्षणात, खाजगीकरण नकोच. चौदाव्या वर्षापर्यंत प्रत्येक मुल पाळेत आलेच पाहिजे. किमान काही गोष्टी पिकल्याच पाहिजेत. गुणवत्ता मोजण्याच्या साधनांत बदल करायला हवा. विनाअनुदानित पाळा कॉलेज, व्यावसायिक शिक्षण संस्था या

सर्व संस्थांच्या बाबतीत अशी भूमिका घ्यायला हवी की या संस्था कोणत्याही परिस्थितीत करियरची कुरण बनता कामा नये. ती समाजाच्या सेवेची क्षेत्र झाली पाहिजेत. त्यावर समाजाचं नियंत्रण असायला हवं.

संदर्भ

- अकोलकर, ग., वि., (1973): शैक्षणिक तत्त्वज्ञानाची रूपरेशा, पुणे : श्रीविद्या प्रकाशन.
- अभ्यंकर, वा., ना., (2002): एकविसाव्या शतकातील शिक्षण, पुणे : स्नेहवर्धन प्रकाश.
- खैर, ग., श्री., (2007) मराठी विष्वकोष (खंड 17), (संपा— विजया वाड), वार्ड : म.रा.म.वि.नि.मंडळ.
- गावडे, भाऊ, (2016): शिक्षण आजचं—दशा, दिशा, आणि भविष्यातील आव्हान, मुंबई : ग्रंथली प्रकाशन.
- पाटील, एन.डी., (2011): शिक्षण, (संपा— विलास रणसुभे), मुंबई : लोकवाङ्मय प्रकाशन.
- पानसे, रमेश, (2001) : शिक्षण, (संपा— विलास रणसुभे), मुंबई : लोकवाङ्मय प्रकाशन.
- पानसे, रमेश, (2001) : शिक्षण : आनंदक्षण, मुंबई : ग्रंथली प्रकाशन.
- निगवेकर, अरुण, (2011): उच्चशिक्षण समस्या आणि प्रवाह, पुणे:उत्कर्ष प्रकाशन.
- वैद्य, अरविंद, (2003): जागतिक शिक्षणाचा सामाजिक इतिहास, मुंबई : ग्रंथली प्रकाशन.

वेबसाईट्स

- www.ugc.in
- www.kotharicommitmentreport
- www.aicte-india.org
- www.pratham

குறுந்தொகையில் கங்குல் பொழுது

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குறுந்தொகையில் கங்குல் பொழுது

இயற்கையின் தோற்றம் மனித மன உணர்வுகளை பாதிக்கக் கூடியது. ஆம்பல் மலர் மாலையில் மலரக்கூடியது. அதன் மலர்ச்சி மாலையையும் அடுத்து வரும் இரவையும் நினைவூட்டுகிறது. சிறிய கால அளவு நிற்கும் மாலை,நின்று இடர் செய்யும் கங்குலைத் துணையாகக் கொண்டிருப்பதால் தலைவி நலிவுறுகிறாள்.

கங்குல் பொழுதில் இடையூறுகள் மிகுந்த மலைச்சாரல் வழியாகத் தலைவன் வருதலைக் கண்டு அஞ்சுகின்றாள் தலைவி. இரவுக்குறியின் ஏதம் குறித்து தலைவனுக்காக இரங்குகின்றாள் தலைவி.

தலைவி காணும் காட்சி அவள் மனஉணர்வுக்கு ஏற்றாற் போன்று அமைவது கண்டு தலைவி அதனைத் துணையாகக் கொள்கிறாள். ஊரெல்லாம் துயிலும் கங்குலில் கடல் தூங்காமையால் அதுவும் தன் போல் காதலரைப் பிரிந்து அரற்றுவதாக வினவுகிறாள்.

தலைவன் தான் ஈட்ட வேண்டிய பொருளைத் தேடுதலை விரும்பிச் சென்றான். தான் இரவில் தூங்குவதற்கு காரணமான உடன் துயிலை மறந்ததால் பருவம் வந்தும் அவன் வரவில்லை.

நாளின் பாதியாகிய இரவுக்காலத்தில் வயா நோயையுடைய பேடை அன்றில் ஆண் அன்றில் பறவையை அழைத்துக் கூவும். அப்பொழுதில் தலைவனின் தோர் வராதிருப்பினும் வருவது போன்று ஓசை தலைவியின் உறக்கத்தை நீத்தன.

தலைவி இரவுப்பொழுதில் ஒரு தன்மையோடு தலைவனுடன் பழகும் ஒழுகலாற்றையுடையவள். பகலில் உறவினர்களுக்கு முகத்தால் விருப்பமுடைய தன்மையுடையவள்.

கங்குல் பொழுது பிரிந்த தலைவிக்கு கடத்தற்கு அரியதாகையில் அதனை ஊழிவெள்ளத்திற்கு அகப்பட்டதற்கு ஒப்பாகக் கூறுகிறாள் தலைவி.

Keywords: குறுந்தல், பூழியர்,கதுப்பு,வயவு, வயவுப் பெடை, அமரா, கால்,பானாட்கங்குல்

தலைமகன் பொழுது கண்டு அழிந்தது

பைங்காற் கொக்கின் புன்புறந்தன்ன

குண்டுநீர் ஆம்பலும் கடம்பின, இனியே

வந்தன்று, வாழியோ, மாலை

ஒருதான் அன்றே கங்குலும் உடைத்தே

பசுமையான கால்களையுடைய கொக்கினது, புல்லிய புறத்தைப் போன்ற, ஆழமான நீர்நிலையில் உள்ள ஆம்பலின் மலர்களும் குவிந்தன. இனி மாலைக் காலம் வந்தது. அது வாழ்வதாகுக. மாலைப்பொழுது மட்டும் தனியாக வரவில்லை. அது தன்பின் வரும் யாமப்பொழுதினையும் துணையாக உடையது.



ஆம்பல் மலர்வதற்குரிய மாலைப்பொழுது மன்னும் வரவில்லை. அது இன்னும் கூம்பிய நிலையில் தான் உள்ளது. அதற்குள் மாலைப்பொழுது வரத் தொடங்கிவிட்டன. அதுவும் தனியே இருக்கும் தன்னை நலிவதற்காகத் தனியே வராமல் தனக்கு ஒரு துணையாகக் கங்குலையும் அழைத்து வந்துள்ளது. கதிரவன் மறையத் தொடங்கி ஏற்பாடு பொழுதிலேயே மாலை வந்து விட்டதாகவும் அதன்பின், இரவு வரப்போவதாகவும் எண்ணித் தலைவி ஆற்றாளாயினள். தனியிருப்பார்க்கு மாலையும், இரவும் செய்யும் வருத்தம் ஈண்டு குறிக்கப்பட்டது.

ஆம்பல் இரவில் மலர்வது. பகலில் கூம்புவது. ஆம்பல் மலராமல் கூம்பிய நிலையில் உள்ள பகற்பொழுதில் தனக்குத் துன்பத்தைத் தரும்மாலை, வாழ்வதற்கு உரிய அன்று என்ற குறிப்பு, 'வாழியோ மாலை' என்ற தொடரால் புலப்படும். ஆம்பல் மலர் குவிந்த நிலையில் மாலைப் பொழுது வராமையை உணர்த்திய போதிலும் அடுத்து வரும் மாலை, ஆம்பல் மலரப்போவதை நினைவூட்டுவதாயிற்று. ஏற்பாடு, மாலை, இரவு, செய்யும் கங்குலைத் துணையாகக் கொண்டு நலிதல் கூறினாள். குவிந்த ஆம்பல் மலருக்கு அந்நீர் நிலைக்கண் நிற்கும் கொக்கின் சிறகு உவமிக்கப்பட்டமை இடத்திற்கு ஏற்ற உவமம் ஆகும்.

மாலை - இரவின் முதற்கூறு
கங்குல் - யாமம், இரவின் நடுக்கூறு.

குறிஞ்சி

**குன்றக் கூகை குழநிலும் முன்றிற்
பலவின் இருஞ்சினைப் கவைபாய்ந்து உகளினும்
அந்திம்மன் அளித்து - என் நெஞ்சம் இனியே
ஆல் இருட் கங்குல் அவர் வயின்
சாரல் நீள் இடைச்செலவு ஆனாதே.**

முன்பெல்லாம் குன்றின்கண் வாழும் கூகை, தன்னுடைய பெடையைக் கூவியழைத்தாலும், முன்றில் உள்ள பலாமரத்தின் பெரிய கிளைகளில் ஆண் குரங்கு தாவி விளையாடினாலும் என் நெஞ்சு அச்சத்தை அடையம். இனி இக்களவு காலத்தில் செல்லுதற்கு அரிய இருளையுடைய இரவில் மலைச்சாரலில் உள்ள நெடுவழியில் அவருடன் துணையாகச் செல்லுதலை நெடுநாள்களாக ஒழியாது, அது இரங்கத்தக்கது.

என் நெஞ்சு அளிக்கும் இயல்புடையது. ஆதலின் அவருடன் களவுக்காலத்தில் செலவு நீங்காததாய் உள்ளது எனத் தலைவி கூறினாள். பொழுது மறைவதற்கு முன் தலைவியின் நெஞ்சு, அஞ்ச வேண்டாததற்கு எல்லாம் அஞ்சிற்று. கங்குல் பொழுதில்

இடைபூறுகள் மிகுந்த மலைச்சாரல் வழியாகத் தலைவன் வரும்போது மீண்டு செல்லும்போதும் அவனைக் காத்துச் செல்வதற்காகத் துணையாக உடன்சென்றது. வரையாது வந்தொழுகும் எல்லா நாளிலும் செல்ல வேண்டுதலின் "நீர்இடை" என்றான். நீண்ட வழியாதலானும் மலைச்சாரலில் புலி, யானை, பாம்பு முதலிய விலங்குகளின் அச்சத்தாலும் தலைவன் இரவுக்குறியில் வரும் ஏதம் குறித்துத் தலைவி அஞ்சினள். இரவுக்குறி வாராமை வேண்டுதல் இதன் பயனாகும்.

**குழறுதல் - கூகை தன் இனத்தை அழைத்தல்
கலை - ஆண் குரங்கு.**

நெய்தல்

**யார் அணங்குற்றனை கடலே பூழிய்
சிறுதலை வெள்ளைத்தோடு பரந்தன்ன
மீன் ஆர்குகின் கானல் அம்பெருந்துன்றை
வெள்வீதி தாழை திரை அலை
நள்ளென் கங்குலும் கேட்கும் நீன்குரலே**

கடலானது தன்னுடைய புலால் நாற்றத்தைப் போக்குகின்ற தாழைகளையும், அலைகளால் மோதி வருத்துகின்றது. தோழி தலைவிக்கு இனிமை செய்யவள். தலைவி நள் என்னும் ஓசையையுடை கங்குல் பொழுதில் உறங்காமல் உள்ளாள். தோழியும் கங்குலில் உறங்காமல் தலைவியோடு வருந்துகின்றாள். தனது காதலுக்கு நன்மை செய்யும் தோழி தலைவியோடு வருந்துவதை கடல் தாழைகளை வருந்துவதற்கு உவக்கிறார் புலவர்.

கடல் ஓயாமல் அலையை வீசக்கூடிய ஊரெல்லாம் துயிலும் கங்குலிலும் தலைவி உறங்காமல் இருக்கின்றாள். கடல் ஓயாமல் அலைவீசுவதைக் கண்ட தலைவி, ஊரெல்லாம் துயிலும் கங்குலும், நீ துயிலாமையால் நீயும் என்னை போல காதலரைப் பிரிந்து துயரால் அரற்றுக்கின்றனையோ எனக் கடலை நோக்கி வினவுவதாக அமைகிறது.

**"மீன்ஆர் குருகின் கானல் அம் பெருந்துறை
வெள்வீத் தாழை திரைஅலை
நள்ளென் கங்குலும் கேட்கும் நின் குரலே"**

(குறுந். 163. அடிகள் 3-5)

தலைவி காணும் காட்சி அவள் மனஉணர்வுக்கு ஏற்றாற்போன்று அமைவது கண்டு தலைவி அதனைத் துணையாகக் கொள்கிறாள். ஊரெல்லாம் உறக்கம் கொள்ளும் கங்குல் பொழுதில் கடல் தூங்காமையால் அதுவும் தன்போல் காதலரைப் பிரிந்து அரற்றுவதாக வினவுகிறாள்.

பாலை

“இலைமேல் அம்சினை இனவண்டு ஆர்ப்ப முலைஏர் மென்முகை அவிழ்ந்த கோங்கின் தலைஅவர் வந்தின வாரா - தோழி துயில்இன் கங்குல் துயில்அவர் மறந்தனள் பயில்நறுங் கதுப்பின் பாயலும் உள்ளார் செய்பொருள் தரல்நகைஇவர் சென்றோர் எய்தினரால் என வருஉம் தாதே

இளவேளின் காலத்தில் பூக்கும் மரம் கோங்க மரமாகும். கோங்க மரத்தின் மலர் தோன்றுவதற்கு முன் தான் வருவதாகத் தலைவன் கூறிச் சென்றான். இளவேனிலில் பழுத்த இலைகள் உதிர்ந்தால் கோங்க மரத்தின் கிளைகளில் வண்டுகள் ஆரவாரிக்கும்படி மென்மையான அரும்புகள் இதழ்விரித்து முதற்பூக்கள் தோன்றின. தலைவன் தாம் ஈட்டவேண்டிய பொருளைத் தேடுவதை விரும்பிச் சென்றான். தலைவன் மீண்டு வந்தான் என்று அறிவித்ததற்குரிய தூதுரைகள் வந்து சேரவில்லை.

கிடைத்த இன்பத்தை விடுத்து கிடைக்காத பொருளைநாடிச் சென்றான். தலைவியின் கூந்தலணையில் இரவில் துயிலும் நிலையும் மறந்தான். தலைவியின் துயிலையும், பாயலையும் நினைப்பாராயின் வருவார் என்பதும், அவர் வரின் தானும் அவ்வேங்கை போலப் பூத்துப் பொலிதல் கூடும் என்பதும் தலைவியின் உள்ளக்கிடக்கையாகும்.

துயில்இன் கங்குல் துயில்அவர் மறந்தனர் பயில்நறுங் கதுப்பின் பாயலும் உள்ளார் இலைஇல் அம்சினை இனவண்டு ஆர்ப்ப முலைஏர் மென்முகை அவிழ்ந்த கோங்கின் தலை அவர் வந்தன வாரா - தோழி

(குறுந்தொகை, பா.எ. 254, அடிகள் 1-5)

என்னும் அடிகள் தலைவன் தான் ஈட்ட வேண்டிய பொருளைத் தேடுதலை விரும்பிச் சென்றான். தான்இரவில் தூங்குவதற்கு காரணமான உடன்துயிலை மறந்ததால் பருவம் வந்தும் அவன் வரவில்லை.

குறிஞ்சி

நாளின் பாதிப்பொழுது இரவுப்பொழுது. இரவுப்பொழுதின்கண் கரிய கால்களையுடைய ஆண் அன்றில் பறவையே, தன்னுடைய விருப்பத்திற்குரிய பேடை அன்றில் அழைத்துக் கூவும். பேடை அன்றில் தன் அருகில் சேவல் உள்ள போதும் இல்லாததாக எண்ணி அன்றில் அகவுகின்றது.

இத்தகைய இரவுப்பொழுதில் தலைவனின் தேர், மணிகளுடன் ஊர் மன்றத்தைப் போழ்ந்தவாறு ஒலியுடன் இரவுப் பொழுதில் வருதல் ஊரில் அல் தோன்றக் காரணமாயிற்று. பறவையின் ஒலி, காமத்தை

மிகுவிப்பதாயினும், அலரின் காரணமாக தேரின் ஒலி தலைவிக்கு அச்சத்தைத் தோற்றுவிப்பதாயிற்று.

“கருங்கால் அன்றிற் காமர் கடுஞ்சூல் வயவுப்பெடை அகவும் பாணாட் கங்குல் மன்றம் போடும் இன்மணி நெடுந்தேர் வாராது ஆயினும் வருவது போலச் செவி முதல் இசைக்கும் அரவமொடு துயில் துறந்தனவால்”

(குறுந்தொகை, பா.எ.301, அடிகள் 3-8)

நாளின் பாதியாகிய இரவுக்காலத்தில் வயானோயையுடைய பேடை அன்றில் ஆண் அன்றில் பறவையை கூவி அழைக்கும். அப்பொழுதில் தலைவனின் தேர் வராதிருப்பதினும் வருவது போன்ற ஓசை தலைவியின் உறக்கத்தை நீத்தன.

தலைவியானவள் இருவேறு இயல்பினை உடையவள். தலைவி, மலையமான் திருமுடிக்காரியின் முள்ர் மலைக்காட்டின் மணம்போன்ற இயற்கை மணம் வீச தோற்றப் பொலிவுடன் இரவுப்பொழுதில் நம்பால் எய்தும் தன்மையுடையவள். வைகறைப் பொழுதில் தான் கூந்தலில் சூட்டிய பல்வேறு மலர்களைச் சுற்றத்தார் அறியாமல் உதிர்த்து, மயிர்ச்சாந்தும் எண்ணெயும் தடவி தோற்றப்பொலிவினை மறைப்பவள். வைகறைப் பொழுதில் நம்மை முகத்தால் விரும்பாதவள் ஆகி, தம் உறவினர்களுக்கு முகத்தால் விரும்பும் தன்மையுடையவள் ஆவாள். அதனால் தலைவியை “இரண்டுஅறி கள்வி” எனத் தலைவன் தலைவியை கள்வியாக்கிறான்.

“முள்ர்க் கானம் நாற வந்து நள்ளென் கங்குல் நம் ஓரன்னள் கூந்தல் வேய்ந்த விரவுமலர் உதிர்த்து சாந்துஉளர் நறுங்கதுப்பு எண்ணெய் நீவி அமரா முகத்தனள் ஆகித் தமர் ஓரன்னள் வைகறைமானே”

(குறுந்தொகை, பா.எ.312, அடிகள்3-8)

எனத் தலைவி இரவுப்பொழுதில் ஒரு தன்மையோடு தலைவனோடு பழகும் ஒழுகலாற்றையுடையவள் என்பதைக் கூறுகிறது இவ்வடிகள். பொழுதின் இயல்புகளுக்கு ஏற்ப தலைவியின் மனவிருப்பங்கள் மாற்றம் பெறுவதை இச்சூழல் உணர்த்துகிறது.

இரவுக்குறியில் இடையீடுகள் பல இருப்பினும் தலைவன் தன் வலிமையாலும், அறிவாலும் தலைவியைக் குறியிடத்தில் காண்கிறான். தலைவனின் வருகை குறித்து தலைவி மகிழ்ந்த போதிலும் அவன் வருமவழியின் கண் உள்ள துன்பங்களை எண்ணி வருந்துபவன் ஆயினள்.

வேங்கை மரங்களின் பூக்கள், மணம் வீசுகின்ற சிறுகுடி உள்ள இடத்தை பகற்குறியின் குறியிடமாக



தலைவன் கொண்டான். அந்தக் குறியிடம் இரவுப் பொழுதில் வழியறிதலும் வானம் காணாமையால் திசை அறிதலும் ஒலியின்றி ஊர் தஞ்சுவதால் ஊராரிடம் அறிதலும் அரிதாகும். இத்தகைய நிலையைக் கூறி இரவுக்குறி பயனற்றது எனக்காட்டி திருமணத்திற்கு வலியுறுத்தி தோழி நொந்து கூறுகின்றாள்.

**“நீர் பரந்து ஒழுகலின் நிலம் காணலரே
எல்லை சேறலின் இருள் பெரிது பட்டன்று
பல்லோர் துஞ்சும் பாணாள் கங்குல்”**

(குறுந்தொகை, பா.எ. 355, அடிகள், 2-4)

மாலைப்பொழுது இரவுப்பொழுதினை எல்லையாகக் கொண்டது. அது நிலைத்து நிற்கும் பொழுது சிறிதுநேரம் ஆகும். ஆயினும் மாலைப்பொழுதோ கடலை விடப் பெரிய எல்லையற்ற கங்குல் பொழுதினை கொண்டு வருவதாகும். தலைவி தனது ஆற்றாமையால் இரவு என்னும் ஊழி வெள்ளத்தில் அகப்பட்டமையை,

**“எல்லை கழிய முல்லை மலர
கதிர் சினம் தணிந்த கையறு மாலை
உயிர் வரம்பான் நீந்தினம் ஆயின்
எவன்கொல் வாழி? - தோழி
கங்குல் வெள்ளம் கடலினும் பெரிதே”**

(குறுந்தொகை, பா.எ.387, அடிகள் 1-5)

எனும் பாடல் உணர்த்துகின்றது.

இரவின் வெள்ளத்தில் கரைகாணாது அழுந்துவதேயன்றி உய்வதற்கு வழியில்லை. மாலைப்பொழுது இரவின் எல்லைப்பொழுதில் நீங்கிச் சென்றாலும் அது கங்குல் என்னும் வெள்ளத்தில் தலைவியை ஆழ்த்தி சென்றது. எனவே மாலைப்பொழுது இரவினும் கொடியதாகும்.

கங்குல் பொழுது பிரிந்த தலைவிக்கு கடத்தற்கு அரியதாகையால் அதனை ஊழி வெள்ளம் என்கிறாள் தலைவி.

முடிவுரை

இயற்கையோடு வாழ்ந்த பழந்தமிழ் மக்கள் தங்களது ஒவ்வொரு சூழலுக்கும் இயற்கையைத் துணையாகக் கொண்டனர். தங்களது மனஉணர்வினை இயற்கையோடு பொருந்திப் பார்க்கும் தன்மை உடையவர்களாக இருந்தனர். காலங்களும் அவர்களது மன உணர்வினை இயற்கையோடு நிற்கத் துணைசெய்தது.

Organic Food Culture in India

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Abstract

Indian food Industry is changing drastically because of organic food culture. Organic food is grown without the use of synthetic fertilisers, sewage sludge, irradiation, genetic engineering, pesticides or drugs. It is grown with natural fertilisers such as manure and compost using environmental friendly practices. Fruits and vegetables, grains, nuts and seeds, dairy products and eggs, meat and poultry are food covered under current organic standards. Consumer in India is moving towards organic food because of health, safety and environmental issues. Organic food culture is not only changing the attitude of people but also changing their consumption behaviour. Consuming organic food is treated as a form of responsible consumer behaviour now a days. It is believed that consuming organic products are related to personal and public welfare. In fact the shift towards organic food in India is not a surprising one but it is U-turn to the original ways of our ancestors. To get data, researcher has used secondary sources, which make research more result worthy. The purpose of this study is to know the major factors which divert the consumers to or from organic food Industry in India.

Keywords: Organic Food; Consumers

Introduction

Modern India is now returning to organic food culture. Organic food is produced using environment friendly practices and is free from artificial fertilizers, pesticides and insecticides. Increased consciousness over the time towards a healthy lifestyle has witnessed an escalated organic farm production along with trade. Production of organic food with minimal to no usage of chemical fertilizers, artificial colour or flavour has gained acceptance by Indian consumers. Majorly due to the health benefits, organic products are being highly preferred by producers and consumers. People have different reasons to buy organic food in India. Popularity with the media coverage and awareness has increased the demand of organic food in India. Some people prefer organic food as they believe that it is stimulating the local economy. Apart from this the highly advertised superior health benefits is continuously assisting the rise of organic food consumption in India. Indian market is flooded with various organic brands like Organic India, Organica, Pure & Sure, Sattvic, etc. to meet the demand of the consumers.

Structure

Objective

- To identify the major factors which are driving consumers towards organic food industry in India.
- To identify the deterrent factors which are driving consumers away from organic food industry in India.



Research Methodology

This paper is based on secondary data. The study is based on various online and offline information.

Organic Food

Organic food is food produced by methods that comply with the standards of organic farming. It avoids the use of man-made fertilizers, pesticides and growth regulators. It is grown with natural fertilisers such as manure and compost using environmental friendly practices. Fruits and vegetables, grains, nuts and seeds, dairy products and eggs, meat and poultry are the categories of foods that are available in India under current organic standards.

Organic food industry in India

Organic food industry in India is growing at a very fast pace due to the increasing demand of organic products. Consumers are not only preferring organic fruits and vegetables but also organic grains, dairy products, organic eggs, meats and other poultry items. The consumers have a good choice of various organic food brands as the market is flooded with a wide variety to meet their soaring demand.

Factors driving consumers towards organic food

A consumer goes through various stages before purchasing any product. Consumer behaviour deals with all these stages. It is concerned with all aspects of purchasing behaviour. Indian consumer behaviour is changing because of change in social and economic environment. There are various factors which influence consumers to change their behaviour towards a particular product or service. Following are the major factors which are responsible for driving consumer towards organic food culture in India.

Increase in disposable income

India is becoming home to a growing middle class population. The steadily increasing disposable income has led to an increased consumer demand for superior and healthy food products. Organic food is the solution for meeting their demands.

Health Concerns

Consumers are becoming more conscious of their health and give more importance to a healthy life style. For them health is above money. Organic food provides them various health benefits as they

are grown without artificial fertilisers, pesticides and growth regulators. They have more nutrients and antioxidants.

Social Status

Organic products are perceived as premium products, these have gained preference and have become a status symbol for many consumers. Lower income group people spend their money where they get maximum value for it but middle and upper income groups display prestige seeking behaviour and don't mind spending more. So they differentiate themselves from the lower income groups by spending on higher value goods. This is one big reason for consumers to change their behaviour towards organic food products which cost more as compared to conventional food products.

Reference groups

A reference group includes individuals or groups that influence our opinions, beliefs, attitudes and behaviours. They are our role models. As a consumer we tend to follow our reference groups. So some consumers buy organic products because they are influenced by their peers in the group.

Taste and nutritional Value

Some consumers pay more attention to taste and nutritional value of food. Organic food is free from chemicals and pesticides so it tastes better. Organic fruits and vegetables have higher content of antioxidants, vitamins, minerals and healthy fats than conventional fruits and vegetables. They are not injected with food dyes. They are not grown with artificial fertilisers. Their nutritional value is more than conventional produce. So those consumers who don't want to compromise with the taste and nutrition factor prefer organic products.

To support local farmers

Some people buy organic food to support local farmers because they feel it can strengthen local economies and communities and aid local small-scale farmers.

Concern for ecosystems

Use of synthetic pesticides and chemical fertilizers for conventional farming degrade our ecosystem. Their manufacturing and usage both contribute to climate change. People with higher concerns for environment favour organic food to support and save our ecosystem.

Concern for Pollution

Pesticides and chemicals used in agriculture and synthetic fertilizers are polluting our environment, poisoning our limited water supplies, and destroying the value of our naturally fertile farms. Certified organic farming standards disallow the use of toxic chemicals in farming and require responsible management of healthy soil and biodiversity. Some consumers buy organic food because of their concern for increasing environmental pollution. They feel by using organic food products they can do their bit and contribute to reduce the environmental pollution.

Preserve agricultural diversity

Loss of species is a major environmental concern today. Extensive loss of common species today is another environmental threat. It is believed that a major percentage of the genetic diversity of agricultural crops has been lost in the past one century due to the conventional farming practices. Many organic farms grow a wide variety of mixed food, taking natural elements and time-tested practice into account. Diversity is vital for survival. Another contributing factor for people to switch to organic food.

Sustainable future for many generations

Some consumers feel if we use organic food we are not only getting the health benefits for ourselves but also for our kids. If we are asking for organic food we are demanding pollution free environment, clean water, ecological balance and good health for our future generations.

Factors driving consumers away from Organic Food

There are various deterrent factors driving consumers away from organic food. Consumers have some reservations towards the organic food because of the following factors.

Price

Manual methods of controlling pests and diseases are used in organic farming. These methods keep pesticides out of people and the environment, but they do cost more. Organic foods derived from animals are costly as compared to their conventional counterparts. More hands-on care is required for organic livestock. That is the reason price charged for organic food products are very high. So it is

not possible for all to go for organic food. Many people cannot afford the organic food. So in India it is limited to a particular strata who have affluent money to spend.

Less Availability of Organic foods

Organic foods are not widely available. They are mostly sold in speciality stores and big departmental stores. But in India consumers not only prefer big and speciality stores but also buy from small local shops where it is not easily available.

Lack of Awareness

Many people in India are still not aware of Organic food products. Urban consumers are more aware of the organic food products as compared to their rural counterparts. They are not aware of the nutritional values, health benefits and even the environmental benefits organic food products have. Hence they are unable to differentiate between organic and non-organic food products. Resulting which non-organic products have a higher percentage of market share.

Distrust in Organic labels

Many consumers lack trust in organic labels and their authenticity, so do not want to pay more for the products sold under the organic labels.

Resistance to change food habits

Satisfied consumers do not want to change their food habits practiced over years and generations, though their previous generations have always consumed food grown naturally without any mention of organic origin. The trusted and age old food brands used to sell better quality products but increased demand and market competition has driven them to increase the production by reducing the quality. Still the brand goodwill makes people stick to these brands. Hence they don't want to switch over to organic food.

Conclusion

As the call for a greener world increases, so does the call for changes in food production and consumption pattern. Demand for organic products is increasing because of the awareness among customers about organic produce. Though some consumers are worried about their health and environmental benefits of organic products, the consumption of organic products has emerged as a status symbol in a larger strata of society. But a few hindrances like availability, high cost, lack of awareness, distrust and



resistance to change are holding back good number of consumers to switch over to organic food. It is also observed that some retailers charge higher price in the name of organic so consumers are still in a dilemma whether to trust organic food or not.

So, if you are still thinking whether it would be safe to go with organic food in India or not, the answer definitely is yes. Adopt organic produce to improve the health of your family and the planet as a whole for generations to come.

As very appropriately stated by Maria Rodale, Chairman and CEO of Rodale

“Organic is something we can all partake of and benefit from. When we demand organic, we are demanding poison-free food. We are demanding clean air. We are demanding pure, fresh water. We are demanding soil that is free to do its job and seeds that are free of toxins. We are demanding that our children be protected from harm. We all need to bite the bullet and do what needs to be done—buy

organic whenever we can, insist on organic, fight for organic and work to make it the norm. We must make organic the conventional choice and not the exception available only to the rich and educated.”

References

<http://organicshop.in>

<https://geneticliteracyproject.org>

<https://www.organicfacts.net/>

Nair, Suja. R. ‘Consumer Behaviour in Indian Perspective’ *Himalaya Publications*.

Rodale, Maria. (2010) ‘Organic Manifesto’, *Rodale Inc*.

Schiffman, L. G. & Kanuk, L. L. ‘Consumer Behavior’, *Pearson Education*.

Visuals to Dissuade the Fear of Writing

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Abstract

Writing in English has been treated as essential as conducting writing activities in the classroom which is thought to be a complex, time-taking, and less productive and less required affair. Initially, it was believed that oral proficiency in any language was the most important. It was associated with another concept that those who were good at oral proficiency or speaking skills of a language would automatically do well in writing. Language researchers and practitioners gradually established the fact that speaking and writing are two distinct language skills. Much attention ought to be paid to enhance these two skills in language classroom individually. It is a felt one that the visual approach is an effective tool which lessens the learning time. It fuels thinking and makes students concentrate and organize their thoughts. Visuals, when combined with 'writing', it kindles the creativity as well as the capability to summarize, analyze and criticize. Learners hesitate to write because words are abstract whereas visuals are concrete. Such methodologies reflect on English language learning and teaching. Creativity is often considered the privilege of a few chosen individuals. Each small variation made by the tutor in the classroom is to make his/her student comprehend the given syllabus. Use of graphic aids for writing skills may help in the logical progression in writing. The goal of this study on writing is to liberate students from timidity and to persuade and kindle their inherent creativity to write.

Keywords: Innovative techniques, digital, academic potentials, illustrations, home-like ambiance, interaction, creative thinking, creativity, spark of change

Introduction

English is being accepted as one of the international languages, and is mostly used for global communication. It continues to be as the bridge through which people connect themselves with trade, commerce, higher education, travel and tourism, employment, research, and technology in the world. Realizing this prominence, English is considered as an obligatory language in all education institutes. However, most of the students face difficulties to write in English. Kingston et al (2002:3) states that student's achievement in learning English is only measured by the productive skills, especially the writing performance. Such aspects include the use of vocabulary, structure of the sentence, composition of the sentence, spelling, and punctuation. These aspects are essential to produce a good writing. Writing is a gauge toward the students' success in learning English.

After a short research, the primary setbacks to writing were content and vocabulary. The students had hitches in finding ideas to write. They only had few words to write and then sat paralyzed wondering what to write. Few depended on their text books, and the others depended on their friend. It was found later that they lacked ideas. The students also had difficulties in finding meaning and collocating words. Based on the setbacks above, several alternatives were shortlisted to improve students' success in writing. One of them is the use of visuals.



Background to the Study

It is to be acknowledged that the three distinctive learning methods are visual, auditory and kinesthetic. New technologies have paved way to integrate visual aids in the language classroom, but it is realized that these assistances are not being fully used. The aim of this study is to examine why the teachers use them infrequently, and to illustrate how visual aids can be integrated in the language classroom. In creating a healthy and encouraging home-like ambiance for interaction in the formal classroom setting, such visual assistances play a vital role in helping the teachers make the subject easy to teach and learn. Visuals may assist the students to overcome certain social-psychological problems like subconscious language behavior, low level of competence, communicative and creative inability and even generation gaps.

Hypothesis

The present study is planned with the hypothesis that writing skills can be developed through the visual aids.

Review of Literature

Writing skills play a significant role in the learning process. Researchers in the recent years, with the language learning field, have been paying considerable attention to the development of unconventional language strategies. Much research has been conducted to investigate the effects of strategy training on improving reading skills (for example, Dreyer and Nel 2003, Rao 2003), listening comprehension (for example, Rost and Ross 1991, Thompson and Rubin 1996). However, relatively little research has been done on productive skills such as speaking and writing. Of the few studies that have dealt with strategy instruction in writing, Richards has elaborated on the development of the writing skill (1990). According to Cummins' (1990), hypothesis of interdependency of language, transfer of skills from one language to other language can take place, provided the underlying cognitive proficiency is well-developed.

Visual Thinking Strategies as noted by researchers Housen and Yenawine (2001) to encourage literacy skills has been pursued. Advocates of teaching visual

literacy, Flood and Lapp (1998), state that using visual arts in the classroom motivates learners to use a variety of means such as drawing, drama, and multi-media presentation in addition to reading and writing to communicate ideas. Flood and Lapp (1998) contend that employing instructional strategies that include visual arts may encourage students to more willingly accept the challenges of creative writing.

Research questions

The following research questions are framed to explore the study:

1. What are the prevailing stratagemms used in the language teaching classroom?
2. What is visual approach and why is it desired?
3. Is the language classroom having enough space to carry out visual creativities?

Discussion

Arguing the importance of integrating visual arts into all curriculum areas, Chicola and Smith (2005) quote Pablo Picasso saying, "Painting is just another way of keeping a diary". To explore the scope, several studies have been reviewed and examined for teaching creative writing. The major reason cited is that for many students, the process is just too frustrating and the anxiety generated by a blank page is sometimes too great a challenge (Ellis, 2003). Creativity always has a role in acquiring knowledge which is exhibited through writing. Writing has been regarded as an important skill in teaching and learning any foreign language. It stimulates thinking and makes students concentrate and organize their thoughts. It cultivates the ability to summarize, analyze and criticize.

Students find difficult writing in any language because the writing process involves cognitive and linguistic strategies with which they are not certain. Use of visual aids for writing skills may help in the logical progression towards enhanced writing. The goal of this paper on creativity through visuals is to liberate students from timidity and to kindle their inherent creative imagination. Visuals pave way for creativity which leads to efficient learning and teaching processes in classes so as to draw attention and make the silent words into living speech. The aim of the study is to practice optimum use of autonomy in teaching-learning process.

As communication becomes more and more technologically advanced, “visual literacy” -the ability to create graphics and visuals and integrate them with text, becomes increasingly important. Anyone who has surfed the Net or designed a World Wide Web page has seen examples of sites that either fail to understand this link or make dynamic use of it. “Evaluating students’ abilities to integrate written and visual communication” explores ways to teach students these crucial skills through improved class assignments.

A goal of educators is to improve students’ ability to read and write. The researcher expects students to be able to deal with graphics and pictures. Visuals are powerful means of expressing ideas that text alone may not adequately convey. Visuals, in the context of subjects, are more than simple illustrations. Visuals combine written text with graphic text to explain various subject relationships. Broad thinking on visuals provides the essential structure and focuses which does not inhibit the critical and creative thinking process (Housen, 2002).

The ability to use visuals is a skill which is essential for language learners who aim to write well. If information cannot be effectively expressed, it is useless. Visual distributions lack interpretive value if not expressed visually. Widdowson (1983) says, ‘Writing is a provoked activity, it is located in ongoing social life. However, the correlation between better aesthetic understanding and academic growth is not so readily acknowledged. This research on use of visuals to dissuade the fear of writing results for developing criteria to assess students ability to integrate written as well as visual communications and thereby reaping the benefits of integrating art into any curriculum.

Conclusion

Usually, students feel boredom of long lectures as a routine in their academic career. Without new ideas and innovative techniques, classes are unlikely to achieve real success. Visuals aids lead the students to

frame the syntax according to their creativities. The teacher can measure students’ creativities as well as the knowledge of syntax. Moreover, visual aids help the students overcome language barriers such as coining sentences. Students can be trained how to be cohesive in expression. This approach of teaching is conducive to train engineering students. It helps the students of ESP bring out their individual talents in conveying ideas in new dimensions.

References

- Chicola, N. & Smith, B. (2005). Integrating visual arts into instruction. *International Journal of Learning*, vol. 12, no. 5, pp. 167-175.
- Ellis, S. (2003). Story-writing, planning and creativity. *Reading*, vol. 37, no. 1, pp. 27-31. *ELT Journal*. London: *Oxford University Press*. Print.
- Flood, J. & Lapp, D. (1997). Broadening conceptualization of literacy: *The visual and communicative arts*. *Reading Teacher*, vol. 51, no. 4, p. 342
- Housen, A. (2002). Aesthetic thought, critical thinking and transfer. *Arts and Learning Research Journal*, vol. 18, no. 1, pp. 99-132.
- Rao, Zhenhui. (2007). ‘Training in brainstorming and developing writing skills’. *ELT Journal*. London: *Oxford University Press*. Print.
- Stapleton, Paul. Radia, Pavlina. (2010). ‘Tech- Era L2 writing: towards a new kind of process’. London: *ELT Journal*. Oxford University Press. Print.
- Walker, Robin. Perez, C.R. (2008). ‘Coherence in the assessment of writing skills’.



The Palace of Illusions: A Study in the Light of Eastern and Western Culture

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Abstract

*Chitra Banerjee Divakaruni, a prominent South Asian-American literary personality, is a McDavid professor of creative writing program at the University of Houston, Texas. Her writings emerge from her experiences as a first-generation immigrant as well as her childhood memories and past in the cultural and traditional atmosphere of India that has created an indelible mark on the scholarly proclivity of the author. Though Divakaruni's characters arise commonly from the South Asian-American descent, their identities and relationships as family members, friends, lovers and citizens emerge exuberantly and stimulate the readers worldwide. Her novel entitled *The Palace of Illusions*, published in the year of 2008, represents the story of the great Indian epic Mahabharata from the viewpoint of Draupadi, a kṛitya, who has been generally considered to be the cause of the destruction of the Third Age of man. In the Eastern literature, the character of Draupadi has been variously defined and elaborated by different writers. Writing from the two worlds; India and America, Divakaruni elevates the divine figure of Draupadi from the traditional portrayals and presents her in the framework of the Eastern (Indian) as well as Western (American) cultural context. From the ancient times to the present, the Eastern (Indian) culture has demarcated certain values to be maintained by the women, which smother and dominate their individual desires thereby cripple their personality. In *The Palace of Illusions*, adorning the character of Draupadi with the rationality projected by the ever growing cultural phenomena of the Western society, Divakaruni shields her from being known as Kṛitya ever again. In other words, the objective of the present study would be lying in the depiction of the individual desires of Draupadi in the context of the Eastern and Western philosophical and psychological discourses, along with it, with the conclusion of Draupadi's life-cycle, the study attempts to establish the confluence of the values of two distinct cultures; Eastern and Western.*

Keywords: Culture, Values, Desires, Instincts, Conflicts and Transcendence etc.

Introduction

Chitra Banerjee Divakaruni, a renowned Indian-American literary personality, has infused profundity as well as exuberance in all her works encompassing a number of themes and genres and it is absolutely true for her novel entitled as *The Palace of Illusions* also. Born in Kolkata, she moved to the United States for her graduate Studies, and receiving a post-graduate degree from the Wright State University, Dayton, Ohio, Divakaruni earned a Ph.D. with a dissertation on Christopher Marlowe from the University of California, Berkeley. Presently, Divakaruni teaches in the nationally ranked Creative Writing Program at the University of Houston, and in an interview with Sree Sreenivasan,

sharing her experiences as a Professor of Creative Writing, Divakaruni also reveals as, “First I want to say that I love teaching writing. For me writing and teaching really dovetail nicely together. When I teach, I’m forced to think more about writing and what effective writing is and it also gives me a real incentive to keep up with my reading” (Divakaruni). Her creativity can be seen expanded through several spheres; poetry, personal essays, short stories, and novels, it is also not a fact that Divakaruni started writing every genre at the same time, it only became possible gradually when she noticed that her poems were becoming more narrative than poetic, consequently, she got enrolled in writing short stories and then the novels, moreover, how she achieved the desired aspects through this genre has been explicated in her own words as stated in a television program named *The Connection Special* as:

But when I moved to fiction the world just opened up for me. . . . I have wonderful colleagues who are poets and poetry does that for them but for me it was moving to fiction that allowed me to create a whole new world and to bring characters to life and talk about social issues that were important to me, I could do all of that in the fictional world that I was creating. (Divakaruni)

In “Author’s Note”, the introduction of *The Palace of Illusions*, Divakaruni has revealed that like many Indian children, she also “grew up on the vast, varied, and fascinating tales of the Mahabharat” (Divakaruni PI xiv), although the setting has always been shifting, from the grandfather’s village home to the parents’ home in Kolkata, her questions grew stronger with every listening and reading of the stories of the “thousand-page leather-bound volume” (Divakaruni PI xiv) of Mahabharat, as Divakaruni reveals that, “I was left unsatisfied by the portrayals of the women. . . . It wasn’t as though the epic didn’t have powerful, complex women characters that affected the action in major ways. . . . But in some way, they remained shadowy figures, their thoughts and motives mysterious, their emotions portrayed only when they affected the lives of the male heroes” (Divakaruni PI xiv), this is the reason as to why Divakaruni feels the need to tell the story of the

woman, “with all her joys and doubts, her struggles and her triumphs, her heartbreaks, her achievements” (Divakaruni PI xv), and chooses Draupadi for she comprises of all the attributes, as she further relates that, “And who could be better suited for this than Panchaali?” (Divakaruni PI xv). While reviewing the novel, *The Union* has also observed that “Divakaruni has taken a male-centered story and breathed new life into its female characters, giving us a rich tale of passion and love, power and weakness, honor and humiliation. Whether or not readers are familiar with the “Mahabharat” epic, still fascinating and relevant several millennia on, they will enjoy this entertaining, insightful, and suspenseful story” (Penguin Random House Home page). But Grace Andreacchi does not seem to appreciate the ambiguity and vague idea as expressed in the novel, as she writes that the novel, “professes to be a retelling of the great Indian epic the Mahabharata from the point of view of a female protagonist, the Princess Panchaali. But the writing is so awkward and the sentiments so lackeyed and cloying, we know immediately, we have been relocated in the sprawling suburban sensibility of modern America” (qtd. in Agarwal 22). Draupadi whose life, beginning with her birth from “sacrificial fire” (Divakaruni PI 1) as the daughter of king Drupad, leads her to accomplish the daughterly duty, i.e. to marry Arjun, “for the good of Panchaal and the honor of the house of Drupad” (Divakaruni PI 74), and then the balancing act as a woman with five husbands in their strive to regain their kingdom, or it can also be articulated that Draupadi moves towards these acts to give vent to her primary desires; the desire to have her own palace and the desire to change “the course of history” (Divakaruni PI 5) as predicted by the voices arising from the sacrificial fire at the time of her birth, meanwhile, she has to suppress her desire for the “forbidden name” (Divakaruni PI 74), i.e. Karna, but the pursuit for the material desires lead her to experience negative emotions as she has to face the “humiliation in the court” (Divakaruni PI 231) which ultimately arouse the desire for revenge on Draupadi’s part. Since the desire for revenge causes the “battle of kurukshetra” (Divakaruni PI xiii) then she has to contemplate the achievements gained by the pursuit of her desires and realizing the futility of her material desires, she abandons



everything to follow her husbands in their journey of “mahaprasthan, the path of the great departure” (Divakaruni PI 344) or to accomplish her own desire, i.e. the desire for transcendence. In general, desire is considered as a longing for a person, object, or an outcome and the same sense is often expressed by emotions such as “craving”, “hankering” etc., but the psychologists often describe desires as different from emotions. To a greater extent the goals of the needs arising from the bodily structure remain same, such as the thirst can be quenched by drinking water and the tiresomeness can be averted by sleeping whereas there will be a great variation in the forms of goal of the desires arising from the mental state such as the desire for fame and status etc. The motivational aspect of desire has long been noted by philosophers; Hobbes (1588–1679) who asserts that the “fundamental motivation of all human action is the desire for pleasure” (qtd. in Anderson 27), but Baruch Spinoza, contrasting with the viewpoint of Hobbes, pertained his analysis in that “he saw natural desires as a form of bondage” (27) that are not always chosen by a person of their own freedom. Hume claims that “desires and passions are non-cognitive, automatic bodily responses, and he argued that reasoning is capable only of devising means to ends set by [bodily] desire” (27). Rod Stryker surpasses all the viewpoints about desire and presents that:

Everything human beings have accomplished and aspired to, our every endeavor has been and always will be rooted in the impulse to satisfy our longing for happiness. We desire love, pleasure, beauty, friendship, accomplishment, wisdom, and power. Each of us longs for an abiding sense of purpose and meaning, peace, health, and security. At some level we also aspire to freedom, to a greater capacity to shape our destiny, and to connect with something greater than ourselves, which some call Source, Self, or God. (Stryker n.p.)

In Eastern culture, the religion of Buddhism has established the “Four Noble Truths” (Samuel 136), and according to the first truth, all existence is subject to suffering while the second truth ascertains the cause of suffering that is, *trishna* (Sanskrit) or *tanha* (Pali), (the clinging and grasping) which makes people want to get things and hold onto them. Broadly elaborating these instincts, the psychology

of Buddhism describes “Desire” under the term “Motivation” that covers three aspects of behavior: situations that motivate behavior, behavior motivated by these states and the goals of such behavior, and “all three aspects may be regarded as stages in a cycle. . . . Some of the goals are of a positive nature, goals that individuals approach; others of a negative nature, which individuals try to avoid” (De Silva 35). According to the philosophical discourse of Buddhism as depicted in *An Introduction to Buddhist Psychology*, the fundamental spring of motivation has been accordingly analyzed into three wholesome (*kusala mula*) and three unwholesome roots (*akusala mula*); “of the unwholesome roots, *lobha* rendered as greed or lust, generates the positive ‘approach desires’; *dosa* generates the ‘avoidance desires’ in the form of hatred and resentment; and *moha*, rendered as delusion, creates confusion in the mind” (De Silva 36), while the “unwholesome springs of action generate unrest and conflict, their opposite charity (*alobha*), compassionate love (*adosa*) and wisdom (*amoha*) lead to inner happiness within the individual and harmony at the interpersonal level” (De Silva 36). Furthermore, the psychology of motivation as deliberated in the Eastern Buddhist scriptures explains that the approach desires produced by greed or lust take a twofold form: The drive for self-preservation (*bhava-tanha*), and the drive for sensuous gratification (*kama-tanha*) - while the avoidance desires like hatred generate the drive for annihilation or aggressive tendencies (*vibhava-tanha*). On one hand, the psychology of Buddhism presents the motivational aspect of desires, on the other, the philosophical discourse, as depicted in *Srimadbhagavadgita*, accounts the nature of the spirit soul for the acquisition of material modes due to the forces of their illusory energy, as *Srimadbhagavadgita* depicts that, “*na hi kascit ksanam api / jatu tisthaty akarma-krt / karyate hy avasah karma / sarvah prakrti-jair gunaih*” (All men are forced to act helplessly according to the impulses born of the modes of material nature; therefore no one can refrain from doing something, not even for a moment) (*Bhagavad-Gita* Ch. 3, Text 5). In Western culture, according to the final picture of mind as Sigmund Freud has worked out, it can be stated that man is impelled by three basic instincts; ego instinct,

sexual instinct, and the self-destructive urge, in *Beyond the Chains of Illusion: My Encounter with Marx and Freud*, Erich Fromm also finds out that:

Freud sees man as motivated by contradictions; by the contradiction between his striving for sexual pleasure and his striving for survival and mastery of his environment. This conflict became even more complicated when Freud later posited another factor which conflicted with the ones already mentioned—the super-ego, the incorporated authority of the father and the norms he represented. For Freud, then, man is motivated by forces conflicting with each other and by no means only by the desire for sexual satisfaction. (Fromm 47)

Describing such an unflinching and prevailing dominance of “Desire”, Judith Butler, in *Subjects of Desire*, has also depicted that, “When philosophers have not dismissed or subdued human desire in their effort to become philosophical, they have tended to discover philosophical truth as the very essence of desire. . . . No doubt, the bulk of the Western tradition has sustained skepticism toward the philosophical possibilities of desire, and desire has been figured time and again as philosophy’s Other. (Butler 1). The objective of the present study is to depict the desires of Draupadi under three main categories as propounded by the philosophical and psychological discourses projected by the Eastern and Western culture respectively. In *The Palace of Illusions*, with the very opening chapter entitled as “Fire”, Divakaruni not only depicts the unusual birth of Draupadi “from the fire” (Divakaruni PI 4) but, adorning her with an existential attitude, reveals her desire for freedom, as Draupadi, being the narrator, relates that, “Through the long lonely years of my childhood, when my father’s palace which seemed to tighten its grip around me until I couldn’t breathe. I would go to my nurse and ask for a story. . . . I made her tell me over and over was the story of my birth. I think I liked it so much because it made me feel special and in those days there was little else in my life that did” (Divakaruni PI 1), herein expending the Western approach, as the philosophers like Søren Kierkegaard emphasizes that each individual-not society or religion-is solely responsible for giving meaning to life and living it passionately and sincerely, Divakaruni has etched Draupadi’s

character endowed with the questions of existential meaning and exhibits author’s disposition advocating the Western values which, derived from political thought, widespread employment of rational argument, have been cherishing the need for equality, democracy, and free thought rejecting authority, tradition or any other dogma, as Draupadi needs “a more heroic name. . . . Something more suited to a girl who was supposed to change history?” (Divakaruni PI 4-5). Draupadi, who does not find her name, “Daughter of Drupad” (Divakaruni PI 5) “within the bounds of acceptability” (Divakaruni PI 5), searches out the peculiar names for herself, as she asserts that, “The story inspired me to make up fancy names for myself: Offspring of Vengeance, or the Unexpected One. . . . Something more suited to a girl who was supposed to change history?” (Divakaruni PI 1-5), thus the desire to seek a ‘more suited’ name and the preference for the negative identity which involves her inability to make a defining choice about herself constitutes Draupadi’s younger self. In Western culture, regarding these initial emotions, the view of the existentialists is that the individual’s starting point is characterized by what has been called “the existential attitude, or a sense of disorientation, confusion or dread in the face of an apparently meaningless or absurd world” (Solomon 1-2). Like ordinary human beings who with “the ambiguity and formlessness at the center of their lives, and with their tendency to try to fix their identity upon some cluster of transient identifications with which they become involved in learning to live in a particular time and place” (De Silva 115), Draupadi also experiences this desire for an identity which has been defined as the condition of, “the ambiguity and formlessness” (qtd. in De Silva 115). The unrestrained situations; her unexpected birth and the prophecy at her birth as the voices from the smoke speak, “we give you this girl, a gift beyond what you asked for. Take good care of her, for she will change the course of history” (Divakaruni PI 4-5), can be accounted for the arousal of different emotions in Draupadi’s younger self which subsequently builds up her character and predispositions. Furthermore, her father’s conservative attitude towards a girl child, “Who Wasn’t Invited” (Divakaruni PI 1), develops



Draupadi into an egotistical and revengeful girl who turns that resentment which she could not express towards her father onto his palace, as she reflects that, “I hated the narrow windows, the mean, dimly lit corridors, the uneven floors that were always damp . . . Staring down from my rooms at the bare compound stretching below, I’d feel dejection settle on my shoulders like a shawl of iron” (Divakaruni PI 5-113) and desires to have her “own palace” (Divakaruni PI 5), as she relates that, “When I had my own palace, I promised myself, it would be totally different” (Divakaruni PI 5). Such self-centredness and the desire for being superior than his king father, arising from the indifferent attitude from her father, unavoidably leads her to a life of delusion and egoistical behavior. when Krishna insists that the prophecy at Draupadi’s birth requires her to “get an education beyond what women were usually given, and that it was the king’s duty to provide this” (Divakaruni PI 23), she is allowed to learn the lessons which her brother, Dhri, considers the, “lessons with misgiving” (Divakaruni PI 23), on the contrary, Draupadi ardently desires to accomplish the reason of her birth, i.e. to “Change the course of history” (Divakaruni PI 5), as she reflects as, “I had a destiny to fulfill that was no less momentous than Dhri’s. Why was no one concerned about preparing me for it?” (Divakaruni PI 29), and such an aspect of desire has been well propounded in the Western culture, by psychoanalysts like Freud, Mikkel Borch-Jacobsen and also Rene Girard, who depict that, “what triggers desire, is not an object but the impulse to identify with the desire of another. . . . Desire is mimetic . . . Mimesis is . . . the matrix of desire” (qtd. in Ellmann 14). This has also been illustrated by Borch-Jacobsen in *The Freudian Subject* thus: “I want what my brother, my model, my idol wants- and I want it in his place” (qtd. in Anderson 27). Since, the “lessons with misgiving” (Divakaruni PI 23), make Draupadi into a hard-headed woman and too manlike in speech, as she also states that, “Dhri, too, sometimes wondered that if I wasn’t learning the wrong things, ideas that would only confuse me as I took up a woman’s life with its prescribed, restrictive laws” (Divakaruni PI 23). Gradually each day, she thinks less like the women around her, as she narrates that, “Each day I moved further from them into a dusky

solitude” (Divakaruni PI 26), Dhri, her brother and companion, is also “called away more and more to his princely duties” (Divakaruni PI 12), as a consequence, she gets confined to her limited world comprising of such people as, “Dhri and Krishna- and Dhai Ma” (Divakaruni PI 32), she has nobody except her Dhai Ma, her nurse and accomplice in so many areas, and Krishna, her friend, who with his pragmatic intelligence uses to play stratagem with her and with his frequent visits shatter the monotony of her life, as Draupadi reveals that, “I was fascinated by Krishna because I couldn’t decipher him. . . . I had the impression that it was I whom he really came to see. He called me by a special name, the female form of his own: Krishnaa. It had two meanings: the dark one, or the one whose attraction can’t be resisted” (Divakaruni PI 12). Her self-preservative desires lead Draupadi towards obtaining the material objects which are erroneously believed to provide the satisfaction in a situation of lack; of parental love, companions, admiration etc., and she expresses her ignorance as, “I had no eyes, so I focused my entire impassioned energy on drinking” (Divakaruni PI 112). Responding to such disorienting situations of the people, the founder of ISKCON, A. C. Bhaktivedanta Swamy Prabhupada mentions his abhorrence for these material desires as, “Birth in a well-to-do family solves the problem of having to find sufficient food from the beginning of life . . . but as ill luck would have it . . . the sons of wealthy are misguided for sense enjoyment, and they forget the good chance they have for spiritual enlightenment” (Prabhupada 5). Reflecting over such ignorance of the human beings, Swami Prabhupada has also articulated that, “they do not know the aim and objective of human life, which is self-realization and the reestablishment of our lost relationship with the Supreme personality of Godhead. . . . According to Vedic civilization, the perfection of life is to realize one’s relationship with Krsna, or God” (Prabhupada 2). As a result of the fulfillments of all her desires, one after another, Draupadi grows wilful, while observing the pictures of her would be in-laws, she watches Karna for the first time and getting lured by his eyes, she becomes unwilling to see the portraits of the other members of her would be family, as she narrates the account, “I wanted to know how those

eyes would look if the man smiled. Absurdly, I wanted to be the reason for his smile. “Ah, you are looking at Karna,” the artist said, his voice reverent, ruler of Anga, and best friend of Duryodhan. . . . Krishna was standing in the shadow of the doorway. I’d never seen him look so angry. “Why are you showing the princess that man’s picture? He’s no prince.” (Divakaruni PI 69-70). Though, close to her Dhairya Ma, she hesitates to ask more about Karna and feels agitation for the name that has been indicated as “forbidden” (Divakaruni PI 74) to her, as Draupadi reflects, “My heart balked inside me like a horse that refuses to follow its rider’s commands? How I longed to speak to her of that other, forbidden name: Karna” (Divakaruni PI 74). The sorceress who is appointed to teach Draupadi the lessons important for her future life also teaches her the futility of the desire for love and describe the magnitude of duty, as she says, “I advise you to forget about love, princess. Pleasure is simpler, and duty more important. Learn to be satisfied with them” (Divakaruni PI 63). Furthermore, in *The Palace of Illusions*, Krishna also instructs Draupadi not to, “be carried away by emotion” (Divakaruni PI 59), and to see herself instead, “as part of a larger political design that would affect the fate of Bharat?” (Divakaruni PI 59) and like any ordinary girl Draupadi is also told whom she is to marry, “for the good of Panchaal and the honor of the house of Drupad” (Divakaruni PI 74), as Draupadi relates that, “before the wedding, there would be a test of skill. . . . “Father designed the test to lure Arjun to Panchaal, didn’t he?”. . . . “Because he’d been defeated by Arjun, he couldn’t send a marriage proposal directly to him without losing face. But the swayamvar—it’s the perfect opportunity” (Divakaruni PI 74). In the name of the honor of family, the swayamvar is designed so as to stop Draupadi from marrying Karna, as she relates that, “The honor of family is more important than other kinds of honor”, my brother said. . . . You’re born to change history. You don’t have the luxury to behave like an ordinary starstruck girl. The consequences of your action may destroy us all” (Divakaruni PI 85-88). Thus, Draupadi’s life can also be seen as torn between desire and duty which she is reminded of time and again by Krishna who makes her aware about the duties that are much more important than

the desires, also Draupadi’s love for Karna would only impede “the course of history” (Divakaruni PI 5), this becomes the reason why Krishna nips the bubble of Draupadi’s romantic love which she accepts to fulfill her desire for the “most wonderful palace” (39), as well as her attachment with the prophecy, i.e. to “change the course of history” (5) makes Draupadi wilful which also impedes her feeling of love for Karna, in order to save her brother Dhairya from the anguish of Karna in swayamvar, Draupadi angrily repeats her brother’s question as, “Before you attempt to win my hand, king of Anga . . . tell me your father’s name. for surely a wife-to-be, who must sever herself from her family and attach herself to her husband’s line, has the right to know this. . . . In the face of that question, Karna was silenced. Defeated, head bowed in shame, he left the marriage hall” (Divakaruni PI 95). Herein it can also be articulated that “the relationship between narcissism and our self-preservation drive has to do with how much or how little our drive for self-preservation is under the control of narcissism. To the extent that narcissism is guiding and controlling our drive for self-preservation to that extent will that drive operate unhealthily and distorted” (Garrison n.p.) thus narcissism becomes problematical, “if allowed to act uncontrolled, it can be devastating in its impact on how we relate to others in our quest to secure our self-preservation needs” (Garrison n.p.). The “young” (Divakaruni PI 97) and arrogant princess Draupadi, thus moving forward, marries Arjun who disguised as an ascetic accomplishes the condition of swayamvar, thus it can be asserted that probably her desire for self-assertion gives rise to those “ill-chosen words . . . words (words I would regret all my life) quenched that light forever” (Divakaruni PI 97), and discussing this point, when Metka Zupancic asks the author that, “Panchaali’s path through all these stages is an initiation. Besides the desire for power, there is another desire, the desire for love?” (Divakaruni n.p.), she replies thus, “Indeed, the desire for love has also been denied to her. She was clearly told whom she should marry and why this marriage needed to take place, namely for political reasons. But, then, what do you do with your inner desires?” (Divakaruni n.p.). Desire is not lack, which suggests negativity, it is affirmative in its



state of movement and change, as Panchaali, in the beginning stages of her life, seeks her position in the male dominated realm of Panchaal with the help of Krishna who induces her father and brother into allowing her to learn “Important lessons” (Divakaruni PI 59), thus repressing her love for the “forbidden” (Divakaruni PI 74) Karna, Draupadi is prepared to play the role ascribed to her, i.e. to be the wife of the greatest archer, Arjun, of that time, as she narrates, “I would no longer waste time on regret. I would turn my face to the future and carve it into the shape I wanted. I would satisfy myself with duty. If I was lucky love would come” (Divakaruni PI 104), and thus gives vent to her another important desire, i.e. to be a renowned and authoritarian queen to build her long desired palace, as she reflects that, “Courteous, noble, brave, handsome, he would be a fit husband for me (and I a fit helpmate for him) as together we left our mark on history. . . . Perhaps he would build me the palace I dreamed of, a place where I finally belonged” (Divakaruni PI 104). In an interview by Metka Zupancic, Divakaruni has also asserted that, “From a position of little power, she wishes to move to autonomy, but autonomy brings its own challenges, with negative aspects that she has to recognize” (Divakaruni n.p.). Thus oscillating between her desire for Karna and her love for Dhristadyumna, her brother, the “young and afraid” (Divakaruni PI 97) Draupadi acts according to what a girl who has to “change the course of history” (5) is expected to do, herein, it becomes necessary to describe that Draupadi has to repress her desire for that forbidden name, i.e. Karna. Her marriage with Arjun brings certain conditions and the desire for companionship remain as unfulfilled as it has been in the palace of king Drupad. She has to marry the other brothers also who were too obedient to think its other side. Throughout the novel, Draupadi can be seen regretting for her words and seeking the chance to rectify the harm done on her wedding day, but, above everything else, she retains her love for Karna under the deep recesses of her mind as P.V.S. Suryanarayana Raju, in *The Essence of Bhagavadgita*, depicts the nature and functions of the unconscious and conscious mind, has also asserted that, “Whatever we accept becomes part of our conscious mind and whatever we reject becomes part of our unconscious

mind and its contents are pushed into dark recesses of mind. Further, compassing the circumference of love, in an interview by Metka Zupancic, Divakaruni has also asserted that, “Love is very important in the Mahabharat. But the idea of love I wanted to explore is vast and not limited to romantic love, although certainly romantic love is very important to Panchaali—both the marital love she tries to reach with her husbands, and the forbidden love she holds unspoken inside herself all her life” (Divakaruni n.p.). The study of desires cannot be, “separated from the “social values” in terms of which they are satisfied and restrained. Drives also involve a process of thwarting and frustration calling for a process of adjustment in a social setting” (De Silva 97). Following her husbands, Draupadi leaves Hastinapur to live in Khandav where Arjun saves Maya from the fire who in turn builds them a palace there and advises not to invite anybody to visit the palace. Draupadi enjoys the grandeur of her palace until her husbands invite their allies to visit their palace, “the most wondrous structure” (Divakaruni PI 113) and then the terrible thing occurs with the comment and laughter of Draupadi’s maidservant as Duryodhan astonished by the wonders of the palace plunges into the pond mistaking that as the floor, “It seems the blind king’s son is also blind” (Divakaruni PI 173). When the time comes, Duryodhan gets the chance to invites his cousins and their wife, Draupadi, to visit Hastinapur and his palace and the misfortune falls upon Draupadi who is humiliated in the court since Yudhishthir loses everything in the game of dice and Draupadi too. Being humiliated Draupadi pledges to revenge her honor and thus the desire to revenge fuels her until her husbands make the Great War possible. The desire for annihilation has always been condemned by the philosophical scriptures of Eastern culture though Freud put forwarded the thanatos, or death instinct, in Eastern culture, the psychology of Buddhism does not accept a death wish in Freudian sense, it does accommodate the existence of aggressive and hostile tendencies in man. As Padmasiri De Silva depicts that, “The drive for annihilation involves aggressive behavior, suicide and violent short-cuts to remove painful stimuli” (De Silva 36-37). It is Draupadi’s ignorance which makes her believe that she will revenge the humiliation

because war does not bring any peace and it leads the humankind towards the destruction. In the context of Buddhist philosophy, Jeremy D. Safran puts forward the essence of it as, “Suffering arises as a result of attempting to cling to what we desire and to avoid what causes us pain. Liberation emerges as a result of recognizing the impermanent nature of reality and letting go of our self-centered craving” (Safran 12).

Conclusion

Thus, in the end it can be asserted that the desires of Draupadi and her attachment to them lead her only towards the ignorance which make her unable to see the purpose of her life that lies in her involvement to bring out the exterminity of the evil of kuru clan and become the reason of their complete destruction, as Divakaruni, in an interview with Metka Zupancic, has also revealed that, “My own view—influenced by my culture—is that the universe we live in is a magical one. It exists on many levels. The world that we perceive with our senses and understand with logic is only the most obvious level. . . . On its most subtle level, the world is spiritual in nature. That is what Panchaali comes to understand at the end of her life” (Divakaruni n.p.). All her desires; the desire for fame, name, palace and companionship prove hollow as they are accomplished with great efforts and yet not accomplished because of being material in nature. Only the love which she keeps subdued and which is nourished as the only truth of her existence, remains with her, from the beginning to the end, the love for Karna remains in Draupadi’s heart, and it attains the universality when her love becomes spiritual and metamorphoses into the love for the Absolute self, Krishna, as Draupadi reflects that, “Krishna touches my hand. . . . At his touch something breaks, a chain that was tied to the woman-shape crumpled on the snow below. I am buoyant and expansive and uncontainable- but I always was so, only I never knew it! . . . “I reach with my other hand for Karna-how surprisingly solid his clasp! Above us our palace waits, the only one I’ve ever needed” (Divakaruni PI 356-60). Draupadi, in a way, attains individuality, because as Swami Vivekananda preaches, “the real individuality is that which never changes, and will never change; and that is the God within us” (qtd. in Chakrabarti 73). In Subjects of Desire, Butler has

also asserted that, “If the absolute is infinite, and desire is an “absolute impulse,” then desire no longer strives after “satisfaction,” but endeavors to sustain itself as desire, “reject(ing) all permanence except the permanence of itself as desire” (Butler) thus herein lies the confluence of two cultural concepts which have adorned the novel also.

References

- Anderson, Christopher Alan. (2018) *The Metaphysics of Sex ...in a Changing World!*. Sarasota, FL: *Design Publishing Inc.*, x.
- Agarwal, Beena. (2011) *Women Writers and Indian Diaspora*. *New Delhi: Authors Press*, Print.
- Chakrabarti, Mohit. (1993) *Swami Vivekananda: A Study on Aesthetics*. New Delhi: *Atlantic Publishers & Distributors*, 2018.
- De Silva, Padmasiri. (2005) *An Introduction to Buddhist Psychology*. 4th ed. *NY: Palgrave McMillan*, Print.
- Divakaruni, Chitra Banerjee. (2008) *The Palace of Illusions*. *London: Pan Macmillan Ltd.*, Print. Referred to as PI.
- _____. “Author’s Note.” Preface. *The Palace of Illusions*. By Divakaruni. New York: *The Doubleday Broadway Publishing Group*, 2008. Print.
- _____. Interview by Patricia Gras (2011). *The Connection Special*. HoustonPBS. UHT, Texas. 29 Mar. Television. <<https://www.youtube.com/watch?v=H8iFvVv9p3U>>.
- _____. Interview by Metka Zupancic. (2012) “The Power of Storytelling: An Interview with Chitra Banerjee Divakaruni”. *Oxford University Press*.
- Web. 12 Feb. 2018. <<http://cww.oxfordjournals.org/content/6/2/85.full?sid=e9f9c39a-5670-4d88b288-60e45221ef16>>.
- Ellmann, Maud. (1994) *Psychoanalytic Literary Criticism*. London & New York: *Routledge, Taylor & Francis Group*, 2018.
- Fromm, Erich. (1962) *Beyond the Chains of Illusions: My Encounter with Marx and Freud*. New York: *Simon & Schuster*, 2018
- Garrison, Christopher J. (2005) *The Psychology of the Spirit: A Contemporary System of Biblical Psychology*. Xlibris, www.Xlibris.com.



- Prabhupada, A. C. (1983) Bhaktivedanta Swami. Bhagavad-gita As It Is. *United Kingdom: MacMillan Publishers*, 2018.
- _____. "Seeing the Aim of Human Life." Krishna.org., 2018. Web. 12 May 2018.
- Raju, Suryanarayana P.V.S. (2013) The Essence of Bhagavad Gita: Yoga of Self-Knowledge. Create Space Independent Publishing Platform, Web. 12 Mar. 2018.
- Safran, Jeremy D. ed. al (2003) Psychoanalysis and Buddhism: An Unfolding Dialogue. *Boston: Wisdom Publications*, Web. 22 Mar. 2018.
- Solomon, Robert C. (1974) Existentialism. New York: McGraw-Hill, Web. 11 Apr. 2018.
- Stryker, Rod. (2011) The Four Desires: Creating a Life of Purpose, Happiness, Prosperity and Freedom. New York: Random House Publishing Group, Web. 10 Apr. 2018.

समकालीन हिन्दी कहानी में दलित चेतना

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समकालीन हिन्दी दलित कहानीकारों ने अपनी कहानियों के माध्यम से परंपरागत मूल्यों के प्रति रीतिरिवाजों के प्रति हिन्दू धर्म और उनके संस्कारों के प्रति खुलकर विरोध किया है । इसलिए जातिप्रथा, नारी शोषण दलित पुरुषों का शोषण, जमींदारों, ठाकुरों, ठेकेदारों, ऑफिसों, स्कूलों के माध्यम से या इन स्थानों पर शोषण हो रहा है और यही समकालीन कहानी के विषय भी रहे हैं ।

बीसवीं शताब्दी के अस्सी के दशक से सही मायनों में दलित कहानी साहित्य का विकास होता हुआ दिखाई देता है । क्योंकि इन दिनों स्वयं दलित कहानीकारों की कहानियों ने सवर्ण मासिकता को पूरी तरह झकझोड़ दिया था । इसलिए हम कह सकते हैं कि हिन्दी दलित कथा साहित्य की दृष्टि से आठवा दशक महत्वपूर्ण है । हिन्दी कथा साहित्य में दलित चेतना की अभिव्यक्ति भी इसी दशक से होती है । इसका उल्लेख श्री रमेश कुमार ने अपने लेख 'आधुनिक हिन्दी कहानियों में दलित चेतना' में किया है । वे लिखते हैं- "आठवे दशक के समानान्तर कहानी आन्दोलन के माध्यम से समाज के कमजोर वर्ग की समस्या को कहानी का केन्द्र बनाया गया । स्वतंत्रता के पचास वर्ष बाद भी निम्न दलित वर्ग का जीवन बद से बदतर होता चला गया है । ऐसी स्थिति में दलित उन्नायकों ने अपनी कहानियों के माध्यम से इस वर्ग के जीवन का यथार्थ निरूपण किया है । इन कहानियों में दलित जीवन की वेदना, निरंतर संघर्ष करते रहने की अनिवार्यता, सुविधा भोगी लोगों के प्रति उनकी विरोध मुद्रा, प्रतिकूल नारकीय स्थिति में भी जीने की विवशता और अपने मानवीय अधिकारों की प्राप्ति हेतु आत्मसजगता जाग्रत हुई ।" इस प्रकार की आत्मसजगता की प्रष्टभूमि तैयार करने में 'सारीका' स. कमलेश्वर ने दलित साहित्य पर दो विशेषांक अपेक्षित-मई 1975 में प्रकाशित किए तथा 'संचेतना' सं. महिष सिंह ने भी एक 'मराठी दलित साहित्य विशेषांक' दिसंबर 1981 में प्रकाशित कर महत्वपूर्ण योगदान दिया है । जिसमें मराठी के दलित कथाकारों की कहानियाँ प्रकाशित हुई थी । इसके पश्चात डॉ. सूर्यनारायण रणसुभे ने मराठी दलित कथाकारों की कहानियों का एक संकलन 'दलित कहानियाँ' शीर्षक से प्रकाशित किया । इसके उपरान्त डॉ. गिरिराज शरण अग्रवाल ने 'दलित जीवन की कहानियाँ' संपादित किया है । जिसमें केवल एक दलित कथाकार श्री रघुनाथ 'प्यासा' को भी शामिल किया है । शेष सभी सवर्ण साहित्यकार हैं । इस दिशा में रमणिका गुप्ता ने महत्वपूर्ण काम किया है । उन्होंने 'दूसरी दूनिया का यथार्थ' कथा संकलन संपादित किया है, जिसमें पहलीबार एक साथ 18 दलित कथाकारों की कहानियाँ संकलित की गई हैं । जिसमें तीन दलित महिला कथाकार भी शामिल हैं । डॉ. एन. सिंह ने दो कथा संकलन प्रकाशित करके इस कार्य को और आगे बढ़ाया है । उनके द्वारा संपादित 'काले हाशिए पर' कहानी संकलन में हिन्दी और मराठी के कई दलित कथाकारों के साथ कई सवर्ण कथाकारों की दलित चेतना से सम्पन्न कहानियों को भी संकलित किया गया है । जिसमें इन कथाकारों को तुलनात्मक दृष्टि से परखा जा सके । 'यातना की 'परछाईयाँ' में केवल दलित कथाकारों की ही कहानियों को संकलित किया गया है । इन कथाकारों में- ओमप्रकाश वाल्मीकि, मोहनदास नैमिशराय, प्रेम कपाडिया, रतन कुमार सांभारिया, और कुसुम मेघवाल की कहानियाँ संकलित हैं । इसके पश्चात अनेक दलित कहानी संकलन और कहानीकार निर्माण हुए हैं । इनके माध्यम दलितों के जीवन का यथार्थ दुनियाँ के सामने प्रस्तुत हुआ है । दलितों ने अपने जीवन के क्या जिया है क्या भोगा है । उनका रहन-सहन खान-पान रीतिरिवाज उन पर अनादिकाल से सवर्णों द्वारा किये



गए अन्याय आत्याचार का चित्रण इनकी कहानियों में हुआ है। जाति-प्रथा, छूताछुत से मिलनेवाली प्रताड़ना ऐसे अनेक विषयों पर दलितों ने अपनी कहानियों में यथार्थ चित्रण किया है। ओमप्रकाश वाल्मीकि की 'सलाम' कहानी जाति-प्रथा और छूताछुत का सशक्त रूप से चित्रण करनेवाला कहानी है। ओमप्रकाश वाल्मीकि की कहानी 'सलाम' में कमल उपाध्याय ब्राम्हण है और हरीश चुहड़ा जाति का है। दोनों गहरे मित्र हैं। कमल उपाध्याय अपने मित्र हरीश की शादी में गाँव जाता है। कमल उपाध्याय को सुबह जल्दी उठकर चाय पीने की आदत होती है। इसलिए वह गाँव के एक चाय के दुकान पर जाकर चाय मांगता है। चायवाला चाय देने के लिए तैयार भी हो जाता है लेकिन बातों-बातों में कि वह हरीश के शादी में आया है। यह सुनकर चायवाला कमल को चुहड़ा समझ कर चाय देने से इन्कार करता है और अपशब्दों का इस्तमाल करता है। सभी लोग उसे गालियाँ देते हैं। इतना ही नहीं बल्कि रामपाल उसे कहता है "ओ, सहरी जनखे हम तेरे भाई है? साले जबान सिमाल के बोल, गाँड़ में डंडा डाल के उलट दूँगा। जाके जुम्न चूहड़े से रिश्ता बना। इतनी जोरदार लौंडिया लेके जा रे हैं सहर वाले, जुम्न के तो सींग लिकड़ आए है। अरे लौंडिया को किसी गाँव में ब्याह देता तो म्हारे जैसों का भी कुछ भला हो जाता।"¹²

स्पष्ट है कि गलती से भी कोई ब्राम्हण किसी निम्न जाति के व्यक्ति के घर या शादी में आया हो तो भी उसे उसी जाति का माना जाता है। कमल के वह ब्राम्हण है यह बताने के बावजूद भी उस पर कोई भी विश्वास नहीं रखता है। इसलिए कमल को सबके सामने बे इज्जत होना पड़ता है। एक ब्राम्हण की अवस्था ऐसी हो सकती है तो असल में दलितों के साथ किस तरह का व्यवहार होता होगा, उनकी समाज में क्या इज्जत होगी, दलितों के बहू-बेटियों के साथ किस तरह का व्यवहार होता होगा यह समझा जा सकता है। इन्हीं दलितों को गाँव के अमीरों के घरों में 'सलाम' के लिए भी जाना पड़ता है। इस रिवाज का हरीश पूरी तरह से विरोध करता है और सलाम पर जाने से इन्कार करते हुए कहता है कि "आप चाहे जो समझे...मैं इस रिवाज को आत्मविश्वास तोड़ने की साजिश मानता हूँ। यह सलाम की रस्म बंद होनी चाहिए।"¹³ इस प्रकार इस कहानी में दलित समाज की आज तक किसी तरह की इज्जत न हो पर दलित समाज में अब जागृति निर्माण हो रही है और इन सवर्णों के रीति-रिवाजों का विरोध कर रहे हैं उन्हें तोड़ने का प्रयास आज के दलित समाज की युवा पीढ़ी के माध्यम से हो रहा है।

डॉ. सुशीला टाकभौर की कहानी 'जन्मदिन' में परंपरागत भंगी समाज के जीवन का रेखांकन हुआ है। कहानी में मध्यप्रदेश के होशंगाबाद जिले की एक तहसील सिवनी मालवा इस कस्बे का चित्रण किया गया है। यह गाँव रेल्वे स्टेशन से तीन किलोमीटर दूर है। यहाँ रेल्वे स्टेशन और बस स्टैंड होने से यह गाँव पिछड़ा नहीं है। यहाँ नगर पालिका नहीं है। नगरपालिका तहसील में है क्योंकि मुख्य नगर तहसील सिवनी मालवा है। यहाँ के और स्टेशन के लोग अधिकतर इसे तहसील ही कहते हैं।

इस कहानी मुख्य नायक मुन्ना है। यह स्टेशन के गाँव में रहता है। उसका घर गाँव से बाहर है। उसके पिताजी रेल्वे में चतुर्थ श्रेणी के कर्मचारी हैं। उनके पास पड़ोस में कोई नहीं रहता इसलिए

दोनों भाई-बहन स्कूल में जाते हैं। मुन्ना स्कूल की शिक्षा घर में लाता है। वह सभ्य सुसंस्कृत वातावरण में रहने से उसका स्वभाव, व्यवहार, आचार, विचार अच्छे बन गए हैं। वह अपने प्राप्त ज्ञान से सबको शिक्षित करता रहता है।

मुन्ना एक दिन जब प्रेम राठौर के लड़के के जन्मदिन पर उसके घर जात है। तब उसे पता चलता है कि प्रेम राठौर का मुहल्ला कितना गंदा है और उनका रहन-सहन भी। क्योंकि वे सब लोग मैला ढोने का काम करते हैं। इसलिए ये जहाँ रहते हैं उसे गाड़ीखाना कहते हैं। मुन्ना गाड़ीखाना के काम के बारे में जानने के बाद उसे बहुत धिन आने लगती है। वह सोचने लगता है कि "एक मानव से दूसरे मानवों का मलमूत्र उठवाना अमानवीय बात है। मानव-मलमूत्र को सिर पर रखकर ढोना असहनीय बात है। ...इन्सान की गुलामी जब उसके मन पर लाद दी जाती है, तब वह इंसान नहीं रहता। वह मात्र गुलाम बनकर रह जात है। ऐसा गुलाम जिसका तन, मन, विचार, भावना कुछ भी उसका अपना नहीं होता। वह गुलामी लादनेवालों के हाथ की कठपुतली बनकर रह जाता है। भावहीन विवेक शून्य गन्ध-बोध से हीन-मात्र यात्रिक जीव।"¹⁴ इस तरह के विचार आज का पढ़ा लिखा युवक कर रहा है और अपने समाज ने जो परम्परागत गुलामी की है। उसका विरोध कर रहा है। इस कहानी में मुन्ना अपने समाज को यह काम करने से मना करता है। इस तरह की चेतना दलित समाज में आयी हुई है।

स्वतंत्रता के बाद दलित समाज के लोगों में शिक्षा का प्रसार हुआ है। वे सभी क्षेत्रों में नौकरी पेशा करने लगे हैं। सभी लोगों के साथ मिलजुल कर काम करने लगे हैं। फिर भी सवर्ण समाज के लोग दलितों को सार्वजनिक पूजा-पाठ में भी शामिल नहीं करते हैं। इसका चित्रण ओमप्रकाश वाल्मीकि की कहानी 'सपना' में हुआ है। इस कहानी में कंपनी में काम करनेवालों की एक कॉलोनी है। कंपनी के वरिष्ठ अधिकारी कालोनी में बालाजी का मंदिर बनाने की योजना बनाते हैं। कॉलोनी में बालाजी का मंदिर बनवाया जाता है। मंदिर बनवाते समय सभी जाति के लोग पूरी सहायता करते हैं, उनमें प्रमुख रूप से गौतम का योगदान सबसे अधिक होता है। लेकिन वह एस. सी. है। मंदिर में मूर्ती की प्राण-प्रतिष्ठा के दिन गौतम और उसके घरवालों को मंदिर के पास पेंडाल में बैठने नहीं दिया जाता है। इसका कारण पूछने पर नटराजन बता देता है कि, "गौतम एस. सी. है।"¹⁵ इस प्रकार परंपरागत रूप से दलितों को किसी भी मंदिर के पूजा-पाठ में शामिल होने का अधिकार नहीं है। क्योंकि भगवानों पर भी उन्हीं की सत्ता है। भारतीय वर्ण व्यवस्था में कोई भी निम्न जाति की व्यक्ति कितना भी पढ़ी-लिखी क्यों न हो वह शूद्र ही मानी जाती है। क्योंकि यहाँ जाति जन्म के आधार पर तय होती है। इसलिए हिन्दुओं के पूजा-पाठ में दलितों को शामिल नहीं किया जाता है। दलितों से हर तरह के काम करवाएँ जाते हैं, यहाँ तक कि किसी भगवान का मंदिर भी कोई दलित या निम्न जाति का व्यक्ति ही बनवाता है। लेकिन उसे पूजा करने या ऐसे सार्वजनिक उत्सवों में भी शामिल होने का अधिकार नहीं है। सवर्णों के पढ़े-लिखे लोगों के दिमाग से आज तक छूत-अछूत की या जातिवाद की भावना कम नहीं हुई है। इसलिए दलितों को किसी भी उत्सव या त्योहारों में शामिल नहीं किया जाता है। डॉ. बाबासाहेब आंबेडकर ने सन

1927 में नाशिक के कालाराम मंदिर प्रवेश के लिए संघर्ष किया था । इसी तरह का संघर्ष इस कहानी में गौतम और ऋषिराज के माध्यम से उजागर हुआ है । इस कहानी पर डॉ. बाबासाहेब आंबेडकर के कालाराम मंदिर प्रवेश का प्रभाव स्पष्ट रूप से दिखाई देता है ।

डॉ. बाबासाहेब आंबेडकर ने नागपूर की दीक्षा भूमि पर अपने लाखों अनुयायीयों के साथ बौद्ध धर्म की दीक्षा ली थी। 'बुद्ध और उनका धम्म' नामक ग्रंथ लिखकर उन्होंने दलित समाज को 22 प्रतिज्ञाएँ दी थी । उसमें उन्होंने किसी भी हिन्दू देवी देवताओं को न मानने और उनकी पूजा न करने की बात कही थी । लेकिन आज भी इन प्रतिज्ञाओं का पालन पूरी तरह से नहीं किया जाता है । क्योंकि आज के पढ़े-लिखे युवक चाहे वह अपने माँ-बाप की इच्छा के खातिर हो या स्वयं की इच्छा से या फिर समाज में सवर्ण लोगों के साथ रहने के खातिर ही क्यों न हो, वे किसी न किसी रूप में पूजा-पाठ करने लगे हैं । दलित समाज को बाबासाहेब का सपना पूरा करने के लिए और समाज को कर्मकांड, छल कपट, झूट, फरेब से मुक्ति दिलाने के लिए स्वयं दलितों को पहले जागृत होना चाहिए । देववाद का पूरी तरह से विरोध करना चाहिए और उनकी दी हुई प्रतिज्ञाओं का पालन करना चाहिए ।

अपना गाँव – मोहनदास नैमिशराय

अपना गाँव कहानी में ठाकुरों द्वारा दलित महिलाओं पर किए अत्याचार का चित्रण है। साथ ही दलित अब सवर्ण समाज के बन्धनों से मुक्त होने के लिए अपना गाँव बसाने का विद्रोही निर्णय लेते हैं। कहानी में कबूतरी हरिया की बहू और संपत की पत्नी है। कबूतरी गोरी चिट्ठी जवान लड़की है। संपत ठाकुर सुल्तान सिंह से पौंचसौ रूपये उधार लेकर शहर जाता है। ठाकुर का बेटा सुल्तान सिंह कबूतरी को अपने हवस का शिकार बनाना चाहता है। इसलिए वह उसे कहता है कि "देख री कबूतरी या तो सिधी हमारे खेतों में, काम करने आ जा वर्ना हम चमारों से जबर्दस्ती भी काम लेना जानते हैं। फिर तेरा तो घरवाला तो हमसे कर्ज ले गया है। उसका मूल ना सही, ब्याज तो तु चुका सकती है।"⁶ यह कहकर सुल्तान सिंह कबूतरी को अपने जाल में फसाना चाहता है। कबूतरी के मना करने पर उसे नंगा करके गाँव भर घुमाया जाता है। गाँव के लोग यह तमाशा खुली आँखों से देखते हैं। ठाकुरों का विरोध करने की किसी की भी हिम्मत नहीं है।

इस बात का बहुत बड़ा धक्का बस्तीवालों को लगता है। बस्ती के पंच मिलकर इस घटना का किस प्रकार विरोध करना चाहिए इसके संदर्भ से विचार विमर्श करते हैं। यह खबर संपत तक पहुँचाने की बात करते हैं। लेकिन यह बात अखबारों के माध्यम से संपत तक पहुँच चुकी थी। इसे पढ़कर संपत भागा-भागा चला आ जाता है। संपत से विचार विमर्श करने पर सब की राय बन जाती है कि इस घटना की रिपोर्ट पुलिस में लिखनी चाहिए। वे सब मिलकर कसबे के पुलिस चौकि में जाते हैं। संपत पुलिस को रिपोर्ट लिखने की बात करता है पर पुलिस ठाकुरों के खिलाफ रिपोर्ट लिखाने से इंकार करती है। रिपोर्ट लिखाने के बजाय उन्हें ही गालियाँ देता है । मारते हैं और इन्स्पेक्टर कहता है "स्सालों चमारों, अब तुम्हें जबान भी लड़ाना आ गया है। एक-एक की गांड में मैंने डंडा न करवा दिया तो मेरा एस. पी. त्यागी नहीं।"⁷ इस प्रकार रिपोर्ट लिखाने गए ग्यारह लोगों

को पुलिस द्वारा पिटा जाता है। फिर भी लहाना गाँव के दलित बस्ती के लोगों की हिम्मत कम नहीं होती है। यह खबर एक मणियार द्वारा लहाना गाँव में पहुँच जाती है। कसबे के दलित लोगों ने इन ग्यारह लोगों को छुड़वाया और उनकी जमानत हो जाती है। अन्य दलित लोगों के दबाव के कारण ठाकुर के खिलाफ केस दर्ज हो जाती है। इधर दूर गाँव में पंचायत जुड़ी जाती है। सब विचार विमर्श करने लगते हैं कि अब क्या किया जाय। गाँव में न्यूज़ रिपोर्टर भी आ जाते हैं। उन्होंने कबूतरी का सारा बयान लिया है। ठाकुर के बेटे का भी बयान लिया जाता है। रिपोर्टर को सारी बातें बताई जाती है। उन्हें यह भी बताते हैं की इनकी जाति को पहले से ही नंगा किया जाता रहा है, बेइज्जती की जाती रही है। यह गाँव परंपरा और रुढ़ियों की गिरफ्त में फँसा हुआ है। गाँव पर जातिभेद की अमिट छाप देखी जा सकती है। गाँव दो हिस्सों में बँटा हुआ है। एक हिस्से में सवर्ण तथा दबंग जाति यानी बामन, बनिया, ठाकुर राजपूत, जाट, त्यागी, यादव, गूजर, कायस्थ तथा कुर्मी जाती के लोग रहते हैं। दूसरे में अवर्ण और निर्बल जातियाँ यानी चमार या चामड़, वाल्मीकि, खटिक, तेली, नाई जुलाहे, खटबुने, मणियार आदि हैं। इस प्रकार ऐसे गाँव में दलितों को रहना मुश्किल हो जाता है। इसलिए दलित बस्ती के बुजुर्ग पंच और सभी लोग मिलकर इस समस्या का हल निकालने के लिए विचार विमर्श करते हैं। वे यह सब जानते हैं कि जात-पात की बिमारी सब जगह है। चाहे वह गाँव हो या शहर। सभी के विचार जानने के बाद हरिया कहता है कि हम अपना अलग गाँव बसाएंगे, जो अपना गाँव होगा। इस बात से स्पष्ट हो जाता है कि दलितों को अपनी गुलामी का अहसास हो गया है और वे अब सवर्णों की गुलामी से मुक्त होकर अपना गाँव बसाना चाहते हैं। यह दलित चेतना को जगानेवाली कहानी है। जो दलित जमाने से सवर्णों के गाँव की गुलामी करता था, उनकी सेवा करता था, मनु के अनुसार जीता था ऐसे बन्धनों को उसने तोड़ दिया है। आज वह आजादी के मायने समझने लगा है। इसलिए अब इस बात की जरूरत है कि सवर्णों को दलितों के साथ अच्छे व्यवहार करने चाहिए। उन्हें मानवीय न्याय और अधिकार भी देने की आवश्यकता है।

साजिश – सूरजपाल चौहान

साजिश कहानी में सवर्ण दलितों को उपर उठने न देने की किस प्रकार साजिश करता है इसका चित्रण है। कहानी में नत्थू बी.ए. पास है। वह ट्रांसपोर्ट का व्यवसाय करना चाहता है। बी.ए. पास होने पर भी उसे किसी प्रकार की नौकरी नहीं मिली इसलिए वह बैंक से लोन लेकर ट्रांसपोर्ट का व्यवसाय करना चाहता है। वह जब लोन के लिए बैंक में जाकर बैंक मैनेजर रामसहाय शर्मा को कहता है। पर रामसहाय शर्मा उसे ट्रांसपोर्ट के व्यवसाय में कितानी सारी मुसीबतें हैं उसके बारे में समझाते हैं। और उससे पिगरी व्यवसाय हेतु काम करने के लिये कहता है। नत्थू यह व्यवसाय नहीं करना चाहता क्योंकि परंपरागत रूप से यही वे करते आये हैं। बैंक मैनेजर रामसहाय शर्मा उसे सोचने का मौका ही नहीं देता है और उससे फिगरी लोन के लिए फार्म भरवा लेता है।

नत्थू के जाने के बाद रामसहाय शर्मा और हेडक्लर्क सतीश भारद्वाज दोनो बहुत खूश हो जाते हैं क्योंकि वे दोनो अपने साजिश में



कामयाब हुए थे। वे दोनों ये कहकर उहाके लगाने लगते है कि "राले आए चुहड़े चमार पढ-लिखकर व्यापार करेगे बैंक से उधार लेकर ट्रांसपोर्ट का धंदा करेगें व्यापारी बनेगे, ट्रेंडिंग करेगे।"⁸ रामसहाय शर्मा सतीश भारद्वाज को कहता है कि अगर कोई भी अछूत वर्ग का युवा अपना धंदा शुरू करने के लिए बैंक से कर्जा हेतु प्रार्थना पत्र भर देता है, तो उसे उसके पैत्रक धंदे में ही लगाने हेतु प्रेरित करता है। उसे ऐसा विश्वास दिलाया जाता है कि वह अपने पैक धंदे को छोड़कर दूसरे धंदे की कल्पना न करे। उन्हे इस बात का डर है कि "जिसके बाप दादा हमारे धरों की गन्दगी साफ करते आए हो और जूटन खाकर बड़े हुए हो, भला उन्हें तुम अपने साथ बैठाकर खाना खिलाओगे।"⁹

नत्थू धर जाकर सारी बातें अपनी पत्नी शांता को बताता है। तो शान्ता का माथा टनक उठता है। शान्ता बैंक मॅनेजर की साजिश को समझ जाती है। उसने नत्थू को पिगरी लोन के लिए ही प्रेरित क्यों किया यह सारी बातें शान्ता ने नत्थू को समझाई। नत्थू को इस बात का अहसास हुआ। नत्थू ने उसी दिन अपने टोले मुहल्ले के युवकों को बैंक मॅनेजर के साजिश के बारे में बताया। सभी लोग एक हुए और शांता के नेतृत्व में जन समूह निकला "मनचाहे पेशे के लिए कर्ज देना होगा पुश्तैनी धंधे मे रखने की साजिश बंद करो हमें भी बहुमुखी विकास का अवसर दो।"¹⁰ के नारे लगाते हुए सैकड़ों लोगों ने बैंक को घेर लिया। इस प्रकार यह कहानी दलित जागृती को उजागर करती है। अपने अधिकारों को समझ रही हैं। अपनं पुश्तैनी धेधे से उभरने का प्रयास कर रहे है और सवर्णों की साजिश को भी समझ रहे है।

लटकी हुई शर्त – प्रल्हादचन्द्र दास

'लटकी हुई शर्त' कहानी में परंपरागत रूप से दलितों के साथ किए जा रहे व्यवहार का आज का दलित खुलकर विरोध करता हुआ नजर आता है। इस कहानी में गंगाराम एक गरीब दुसाध जाति का लड़का है। उसे बचपन में बच्चे गंगाराम गंगाराम कहकर चिढ़ाते थे। वह बचपन में बहुत भुक्कड़ भी था। बहुत खाना खाता था। इसलिए उसके पिताजी को शर्म महसूस होती थी। वे उसे इसके लिए डाटते भी थे। गंगाराम के पिताजी ठाकुर रामकिसुन बाबाम के अस्तबल में घोड़ों को सानी-पानी खिलाता था। आज गंगाराम अस्तबल का मालिक बन गया है।

होता यह है कि गंगाराम के शादी के बाद उसे तीन बेटे हुए। गंगाराम ने अपने तीनों बेटों को बहुत अच्छे तरह से पढ़ाया-लिखाया और काबिल बनाया। शिक्षा के तुरन्त बाद तीनों बेटे नौकरी पर लग गए। बड़ा बेटा मनुआ बैंक में, दूसरा बेटा शिवचरण पुलिस में और तीसरा बेटा हरिचरण ब्लाक ऑफिस में नौकरी करने लगते है। इसी कारण गंगाराम के पास धन-जन सब कुछ आ जाता है। गाँव के ठाकुर लोग शराब और शबाब के कारण बर्बाद हो जाते हैं। अब स्थिति यह है कि गाँव के ठाकुर लोग दुसाध जाति के लोगों को उनकी शादी ब्याह में बुलाते हैं। भोजन भी खिलाने लगे है पर आज भी उनकी पत्तल खाना खाने के बाद उन्हें ही उठानी पडती है। ठाकुर लोग दलित की शादी में आते हैं तो दलितों की पंगत में बैठकर खाना नहीं खाते हैं। उन्हें सुखा खाना देना पडता है। इस रिवाज की याद हरखु

काका गंगाराम को दिलाते हुए कहते हैं कि "आज भी वही नियम चल रहा है। जब हम उनके यहाँ नौकर होते हैं, तब की बात नहीं करता तब तो हम खाते हैं, अपना जूटन आप साफ करते हैं, और हमें मलाल नहीं होता। लेकिन जब भोजन में 'नेउता' कर ले जाया जाता है, तब भी? और जब हम बाबूओं को नेउता देते हैं तो हमें 'सूखा' पड्डुवाना पडता है। वे हमारे यहाँ बैठकर नहीं खाते। और जो हमस सूखा देते हैं, पता नहीं उसको भी वे खाते हैं या नौकर-चाकरों को देते हैं। इसके बारेमें कभी सोचा है तुमने? समर्थ हुए तो जाति की इस दीवार को तोड़ें या फिर ऊँची जाति के होने के उनके दम्भ को।"¹¹

यही बात गंगाराम को झंझोड़ देती है। इसलिए वह फैंसला करता है कि इस बार रामकिसुन बाबू की पोती की शादी में कोई भी 'इतर जात' खाना नहीं खाएगी। जबतक उनकी शर्त और मांग पूरी नहीं की जाती। वे शर्त रखते हैं कि खाने के बाद हम अपना पत्तल नहीं उठाएंगे। नेउता कर लेजाते हैं तो सचमुच सम्मान दीजिए और यह सम्मान आप ने दिया तो सब ने दिया- क्योंकि आप तो गाँव के सिरमौर है।"¹² यह बात गाँव के सिरमौर रामकिसुन बाबू को कहते हैं। स्पष्ट है कि इस बात को परंपरावादी सनातनी रामकिसुन बाबू नहीं मानते हैं। अंत में रामकिसुन बाबू के पोती के शादी में सभी इतर जाति के लोग मनोभाव से काम करत हैं लेकिन शादी में किसी भी इतर जात के लोगों ने खाना नहीं खाया। जब भी गाँव में ठाकुरों के घरों में शादी होती है गंगाराम अपने लोगों के लिए दावत रखता है। गाँव में कितनी शादियाँ बाबूओं के यहाँ हुई। कितनी शादियाँ ठाकुरों के यहाँ हुई पर गंगाराम की शर्त आज भी लटकी हुई है।

स्पष्ट है कि दलित समाज आज पढ-लिखकर काबिल बन रहा है। वह अपनी परंपरा को तोड़ने का प्रयास कर रहा है। सामाजिक विषमता को मिटाने की कोशिश कर रहा है। इसमें सवर्ण समाज को सहयोग करना चाहिए, पर वे अपनी सनातनी मानसिकाता को छोड़ने के लिए तैयार ही नहीं है।

कहानी में यह एक दलित समाज को संदेश भी दिया है कि गंगाराम को जिसने चेतना दी वह हरखुराम है। हरखुराम के नाम से उनकी याद में 'हरखुराम हाईस्कूल खोल देता है। वह इस स्कूल से और मनुआ, हरिचरण और शिवचरण निर्माण हो। जो दलित समाज आज पढा-लिखा है उन्हें ऐसे ही कुछ कदम उठाने की जरूरत है।

हरिजन- प्रेम कपाड़िया

हरिजन कहानी देवदासी की जिन्दगी को उजागर करती है। मंदिरों में पुजारी दलित महिलाओं को किस प्रकार देवदासी बनाकर रखते हैं। उन्हें अपनी हवस का शिकार बनाते हैं। उनसे पैदा होनेवाले बच्चे को शिक्षा-दिक्षा से भी वंचित रखते हैं। इस बात का चित्रण इस कहानी में हुआ है। कहानी का नायक प्रेम परबतिया नामक देवदासी का पुत्र है। वह पढ़ना चाहता है। प्रेम की माँ परबतिया भी उसे पढ़ाना चाहती है। वह मंदिर के पुजारी से जा कर कहती है कि वह अपने बेटे को पढ़ाना चाहती है, उसे कुछ बनाना चाहती है। तब पुजारी कहता है कि "अरे परबतिया! कहीं राख में फूल खिलते हैं? वह हरिजन है...हरिजन कैसे पढ़ सकता है? हमारे वेदों में हरिजनों को वेद पुराण सुनने की भी मनाही है...पढ़ने की बात तो दूर रही! खैर! छोड़! अलमारी में सोमरस की शीशी है...उसे निकाल ले और गिलास में डाल दे...तब

तक मैं कपड़े उतारता हूँ।¹³ पुजारी दलित देवदासियों को भोगते हैं पर उनसे पैदा होनेवाले बच्चे की जिम्मेदारी कोई भी नहीं लेता है। बावजूद इसके प्रेम स्कूल जाने लगाता है।

एक दिन प्रेम के स्कूल में एक लड़का उसकी तख्ती पर पैर रख देता है। प्रेम के उसे पुछने पर वह लड़का कहता है कि "पैर पड़ गया तो क्या होगा? तू हरिजन है ही....फिर हरामी भी है। तेरे बाप का नाम क्या है?"¹⁴ इस बात को लेकर दोनों में झगडा होता है। प्रेम वही तख्ती उस लड़के के सिर पर मारकर वहाँ से भाग जाता है। यही बात वह घर आकर अपनी माँ से पुछता है। उसकी माँ बता देती है कि "बेटा ये हमारी बदनसीबी है कि तेरे बाप का पक्का पता नहीं...जो औरत रोज नये मर्द के साथ सोती हो, उसके बच्चे के बाप का नाम कैसे पता चल सकता है?"¹⁵ यह सुनने के बाद प्रेम अगली सुबह ही शहर की ओर निकल पड़ता है। जिस सड़क पर चलने लगता है, उसी सड़क पर एक बाबूजी की गाड़ी से टकरा जाता है। वे बाबूजी उसे दिल्ली ले आते हैं। उसे अच्छा पढाते-लिखाते हैं। उसे एक काबिल इंसान बनाते हैं। वह दिल्ली महानगर का पुलिस उपायुक्त बन जाता है। पुलिस उपायुक्त बनने के पश्चात जिस बाबूजी के घर में रहकर वह यह सब कुछ हासिल करता है, उन्हीं बाबूजी की बेटा प्रिया के साथ उसकी शादी हो जाती है। शादी के बाद वे बहुत ही ऐशोराम की जिन्दगी जीने लगते हैं। उसे याद आती है कि तीस साल पहले उसने अपनी माँ को इटारसी में छोड़ आया है और कभी वापस मुडके भी नहीं देखा है। आज वही होम सेक्रेटरी का दामाद है। वह स्वयं पुलिस उपायुक्त है। उसे कोई चू तक नहीं कर सकता है। प्रेम के ससूर प्रेम के बारेमें जान चुके है। वे भी इस देवदासी प्रथा को बंद करना चाहते है। देवदासी प्रथा को उसने अपने गाँव इटारसी में देखा है। उसकी माँ ही देवदासी होने से उसे सब कुछ पता है। प्रेम के ससूर उसका ट्रान्सफर इटारसी कर देते हैं। प्रेम इटारसी पहुँच जाता है। वहाँ पहुँचने पर वह सारे मंदिरों की फाईलें मंगवाकर देखता है

कि किस मंदिर में कितनी देवदासियाँ है। वह जब सूरजगंज के मंदिर की फाईलें देखता है तो वहाँ के देवदासियों की लिस्ट में उसकी माँ का नाम होता है। वह सूरजगंज जाता है। सभी देवदासियों को सूरजगंज पुलिस थाने लाया जाता है। पूरे तीस साल बाद अपनी माँ को देखकर उसका मन भर आता है। वह अपनी माँ को लिपट जाता है और कहता है कि माँ मैं तेरा परेमा हूँ। इस प्रकार कहानी में एक देवदासी के पुत्र का बड़ा ही रोमांचक चित्रण इस कहानी में हुआ है।

त्ममितमदबमे

¹आधुनिक हिन्दी कहानी में दलित चेतना— आजकल दिल्ली जनवरी रमेशकुमार 1992 पृ. 13

²सलाम — ओमप्रकाश वाल्मीकि पृ. 13

³वही पृ. 17

⁴संघर्ष — सुशीला टाकमौरि पृ. 34

⁵सलाम — ओमप्रकाश वाल्मीकि पृ. 29

⁶दलित कहानी संचयन — संपा. रमणिका गुप्ता पृ. 31

⁷वहीं. पृ. 44

⁸वहीं. पृ. 67

⁹वहीं. पृ. 68

¹⁰वहीं. पृ. 69

¹¹वहीं. पृ. 83

¹²वहीं. पृ. 83

¹³वहीं. पृ. 89

¹⁴वहीं. पृ. 90

¹⁵वहीं पृ. 91



Enhancement and Evaluation of Pedagogical Content Knowledge (PCK) of Pre-Service Physics Teachers Using Concept Map Strategy

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Abstract

Research in education demonstrates that, in addition to knowing the concepts and laws in physics and the methods of scientific inquiry (Content Knowledge), teachers should know how learning process take place, how memory works, and the development of brain with age (Pedagogical Knowledge). Teachers of a particular subject should possess the distinct knowledge and must be able to integrate their content knowledge and pedagogical knowledge. This special knowledge is called pedagogical content knowledge (PCK). PCK should be evaluated periodically for the professional development of a teacher. Concept mapping is an effective testing and evaluation tool, which plays a dual role in assessing and improving the PCK of a physics teacher. Two groups (experimental and control) of B.Ed trainee physics teachers were selected for the study. During the internship training session, the experimental group was made to create concept maps containing the pedagogical content for the lessons they teach in the class every day for one month. Their PCK is evaluated using their concept maps, while the control group is evaluated simultaneously by the traditional method. The findings indicate that concept mapping is an effective tool for evaluating and enhancing the PCK of B.Ed trainee physics teachers. Keywords: pedagogical content knowledge (PCK), pre-service teachers, concept map, evaluation

Introduction

Nowadays, in spite of the availability of the information on the internet and other sources, physics has become a very tough subject for the high school children. Since physics is a part of the science curriculum, many teachers and students give less importance to physics. According to Osborne et al. (2003), students show least interest in physics than other science disciplines. So they concentrate on topics in biology and chemistry to get through their high school board exams. Those children join science group in the higher secondary course (pre-university) with the aim of studying an engineering course in the future. Having got used to rote learning, somehow they manage to get good marks in the higher secondary course. When these children go for higher studies like engineering and other technical courses, they struggle a lot to complete their courses due to a lack of fundamental

knowledge in physics. So it is the duty of a high school physics teacher to impart the concepts in physics without any confusion.

Teachers are viewed as ‘learning specialists,’ enriched with knowledge. Evaluating the knowledge of a teacher as a ‘learning specialist’ include functioning of this knowledge in the teaching-learning process; particularly, how that knowledge is applied in decision making, such as designing the lessons and instantaneous judgements in the classroom. Some studies showed that most of the pre-service teachers do not have sufficient content knowledge and Pedagogical Content Knowledge (PCK) and are not able to make use of different teaching methods efficiently (Kagan, 1992; van Driel, Verloop, & de Vos, 1998). PCK should be evaluated periodically for the professional development of a teacher. This study is an attempt to assess PCK of a physics teacher using concept map strategy. We have adopted CoRe (Content Representation) which was initially developed by Loughran et al. (2006) as a reference to construct the concept maps needed for the study.

Pedagogical Content Knowledge (PCK)

Shulman defines Pedagogical Content Knowledge as that “special amalgam of content and pedagogy that is uniquely the province of teachers, their special form of professional understanding” (1987, p. 8). A teacher should possess knowledge about the curriculum and subject matter. But the teachers’ PCK is a vital part of their professional knowledge (Baxter and Lederman 1999; Berry et al. 2008). Concerning physics, modern researches have reiterated that school students not only recognize physics as a demanding and difficult subject (Angell, Guttersrud, Henriksen, & Isnes, 2004; Kessels, Rau, & Hannover, 2006) but also show an appreciable lack of interest in the subject physics or in pursuing a career related with physics. Moreover, present research in various science subjects reveals that teachers’ pedagogical content knowledge is an essential factor which directly influences students’ learning and achievement (see Gess-Newsome, 2013).

Concept Map

A concept map is a visual description of knowledge stated as a hierarchical outline of concepts and their connections. (Iuli, 2004). Novak and Gowin (1984) describe it as a “schematic device for representing a set of concept meanings embedded in a framework of propositions”. Concept maps contain the connections between concepts and thoughts. Concepts can be organised by drawing internal links between the new concepts, connecting concepts in prior knowledge with the new ones, by selecting relevant linking phrases.

Concept maps are used as teaching tools and have generated many positive results in the classrooms (Novak 1980; 1981). Ausubel (1963) made the significant distinction between rote learning and meaningful learning.

Concept maps are useful in teaching and learning process as these maps facilitate learning because these have a long-lasting impression on the mind of students thereby improving the learning outcome of the students. Concept maps are used as assessment tools (Ingec, 2009) and curriculum planning tool (Ambe and Reid-Griffin, 2009, Kane and Trochim 2007; Kinchin and Alias, 2005).

Content Representation (CoRe)

CoRe (Content Representation) was originally developed by Loughran et al. (2006). This provides an overview of the pedagogical approach of a teacher while teaching a particular topic and the reasons for taking that approach. CoRe is a representation of why we teach that content and how it is taught for a particular group of students with different levels of intelligence, class etc. The parts of a CoRe are, Big science concepts.

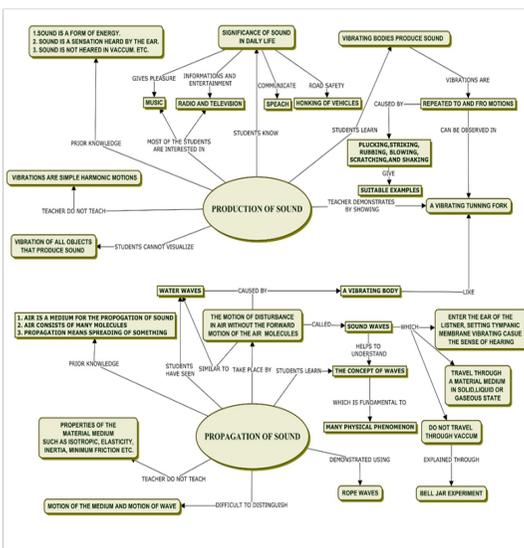
- What do you expect the students to learn about this concept?
- Why is this concept important for the student?
- What more do you know about this concept, which you don’t want the students to learn?
- What are the difficulties and limitations associated with teaching this concept?
- How do the students think while teaching this concept and how it affects your teaching?
- Identify the various factors that may affect your teaching of this concept.



- Teaching method sopted and the reasons for choosing that method for teaching this concept.
- What are the different techniques to evaluate students understanding thisconcept.

The CoRe gives an impression of teachers' PCK for a particular topic and gives some understanding of the teacher's decision-making skill when teaching a particular topic. It also provides the linkages between the content taught, and the practices of teacher and student during the teaching process.

In this study, we have taken the above components as a reference and constructed concept maps which include most of the components embedded in a different form. In addition to the above, students' prior knowledge about the topic is also included in each concept. It is not necessary that the concept map should contain all the components and more components can be included if a teacher finds useful. An experimental investigation carried out by Blackwell and Pepper (2008) showed that a pre-service teacher could enhance his teaching-learning practices by constructing concept maps while preparing his lesson plan. It also helps him to make better pedagogical decisions. The concept maps constructed in this form includes both pedagogical and content components in it. So this concept map can be used to evaluate the pedagogical content knowledge (PCK) of a teacher A typical concept map with the above components having two 'big concepts' is shown below.



Concept map containing two big concepts in Sound for class 10 (Tamilnadu state Board)

Methodology

This study took place during the teaching practice session of B.Ed students of physical Science from a reputed Teacher Education College near Chennai. 30 students were selected for the study and divided into two groups 15 each (experimental and control groups). The experimental group was given training in concept mapping, and the components of content representation (CoRe) were explained. They constructed concept maps for all the lessons they teach during the teaching practice session. Among those concept maps, the concept maps constructed for the unit 'sound' is taken for evaluation (five lesson plans). Simultaneously the teaching performance of both groups was also evaluated using evaluation proforma for the same lesson plans with the help of their guide teachers.

Scoring of the concept map is done as follows.

- Proposition 1 point,
- Hierarchy 5 points,
- Cross-links 10 points,
- Example 1 point

The mean score of the five concept maps is calculated for each student in the experimental group. Similarly, the average of the teacher's performance score is also tabulated for both the control group and experimental group using guide teacher's evaluation proforma.

The scores are converted for 100, and a t-test is carried out between

- the scores of the experimental group using concept map evaluation and evaluation proforma (paired)
- the scores of the experimental and control groups using evaluation proforma (unpaired)

Results

Table -1

Evaluation method	Number N	Mean	Standard Deviation	t' value	p' value
Concept maps	15	88.2	7.03	1.193	0.253
Evaluation proforma	15	82.8	6.25		

The above table-1 indicates the scores of the experimental group using concept maps and the scores using evaluation proforma (usual method followed by the guide teacher. From this we find that

there is no significant difference between the scores evaluated using concept maps (M = 88.2 S.D = 7.03) and the scores evaluated using evaluation proforma (M = 82.8, S.D = 6.25) Conditions; t = 1.193 and p = 0.253

Table -2

GROUP	Number N	Mean	Standard Deviation	t'value	p'value
Experi-mental Group	15	82.8	6.25	2.630	0.019
Control Group	15	65.7	8.5		

Similarly comparison of the sores of both control group and experimental group using evaluation proforma, from table -2 we find that there is a significant difference between the scores of experimental group (M = 82.8, S.D = 6.25) and the scores of control group (M = 67.7 S.D = 8.5) Conditions; t = 2.630 p = 0.019.

Discussion of the Result and Conclusion

The scores of the experimental group obtained by evaluating the concept maps constructed by them do not differ significantly from that obtained using the guide teacher’s evaluation proforma. Since the guide teacher’s evaluation is a time-consuming process,we find that concept mapping is a better tool to evaluate the pedagogical content knowledge of the teacher.

There exist a statistically significant difference between the mean scores of the control group (M= 67.7) and experimental group (M= 82.8). This difference reveals that using a concept map strategy in lesson plan has enhanced the pedagogical content knowledge of the student teachers.

Reference

Baxter, J.A. & Lederman, N.G. (1999). Assessment and Measurement of Pedagogical Content.
 Christiane Kuhn, Alicia C. Alonzo and Olga Zlatkin-Troitschanskaia Kuhn et al. (2016), Evaluating the pedagogical content knowledge of pre- and in-service teachers of business and economics to ensure quality of classroom practice in vocational education and training Empirical Res Voc Ed Train (2016) 8:5 DOI 10.1186/s40461-016-0031-2
 Guerriero, S. (ed.) (2017), Pedagogical Knowledge and the Changing Nature of the Teaching Profession, *OECD Publishing*, Paris
 Kind, V. (2009) ‘Pedagogical content knowledge in science education : potential and perspectives for progress.’, *Studies in science education.*, vol. 45, no. 2. pp. 169-204.
 Knowledge. J. Gess-Newsome, & N.G. Lederman (Eds.), Examining Pedagogical Content Knowledge: The Construct and its Implications for Science Teaching, *Dordrecht, Boston, London: Kluwer Academic Publishers.* pp. 147-161.
 Loughran, J. J., Berry, a. & Mulhall, P. (2006) Understanding and Developing science teachers’ pedagogical content knowledge, Rotterdam: *Sense Publishers.*
 Ragisha, K. K, Dr.K.Abdul Gafoor (2014), Effect of Concept Mapping on Pedagogic Content Knowledge of Elementary Student Teachers, *IOSR Journal Of Humanities And Social Science (IOSR-JHSS)* vol. 19, no. 11, Ver. VII, pp. 31-35 e-ISSN: 2279-0837, p-ISSN: 2279-0845. www.iosrjournals.org
 Van Driel, J. H., Verloop, N., de Vos, W (1998). Developing science teachers’ pedagogical content knowledge. *Journal of Research in Science Teaching*, vol. 35, no. 6, pp. 673-695.



திருக்குறளில் அகத்திணை மரபு The Legacy of *Akatthinai* in Thirukkural

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Abstract

Tamil Literature has a rich and varied tradition of legacy and supremacy that surpasses time and period which is immensely unique and distinguished in many different ways. 'Akam' is one of the many unique and excellent traditional literary phenomena that is evident only in Tamil literature. The Research titled, 'The Legacy of Akatthinai in Thirukkural' aims to identify, extrapolate, analyze and discuss the legacy of Akam (Inner Phenomenon) element apparent in acclaimed poet, Thiruvalluvar's selected couplets. The study also aims to revolutionize and internalize the thinking patterns and ideologies inherent in the poets composed couplets. The research is qualitative based which allows for literary interpretation. It employs the descriptive analysis mode to gather data through analytical based findings. The research will employ the 'Akam Theory', popularised 3,000 years ago by Tholkaappiyar, which were extracted from his master piece titled 'Tholkaappiyam'. The research will be a bench mark and a valid platform for the research scholars of Thirukkural in the future. The exposition, interpretation and revelation of the Akam Theory phenomena will be a point of reference and valuable guide for Thirukkural enthusiasts to improvise and create genre of distinction and excellence in the future. The research also strives to give related information on the status, grade and quality of Thirukkural work composed by Thiruvalluvar.

முன்னுரை

பழங்காலத்தில் முதன்மையாகத் தோன்றிய எல்லா நாட்டு இலக்கியங்களின்பாடுபொருளாகக் காதலும் வீரமும் அமைந்திருந்தன. ஆனால், தமிழில்தான் அதற்கான பொருள் இலக்கணம் தோன்றியது. சங்க இலக்கியங்களாகிய எட்டுத்தொகையும், பத்துப்பாட்டும் பொருள் இலக்கணத்திற்கு இலக்கியங்களாய்ப்பண்டைத் தமிழரின் காதலாகிய அகவாழ்க்கையையும் வீரமாகிய புறவாழ்க்கையையும் விளக்கி உரைப்பனவாய் அமைந்துள்ளன. பண்டைத்தமிழரின் வாழ்வியல் போக்கினைப் புலப்படுத்தும் பின்னணியாகப் புலவர்கள் இயற்கையைக் கருதினர். அதற்குக் காரணம் தொல்காப்பியர் அகப்பாடல்பாடுவதற்காக வகுத்த முதல், கரு, உரிப்பொருள் என்ற முப்பொருள்முறைமையும், பண்டைத்தமிழரின் இயற்கையோடு இயைந்த வாழ்க்கைமுறையும் ஆகும். மற்றவர்க்கு இத்தகையதென எடுத்துரைக்க இயலாத காதல் உணர்வுகளை வெளிப்படுத்தும் அகமரபாகப் புலவர்கள் கையாண்டுள்ள முப்பொருள் காமத்துப்பாலிலும் அமைந்திருக்கும் திறத்தை ஆய்வதாக இக்கட்டுரை அமைகிறது.

தமிழ்மொழியில் மனித வாழ்க்கைக்குரியதாகக் கூறப்பெற்றுள்ள அகப்புற இலக்கணத்திற்குக் கிடைத்துள்ள முதன்மையான இலக்கிய வடிவம் சங்க இலக்கியம் ஆகும். சங்க இலக்கியத்தை அடுத்து, சங்கம் மருவிய காலத்தில் தோன்றிய இலக்கியங்களின் பொருண்மை அறம் கூறுவதாக மாற்றம் பெற்றது. அக்காலத்தில் தோன்றிய முதன்மையான அறநூலான திருக்குறளில் அகப்புற அமைப்பைப் பரவலாகக் காணமுடிகிறது. தமிழ் இலக்கிய மரபைப் பின்புலமாகக் கொண்டு திருவள்ளுவர், காமத்துப்பாலை அமைத்துள்ளார். திருக்குறளின் மூன்றாவது பாலாக அமைந்திருப்பது காமத்துப்பால். இதில் இடம்பெற்றுள்ள 25 அதிகாரங்களும் தலைவன், தலைவியர்களுக்கு இடையே உள்ள காதல் வாழ்க்கையைக் கூறுகின்றன. இது பண்டைய தமிழ் அக இலக்கிய மரபைப் பின்புலமாகக் கொண்டு அமைந்துள்ளது. களவு - கற்பு எனும் வாழ்க்கை நிகழ்ச்சிகள் தமிழ்நெறி என்று பாராட்டப் பெறுபவை. அகப்பொருளின் இந்தச் சிறப்புகளைக் கூறும் அக இலக்கிய மரபு திருக்குறளில் பரவி விரவியுள்ளது. அவ்வகையில் தொல்காப்பியர் வகுத்த அகத்திணை மரபையும் திருக்குறளில் அமைந்துள்ள அகப்பகுதியான காமத்துப்பாலையும் ஒப்பிட்டு ஆய்வதே இவ் ஆய்வின் நோக்கமாகும்.

அகத்திணை மரபு

தமிழிற்குத் தனிச்சிறப்பு அளிப்பது மக்களின் வாழ்க்கை முறையை இலக்கணத்திற்கு உட்படுத்தி அமைத்த அகப்பொருள், புறப்பொருள் என்றபொருள் இலக்கணப் பாகுபாடாகும். “குறிப்பிட்ட சில விதிமுறைகட்குட்பட்டு மரபுபிறழாமல் பாடப்படுவன அகமென்றும் அவற்றில் வேறுபட்டு அமைவது புறமென்றும் கருதப்பட்டன” என்று வாழ்வியல் களஞ்சியம் (பாலுச்சாமி, 1991) விளக்கம் தருகின்றது. தலைவனின் வீரம், கொடை, அறம், மக்களில் சிறந்தவர்களின் வாழ்க்கை முறை போன்றவற்றை எடுத்துரைக்கும் புறப்பொருளை விட மக்களின் காதலுறவை எடுத்துரைக்கும் அகப்பொருளைச் சான்றோர்கள் போற்றினர்.

“தள்ளாப் பொருள் இயல்பின் தண்தமிழ் ஆய்வந்திலார் கொள்ளார் இலக்கன்று பயன்” (பரி.,9: 25-26)

என்ற பாடலடிகள் அகமரபைத் தமிழென்ப போற்றியுரைக்கின்றன. அகப்பொருள் இலக்கண நூலாகிய இறையனார் களவியல் அதன் பாடுபொருளை, “இந்நூல் என்னுதலிற்றோ எனின் தமிழ்நுதலிற்று” என்கிறது (நக்கீரர், 1964: ப.5)

புறவொழுக்கம் வாழ்க்கைக்குத் துணை நிற்பது. அகவொழுக்கம் வாழ்க்கையை உருவாக்கி உலக

உயிர்களின் தோற்றத்திற்குக் காரணமாகிறது. அத்தகைய சிறப்பிற்குரிய அகப்பொருளைத் தொல்காப்பியர் கைக்கிளை, குறிஞ்சி, முல்லை, மருதம், நெய்தல், பாலை, பெருந்திணை என ஏழாகப் பகுத்துள்ளார். இதனை,

“கைக்கிளை முதலாப் பெருந்திணை இறுவாய் முற்படக்கிளந்த எழுதிணை என்ப”

(தொல்.பொருள்: நூ.1)

என்ற நூற்பா மொழிகிறது. இவற்றுள் கைக்கிளை, பெருந்திணை என்ற இரண்டும் அகவாழ்க்கைக்குப் பொருந்தாது எனச் சிலர் குறிப்பிடுகின்றனர். ‘அன்பின் ஐந்திணை’ என்ற தொல்காப்பியர் கூற்றினைக் கொண்டு குறிஞ்சி, முல்லை, மருதம், நெய்தல், பாலை என்ற ஐந்து மட்டும் அன்புடை வாழ்க்கையை எடுத்துரைக்கும் திணையாகப் பிற்கால இலக்கண நூல்களால் கொள்ளப்பெற்றது. அகப்பொருள் விளக்கம் கைக்கிளையை, அகப்புறக்கைக்கிளை என்றும் பெருந்திணையை அகப்புறப் பெருந்திணை என்றும் வழங்கியுள்ளது (நாற்கவிராச நம்பி, 2005). புறப்பொருள் வெண்பாமாலை, கைக்கிளை பெருந்திணையைப் புறம் என்று குறிப்பிடுகின்றது. (ஐயனாரிதனார், 2005)

அகத்திணை மரபும் திருக்குறளும்

காதலையும் வீரத்தையும் நிலைக்களனாகக் கொண்ட சங்க இலக்கியம் மக்களின் இயற்கையோடு இயைந்த வாழ்க்கையைக் காட்டுவதால், சங்ககாலத்தை இயற்கை நெறிக்காலம் என்பார் ஆ.வேலுப்பிள்ளை (1985). “குறிஞ்சி, முல்லை, பாலை, மருதம், நெய்தல் என்ற ஐவகைத் தாவரப் பெயர்கள் நிலத்தின்பெயர்களாகியதும் அவ்வந்தில காதலொழுக்கத்திற்குப் பெயராகியமையும் அக்கால வாழ்க்கையில் இயற்கை பெற்ற முக்கியத்துவத்திற்கு ஒரு சான்றாகும்” (வேலுப்பிள்ளை, ஆ, 1985)

“முதல்கரு உரிப்பொருள் என்ற முன்றே

நுவலுங் காலைமுறை சிறந்தனவே

பாடலுள் பயின்றவை நாடுங் காலை”

(தொல்.பொருள்: நூ.3)

என்ற தொல்காப்பிய நூற்பா அகஇலக்கியத்தில் முதல், கரு, உரிப்பொருளின் இன்றியமையாமையை எடுத்துரைக்கிறது. இதனை, “யாதானும் ஒரு செய்யுட்கண் முதற்பொருளும் கருப்பொருளும் உரிப்பொருளும் வரின், முதற்பொருளால் திணையாகும் என்பதா உம் முதற்பொருள் ஒழிய ஏனைய இரண்டும் வரின் கருப்பொருளால் திணையாகும் என்பதா உம், உரிப்பொருள் தானேவரின் அதனால்திணையாகும் என்பதா உம் ஆம் அவை ஆமாறு முன்னர்க் காணப்படும்” (இளம்பூரணர், 2006: ப.8) என்ற உரை மேலும்



தெளிவுபடுத்துகிறது. சங்க அகிலக்கியங்களில் நிலத்தின் அமைப்பு, பருவப் பொழுதுகள், இயற்கை இவற்றைப் பின்னணியாகக் கொண்ட மனிதவாழ்வு இயையுபடப் புனையப்பெற்றுள்ளன.

முதற்பொருள்

கருப்பொருளாகிய உயிரினங்களின் இருப்பிற்கும் மக்களின் அக ஒழுக்க நிகழ்விற்கும் முதன்மையாக விளங்குதலின் நிலமும் பொழுதும் முதற்பொருள் எனப்படும். இவை புவியியல் அடிப்படையிலான பகுப்புமுறை ஆகும். மலை, காடு, வயல், கடல் என்ற நிலங்களையும் முதுவேனில் காலத்தில் காடும் மலையும்வளம் திரிந்து வறண்டநிலை அடையும் பாலை நிலத்தையும் அகப்பாடலுக்கான நிலங்களாகத் தொல்காப்பியம் சுட்டுகின்றது. (நச்சினார்க்கினியர், 2003 நிலங்கள் பொழுதுகளோடு தொடர்புடையவை. பொழுது, பெரும்பொழுதுசிறுபொழுது என்ற இரண்டு பாகுபாட்டை உடையது. ஓர் ஆண்டில் இரண்டு மாதங்கள் நிலவும் கார், கூதிர், முன்பனி, பின்பனி, இளவேனில், முதுவேனில் என்னும் ஆறுபருவ மாற்றங்களைப் பெரும் பொழுதுகள் என்கின்றனர். ஒருநாளில் ஏற்படும் பொழுது மாற்றங்களான வைகறை, காலை, நண்பகல், ஏற்பாடு, மாலை, யாமம் என்ற ஆறும் சிறுபொழுதுகள் எனப்படும். கர்காலமும் மாலைப்பொழுதும் முல்லைக்குரியது. கூதிர் முன்பனிக்காலங்களும் யாமப்பொழுதும் குறிஞ்சி நிலத்திற்குரியது. பின்பனி, இளவேனில், முதுவேனில் காலங்களும் நண்பகல் பொழுதும் பாலை நிலத்திற்குரியது. ஆறு பெரும் பொழுதுகளும் வைகறை, விடியல் என்ற சிறுபொழுதுகளும் மருத நிலத்திற்குரியது. ஆறு பெரும்பொழுதுகளும் ஏற்பாடு என்ற சிறுபொழுதும் நெய்தல் நிலத்திற்குரியது என பொழுதுகளைத் தொல்காப்பியம் வரையறை செய்துள்ளது (நச்சினார்க்கினியர், 2003:நா.6-10).

காமத்துப்பாலை வள்ளுவர் ஐவகை நிலப்பகுப்பினுக்கு உட்படுத்தியமையால் நிலப்புனைவு இடம் பெறவில்லை. பெரும்பொழுது குறித்தும் அதில் பேசப்பெறவில்லை. சிறுபொழுதாகிய மாலை பன்னிரண்டு குறட்பாவினும், (குறள்:1135,1121-1130,1269) காலைமூன்று குறட்பாவினும், (குறள்:1225,1226,1227) யாமம் ஏழு குறட்பாவினும் (குறள்:1136,1167,1168, 1169,1252,1280,1329) காணப்பெறுகின்றன.

**“காலை அரும்பிப் பகல்எல்லாம் போதாகி
மாலை மலரும்இந் நோய்” (குறள்.,1227)**

என்ற குறட்பாவில் ஒருநாளின் மூன்று பொழுதுகளில் காதல் உணர்வு வளரும்திறம் சுட்டப்பெற்றுள்ளது. சிறுபொழுதுகள்வழி வள்ளுவர் தலைமக்களின் காதல்நிலையை விளக்கியுரைக்கிறார்.

கருப்பொருள்

கருப்பொருள் என்பது முதற்பொருளாகிய நிலத்தில் தோன்றி, நிலைகொண்டவற்றைக் குறிக்கும். “கருப்பொருள் அவ்வநிலத்திலுற்பத்திப் பொருள்” (நா.கதிரைவேற்பிள்ளை, 2003:ப.400) என்பர். தெய்வம், உணவு, மா, மரம், புள், பறை, தொழில், யாழ் முதலியனகருப்பொருள் என்பதை,

**“தெய்வம் உணாவே மாமரம் புள்பறை
செய்தி யாழின் பகுதியொடு தொகை,
அவ்வகை பிறவுங் கருவென மொழிப”**

(தொல்.பொருள்:நா.18)

என்ற நூற்பா எடுத்துரைக்கிறது. இந்நூற்பாவில் ‘பிறவும்’ எனக் கூறியமையால் இதற்கு உரை எழுதிய நச்சினார்க்கினியர் ‘மக்கள் பெயருங் கொள்க’ என மொழிந்துள்ளார். அதனைப் பின்பற்றி அகப்பொருள் விளக்கம் (நாற்கவிராசநம்பி, 2005), தொல்காப்பியர் எட்டாகக் குறிப்பிட்ட கருப்பொருளை,

**“ஆரணங்கு உயர்ந்தோர் அல்லோர் புள்விலங்கு
ஊர்நிர்பூமரம் உணாப்பறை யாழ்ப்பண்
தொழிலெனக் கருந ரெழுவகைத் தாகும்”**

(அகப்பொருள் விளக்கம், நா.19)

என்ற நூற்பாவில் பதினான்காக விரித்துரைத்துள்ளது. திருக்குறளில் நெய்தல்நிலத் தலைவனின் பொதுப்பெயரான துறைவன் (குறள்.,1157, 1277) என்ற பெயர் இடம்பெற்றுள்ளது. சங்கப்பாடல்களில் கருப்பொருள்கள் உவமையாகவும் கருத்துப் புலப்பாட்டிற்கும் இடம் பெற்றிருத்தலைப்போலத் திருக்குறளில் களிறு (1087), அன்னம் (1120), குவளை (1114), அளிச்சம் (1115, 1120), பணை, வேய் (1113, 1234), கடல் (1164, 1166, 1175), புனல் (1167, 1287), ஊற்றுநீர் (1161), வெள்ளநீர் (1170), வள்ளி (1304) என்னும் பெயர்கள் பயன்படுத்தப் பெற்றுள்ளன. அவை உவமையாகவும், உருவகச் சொற்களுடனும் தலைவியின் இயல்பு கூறுமிடத்தும் கையாளப் பெற்றுள்ளன. நிலப்பாகுபாடு செய்யாமல் எழுதப்பெற்றுள்ள திருக்குறளிலும் இலக்கியங்கள் எடுத்தாண்டுள்ள இயற்கைப் பொருள்கள் கருத்துப் புலப்பாட்டிற்குப் பயன்படுத்தப் பெற்றுள்ளமை குறிப்பிடத்தக்கது.

உரிப்பொருள்

உரிப்பொருளாவது குறிஞ்சி, முல்லை, மருதம், நெய்தல், பாலை என்னும்ஐந்திணை மக்கட்கும் உரிமை பூண்டு நிற்பது ஆகும். “அகவொழுக்கத்திற்குஉரிய ஒருவன் ஒருத்தியின் கூட்டுவாழ்வுக்கு உரியபொருள்” (புலவர் குழந்தை, 1968:ப.73) என்பர். இப்பவாழ்க்கைக் கூறுகள் எல்லா நிலத்தும் நிகழ்வதாயினும் புலவர்கள்

அவற்றைப்பணர்தல், இருத்தல், ஊடல், இரங்கல், பிரிதல் என்ற ஒழுக்கங்களாகப் பகுத்துஅதனை முதல், கருப்பொருளோடு தொடர்புபடுத்தி விளக்கியுள்ளனர்.

சங்க இலக்கியத்தில், “கருப்பொருள் இல்லாமல் உரிப்பொருள் மட்டுமே அமையும் பாடல்களும் பல உள. முதலும் கருவும் இன்றியும் பாடல் அமையலாம். உரிப்பொருளின்றிப் பாடல் அமைய இயலாது” (தமிழண்ணல்,2005:ப.38) என்பர். அவ்வகையில்,

**“யாயும் யாயும் யார் ஆகியரோ
எந்தையும் நுந்தையும் எம்முறைக் கேளிர்
யானும் நீயும் எவ்வுழி அறிதும்
செம்புலப் பெயல்நீர் போல
அன்புடை நெஞ்சம் தாம் கலந்தனவே”**

(குறுந்தொகை.,40)

என்ற பாடல் உரிப்பொருள் மட்டும் அமைதற்குச் சான்றாகின்றது. இப்பாடல் குறிஞ்சித் திணைக்கு உரியது. இதனுள் குறிஞ்சித்திணை சார்ந்த முதல் கருப்பொருட்கள் இடம் பெறவில்லை. அதன் உரிப்பொருளாகிய புணர்தலும் புணர்தல் நிமித்தமும் இடம்பெற்றுள்ளன. அக இலக்கியத்தில் உரிப்பொருள் பெற்றுள்ள இடம் ஈண்டு புலப்படுகிறது.

திருக்குறளில் உரிப்பொருள்

திருவள்ளுவர் காமத்துப்பாலை உரிப்பொருள் என்ற காதல் உணர்ச்சி வெளிப்பாட்டு முறையைப் பின்பற்றிப் படைத்துள்ளார். முதல், கருப்பொருள் பின்னணி இவர் பாடலில் அமையவில்லை. குறள் யாப்பே காரணம் என்பர். ஐங்குறு நூற்றில் கூட அப்பின்னணியைக் காணமுடிகிறது. குறளில் வள்ளுவர் அமைக்காததற்குக் காரணம் உலகப்பொதுவாகக் காதலைப் பாட எண்ணியமையே ஆகும்.

உலகமக்கள் அனைவராலும் எக்காலத்தும் ஏற்றுக்கொள்ளத்தக்க அறக்கருத்துக்களைப் பாடிய வள்ளுவர் அகப்பொருளை நிகழ்ச்சிகளின் அடிப்படையில் பாகுபடுத்தினால் அவ்வக மரபு நிகழ்ச்சிகள் நாட்டுக்கு நாடு மாறுபடக்கூடிய தன்மையில் அமைகிறது. காதல் உணர்ச்சி மக்கள் அனைவருக்கும் பொதுவானவை என்பதால் உணர்ச்சியை அடிப்படையாகக் கொண்ட உரிப்பொருள் மரபை மட்டும் கொண்டுள்ளார். “நாட்டுக்கு நாடு மாறக்கூடிய நிகழ்ச்சிகள் அடிப்படையில் காமத்துப்பாலைப் பிரித்து அதிகாரப் பெயர்கள் சூட்டாமல் மாறாதகாதல் உணர்ச்சிகளின் அடிப்படையில் பிரித்து அதிகாரப் பெயர்களைச் சூட்டினார்” (ரமா.தி,2001:ப.184)என்பார் கூற்று ஈண்டு குறிப்பிடத்தக்கது. அறங்களை மட்டுமன்று காதலையும் உலகமக்கள் அனைவருக்கும் உரியதாக எண்ணிய

திருவள்ளுவரின் அகப்பொருள் மரபு காமத்துப்பாலில் புலப்படுகிறது.

திருக்குறளுக்கு உரை எழுதிய பழைய உரையாசிரியர்கள் பதின்மர். அவர்களுள் மணக்குடவர், பரிமேலழகர், பரிப்பெருமாள், பரிதியார், காளிங்கர் ஐவர் உரைகளே கிடைத்துள்ளன. ஆண்பால், பெண்பால் கூற்று, உரிப்பொருள், திணைஎன்ற அடிப்படையில் பாகுபடுத்தித் திருக்குறள் காமத்துப்பாலுக்கு இவ்வரையாசிரியர்கள் உரை நல்கியுள்ளனர்.

மணக்குடவர், பரிப்பெருமாள், பரிமேலழகர் மூவரும் உரிப்பொருள் அடிப்படையில் பகுத்துரைக்கின்றனர். பரிமேலழகர், “புணர்ச்சியைக் களவென்றும் பிரிவைக் கற்பென்றும் பெரும்பான்மை பற்றி வகுத்து அவற்றைச் சுவைமிகுதி பயப்ப உலகநடையோடு ஒப்பும் ஒவ்வாமையுமுடையவாக்கிக் கூறுகின்றார்.” (பரிமேலழகர்,2006:ப.329) இருத்தல், இரங்கல், ஊடல்என்ற ஒழுக்கங்கள் பிரிவின் நிமித்தமாகத் தோன்றுதலால் இவற்றைப் பிரிவு என்றபகுப்பினுள் சுட்டுகின்றார்.

மணக்குடவர், புணர்தல், பிரிதல், இருத்தல், இரங்கல், ஊடல் ஆகிய உரிப்பொருள்களை உடைய குறிஞ்சி, பாலை, முல்லை, நெய்தல், மருதம் என்னும் ஐந்திணைகளுக்கும் திணைக்கு ஐந்து அதிகாரங்களாகக் காமத்துப்பாலில் இருபத்தைந்து அதிகாரம் அமைத்ததாகப் பகுக்கிறார்.பரிப்பெருமாள் அருமையிற் கூடல், பிரிந்து கூடல், ஊடிக் கூடல் என்று மூவகையாகப் பிரிக்கின்றார். முதல் மூன்று அதிகாரங்கள் அருமையிற் கூடலாகியபுணர்தல் உரிப்பொருளையும், அடுத்த பதினெட்டு அதிகாரங்கள் பிரிந்து கூடலாகியபிரிதல் உரிப்பொருளையும் இறுதி நான்கு அதிகாரங்கள் ஊடிக் கூடலாகிய ஊடல் உரிப்பொருளையும் கொண்டுள்ளதாக இயம்புகிறார். வள்ளுவர் காமத்துப்பாலில் தலைமக்களின் காதல் நிகழ்வுகளை அடுக்கி மொழிகிறார். உரையாசிரியர்களின் பகுப்பு அதனுள் இருக்கும் உரிப்பொருள் அமைப்பினைப் புலப்படுத்துகின்றது.

**“கண்டுகேட் டுண்டுயிர்த் துற்றறியும் ஐம்புலனும்
ஒன்தொடி கண்ணே உள்”** (குறள்., 1101)

**“ஓம்பின் அமைந்தார் பரிவோம்பல் மற்றவர்
நீங்கின் அரிதால் புணர்வு”** (குறள்., 1155)

**“மாற்றியான் என்னுள்ளேன் மன்னோ அவரொடியான்
உற்றநாள் உள்ள உளேன்”** (குறள்., 1206)

“புலப்பேன்கொல் புல்லுவேன் கொல்லோ

கலப்பேன்கொல்

கண்ணன்ன கேளிர் வரின்” (குறள்., 1267)

“புல்லா திராஅப் புலத்தை அவருறும்

அல்லல்நோய் காண்கம் சிறிது” (குறள்., 1301)



என்ற குறட்பாக்கள் முறையே புணர்தல், பிரிதல், இருத்தல், இரங்கல், ஊடல் ஆகிய உரிப்பொருள் அமைப்பினைப் புலப்படுத்துகின்றன.

வள்ளுவர் உலகப்பொதுவாக, தலை மக்களின் காதலைச் சித்திரிக்கஎண்ணியமையால் சங்கப் புலவர்களைப் போல் முதல், கரு, உரிப்பொருட்பாகுபாட்டினுக்கு உட்பட்டு குறட்பாவை அமைக்கவில்லை. எனினும் அதனுள் சில இயற்கைப் புனைவுகளை உவமை, உருவகங்களாகவும், தலைமக்களின் நிலையை விளக்குதற்கும் கையாண்டுள்ளமையைக் காணமுடிகிறது. உரையாசிரியர்கள் பகுப்பின் அடிப்படையில் காமத்துப்பாலில் அமைந்துள்ள அன்பின் ஐந்திணைக்குரிய உரிப்பொருள் அமைவுகள் புலனாகிறது.

திருக்குறளில் ஒத்த அன்புடைய தலைமக்களின் வாழ்க்கையின் அடுத்தடுத்த நிகழ்வுகள் புனையப் பெற்றுள்ளமையால் அதனுள் கைக்கிளைப் பெருந்திணை அமைக்கப் பெறவில்லை. மேலும் எல்லாப் பண்புகளிலும் சிறந்து விளங்கும் தலை மக்களை வள்ளுவர் காட்ட எண்ணியமையால் பெருந்திணைக்கூறுகளும் அதனுள் இடம் பெறவில்லை.

திருக்குறளில் அகமாந்தர்கள்

அக இலக்கியங்கள் தலைவன் தலைவியின் காதலை மையமாகக் கொண்டு படைக்கப் பெற்றுள்ளன. புலவர்கள் தலைமக்களின் காதலைத் தன் கூற்றாகப்பாடல்களில் அமைப்பதில்லை. அகமாந்தர்களான தோழி, பார்ப்பான், பாங்கன், செவிலி, பாணன், கூத்தன், விறலி, பரத்தையர், அறிவர், கண்டோர், அயலார், தேர்ப்பாகன் போன்றோரின் கூற்றுக்களை அடிப்படையாகக் கொண்டே புலவர்கள் தலைமக்களின் மனவுணர்வுகளையும் பிறமாந்தர்களின் மனவுணர்வுகளையும் வெளிப்படுத்துகின்றனர். அக ஒழுக்கத்திற்குரிய தலைவனும் தலைவியும் அக இலக்கியத்தில் முதன்மை மாந்தர்கள் ஆவர். இவர்களின் இல்வாழ்க்கை செம்மையாக நடைபெறுவதற்குத் துணைபுரிபவர்கள் துணைமை மாந்தர்கள் ஆவர். இத்துணைமை மாந்தர்கள் தலைமக்களின் காதல் வாழ்க்கைக்குத் துணைபுரிவோர், கற்பு வாழ்க்கைக்குத் துணைபுரிவோர் எனப் பகுக்கப்பெறுகின்றனர்.

**“பார்ப்பான் பாங்கன் தோழி செவிலி
சீர்த்தகு சிறப்பிற் கிழவன் கிழத்தியோடு
அளவியல் மரபின் அறுவகை யோருங்
களவினிற் கிளவிக் குரியர் என்ப”**

(தொல்.பொருள்:நூ.490)

என்ற நூற்பா களவு வாழ்க்கைக்குத் துணைநிற்பவர்களையும்

**“பாணன் கூத்தன் விறலி பரத்தை
யாணஞ் சான்ற அறிவர் கண்டோர்
பேணுதகு சிறப்பிற் பார்ப்பான் முதலா
முன்னுறக் கிளந்த அறுவரோடு தொகைஇத்
தொன்னெறி மரபிற் கற்பிற்குரியர்”**

(தொல்.பொருள்:நூ.491)

என்ற நூற்பா கற்பு வாழ்க்கைக்குத் துணைநிற்பவர்களையும் சுட்டி, தலைமக்களின் களவு கற்பு வாழ்க்கையில் அகமாந்தர்களின் பங்களிப்பைத் தொல்காப்பியம் எடுத்துரைக்கிறது.

“அகப்பொருட்பாடல்கள் அனைத்தும் நாடகக் கூற்று வகையாகவே அமைந்துள்ளன. தலைவன், தலைவி, தோழி முதலிய கற்பனை மாந்தர் வாயிலாக அன்றிப் புலவர் தன் எண்ணங்களையும் உணர்ச்சிகளையும் வெளியிடுவதற்கு அகப்பொருள் இலக்கியத்தில் வாய்ப்பில்லை” (மாயாண்டி.இரா, 1980:ப.79) என்ற கூற்று அகமாந்தர்களின் இன்றியமையாமையைத் தெளிவுடுத்துகிறது. அவ்வகையில் சங்க இலக்கியத்தில் தலைவன், தலைவி, தோழி, பாங்கன், பரத்தை, கண்டோர், வாயில்கள், தாய், செவிலி, பாணன், அயலார், அந்தணர், தேர்ப்பாகன், உழையர், சான்றோர், அடியார் போன்ற அகமாந்தர்கள் இடம்பெற்றுள்ளனர்.

திருக்குறள் தலைமக்களின் காதல் உணர்வைவே முதன்மையாகக் கொண்டுள்ளமையால் அதில் தோழியின் கூற்றுக்களும் பங்களிப்பும் சங்க இலக்கியத்தில் இருப்பதுபோல் காணப்பெறவில்லை. திருக்குறளில் தலைவனும் தலைவியும் ஒருவர் மீது ஒருவர் கொண்ட அன்பை உணர்ந்தவர்களாகவே காட்டப்பெற்றுள்ளனர். ஆகையால் அதில் தலைமக்கள் கூற்றுகளே மிகுதியும் இடம்பெற்றுள்ளன. அவர்களின் அன்பை விளக்கியுரைக்கும் ஊடகமாகப் பிறமாந்தர்களின் பங்களிப்பு திருக்குறளில் இல்லை எனலாம். திருக்குறள் காமத்துப்பாலில் தலைவன், தலைவி, தோழி போன்ற அகமாந்தர்கள் மட்டுமே இடம்பெற்றுள்ளனர்.

பெயர் கூறா மரபு

காதல் உணர்வு மக்கள் அனைவருக்கும் பொதுவானது. அகப்பாடல்கள் அனைத்தும் ஒருவர் மனத்தால் உணரும் அனுபவத்தின் வெளிப்பாடே ஆகும். எனினும், அதில் மாந்தர்களின் இயற்பெயர் சுட்டப்பெறுவதில்லை.

**“மக்கள் நுதலிய அகனைந் திணையும்
சுட்டி ஒருவர் பெயர்கொள்ப பெறாஅர்”**

(தொல்.பொருள்:நூ.57)

என்ற நூற்பா காதல் உணர்வுகளை மனித இனம் முழுமைக்கும் பொதுவாகக்காட்ட எண்ணும் தமிழ் இலக்கிய மரபைச் சுட்டுகிறது. “மக்கள் பெயர் தாங்கி வரும் காதல், காதல் பாட்டு ஆகுமேயன்றி அகம்என்ற பாட்டாகாது” (மாணிக்கம்.வ.சுப.,2009:ப.ரு) என்னும் கருத்தும், “மனித வாழ்வின் அடிமனப் பண்புகளையெல்லாம் கண்டு கூறும் இப்பாடல்கள் மனித இனப்பொதுமையுடையனவாக மதிக்கப்படுகின்றன” (தமிழண்ணல்,2005:ப.111)என்னும் கருத்தும்பெயர் சுட்டாத தமிழ் இலக்கிய மரபின் சிறப்பைத் தெளிவுறுத்துகின்றன.

தலைமக்களை அடையாளப்படுத்துவதை விட, அவர்களுடைய உணர்வுகளே மிகுந்து தெரியவேண்டும் என்பதற்காக அக இலக்கியங்களில் தலைவன் தலைவியரின் பெயர்கள் சுட்டப்பெறுவதில்லை. தலைமக்களின் இயற்பெயர் மட்டுமன்றி அவர்களோடு தொடர்புடைய பிற அகத்திணை மாந்தர்களின் பெயர்களும் சுட்டப்பெறுவதில்லை.

முடிவுரை

அகஇலக்கணம் கூறும் அகமாந்தர்களின் பெயர் சுட்டா மரபை திருக்குறளிலும் காணமுடிகிறது. சங்க இலக்கியத்தில் ஊடலுக்கான காரணமாகப் பரத்தையைத் தலைவன்நாடிச் செல்வதைக் காணமுடிகிறது. திருக்குறளில் பரத்தை ஒழுக்கம் கூடாதஒழுக்கமாக வலியுறுத்தப் பெறுதலால் அன்பின் மிகுதியே ஊடலுக்கான காரணமாகிறது. ஆகையால், ஊடல் தீர்க்கும் வாயில்களுக்கான இடம்திருக்குறளில் இல்லாமையை அறியமுடிகிறது. ஊடலுக்குப் பரத்தையைக் காரணமாக்காது அன்புமிகுதியைக்காரணமாக்கிக் கூறிய திருக்குறளின் மரபுமாற்றம் குறிப்பிடத்தக்கது. தமிழ் அக இலக்கிய மரபுகளைச் சங்க இலக்கியத்திற்கு அடுத்தபடியாகத் திருக்குறள் கொண்டிருந்தாலும் அவற்றுள் சில மரபு மாற்றங்களைக்காணமுடிகிறது.

துணைநூற்பட்டியல்

இளம்பூரணர், (2006). தொல்காப்பியம் பொருளதிகாரம். சென்னை: சாரதா, பதிப்பகம் மூன்றாம் பதிப்பு கதிரைவேற்பிள்ளை, நா, (2003). தமிழ்மொழி அகராதி. சென்னை:சாரதா பதிப்பகம், இரண்டாம் பதிப்பு குழந்தை, (1968). தொல்காப்பியர் காலத் தமிழர். சென்னை: பாரி முனை,இரண்டாம் பதிப்பு தமிழண்ணல், (2005). சங்க இலக்கிய ஒப்பீடு. மதுரை: மீனாட்சி புத்தக நிலையம், முதற்பதிப்பு நக்கீரர், (1964). களவியல் (எ) இறையனார்.அகப்பொருள். சென்னை: திருநெல்வேலித் தென்னிந்திய சைவ சித்தாந்த நூற்பதிப்புக் கழகம், மறுபதிப்பு. நச்சினார்க்கினியர், (2003). தொல்காப்பியம் பொருளதிகாரம் (மு.ப.), சென்னை: தமிழ்மண் பதிப்பகம், முதற்பதிப்பு. நாற்கவிராச நம்பி, (2005). அகப்பொருள் விளக்கம். சென்னை: முல்லை நிலையம், மறுபதிப்பு. பரிமேலழகர் (2006). திருக்குறள்.சென்னை:சாரதா பதிப்பகம், ஏழாம் பதிப்பு. பாலுச்சாமி, நா, (1991). வாழ்வியல் களஞ்சியம் (தொ.1), தஞ்சாவூர்: தமிழ்ப் பல்கலைக் கழகம் மாணிக்கம், வ.சுப, (2009). தமிழ்க்காதல். சிதம்பரம்: மெய்யப்பன் பதிப்பகம், முதற்பதிப்பு. மாயாண்டி, இரா, (1980). சங்க இலக்கியத்தில் கற்பனை. சென்னை: அய்யாவு குடியிருப்பு, முதற்பதிப்பு. ரமா,தி, (2001). திருவள்ளுவரின் களவியல் கோட்பாடு. காரைக்குடி:தியாகராசா பதிப்பகம், முதற்பதிப்பு. வேலுப்பிள்ளை, ஆ, (1985). தமிழ் இலக்கியத்தில் காலமும் கருத்தும். சென்னை: பாரி புத்தகப் பண்ணை.



Job Involvement and Job Satisfaction of Secondary School Teachers

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Abstract

The teaching profession requires lots of knowledge, skills, positive attitudes, patience, emotional stability and many more qualities. In order to discharge the duties assigned to a teacher in a very effectively and efficiently, he should get a very healthy environment where satisfaction is the most vital prerequisite component. Previous researches established many factors which makes the teachers unhappy and there are instances of working by the teachers ill equipped and unhygienic and poor intellectual environments. This study investigated the relationship between job satisfaction and job involvement among secondary school teachers. A total of samples of 300 secondary school teachers were drawn using simple random sampling. Two questionnaires were used in the study. Carl Pearson Moment Correlation Coefficient used for the study. From the finding of the study there is a relationship between job satisfaction and job involvement among secondary school teachers. The results and implications were discussed and suggestions made for further researches.

Keywords: Job involvement, Teachers involvement. Job Satisfaction, Secondary School teachers

Introduction

Job Involvement has come into sight an important variable in organizational research. It has strained the attention of management scientist and organizational psychologists. Job involvement is a variable which is being studied with different approaching in the organization . It has immense importance and impact in organizational development . Great number of studies have been conducted to observe the job involvement among managerial employees.

Teachers' involvement is about maintaining a relationship despite some degree of dissatisfaction with the benefits from a relationship.

Here job satisfaction means teachers satisfaction on their teaching job. Any achievement that an employee experience in his job or the degree to which the worker work gives the feeling is called job satisfaction.

Secondary School Teachers. It refers to the teachers working the secondary schools and they include both Government and Private schools.

Need and Significance of the Study

Teachers are considered pillars of the nation. Particularly, the secondary education teachers are considered to be more significant persons since they are dealing with children age below fourteen. The teachers working in secondary schools have to play many roles – teachers, second parent, counselors and so on. Moreover, in our

educational system, secondary education is a crucial point. So the teachers have to work hard for the student's academic achievement. More involvement on the part of the teachers is needed to enhance the students' achievement. Unless teachers are satisfied with their work, we cannot expect job involvement among teachers. So job satisfaction and job involvement are related variables, or interlinked. To raise the academic achievement of the students and school climate, the job satisfaction and job involvement of teachers have to be raised. In order to identify the factors which affect the job satisfaction and job involvement of the teachers, this study has been undertaken. This study reveals how much they work and how much they contribute to the school.

Research Problem

“Job involvement and Job Satisfaction of Secondary School Teachers ”

Review of Related Literature

Fu, Ching-Sheue (2015) “The Effect of Emotional Labor and Job Involvement in Preschool Teachers”. Preschool Teachers are the sample for the study. Hierarchical regression analysis were used in the study. Findings: (1) There is a relation between Job Involvement and Emotional Labor (2) There exists the relationship between Job Involvement and Psychological Capital. (3) Cavernous acting wield the strongest influence on Job Involvement in Pre school teachers and (4) Towering Psychological capital alleviated their emotional Burdon. Moreover “Self Efficacy and Optimism alleviated the need for Psychological satisfaction of work in preschool teachers. (5) Optimism wield a mediating effect on the relationship between emotional labor and Job Involvement in preschool /teachers.

Msuya, Ombeni William(2016) The investigation of this study was found in a public sector school in Tanzania. It is found that the teachers' job satisfaction was not identical. Job satisfaction of the female teaches were statistically significant . Young teachers who below the age of forty years show their job satisfaction level is also significant.

Objectives

1. To study the level of job involvement and job satisfaction of the secondary school teachers.
2. To study the difference in the level of job satisfaction and Job Involvement of secondary school teachers with regard to Gender, Locality and Types of Institution
3. To find out the relationship between job satisfaction and Job Involvement of secondary school teachers.
4. To find out the relationship between job satisfaction and Job Involvement of secondary school teachers with respect to Gender, Locality and Types of Institutions.

Hypotheses

1. There will not be a significant difference between secondary school teachers in their job satisfaction with respect to Gender, Locality and Types of Institutions
2. No significant found Gender, Locality and Types of Institutions with respect to job involvement and job satisfaction
3. There is a positive and significant relationship between job satisfaction and Job Involvement of secondary school teachers.
4. There is a positive and significant relationship between job satisfaction and Job Involvement of secondary school teachers with respect to Gender, Locality and Types of Institutions.

Methodology of Research

The study will adopt a Normative Survey Method. The variables studied are Job satisfaction and Job Involvement.

Population

School teachers working at secondary level

Sample

The sample consists secondary school teachers from both Government and Management schools, Thanjavur Educational Block

Tools

- Job Involvement Questionnaire designed by Ashok pratap Sing
- Job Satisfaction Scale designed by Bubey, B.L Unnal & Varma.



Analysis and Interpretation

The data collected for the variables will be analyzed by using Descriptive Analysis and Inferential Analysis. Under Inferential Analysis Differential Analysis and Correlation Analysis will be used.

Descriptive Analysis

Table 4.1

Showing Mean and Standard Deviation of the Scores obtained in Job involvement and Gender, Locality and Types of Institution

Maximum Scores:160

Variable	N	Mean	SD
Job Involvement	147	93.09	10.86
Male	61	93.66	7.87
Female	86	92.69	12.59
Government	123	93.78	8.01
Management	24	89.54	19.82
Urban	73	90.95	13.09
Rural	74	92.54	12.66

Table 4.2

Showing Mean and Standard Deviation of the scores obtained in Job Satisfaction

Maximum Scores:160

Variable	N	Mean	SD
Job Satisfaction	147	46.8	8.21
Male	61	44	8.12
Female	86	48.19	8.03
Government	123	46.73	8.35
Management	24	47.13	7.65
Urban	73	45.33	8.7
Rural	74	41.54	8.76

Differential Analysis

Table 4.3

Showing Mean and Standard Deviation and ‘t’ scores obtained in Job involvement with respect to Gender, Locality and Types of Institution

Maximum Scores:160

Variable	N	Mean	SD	‘t’	Significant level
Male	61	93.66	7.87	0.567	NS
Female	86	92.69	12.59		
Government	123	93.78	8.01	0.312	NS
Management	24	89.54	19.82		
Urban	73	90.95	13.09	0.018	NS
Rural	74	92.54	12.66		

Table 4.4

Showing Mean and Standard Deviation and ‘t’ scores obtained in Job Satisfaction with respect to Gender, Locality and Types of Institution

Maximum Scores:160

Variable	N	Mean	SD	‘t’	Significant level
Male	61	44	8.12	0.016	NS
Female	86	48.19	8.03		
Government	123	46.73	8.35	0.822	NS
Management	24	47.13	7.65		
Urban	73	45.33	8.7	0.0312	NS
Rural	74	41.54	8.76		

Correlation Analysis

Table 4.5

Correlation study of job involvement and job satisfaction of teachers at secondary level

Variables	N	‘r’	‘p’
Job Involvement & Job Satisfaction	147	0.315	S

Table 4.6
Correlation study of job involvement and job satisfaction of teachers at secondary level with respect to male, female, Government, Management, Rural and Urban

Variables	N	r	p
Male	61	0.453	S
Female	86	0.289	S
Government	123	0.478	S
Management	24	0.071	NS
Rural	74	0.62	S
Urban	73	0.132	S

Findings

- There exists a high level of job involvement and job satisfaction of teachers working in secondary level.
- No significant difference between male and female, Government and Management, urban and rural school teachers in their Job involvement.
- No significant difference between male and female, Government and Management, urban and rural school teachers in their Job satisfaction.
- Positive relationship among secondary school teachers with respect to Job Involvement and job satisfaction
- There exists positive and significant relationship with respect to male, female, Government, management , rural and urban school teachers.

Suggestions for Further Study

This study can be extended to secondary school teachers and higher secondary school teachers.

This study is limited only to the selected school secondary teachers in Thanjavur educational block only and it to be extended to all types of school and colleges.

The present study was carried out during the short period of time with limited samples. The finding and conclusion need to be verified larger group size of the samples.

References

Brook, P. P., Russell, D.W, & Price, P.L (1988) Discriminant validation of measures of job satisfaction, job involvement and organization commitment. *Journal of Applied psychology* vol. 73, pp. 139-145.

Dolke, A. M & Srivastara P.K (1988) Need satisfaction, job involvement and intrinsic motivation: A factor analytic study. *Indian Journal of Applied Psychology*, vol. 25, pp. 13-17

Hollenbeck, J. R Connolly, T. F & Rabinowitz.S (1982) Job involvement 1977-1982 . Beyond the exploratory stage. Working Paper, Michigan State University.



Relationship Between Social Science Subject & Metacognition Awareness Among Teacher Education Students

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Abstract

Social Science subject is interesting subject but not like for the students today. Teaching Social Science is the best way to create knowledgeable, engaged citizens that a democracy needs. Social Science helps to give students a broader view of the world, a sense of their place in it and the facts of their own country's history. The practice of Social Science teaches critical thinking, analysis skills and fast paced media atmosphere. Beyond these practical considerations, the study of Social Science gives learners people to look up to, role models and a sense of belonging and community in a world that is sometimes lacking in this areas. (Taken from milestones social science CCE compliment book 4th). The field of Human knowledge that deal with all aspects group life of human beings. So it is subject to change with the changes the human behaviors. Humanities are academic disciplines that study the human conditions using methods that are primarily analytical, critical, or speculative. Ancient and modern languages, visual and performing Arts such as Theatre arts, literature, history, philosophy, religion (in social slide). The twenty-first century has tremendous concentration over the Meta Cognitive aspects of knowledge which are involved in the active control of the cognitive processes engaged in the teaching and learning process. The main objective of the present study is to find out Meta Cognitive awareness towards teaching of B.ED. Student teachers with respect to gender, nativity of the Student teachers and age of study. A sample of 70 B.ED. Student teachers were selected by a using simple random sampling technique for the investigation. It was found that there is significance difference between male and female students in respect of their Meta Cognitive awareness towards teaching.

Keywords : Metacognition, critical thinking, Metacognitive awareness

Introduction

History is the systematically structured study of the events that happened in the past chronologically or in the sequence of time. It tells us the details of how the ancestors of humans lived and progressed over the thousands of years. History is a part of Social Science.

Why Study History

History is important as it helps us understand how human beings have developed over a period of time.

- It tells us how humans experimented and invented various things changing from the times of living in caves to flying in rockets.
- It tells us how scientific development took place.
- It tells us how they explored the world travelling over thousands of kilometers in the oceans with no maps and navigational tools in crude boats.
- History helps us how the culture, religion and society changed.
- In nutshell it tells us how we have reached a state we live in today and it helps us guide or imagine the future by understanding how things transform with experiment and learning from them.
- Himalayas in the North separated India from Central Asia and protects from the cold winds. At the same time passes in the mountains helped the movement of the people especially the traders and helped in trade and developments in the field of culture and exchange of ideas.
- In the south, trade with Rome took place via sea route. Thus the oceans also helped in exchange of goods, religious and cultural ideas. Exchange of goods and ideas slowly led to the development of civilizations, growth of towns and cities. With the passage of time they developed in to huge kingdom and people living there started following different occupations.(taken from CCE awareness social science for class VI)

Time Frame Under Study

The earth was formed billions of years back. Life came into being in various forms slowly and gradually. Human species is understood to have come in to existence about 200,000 years ago. Scientists studied the various remains and sign of old times and have come to this conclusion. They believe it took them many thousands of years to change their lifestyles from being a cave man to forming settlements and the study of history is therefore divided in to three parts as the ancient history, the medieval history and the modern history.

Geographical Frame Work

The geographical location of a place affects the survival of humans. The type of lands, soil, availability of water, comfortable climate all affect settlements physical feature of any country influence the history of any country. We generally find that people prefer to live in areas where environment is conducive for living. In India humans settled first on the banks of three big rivers. The Indus, Ganga and Brahmaputra. Kingdom like Magadha emerged in the Indo-Gang tic plains. They settled in these areas due to the following advantages:

- Land was fertile.
- River provided a source of water doe their needs.
- Climate was good.
- Rivers served as a means of transport.

Understanding Social Science

Social Science is a major category of academic discipline, concerned with society and the relationship among individuals within a society. It is an integral part of the school curriculum in all the stages of school education beginning from the elementary stage. It in turn has many branches, each of which is considered a “Social Science”. When we analyze Social Science, we find that it is centered on understanding how the world works on a social level. It demonstrates an understanding that people in different times and places view the world differently and also demonstrates an understanding that different people may describe the same event in diverse ways, citing reasons for the differences in views. It’s a challenge for the Social Science teachers in the contemporary scenario to prove the worth of their subject and their own effectiveness. Teaching of social science can be made effective by keeping ourselves updated with the changing situation of the society and the world. Social science teaching needs to be revitalized towards helping the student acquire knowledge and skills in an interactive environment. In the new education policy, there is a need to make extensive work policy on its various aspects. (Edutracks Article).



Metacognition

“Metacognition” is often simply defined as “thinking about thinking”. In actuality, defining Metacognition is not that simple. Although the term has been part of the vocabulary of educational psychologists for the last couple of decades, and the concept has been there for as long as humans have been able to reflect on their cognitive experiences, there is much debate over exactly what Meta Cognition is. One reason for this confusion is the fact that there are several terms currently used to describe the same basic phenomenon (e.g., self regulation, executive control), or an aspect of that phenomenon (e.g., meta-memory), and these terms are often used interchangeably in the literature. While there are some distinctions between definitions (Van Zile- Tamsen, 1994), all emphasize the role of executive processes in the overseeing and regulation of cognitive processes.

The term Metacognition was introduced by Flavell in 1976 to refer to ‘the individual’s own awareness and consideration of his or her cognitive processes and strategies’. It refers to that unique capacity of people to be self-regulative, not just to think and know but to think about their own thinking and knowing.

Reviewing a number of definitions of Meta Cognition, it can be concluded that Metacognition is: Thinking about thinking and developing the process of solving problems and answering questions.

- The examination of how we think about how we do things, how we go about finding solutions, how well we can understand and analyze the systems, strategies and techniques we use to think to do things.
- An awareness of the process of how an answer is found, what strategies and type of thought has gone on and the previous experiences that have been used.
- To consciously apply a process, a procedure to a problem or activity and to be aware that the result is satisfactory or otherwise. To be able to ‘unpick’ that strategy/those actions and so improve performance.
- Awareness of the different processes involved in thinking.
- The ability to take out our thinking, and examine it, and put it back, rearranged if necessary.

Metacognition Awareness

“Meta” means beyond. In Metacognition awareness the students are trained beyond cognition. Meta Cognition awareness in this study refers to the awareness of one’s own thought, which is important for developing an understanding of ideas, concepts and problems. Meta Cognition in this study refers to the automatic awareness of their own knowledge and their activity to understand and manipulate their own cognitive processes.

Method of the Study

Normative survey method was adopted in the presented study. The sample is a small proportion of a population selected for observation and analysis. The present study consists of 70 student teachers from four B.Ed., colleges in Madurai. The sample is selected by using simple random sampling technique. The data is necessary for carrying out research. The investigator used the following tool. That is (MAIT) Meta Cognitive Awareness Inventories for Teachers.

Metacognitive Awareness Scale

Scale consists of 24 statements related to three dimensions. Statements related to broader area of examining, planning and grasping. Each item is provided with five alternatives i.e. strongly agree, agree, neutral, disagree, strongly disagree. The responses of the student teachers were recorded in the scale 5,4,3,2,1. The author of the tool established reliability of the tool. The reliability of the test was determined by test- retest method. The correlation coefficient was obtained for two sets of scores. It was computed to be 0.94. The item validity of the statements were also established and items which have high discriminating power and those items which had “t” values significant at 0.05 levels or higher have been included in the scale.

Need and Significance of the Study

Everybody needs thinking process Meta Cognitive strategies enable thinking process and accelerate the thinking in good and correct manner to solve the problem easily; so this is needed for teachers as well as students. Cognition is a universal language of thought process. Learners should be surrounded by construction and lovely things so that their cognition

will continue to grow and deepen. One of the crises that grip every teacher-trainee is the inability to control and structure the cognitive process in teaching and learning. People on whom the responsibility of inculcating Meta Cognitive skill among the student will be shouldered. Before developing awareness it is necessary to know their skills at present as the first step.

Objectives of the Study

- To find out the level of Meta Cognitive awareness for B.ED. Students.
- To find out the level of Meta Cognition awareness male and female B.ED. Students.
- To find out significant different between male and female students in their Meta Cognitive awareness.
- To find out significant different between rural and urban B.ED. Students in their Meta Cognitive awareness.
- To find out the relationship between social science and Meta Cognition awareness in the B.ED. Students.

Data Analysis and Finding

Table 1: Level of Meta Cognition Awareness of the B.Ed., Student

Place	low		Moderate		High	
	N	%	N	%	N	%
Rural	5	14.2	26	74	5	14
Urban	5	14.2	27	77	1	2.8
Total	10	28.4	53	151	6	16.8

It is inferred from Table 1 that 14% of the B.Ed., students have low, 73% of them have moderate and 12% of them have high level of Meta Cognition Awareness. The result has been shown in figure.1

Table 2: Level of Meta Cognition Awareness of the Male and Female B.Ed., Students

Place	Low		Moderate		High	
	N	%	N	%	N	%
Rural	5	14.2	26	74	5	14
Urban	5	14.2	27	77	1	2.8
Total	10	28.4	53	151	6	16.8

Table .2 reveals that 14.2% of the Rural students have low, 74% of them have moderate and 14% of them have high level of Meta Cognition; among Urban students 14% have low, 77% of them have moderate and 2.8% of them have high level of Meta Cognition Awareness.

Table 3: Difference between Male and Female B.Ed., Students in their Meta Cognition Awareness

Variable	Male (17)		Female (18)		t'Value	Significant
	Mean	S.D.	Mean	S.D.		
Meta Cognition	106.12	4.8	104.8	7.05	5.48	S

(At 5% level of significance the table value of 't' is 1.96)

It is inferred from Table 3 that there is significant difference between male and female B.Ed., students in their Meta Cognition awareness.

Table 4: Difference between Rural and Urban B.Ed., Students in their Meta Cognition Awareness

Nativity of the student teacher	Rural (N=17)		Urban (N=18)		Calculated t' value	Remarks at 5% level
	Mean	S.D.	Mean	S.D.		
Meta Cognition	104.24	4.86	106.66	5.46	6.34	S

(At 5% level of Significance the table value of 't' is 1.96)

It is inferred from Table 4 that there is significant difference between rural and urban B.Ed., Students in their Meta Cognition awareness.

Recommendations

Based on the important findings stated earlier following recommendations have been made for betterment of future of the B.Ed. Students.

- Create Meta Cognition environment in schools as well as in colleges. In the creation of Meta Cognitive environment teachers should monitor and apply the knowledge deliberately, in modeling cognitive behavior



to assist students in becoming aware of their thinking.

- Meta Cognitive teaching strategies must be included in the teacher education program.
- The syllabus and content must be framed in such a way that they can be effectively taught among student teachers. Latest technological and gadgets must be used in teaching and to create interest among them.

Suggestions for Further Research

The following are some of the suggested research problems for future research.

- A study may be conducted on Meta Cognition and soft skills of B.Ed., Students.
- A study may be conducted on Meta Cognition and techno-pedagogical skills of B.Ed., students.
- Relationship between Meta Cognition and achievement in Social Science in College of education.
- A study on Relationship between Meta Cognition and attitude towards Digital Technology of B.Ed., students.

Conclusion

The finding reveals that male B.Ed., students are better than female B.Ed., students in their Meta Cognitive awareness. This may be due to the fact that male B.Ed., students, are energetic, physically

fit, enthusiasm for comprehended the concepts, with good planning, courage, confidence and self-regulation. It can be concluded that the student teachers who are resourceful agents of transformation of the young generation have to concentrate on accelerating the cognitive capabilities. The parents and teachers should evolve effective strategies.

References

- CCE awareness social science for class VI.
Encyclopedia, Edutracks articles.
Lokanadha Reddy, Santhakumari, poorma (2009), Cognitive and Meta Cognitive Orientation for quality improvement in teacher education with special reference to children with special needs university news, vol. 47, no. 22, p. 1-5.
milestones social science CCE compliment book 4th)
Social slide from net.



Gandhi - The CEO World Needs?

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Abstract

Mohandas Karamchand Gandhi, fondly known as Mahatma Gandhi, needs no introduction. Gandhi envisaged an India, which emphasized on values such as Sarvodaya (upliftment of all), ahimsa(non violence), truth and trusteeship. As a philosopher, Gandhi never compromised on the means, which lead towards the end. In the 21st century, the world is gripped by capitalism. Every bookstore is brimming with books by a plethora of 'management gurus'. In this mad rush, where everybody seeks materialistic pleasures, Gandhi gives a holistic approach through his values on how to channelize this energy, in an ethical way, for collective good which consequently results into profit. Multinationals have philosophies, which they live by, while running their businesses. Through this paper, I would conform to an objective understanding of Gandhian ethics and formulate an analogy, with the mantra followed by different multinationals. With this humble attempt, I would be able to present, Gandhi as the 'ideal management guru'. Today, every invention becomes stale news, in minutes, whereas Gandhi is an eternal phenomena. Through this paper, I would try to bridge the gap between philosophy and management via Gandhi.

Keywords: Gandhi, CEO, Ethics, Non violence, Sarvodaya, Management, Values.

Introduction

India is a land of diversity. Blessed with a plethora of races, cultures and traditions, it is also a rich melting pot of philosophies and visions. One such visionary, who gripped the nation, was Mohandas Karamchand Gandhi. Fondly known as Bapu, Gandhi attracted the attention of the nation with his seemingly simple philosophy which highlighted Ahimsa (non violence), Satyagraha (insistence on truth) and Sarvodaya (upliftment of all). These ideals may look simple from the exterior. However, a deep study of the same, reveals something quite contradictory.

The literal translation of Gandhi's philosophy can be summed up as:

“A way of life, characterized by non violence in all forms, which aims at upliftment of humanity”

The above mentioned way of life looks utopian for the capitalistic world right now, which is gripped by globalization and industrialization. The pertinent question that needs to be asked here is, “Is Gandhian philosophy still relevant today?” Can Gandhi's value based philosophy, act as a catalyst for the world's progress, which only functions on the transactions of profit and loss?

Mahatma Gandhi has been hailed as a leader for India. He was a karma yogi, i.e. a man of action. Can good leaders be good managers?



One must investigate the possibility of Gandhi as a Chief Executive Officer, which the world needs. Gandhi was a confluence of many attributes such as moral, ethic, truth, love, non violence on one hand and courage, action, determination, transparency and sacrifice on the other.

When Gandhi quoted from the Gita, the Koran or the Bible, he was a missionary. When he initiated compromise between the two opponents, he was a mediator. When he applied his trident of truth, love and non violence, he was an autocrat. When he gave procedural details to accomplish a goal, he was a bureaucrat. And when he delegated power to his colleagues and juniors, he was a trainer and a developer. (Pratap, 2011, p. 20)

Different management magazines and gurus have listed some essential traits, which are necessary to be a good CEO. They can be listed as follows :

1. Curiosity
2. Purpose
3. Risk taking attitude
4. Organizational skills
5. Realistic optimism
6. Clear communication
7. Vision
8. Engaging with impact
9. Deciding with speed and conviction
10. Adapting proactively
11. Delivering reliably

Innumerable sources list out the innumerable attributes, which are a must, for a CEO/Manager. It is humanely impossible to collectively list down each and every attribute. A comprehensible deduction of the qualities, is essential and need of the hour. This comprehension is available in Gandhi's philosophy.

In his book, Pathway to God, Gandhi has listed down, three traits which are essential for a Sadhaka (seeker of truth), which are :

1. Intellect
2. Morality
3. Belief

These three traits can also be understood as managerial traits adapted by the CEO, wherein he has an intellectual and critical understanding of business, accountability for himself/herself and the employees. And last, but not the least, the CEO must possess a strong sense of belief in the environment

around him/her. But, the question here is, are these traits enough to set apart a successful CEO from an unsuccessful one? The answer is, no. These traits do not make a CEO successful, but it provides a fundamental ground to list out the five most important managerial traits based on Gandhian philosophy which surely would make a CEO successful. These managerial qualities stem up from Gandhi's basic understanding of life which is based on non violence, truth, following proper means to achieve the desired end, upliftment of all and equality.

1. A CEO should Practise Non Violence

Gandhi, as a leader, preached one value, all throughout his life i.e. ahimsa or non violence. In layman's terms, non violence is defined as a practise of being harmless to self and others, under every condition. Gandhian definition of non violence is not just non killing, aggression or injury, but also being free from prejudices, jealousy, animosity, pride, ego, since these also cause mental violence towards one's self and others. All these vices, prohibits an individual from achieving the desired result. For Gandhi, truth was the end and love is the means. And, means and ends are interchangeable i.e. Gandhi does not propagate unfair means to achieve the end. Interestingly, Gandhian way to attain truth is not based on lofty ideals but has a scientific bend. According to CV Raman, science is research for truth in logic, psychology, behaviour etc. A virtue of a scientific mind is to reject what is false and untrue. Gandhian philosophy holds the same values, when it searches for truth. Thus, a CEO must have the ability to change attitude and behaviour of others, in a positive way. This can only happen if one follows the art of self management, wherein the CEO gets rid of immorality, so as to set an example for others through the practise of non violence.

The root of all action lies in thought. Therefore, the root of right action lies in right thoughts. (Mehta, 2004, p. 83)

2. A CEO should be Accountable for his Actions

"We ought to constantly examine whether our way of life tends to improve human life, or worsen it" (Gandhi, 2014, p. 20)

Similarly, a good CEO ought to constantly analyse and scrutinise his/her action, to judge whether it improves the organization. A good CEO is aware of his/her actions and their consequences. Humans are often faced with this conundrum, “If I betray my principles in private, and no one is there to see, are my principles still intact?” To this, Gandhi would have answered, “No, they are not. The reason? There was a witness: you.”

A good manager will ensure an immersion of his/her actions and the responsibility of its consequences. This sense of accountability can only be achieved if one puts the bigger picture in the forefront, instead of an individual self. If a CEO wants the employees of the organization to put the organization in the forefront, the CEO must preach through example. It is imperative that the CEO develops a Socratic method of thinking, so as to be constantly and critically aware of every thought that might get converted into action.

3. An Excellent CEO Builds A Brand

Different companies have different taglines, which are synonymous with their policies and philosophies. Such branding is extremely essential, in order to carve a niche in the minds of the people. Good branding increases the value of the company, and provides employees with direction and motivation. It sets the company apart from the competitors and helps to preserve the originality and principles of the company. Mahatma Gandhi was a brand himself. The ideals of Satyagraha, Ahimsa and Sarvodaya are age old. It was Gandhi, who brought them back in the limelight, through his novelty. This originality made sure that the masses could identify with the ideals and follow them. So much so, that everyone equates non violence to Gandhi.

In a similar fashion, a CEO must build a brand for himself/herself and the organization, for customer acquisition and maximum profit. The process should be kinetic and not static, so as to establish a good relationship between the the organization and different stakeholders. Such an establishment is imperative to run a successful business in the long run.

4. A Good CEO is an Egalitarian

“The symbol of a court of justice is a pair of scales held evenly by an impartial and blind but sagacious woman. Fate has purposely made her blind in order that she may not judge a person from his exterior but from his interior worth” (Pratap, 2011, p. 76)

Gandhi believed in Sarvodaya, i.e. uplift of all. This stems from the philosophy of equality, wherein every person must be treated with respect and fairness. The Gandhian philosophy stands for natural justice and principles of humanity which was rooted in Gandhi’s study of Vedantic philosophy. If an organization follows the philosophy of Sarvodaya, it ensures that every stakeholder is profited. This is only possible, if the CEO has a holistic view of the progress of the organization and does not put himself/herself on a pedestal.

“Equality depends on the state of our mind and until our mind reaches that state, we shall remain backward” (Gandhi, 2014, p. 27)

A good CEO considers every employee as his/her equal. This state of being ensures a sense of community, working towards a common goal which in return brings about a sense of belongingness amongst the employees. Again here, the CEO follows mental non violence by getting rid of prejudices and biases, if there are any. An organization must not be characterized by a pyramid, where the apex is sustained by the bottom, in a hierarchal manner. It should be like an oceanic circle whose centre will be the CEO, always ready to perish for the organization, till the end when ultimately the last whole becomes one life composed of employees and the CEO as an integral, wholesome unit.

5. A Good CEO must know when to say no

Managers are taught from business schools that winning is everything. One must learn the art of negotiation and never surrender. However, Gandhi believed in surrendering. When a person surrenders, he/she renders the tyrant’s tool powerless. How? A CEO, when dealing with any crisis or in negotiating with even the most difficult person, must determine what is within his/her control and what is not. And then focus only on what you can control. Learn to say NO, If it does not serve any purpose. Once the CEO learns to say No, to himself/herself as well as



to the employees, he/she can concentrate on doing the best for the organization, rather than winning the negotiation. Similarly, when in an encounter with a fellow employee, the CEO must try to make sure that the end goal of the encounter is beneficial to the employee as well as the organization. The CEO must manage the areas of his/her influence wisely, so that the resultant changes benefit the enterprise.

The above five traits are a confluence of ethics and management. But, is it necessary to have an ethical business? What is the place of ethics in business and management?

Management and Ethics

When an enterprise expects to receive ethical treatment from employers, customers, shareholders, vendors and even competitors, the enterprise itself must treat all these constituents ethically. Gandhian philosophy stresses the need for holistic and integrated development of every individual, community and consequently the state. Human Resources are fountainhead of all activities and therefore the management must frame people centric policies for the enhancement of society as a whole. As Amartya Sen rightly points out, social reforms must take precedence over economic reforms as social reforms will lead to economic reforms. Gandhi was the most comfortable with the most complex branch of management which is managing people. Gandhian management which is primarily based on ethics advocates transparency, conviction, logic, reason, curiosity and non violence. A good management is characterized by the above mentioned virtues. The terrorist attack on Mumbai on 26/11, can also be described a case of highly efficient and effective management. But, is that really quotable? Management without ethics and accountability, portrays utter contempt for human values and progress, which are instrumental in bringing about the progress of the society and nation as a whole.

Conclusion

A Chief Executive officer must also be a Chief Ethics Officer. Morality is affected by environment, hence, if a Chief Executive Officer starts behaving selfishly, the employees start behaving selfishly too. Such a self centered attitude is certainly not beneficial for the enterprise. Gandhi defined a true

Congressman as follows, "A true Congressman is a true servant. He ever gives, never wants service. He is easily satisfied so long as his own comfort is concerned. He is always content to take a backseat. He is never communal or provincial. His country is his paramount consideration." On the same lines, an ethical CEO, can be defined as follows, "A true CEO is a servant of the organization. He ever gives and never demands service. He is easily satisfied so long as his own comfort is concerned. Always takes a backseat and is egalitarian in his approach. The enterprise is his paramount consideration" The Gandhian model of ethical management cannot possibly resolve all complex human and social problems in their entirety, but surely, it still holds out a promise for a better world.

References

- Alexrod A. (2010), Gandhi CEO. New Delhi: Penguin India.
- Desai V. (2015, May), Discourses On The Gita Ahmedabad: Navjivan Publishing House
- Deshpande S. (2014, September), Pathway to God Ahmedabad: Navjivan Publishing House
- Gandhi M. (2009, January), My Experiments Truth. Mumbai: Fingerprint Publishing
- Gandhi M. (2014, March), Panchayati Raj Ahmedabad: Navjivan Publishing House
- Gandhi M. (2015, March), Constructive Programme- It's Meaning And Place. Ahmedabad: Navjivan Publishing House
- Gandhi M. (2014, April), Ethical Religion. Ahmedabad: Navjivan Publishing House
- Karnad A. (1996), Business And Ethics. Madras: Alacrity Foundations Pvt Ltd.
- Mehta S. (2004, December), A Hand Book Of Sarvodaya (I and II). Mumbai: Geeta Prakashan.
- Pratap R. (2011), Gandhian Management. Mumbai: Jaico Publishing House.
- Stewart M. (2010), Debunking the Management Myth. Newyork: W. W. Norton and Company, Inc.



Neo-Buddhism and Engaged Buddhism: A Philosophical Understanding

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Abstract

Reconstruction of Buddhism has been paved by Dr. B. R. Ambedkar, in the form of Navayana, i.e Neo-Buddhism. The word, Navayana, means new vehicle, new beginning and emersion of new religion. After Mahaparinibban of Lord Buddha, number of rituals and mal-practices were added in Buddhism. Ambedkar wanted to remove all those. Ambedkar has not accepted traditional Buddhism for his people, he introduces the principle of Neo-Buddhism by writing the book, 'The Buddha and His Dhamma'. In the contemporary world, Buddhism again revived in the west by Vietnamese Zen Buddhist teacher Thich Nhat Hanh who introduced the term 'Engaged Buddhism'. The term 'Engaged Buddhism' refers to Buddhists who are seeking ways to apply the insights from meditation practice and dharma teachings to situations of social, political, environmental and economic suffering. He was active in the peace movement of Vietnam and promoted non-violent solutions to conflict. The intention of my paper aims to study Dr. B. R. Ambedkar's Neo-Buddhism and Thich Nhat Hanh's Engaged Buddhism, as both these concepts are significant in philosophical discourse to understand the principles of Buddhism and its relevance in twenty-first Century. It will also analyze the philosophical comparison of Neo-Buddhism and Engaged Buddhism. It has been observed that the revival of Buddhism has great similarity in its social relevance. Therefore, moral principles of Lord Buddha were socially led by both Dr. B. R. Ambedkar and Thich Nhat Hanh for uplifting social religion as engaged Buddhism. A philosophical comparison lies in finding Buddhism's social relevance for civilization.

Keywords: B. R. Ambedkar, Buddhism, Engaged Buddhism, Navayana, Neo-Buddhism, Thich Nhat Hanh.

Introduction

Reconstruction of Buddhism has been made possible by Dr. B. R. Ambedkar, in the form of Navayana i.e Neo-Buddhism. The word, Navayana, means new vehicle, new beginning and emersion of new religion. After Mahaparinibban of Lord Buddha, number of rituals and mal-practices were added in Buddhism and Ambedkar wanted to remove all those from later Buddhism. Ambedkar has not accepted traditional Buddhism for his people and introduced the concept of Neo-Buddhism in his book, 'The Buddha and his Dhamma'.

In the contemporary world, Buddhism again revived in the west by Vietnamese Zen Buddhist teacher Thich Nhat Hanh who introduced the term 'Engaged Buddhism'. The term 'Engaged Buddhism' refers to Buddhists who are seeking ways to apply the insights from meditation practice and dharma teachings to situations of social, political, environmental and economic suffering. He was active in the peace movement of Vietnam and promoted non-violent solutions to conflict.



This paper aims to study Dr. B.R. Ambedkar's Neo-Buddhism and Thich Nhat Hanh's Engaged Buddhism, as both these concepts are significant in philosophical discourse to understand the principles of Buddhism and its relevance in twenty-first Century. It will also analyse the philosophical comparison of Neo-Buddhism and Engaged Buddhism. It has been observed that the revival of Buddhism has great similarity in its social relevance. Therefore, moral principles of Lord Buddha were socially led by both Dr. B. R. Ambedkar and Thich Nhat Hanh for uplifting social religion as engaged Buddhism. A philosophical comparison lies in finding Buddhism's social relevance for civilization.

Dr. B.R. Ambedkar has introduced Buddhism in India which is known as Navayana that is, Neo-Buddhism, a new beginning of new identity based on Buddhist principles. It aims at maintaining continuity with classical Buddhism, while at the same time endeavours to make it speak to the contemporary context. Thus, it is a reconstruction of Buddhism. When Dr. B.R. Ambedkar converted with thousands of followers on 14 October 1956, Buddhism revived in its pristine form in India.

In Buddhism, the number of sects was existed as it was in other religions in course of time number of rituals and mal-practices were added in Buddhism and it has become very complex religion. Dr. Ambedkar wanted to remove all those from later Buddhism. He also wanted to make it relevant in the Indian context of discrimination against underprivileged castes, most of who were also abjectly poor. Thus, he advocated a socially responsible and engaged Buddhism. Therefore, he simplified this religion for his people by creating new term 'Navayana' or 'Neo-Buddhism'. Dr. Ambedkar believed that society required certain governing principles in the form of code of conduct, which could serve as guiding policy for societal affairs. After three decades of dedication in details study of comparative philosophical doctrines of different religions, he ultimately reached the conclusion that the philosophy of Buddha has great relevance to human society. Dr. Ambedkar was strongly believed that religious values should be as such which hold society together, in which all people should get equal rights. That is why he decided to embrace Buddhism because it was based on principles of equality, liberty and fraternity.

A decade or so after Dr. Ambedkar's socially responsible Buddhism, the Vietnamese Buddhist monk Ven. Thich Nhat Hanh offered a similar perspective on Buddhism which he termed as 'engaged Buddhism'. This term is more inspired by the Humanistic Buddhism. Thich Nhat Hanh has published more than 100 books, including more than 40 in English. He was active in the peace movement and then he nominated by Martin Luther King, Jr., Prize. Dr. King said, "I do not personally know of anyone more worthy of [this prize] than this gentle monk from Vietnam. His ideas for peace, if applied, would build a monument to ecumenism, to world brotherhood, to humanity". It was meant to offer an alternative to wars, mass deaths in violent regimes and severe poverty – all of which afflicted South Asian countries. As Sally King notes, the Vietnam War, the genocide in Cambodia, deforestation in Thailand and oppressive governments in Myanmar all required that Buddhism address these issues. For without doing so, Buddhism would have become irrelevant in the context of those very same cultures to which it gave identity.

In the deep analytical study of all religions, Dr. B.R. Ambedkar was highly influenced by the philosophy of Buddha and his various principles. He particularly found its rational and scientific core extremely relevant in the context of the struggle against obscurantism in India. He attended World Buddhist Conferences held at Colombo, Rangoon and Kathmandu and expressed his thoughts on the philosophy of Buddhism. All of this shows that he was influenced by the South Asian traditions of Buddhism whose Indian roots he unraveled in the course of reconstructing it in the social context of India. His talk on All India Radio on 3 October 1954 entitled 'My Social Philosophy' is also very important to understand his belief in the principles of Buddhism as an important tool of social emancipation. During this crucial time, he also published various articles on Buddhism which was published in the journal of Mahabodhi Society of India. Then he converted to Buddhism on 14 October 1956 at Nagpur. There are resonances between Dr. Ambedkar's Buddhism and that of Ven. Thich Nhat Hanh considering how both versions of Buddhism address social issues pertaining to South Asia. This point has been noted by scholars

such as Prof. Pradeep Gokhale, however, there is a need to do a detailed book length comparative study of the two thinkers. This is because of the similarities between their approaches and their common context of South Asia. Moreover, their relationship to classical Buddhism in which they are rooted also needs examination.

The relation between Dhamma of Dr. B. R. Ambedkar and Mindfulness of Thich Nhat Hanh

The religion and religious establishment are depended on the higher standard of social structure. The philosophy lies in understanding its essence for the whole development of society. The principles and its practices must be core of any religion otherwise spirituality in religion only leads to disparity in society. This very idea might be the intention of Dr. B. R. Ambedkar and Ven. Thich Nhat Hanh towards the establishment of Buddhism. The philosophical idea of Ambedkar's Buddhism lies not in pessimism. In his writing *Buddha and His Dhamma* he did not dwell in the idea of Dukkha (four noble truths) and Dependent origination. This emphasis his philosophical idea about "Dhamma is to maintain purity of life".¹ In *The Buddha and his Dhamma*, Dr. B. R. Ambedkar emphasized on how Dhamma play an essential role in human life however purity of mind is the core of human life. In his writing he intended that "Dhamma is to reach perfection in life".² There are three types of perfections Ambedkar stated that perfection of mind, body and speech. This seems Dhamma is way of life, Dhamma is purifying mind for the higher state of Nibbana. In further writing what appeals to Ambedkar on notion of Nibbana is to eliminate the fire of anger, hatred, passion, ill will. However, Nibbana is the 'state of mind, state of pure happiness'.

In the writing of *The Buddha and his Dhamma*, according to Ambedkar, "Dhamma is to give up craving."³ The spirit of contentment is the spirit of higher conscious control over greed. Wicked state of mind always leads to animosity. Thus "Dhamma, according to Ambedkar's interpretation is a secular way of life based on morality, which aims at the well-being of humanity as a whole."⁴ John Stuart Mill, on contentment he writes, "I have learned to seek my happiness by limiting my desires, rather than in attempting to satisfy them."⁵ Contentment

leads to pure happiness, whereas desire diminishes in the light of contentment. Thus, Dhamma is pure nature to Ambedkar where he believes "all compound things are impermanent is Dhamma."⁶ The entire state of human life is impermanent in its nature. Whatever comes into existence is going to an end, is the law of nature. The intention of Ambedkar to accept this philosophy of Lord Buddha must be to set new vehicle of Dhamma. In *The Buddha and His Dhamma*, Ambedkar stated that, "To believe that Karma is instrument of moral order is Dhamma."⁷ Thus Ambedkar's notion of Dhamma interprets that neo Buddhism is an ethical religion, in which moral implication in action is duty (Dhamma) of an individual. Therefore, it is observed that Dhamma is core principle of Neo-Buddhism.

The word mindfulness appeals to Thich Nhat Hanh as stable, conscious state of mind. Engaged Buddhism is fundamental practice of meditation. In throughout his writing he stated that practice of meditation is real notion of Buddhism however meditative practices engage one to religion. Thich Nhat Hanh in his book 'Together We Are One', states that suffering would overcome with the practice of mindfulness. The middle path to him is "neither to suppress nor to over identify suffering".⁸ This writing of Thich Nhat Hanh emphasizes that, with the practice of mindfulness meditation one can establish in Buddhism.

In his writing 'Buddha Mind, Buddha Body', Thich Nhat Hanh has observed that how mind can function effectively to create happiness in one's life.⁹ A meditative practice in which he discusses about to improve mental clarity and to restore mind-body in harmony. The meditative practices such as walking meditation, conscious breathing meditation, sitting meditation, telephone meditation and five mindfulness training are the essential writings for understanding mindfulness. The whole literature by Thich Nhat Hanh is dedicated to Engaged in Buddhism for the benefit of oneself and for society. It has been observed that Dhamma by Ambedkar and mindfulness by Thich Nhat Hanh has correspondences to practice Buddhism. Peace and happiness are intrinsic human feeling. Therefore neo-Buddhism and engaged Buddhism has resemblance in mindful practices in Buddhas Dhamma.



The five precepts let by Lord Buddha for the moral development of an individual in Buddhism. However, the moral development revived by Ambedkar and Thich Nhat Hanh to establish Buddhism in human life. These five precepts became the foundation of neo-Buddhism and engaged Buddhism, but these precepts were translated as mindfulness training to establish Buddhism in real life.

Conclusion

It is believed that inward change can bring about change in society. The altered state of conscious mind can lead to the external disposition. Therefore, mind full practice over social problem has always been the main criterion in Buddhism. To eliminate social issues, the need for ethical implementation is always a priority, this must have been conceived by Dr. B. R. Ambedkar and Ven. Thich Nhat Hanh. The comparison lies in an effective implementation of Lord Buddha's philosophy as a way of engaging oneself to their religion. Navayana i.e. Neo- Buddhism and engaging oneself to the religion are both terms based on the principles of Lord Buddha. To find a relation between Buddhist practice and social engagement is called socially engaged Buddhism. Thus, it is to be said that both Dr. B. R. Ambedkar and Ven. Thich Nhat Hanh has given social ground to the spirituality. It is requisite to engage life in Buddhism for Living happy life. Therefore socio-spiritual movement lies in establishing engaged Buddhism as neo-Buddhism to create peaceful social order.

References

- Ambedkar, B.R., *The Buddha and His Dhamma*, Siddhartha Publications, Mumbai, 1957 (Reprint by Samata Prakashan, Nagpur).
- Bhaskar, V.S., *Faith and Philosophy of Buddhism*, Kalpaz Publications, Delhi, 2009.
- Fitzgerald, Timothy, 'Ambedkar, Buddhism and the Concept of Religion', in Michael, S.M. (ed.), *Dalits in Modern India: Visions and Values*, Second Edition, Sage Publication, New Delhi, 2007.
- Gokhale, Pradeep (ed.), *The Philosophy of Dr. B. R. Ambedkar*, Sugava Prakashan, Pune, 2008
- Hanh, Thich Nhat, *The Heart of Buddha's Teaching*, Rider Publications, 1999.
- Hanh, Thich Nhat, *The Miracle of Mindfulness*, Rider Publications, 2008.
- Hanh, Thich Nhat, *Buddha Mind, Buddha Body*, Jaico Publishing House, Mumbai, 2008
- Hanh, Thich Nhat, *Together We Are One*, Jaico Publishing House, Mumbai, 2011
- Kamble Ramesh, 'Contextualizing Ambedkarian Conversion', *Economic and Political Weekly*, Vol. 38, No.41, October 11 - October 17, 2003
- King, Sally, *Socially Engaged Buddhism*, University of Hawaii Press, Honolulu, 2009
- Mahadevan Kanchana, 'Conversion, Recognition and Pluralism: Dr. Ambedkar's Democratic Buddhism', in Gokhale Pradeep (ed.), 'The Philosophy of Dr. B. R. Ambedkar', Sugava Prakashan, Pune, 2008
- Mungekar, Bhalchandra, 'Dr. Ambedkar's Interpretation of Buddhism and Its Contemporary Relevance', in Mungekar, Bhalchandra and Rathore, Aakash Singh (eds.), *Buddhism and the Contemporary World: An Ambedkarian Perspective*, Dr. Ambedkar Institute of Social and Economic Change, Bookwell Publishers, New Delhi, 2007
- Queen Christopher, 'Ambedkar's Dhamma: Source and Method in the construction of Engaged Buddhism' in Jondhale, Surendra and Beltz, Johannes (ed.), *Reconstructing the World: B. R. Ambedkar and Buddhism in India*, Oxford University Press, New Delhi, 2004
- Rathore, Aakash Singh and Verma Ajay (ed.), *B. R. Ambedkar: The Buddha and His Dhamma – A Critical Edition*, Oxford University Press, New Delhi, 2011
- Rodrigues, Valerian, 'Making a Tradition Critical: Ambedkar's Reading of Buddhism', in Peter Robb (ed.), *Dalit Movements and the Meanings of Labour in India*, Oxford University Press, Delhi, 1993
- Verma Vidhu, 'Reinterpreting Buddhism: Ambedkar on the Politics of Social Action', *Economic and Political Weekly*, Vol. XLV No. 49, December 04, 2010
- Zelliot Eleanor, 'B. R. Ambedkar and the search for a Meaningful Buddhism', in Jondhale, Surendra and Beltz, Johannes (ed.), *Reconstructing the World: B. R. Ambedkar and Buddhism in India*, Oxford University Press, New Delhi, 2004

Endnotes

- ¹B. R. Ambedkar, *The Buddha and His Dhamma*, Siddhartha Publications, Mumbai, 1957 (Reprint by Samata Prakashan, Nagpur), p.110
- ²ibid, p.111
- ³ibid, p.115
- ⁴Pradeep Gokhale (ed.), *The Philosophy of Dr. B. R. Ambedkar*, Sugava Prakashan, Pune, 2008, p.128
- ⁵www.wikipedia.org, Retrieved on 06/06/2018.
- ⁶B. R. Ambedkar, op. cit., p.116
- ⁷Ibid, p.117
- ⁸Thich Nhat Hanh, *Together We Are One*, Jaico Publishing House, Mumbai, 2011, p.3
- ⁹Thich Nhat Hanh, *Buddha Mind, Buddha Body*, Jaico Publishing House, Mumbai, 2008, pp.85-88



The Thoughts of Swami Vivekananda about Education

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Abstract

A person develops abilities, ideas, ideal behaviour and positive attitude through education. Carter V Good says, "it is social process by which people are subjected to the influence of a selected and controlled environment (especially that of the school) so that they may attain social competence and optimum individual development. We want that education by which character is formed, strength of mind is increased, the intellect is expanded and by which one can stand on one's own feet. Education is not the amount of information that is put in to brain and runs riot there, undigested, all your life. We must have life- building, man making and character making education. Strength is goodness, weakness is sin. All sins and all evil can sum up in that one word; it is weakness that is the source of selfishness. It is weakness that makes men injure others. Does the modern education serve this purpose? Modern human beings are facing lots of problems in life and that education doesn't help them in solving their problems. Most of the people commit suicide are educated! What type of education is it? Most of the people involved in criminal activities are educated! . Vivekananda's educational thoughts are not only revolutionary, but epoch making. Vivekananda expressed the outcome of self-knowledge in his words charged with his own great reason; Teach yourselves, teach everyone his real nature, call upon the sleeping soul, see how it awakes; power will come, purity will come and everything that excellent will come, when the sleeping soul is roused to self-consciousness activity,". Today the science of the matter must be combined with of the holistic perception of life, the 'Science of the Soul'. According to Vivekananda, Newton and Galileo are "prophets of physical science" and Upanishadic Rishis are "prophets of Spirituality". He hoped that in the days to come the ideal man would be equally intellectual, emotional, active and meditative. He also said "Science and philosophy will shake hands". Let's hope that dream of Swami Vivekananda will become reality in the 21st century.

Vivekananda was a great educationist who revolutionized the field of education. His educational views were so perfect that even in today's world we have to find solutions of our problems from them. His views on education were based on the ground reality of India, as he had seen the contradiction between the glorious past of Indian culture and the present condition of India in his days. His deliberate thinking, vast reading and divine insight were at the base of his views. He wanted to bring change in India's future by changing education so he strongly advocated national education on national lines and based on national cultural tradition. Vivekananda's contribution to create New India was great. He opened the minds of Indians and reminded them their duty to the downtrodden people. He encouraged and appreciated the role of toilers and labourers in the growth of country's prosperity.

Vivekananda was the first religious leader in India who had spoken for the common man and developed certain philosophy for them. He also recommended skill based education to make them independent. He used to say,

“We must have life building, man making and character making education. Strength is goodness, weakness is sin. All the problems, evils can sum up in that one word; it is weakness that is the source of selfishness. It is weakness that makes men injure others.”¹

Present day problems of poverty and unemployment are mainly the problems of lack of technical education. Education that is based on logic and reason is different from the education that is based on skills and practise. Enjoying the plays of Shakespeare is a different thing and making a table or chair or repairing a electrical problem at home is a different thing. The problems of India can be solved through skill based education as we have so much of population that it is a herculean task to provide employment to all the adult men and women for their bread and butter. Swami Vivekananda had talked about various aspects of education and one of the aspect or practical use of education is earning the daily bread.

I have analysed Vivekananda’s thoughts on education in this paper that can eradicate the problems of present day India. However, Swamiji’s range of thoughts on education varies from technical education to philosophical education and finally leads to spiritual education, I have concentrated mainly on the objectives of technical education or the skill based education and how it can be useful in solving India’s major problems of poverty and unemployment of the common masses. The point to be considered first is about the purpose or aim of Education. Vivekananda once said that the flaw of our present day education is that it has no definite target to follow. Further he explains it as, A sculptor has a clear idea about what he wants to shape out of the marble block; similarly a painter knows what he is going to paint. But a teacher has no clear idea about the goal of his teaching.² We can add in it that even the students in higher education have no clear idea about what they are learning and why? According to Vivekanada,

“The goal of education is man making. Education is the manifestation of the perfection already in man, which is the very nature of our inner soul.”³

If we take this belief of Swamiji at the surface level and apply it in education, it means that every learner has different capacities and different likings. One can play a game of cricket masterly and the other can play the game in computer as well. One can make a beautiful painting with colours but the same person cannot make a beautiful statue. Everyone is imbibed with different arts inherently and different skills by his likings. The aim of education is to find out the inherent capacities hidden in the student and to elevate it to higher level of execution.

In his idea of education, Vivekananda emphasised on physical health because a healthy mind resides in healthy body. He frequently quotes that one can not know his inner-self if he is weak by mind. Our education system does not provide any atmosphere for physical training. It lays great emphasis on the mental training. Our examination system also tests the cramming capacity of a student and not the practical knowledge he has received. The children are sent to nursery from the age of three and that prolongs up to the age of twenty two. No where there is a scope of physical development of a students. And this is the reason we produce more clerks than sportsmen. The performance of India in Olympics is the best example of it. In some of the games we cannot even qualify. We have a large coastal area but no swimmer from India has even qualified at world level. Such are the cases in so many areas. This is why Vivekanada believed that the ideal environment at home and school is crucial for the development of the child. The child has great influence of parents and teacher so they should inspire him by living an ideal life. Swamiji advocates the old Indian institution of Gurukula for better growth of children. In this system of education, the students have the teacher always before them and the teacher who is an ideal of physique, skills, character and morality can inspire them more than any book. He is the best role model for them to follow. Vivekananda’s views of education are similar to the scheme of contemporary educationists which is in nature heuristic. In this style, the teacher invokes student to ask questions, who becomes capable to find out answers for himself



under the guidance of his teacher. Unfortunately we have not been able to develop such systems in Indian education system and this is the root cause of the failure of our examination system and the cause of growing unemployability of the students in various specialized fields.

Many a people think that Swamiji's philosophy of education emphasises more on spiritual development and neglect the material side. Vivekananda has repeatedly focussed on the need for the removal of poverty and unemployment, in his plan for regeneration of India. According to him,

"We need technical education and all else which may develop industries, so that men, instead of seeking for service, may earn enough to provide for themselves, and save something against a rainy day."⁴

India may not be able to offer jobs to all the people reside in it, but as Swamiji said, we can develop our agriculture sector, domestic produce sector and our village system in such a manner that any person of a village need not think to go to cities for employment. For this we have to make our villages independent and develop a system that the products of villages are consumed by villages.

Swamiji also emphasise on women education. He believed that if the women of our country get the proper kind of education, they will be able to solve their problems with courage and confidence. The goal of female education is to make them bold and fearless, strong and aware of their modesty and dignity. He noted that Women have a special capacity and competence for the studies related with home and family. Hence he recommended that the knowledge of subjects like sewing, culinary, nursing, domestic science, arts, and embroidery etc. to make them independent and stable.

I would like to narrate an experience of mine here. On my visit to Kutch district of Gujrat which is a desert area with limited resources and limited scope of development as the region has rocky land throughout. The people of Kutch are considered innovative and hardworking and independent natured. In the Khavda and Bunny regions of Kutch, the girls from the beginning of their childhood are taught the art of embroidery. Any girl, from childhood to the marriageable age, embroiders more

than ten Lehengas and cholis artistically. As the region is attracting tourists from all over the world for its desert and arts, the girls can be able to sell their lehengas at a very high price to the foreign tourists and earn the expenses of their marriage and even help their parents. The price of the lehengas ranges from 50000 to 150000 according to the intricacies of their artistic embroidery.

Vivekananda, in this respect, said, "Life is a series of fights disillusionments...the secret of life is not enjoyment but education through experience. The education which does not help the common mass of people to equip themselves for the struggle of life, which does not bring out the strength of character, a spirit of philanthropy and the courage of a lion- is it worth of the name? Real education is that which enables one to stand on one's own legs."⁵

That is why Swamiji has often reiterated that "If the mountain does not come to Mohammed, Mohammed must go to the mountain. If the poor cannot come to education, education must reach them at the plough, in the factory, everywhere." This is the duty of the government to provide free education to the needy and poor if they cannot reach the education.

Swamiji in one of his speeches has given the ideal of education and outcome of it. He said,

"The ideal of all education, all training, should be this man-making. But instead of that, we are always trying to polish up the outside. What use of it in polishing up outside when there is no inside? The end aim of all training is to make the man grow. The man who influences, who throws his magic, as it were, upon his fellow beings, is a dynamo of power, and when that man is ready, he can do anything and everything he likes."⁶

Swamiji knew that India is a country of masses and poor masses so he was aware when speaking on the objectives of education. He knew that a person cannot achieve his spiritual height until he would be able to earn his bread and run his family satisfactorily. He declared, "My countrymen! Stop weeping. You have wept enough. Make your nerves as strong as steel and stand on your legs. Today we are in need of a religion of humanity which may sustain all living in the country."

Thus Swami Vivekananda, being a social reformer and social educationist, provided us with some of his great views on what education should be, what should be the objectives to be achieved from it and how we can achieve the fruitful results from this so as to make our country not only free from poverty and unemployment but to make it a best example of a country of sound social structure, superb innovative spirit and country of great adventures. This is how India can achieve the dream of being a Vishva Guru (Preceptor of the world) which was also a dream of Swami Vivekananda himself.

References

<http://www.swamivivekanandaquotes.org/2014/01/swami-vivekananda-weakness.html>

https://www.quora.com/What-are-the-main-demerits-of-Indian-education-system?redirected_qid=20403420#!n=12
<https://www.speakingtree.in/blog/gurukula-education>
paper Submitted to Birla Institute of Technology: www.youthknot.net
<http://www.swamivivekanandaquotes.org/2013/04/swami-vivekananda-quotes-on-education.html>
<https://www.vivekananda.net/Quotations/A-F.html>
-Swami Vivekananda: Life and teachings. <http://www.belurmath.org/swamivivekananda.htm>
-Educational philosophy of Swami. D&RaoBhaskaraDigumarti (2010)
-Educational ideals of great India. Prof.Chube, S.P.&Dr.ChaubeAkhilesh (2007)



Holistic Way of Living and Indian Philosophy

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Abstract

The fundamental text of Western civilization are those who will boost our beliefs in the boundless power of free individual human being and we should teach them not in a formal mode and rote learning. According to Niall Ferguson "the real threat to western civilization is the loss of faith in the civilization that they have inherited." He states "The biggest threat to western civilization is posed not by other civilization but by our own pusillanimity and by the historical ignorance that feeds it." While embarking upon the value of Indian civilization will Durant has said: "Nothing should more deeply shame the modern student than the recency and inadequacy of his acquaintance with India". In a similar way Winternitz M. (A history of Indian literature, I 8. vol.-8 Kalkatta-1927) has said "I have not found in Europe and America, poets, thinkers or popular leaders equal or even comparable to those of India today". Indian Philosophy will teach us the tolerance and gentleness of matured mind, the quite content of the unacquisitive soul. The claim calm understanding of the spirit and unifying and pacifying love for all living things. It is a "Just Holistic living which should become the cartography of the universal way of living." Here the Tapas of Asian civilization although demands and declare world as one family – 'Vasudhaiva Kutumbkam' needs to be comply in practice to nullify the clash of civilisation.

Keywords: Indian Philosophy, Wisdom, Humanity, The Concept of Civilization, Quality of Civilization, Human Love, Peace, Holistic Way of Living, Spirituality, Huntington on the conflict of civilization, Western Civilization

Introduction

Life has meaning and to find its meaning is the perennial quest of mankind throughout the history. In order to live life we must know, understand and live life. Living has no proxy. In order to live and learn life we must love to live, which requires wisdom to live, because it is wisdom that makes us simple, independent, magnanimous and truthful. Wisdom is our prime quest and to be earned through self reflexivity of person and people. Wisdom alone can save us from havoc and despair, from the shriveled abstraction and formalism. 'Wisdom' Leonardo da Vinci calls "The noblest pleasure, the joy of understanding the highest music of the soul". This music has been sung by humanity through ages. It is the music of human civilization.

Civilization is a social order, promoting cultural creation. Where chaos and insecurity ends civilization begins. Where there is fearless curiosity and freedom is secured by understanding and through embellishment of life, then and then civilization flourishes.

Dr. Radhakrishnan has rightly said, "For thinking mind to blossom for arts and sciences to flourish, the first condition that is necessary is a settled society providing security and leisure". (Radhakrishnan: 2008: 1)

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Idea of Civilization

Except God, humanity, has devised the grandest idea is that of civilization. The event of Nine Eleven has given a new life to the idea of civilization. The idea of civilization is not a passive idea, against the existing strategies of thinking. We can discover and create the ideas which we need. The idea of civilization demands not the clash of civilization, but it demands freedom and courage to think. The word civilization carries an aura of grace, dignity, good order and security. According to Huntington civilization has a long standing, wide spread vision of life. Civilization to him is a way of shaping, explaining, ordering experiences and identities, in which we are born. Our participation forms a horizon of understanding which makes truth and sympathy difficult. The real clash to Huntington is between civilization and barbarism. Either both will end together or end separately, the other has to die. The rift between quality and quantity needs to be subsided. We need a good widespread concept of life wherein quantity and quality must align. It is a key element in civilizing process through which we can get real, civilized community. True quality of civilization is constituted by high quality relationship of ideas, objects and people. This high quality relationship is the life supporting system of civilization.

High quality of relationship is love. This love includes humanity. Love is a civilizing mission which constructs, what is genuinely good and has greater appetite for it. The pursuit of love is an index of civilization for the 21st century. Love for ideas, objects and people are neither cool nor clever. This love is at odds with the superficiality of social allure. It is this phenomena of love which creates mental space for reflection and human dignity. This mental space, created by love is the best that has been thought and said in the world for stimulation and guidance. It resists humanity to create a source of a new dogma. Human love is a concrete negation of dogma and dogmatism. This love has an appetite for self-improvement, as it resist the logic of negation or negativity.

Peace earned by love is not just the absence of violence, Amrtita Pritam has rightly said, "Peace is when the flowers bloom". This flowering and the possibility to blossom, is the backbone of

Indian Civilization and Indian Philosophy. Indian Philosophy is the blossoming of life. This blossoming is not possible without wisdom. C. Rajgopalchari said, "Without wisdom in the heart all learning is useless."

Love and wisdom are the pillars of civilization. Indian philosophy cannot construct ideas, objects and society on the debris of the past heritage only. Spiritual aspect of life is a significant part of Indian Philosophy. Tagore boldly states 'We must accept truth when it comes from the west and not hesitate to render it over the tribute of admiration. Unless we accept it, our civilization will be one sided. It will remain stagnant let us try to win the heart of the west with all that is best not in revenge or in contempt but with goodwill and understanding in a spirit of mutual respect'. This catholicity of mind and holistic way of thinking and living is and can become the mission statement of Indian Philosophy. This has been clearly stated in a letter to Charles Andrews by Tagore in August 1920 "I feel clearly that the ultimate reality of man's life, is his life in the world of ideas, where he is emancipated from the gravitational pool of the dust and he realizes that he is a spirit. How to gain our freedom of soul inspite of the cramped condition of our outward circumstances. How to ignore the perpetual insult of our destiny, so as to be able to uphold the dignity of man - the universal man." To establish the universal kingdom of the self through self-search, Indian Philosophy demands the support of the best self. That is the holistic self.

We live in a civilization and its problematics are war, poverty, greed, mismanagement of resources, crime, ignorance, depression, pollution and terrorism. But all this can be traced back to the most private places "The inner lives of individual". This to Indian Philosophy is not a retreat but a right place, which Gandhijee has symbolized as 'Hridaykunj' – The abode of one's own and a place to negotiate with one's own being. - The place of inner recesses of one's own being. The inner seat or place to start. With this capital Indian Philosophy can flourish as a way of thinking and can establish holistic collectivity or connectivity.

Indian Philosophy focuses on the vision of inner and outer human flourishing wherein the integration



is the hard core. This inner and outer integration is the essence of holistic way of living and to Indian Philosophy it is also a civilizational demand, which would internalise 'life giving ideas are persuaded not by fear but by joy. It is the joy that penetrates to the depth of the soul. In this respect Indian civilizational practices are closely connected with inner spiritual prosperity. Spirituality is "the whole of person's inner life" not distinct from the non-material order of existence. This spiritual inner life envisioned by Indian philosophy and civilization has four aspect.

1. The depth of thought : The depth of thought which occurs in connection with understanding, and explaining innerness. Here depth is a cultivation, protection and guidance to the good experience. It gives authenticity and intimacy to the world. It demands authenticity and intimacy to person and people.
2. Feeling or experiencing : Feeling or experiencing is not only a verbal but more an expression of feeling and experience. Here thought and experience need not collide but act in a cohesive way.
3. Attachment to higher things : This harmonizing feeling or experience aspires for good and higher life.

Good life aspires for higher things. Beauty, wisdom and goodness are the prime sources of the soul's nourishment for the growth of the soul. The higher experience is necessarily an upliftment and this upliftment is the path, the new way of looking and living in the world. This new existence creates a mental space which is a prejudice free space. Indian Philosophy with its firm footing on spirituality need not rest on exclusion. Upanishidic saying is 'Annam Brahmety Vyajanat'. Which means the material prosperity is encoded with high degree of spirituality. Spiritual prosperity is sympathetic to material prosperity. When these two, spiritual and material prosperity sympathetically viewed, will make civilization as a sovereign concept which Indian Philosophy has established and propagated as its mission for Indian Civilization. For Indian civilization in its largest canvass is the book of life.

4. Mental space : This canvas demands a mental space. This mental space is created exclusively

through 'open mindedness'- prejudice free space.

Let the Indian concept of civilization bravely stated in the letter of the sister Nivedita (Vol.II page-1254)

"Love alone can heal and help".

Dinesh Raheja in his Haiku has rightly said,
"The ice palace I
build for you may melt; my love
is frozen in time".

The concept of Civilization demands holistic way of life and living. Reflexivity is the backbone of civilization, as an integration of life system and knowledge system. With the help of inquiry, caveat is made for transparency in theory and praxis. Today we suffer from the crises of representation, legitimation and praxis which demand an inquiry into the human disciplines. Human disciplines cannot show themselves nor can capture lived experience. Human discipline today suffer from alienation, distancing and reduce society and social fact only as a text. We need an agent who is also an inquirer of one's own life and society not in abstraction but treating life as a performative living, with curiosity and creativity. The inner and outer core of being demands interweaving as has been stated as yan and yin. Self indulgence is not a narcissistic tendency. Self indulgence is the voice of the presence of the 'I', it is an existential predicament. This existential predicament is the hard core of Indian Philosophy, devoid of the obsession of ego. Life is an ever unfolding of one's own being – in an unchartered way. The stipulation of life in Indian Philosophy is a conceit and crime. To be catholic in thought and experience ensures the way of life in Indian Philosophy. Core characteristic of Indian Philosophy are as follows :

1. To use knowledge in and for practice. To divide them is to do away with life and living.
2. Each action demands qualitative change.
3. To treat life as an emergent process, which operates through action and reflection.
4. Act done by an agent is not and cannot be a singular but a co-extensive act. We live with other. Our self is a co-extensive social self.
5. This co-extensive self is not value neutral nor value free but involved in constructing value. The biggest value asserted is the flourishing and flowering of man, society and the universe.

6. It respects the works, accepts the multiple forms of knowing. Without privileging ideology or action. It understands thoroughly and consciously the multiple ways in use and misuses of power.
7. It's sensitivity and struggle is for the benefit and the well-being of the last man and humanity at large.

According to Dayakrishna Indian civilization is a search for knowledge and this search is continuous because Indian civilization do understand that nothing is fixed and static. Everything is moving and developing. Everything is changing either deteriorating or building up. This spirit of inquiry is the virtue and core of Indian civilization. Western understanding of Indian civilization needs to be challenged. It is a single exclusive understanding of civilization which allow us to enter in nostalgia or sedation. India is a holistic or catholic civilization expanding and respecting spirit and matter are equally potential for inquiry and it is the wealth and health of Indian Philosophy. Our other worldliness has been projected and propagated by colonialism. Against this Indian thinkers have attempted to understand and imagine Indian civilization, with modern contextuality Shri Aurobindo has denied the singularity of matter and spirit and asserted that matter and spirit are real. Tagore was interested in art and talks about the universal religion of man. Gandhi on the other hand was in disagreement with western understanding of Indian civilization. Shri Aurobindo, Gandhi and Tagore were innovative in their thinking about Indian civilization. But they are, necessarily not nostalgic. What we need today is a civilization of understanding and hope. We must understand the story of civilization is the story of causality and affectivity of the self consciousness. This is the only promise our Holistic Philosophy is wanting and awaiting.

Today's world according to Huntington is conflicting and conflict begetting and the reasons given by Huntington are as under

1. Acceleration of socio-economic modernization which brings this dislocation and alienation to people.
2. The increasing economic and political capabilities of non-western world.
3. The improvement in transportation and

communication which has made interaction and difference more sharp.

The world finally is divided in we and they. In this respect clash of civilization has become a powerful metaphor. It is not a demand or concern for multiculturalism but global mono-culturalism. Which makes homogeneity of civilization as mere rhetoric.

The perspectival suggestion is to implement the universal declaration of human rights. This is not a conflict or a clash between cultures and civilizations but a conflict between dictatorial regime and their critics.

The history of last three centuries is the history of volatile state power and culture against the acceleration of modernity. Mac Nill 1990 'The rise of the West' states that 'civilization is a turbulent agglomeration rather than a homogenous cultural jelly. Civilizational conflicts are also treated as Euro-centrism. In which the moral statures of non-western people are in his theoretical framework is unclear. The west should retain its paramount position as used in Diderot's encyclopedia which states "civilization with 'C' capital."

Western civilization is more than just one thing. It is a package. It is about

1. Political Pluralism
2. Capitalism
3. Freedom of thought
4. Scientific method
5. The rule of law
6. Property rights
7. Democracy

The difference between the rest and the west according to Rongping is that of the indices of quality that it measures that is "National Innovative Development" and "National Innovative Capacity". (Niall Ferguson, 2011 : 324)

Yet Western civilization has six flows

1. Historical misdeeds
2. Brutalities of imperialism
3. Banality of consumer society
4. Materialism
5. Discontent
6. Thrifty asceticism



The fundamental text of western civilization is which will boost over belief in the boundless power of free individual human being and we should teach them not in a formal mode and rote learning. According to Niall Ferguson “the real threat to western civilization is the loss of faith in the civilization that they have inherited.” He states “The biggest threat to western civilization is posed not by other civilization but by our own pusillanimity and by the historical ignorance that feeds it.” While embarking upon the value of Indian civilization will Durant has said :

“Nothing should more deeply shame the modern student than the recency and inadequacy of his acquaintance with India”. In a similar waying Winternitz M. (A history of Indian literature, I 8. vol.-8 Kalkatta-1927) has said “I have not found in Europe and America, poets, thinkers or popular leaders equal or even comparable to those of India today”.

Conclusion

Indian Philosophy will teach us tolerance and gentleness of matured mind, the quite content of the unacquisitive soul, the calm understanding of the spirit and unifying and pacifying love for all living things. It is a “Just Holistic living which should become the cartography of the universal way of living.”. Here the Tapas of Indian civilization and philosophy although demands and declare world as one family - ‘Vasudhaiva Kutumbkam’ needs to be complied in practice to nullify the clash of civilisation. It is rightly said that world though embedded with difference is an honourable home of humanity. If this metaphor is attached to the concept of civilization, the world and philosophy has a future. The future lies not in segregation but is to be viewed and treated holistically. The holistic frame and practice of understanding will give a new meaning to civilization which is the demand of the day.

References

- Daya Krishna (2012) *Civilizations – Nostalgia and Utopia*, New Delhi: Sage & Shimla : Indian Institute of Advanced Study.
- Fernand Braudel (1993) *A History of Civilizations*, Translated by Rechard Mayne, New York: Penguin Books.
- Frances Wood (2017) *Great books of China – from Ancient Times to the present*, London: Head of Zeus.
- Jahanbegloo Ramin (2017) *The Decline of Civilization- Why we need to return to Gandhi and Tagore*. New Delhi: Aleph Book Company.
- Judi Marshal (2016) *First Person Action Research – Living Life as inquiry*, New Delhi : Sage.
- McLeod Alexis (2017), *Understanding Asian Philosophy, Ethics in the Analects, Zhuangzi, Dhammapada and the Bhagvad Gita*, New Delhi : Bloomsbury.
- Naguib Mahfouz (2017) *The meaning of civilization – Essays on culture, religion and politics*, New Delhi : Speaking Tiger.
- Niall Ferguson (2011), *Civilization – The West and the Rest*, London: Allen Lane an Imprint of Penguin Books.
- Radhakrishnan S. (2008) *Indian Philosophy Vol. 1*, New Delhi : Oxford Uni Press : II Edi.
- Raheja Dinesh (2017) *101 Haiku*, Noida : Om Book International.
- Sarvapalli Radhakrishnan (1998) *The Philosophy of Hinduism and other Essays*. New Delhi : Niyogi Books.
- Siep Stuurman (2017) *The Invention of Humanity – Educality and Cultural Difference in World History*, Cambridge: Harvard University Press.



Comparative study of difference in Need for Cognition between Individual with Normal Sight and Visually Impairment

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Abstract

'Need for Cognition', coined by Cacioppo & Petty (1982), is described as an individual difference confining people's tendency to be engaged in and enjoy effortful cognitive activity. The present study was conducted to find whether there is a difference in the Need for Cognition of sighted and visually impaired individuals. It was hypothesized that there is no difference in Need for Cognition score between visually impaired and sighted students. 30 individuals with normal sight were compared with 30 matched individuals with different visual impairments on their need for cognition using the Cacioppo & Petty's (1982) Need for Cognition Scale. *t*-test was conducted to study the difference and *t* value was found to be significant.

Keywords: Need for Cognition, sighted individual, visually impaired individual

Introduction

Visual perception is one of the important cognitive functions which help an individual to interpret the stimuli around them. It plays an important role in the development of many other cognitive processes (Hupp, 2003) like problem-solving, thinking, reasoning, etc. Human eye makes it possible to access a large range of information available in our surrounding (Mishra, 2013) and helps us to be aware and knowledgeable of the physical world around us.

However, there are many people in the world who lack this ability to see the world. This inability to see results to them being unable to receive or limited ability to receive information through one of the various sense organs. This sensory deprivation produces frustration, anxiety, adjustment problems, social isolation and various other personality and behavioural issues. Individuals with all senses intact also face these problems. However, poor eyesight or visual challenges may intensify these reactions (Mishra, 2013).

Studies have compared individuals having visual impairments with those having normal sight across different psychological aspect. Individuals with visual impairments have been found to have poor self-concept and ego-strength (Mishra, 2013). Visually challenged adolescents have mixed emotions that are feelings of helplessness, confusion, disbelief, powerlessness, fear, shamefulness and anxiety. They generally consider themselves as inferior beings (Fitchen et al., 1991).



They show poor emotional, social and educational adjustment than sighted individuals and consider themselves as a cause of problems to others like their family and teachers. (Thahane, et al., 2005). In comparison to sighted adolescents, visually challenged students consider themselves as physically less attractive and less popular among their peers and are hence less satisfied and unhappy with themselves (Halder and Datta, 2012).

Visual challenges pose difficulties in psychosocial as well as academic achievement of students. One of the factors that could possibly be influencing these academic and psychosocial difficulties is their need for cognition. It was Cacioppo & Petty (1982) who proposed and explained the concept of Need for Cognition (nCogn). It is described as an individual difference confining people's tendency to be engaged in and enjoy effortful thoughts. People high in need for cognition were theorized to seek and reflect on information to impose meaningful structure on events. Such types of people are termed as "chronic cognizers". They have a tendency to engage in cognitively challenging activities without external motivation as they love cognitively taxing activities. As opposed to this, people low in need for cognition was hypothesized to rely on low-effort heuristics and the views of others to impose the structure called as "cognitive misers". They prefer to involve in cognitive tasks only when they have a good reason to do so.

Studies have shown beneficial effects of high need for cognition. Individuals with a higher need for cognition are more successful in solving the problem (Hepper, Reeder, & Larson, 1983; Huli & Aminbhavi, 2014), collects information and made decisions on more aspects of the problem, and faced fewer crises during the process (Nair and Ramnarayan, 2000). College students high in need for cognition reported greater satisfaction. (Coutinho & Woolery, 2004; Huli & Aminbhavi, 2014).

Need for Cognition is associated with educational success in various ways. It plays an important role in an intrinsic motivation to engage in reading complex information (Juric, 2017), academic achievement (Sadowski & Gulgoz, 1992) and is a significant predictor of intellectual task performance (Coutinho, 2006).

Experiential evidence suggests that the lower academic achievement and the psychosocial difficulties of students with visual challenges may be partially related to their low need for cognition. It was hence decided to test a null hypothesis and find out whether there is any significant difference in the need for cognition among individuals with visual impairment and those with normal sight. This will help in further understanding the nature of the need for cognition and factors influencing it.

Methodology

Aim:

To study the difference in need for cognition between individuals with normal sight and individuals with visually impairment.

Hypothesis:

There is no difference in need for cognition score between visually impaired individuals and sighted individuals.

Samples:

The research participants' were 30 students with visually impairments (partial and total) from various educational institutions individuals. Visual impairment may be defined as "blindness in one or both eyes or the inability to read regular newspaper print, or report of any other trouble seeing even when wearing glasses or contacts" (Hupp, 2003). These participant's need for cognition was compared with another sample (N=30) of the same institutions, with the same educational background and of the same age-group. In order to have an equal gender representation there were 15 females and 15 males in each group. The age group of these samples was 18 to 25 years old.

Tools:

Cacioppo, Petty & Chuan Feng Kao's (1982) Need for Cognition Scale was used. The original Need for Cognition scale was created by Cacioppo and Petty (1982) which consisted of 34 items. Two years later, Cacioppo and Petty collaborating with Chuan Feng Kao (1984) developed short form of that scale which consists of 18 items. Example items are "I would prefer complex to simple problems,"

The 18-item version of the Need for Cognition Scale (Cacioppo, Petty, & Kao 1984) is a nine-point Likert scale anchored by “strongly disagree” and “strongly agree”. The participants are required to rate the extent to which they agree with each statement about the satisfaction they gain from thinking. There are some item such as “I prefer complex to simple problems” which have direct scored and some items such as “Thinking is not my idea of fun” which have reverse scored. The score on need for cognition scale is the sum total of all the 18 statements. High scorers are likely to be able to process and systematize information, and the ability to choose important from irrelevant (Cacioppo & Petty, 1982, 1984).

Procedure

A randomized group design was used in the present study. The Need for Cognition scale was administered to all the participants of both the groups under normal testing conditions. For the participants with visual impairments, the instructions and items from the scale were read out to them and the reader recorded their response for the same. The mean need for cognition for the two groups was calculated and t-test was used to find out whether there is a significant difference in the two groups with respect to this cognitive element.

Results and Discussion

The study was conducted to find out the difference in Need for Cognition between individuals with normal sight and individuals with visual impairment using a randomized group design. The mean score for Need for Cognition was compared for the two groups.

Table 1 shows the comparative analysis of the two groups with respect to Need for Cognition scores.

	Visually Impaired Individuals	Normal Sight Individuals
Total	1756	2004
Mean	58.53	66.8
Range	33	25
SD	8.37	7.12

As shown in Table 1, the mean need for cognition score was found to be higher for the individual with normal sight (66.8) than for the individuals

with visual challenges (58.53). Although the range was slightly higher for visually group range (33 for visually impaired group and 25 for the sighted group), the SD of the two groups (8.37 for visually impaired group and 7.12 for the sighted group) were comparable. Thus, the scores of both the groups may be described as similar in variability for both the group.

With calculated t-value where $t(58) = 7.66, p < 0.01$, suggests that there is a significant difference in the two groups with respect to their need for cognition. Individuals with visual impairments reported a low need for cognition in comparison to their matched counterparts with normal vision.

Thus, in comparison to adolescents with normal visual, those with visual impairments are less likely to engage in and enjoy effortful thoughts. They are less inclined towards investing their energy in trying to figure out indepth meaning of any situation and are more likely to rely on low-effort heuristics. This suggests that visual impairments are associated with low intrinsic motivation to engage and cognitively challenging activities and would require external motivation example praise, incentives, rewards to undertake such activities.

Need for cognition is influenced by various biological, psychological and social factors. The low need for cognition in individuals with visual impairment may be understood in light of their poor psychological resources brought about by high level of frustration, poor self-concept, lack of motivation that is seen among students with visual challenges.

The different socio-cultural factors strongly influence the development of need for cognition. Children with disabilities are often neglected in the Indian society and are considered as a burden (Ghai, 2002 & Halder, 2008, 2009), causing such children to experience feelings of inadequacy. There is either too much of expectations or no expectations at all from such children, causing poor motivational state to engage in cognitively effortful thinking.

Another reason that contributes to their poor self-esteem is other people’s reaction to their disabilities. The general disappointments and sadness lowers their self-concept. This may be another factor contributing to low need for cognition among adolescents with visual impairments.



Education and educational institutions play a very important role in need for cognition. The low need for cognition in this group of adolescents also needs to be seen in light of the teaching-learning process that the students with visual impairments in India are exposed to. This is because school is one of the most important factors that influence our thinking style.

In Maharashtra, till 7th grade most of the children with visual impairments primarily go to a special school for students with visual impairment which fosters dependence on others for educational progress and less emphasis on empowering them with technological advances that brings about greater autonomy and mastery. Lack of mainstreaming and integration at the early stage of education and being exposed to more traditional and less flexible ways of teaching and learning process lowers the motivation of students with such impairments to engage in a more effortful thinking process. Failure to inculcate this at the early stages of education, perhaps results to difficulties in enjoying such activities even when they are exposed to it at the college level, which is characterized by mainstreaming and integration efforts.

Conclusion

The finding of the present study shows that there is a significant difference in the two groups with respect to their need for cognition. Individuals with visual impairments reported a low need for cognition in comparison to their matched counterparts with normal vision.

Implications

The study suggests lowered need for cognition among students with visual challenges, This may be understood in light of their psychosocial conditions. The study thus suggests that measures should be taken to enhance the need for cognition among students with visual challenges. This would involve measures taken at the home, school as well as society level so as to enhance the psychosocial resources of individual's with visual challenges. A more sensitive yet motivating and challenging environment provided by family, teachers and society may be helpful in fostering the psychosocial resources required for the development of need for cognition,

Limitations of the study

The finding of the study should be seen in light of its limitations. The conclusion is based on small sample size and that too from a single institution. Thus, the study may be extended to a large sample studying in different institution to get the better results. The experiences of students with partial and total visual challenges are different in several respects. Further studies may be required to study whether there is a difference in the need for cognition depending upon the level of impairment. Need for cognition is influenced by personality factors as well as intellectual factors. The present study did not control these factors, In order to generalize the result of the study; such type of research can be replicated in different state and also across different age groups. Comparison of need for cognition among students exposed to traditional teaching –learning process with those exposed to innovative methods may be required to further support the role played by educational institutions in development of the need for cognition.

References

- Cacioppo, J., & Petty, R. (1982). The need for cognition. *Journal of Personality And Social Psychology*, 42(1), 116-131.
- Cacioppo, J., Petty, R., & Kao, C. (1984). The efficient assessment of need for cognition. *Journal of Personality Assessment*, 48, 306-307
- Coutinho, S. (2006). The Relationship between the Need for Cognition, Metacognition and Intellectual Task Performance. *Educational Research and Reviews*, 1(5), 162-164
- Coutinho, S., & Woolery, L., (2004). The need for cognition and life satisfaction among college students. *College Student Journal*, 32 (2), 203-206.
- Fichten, C.S., Amsel, R., Robillard, K., & Tagalakis, V. (1991). Thoughts about encounters between non-disabled and disabled peers: Situational constraints, states-of-mind, valenced thought categories. *Cognitive Therapy and Research*, 15(3), 345-369.
- Ghai, A. (2002). Disabled Women: An excluded agenda of Indian Feminism. *The Journal Hyptia*, 17 (3), 49-66.

- Halder, S. (2008). Rehabilitation of Women with Physical Disabilities in India: A Huge Gap. *Australian Journal of Rehabilitation Counselling*, 14(10), 1-15.
- Halder, S. (2009). Prospects of Higher Education of the Challenged Women in India. *International Journal of Inclusive Education*, 13(6), 633-646.
- Halder S. and Datta P. (2012) Insights into Self-Concept of the Adolescents Who Are Visually Impaired in India. *International Journal of Special Education*, 27(2), 86-93
- Heppner, P. P., Reeder, B. L., & Larson, L. M. (1983). Cognitive variables 127 associated with personal problem-solving appraisal: Implications for counseling. *Journal of Counseling Psychology*. 30. 537-545.
- Huli, P. & Aminbhavi, V. (2014). The Impact of Need for Cognition on Life Satisfaction of P.G. Students. *IOSR Journal of Humanities and Social Science*, 19(4), 11-16.
- Hupp, G. (2003). *Cognitive Differences between Congenitally and Adventitiously Blind Individuals* (Doctor of Philosophy). University of North Texas
- Juric, M. (2017). The role of the need for cognition in the university students' reading behaviour In *Proceedings of ISIC, the Information Behaviour Conference, Zadar, Croatia, 20-23 September, 2016: Part 2. Information Research*, 22(1), paper isic1620). Retrieved from <http://InformationR.net/ir/22-1/isic/isic1620.html> (Archived by WebCite® at <http://www.webcitation.org/6oGe1A1gl>)
- Mishra, V. (2013). A Study of Self-Concept In Relation to Ego-Strength of Sighted and Visually Impaired Students. *International Journal on New Trends in Education and Their Implications*, 4(1), 203-207.
- Nair, K. & Ramnarayan, S. (2000). Individual Differences in Need for Cognition and Complex Problem Solving. *Journal of Research in Personality*, 34(3), 305
- Sadowski, C., & Gulgoz, S. (1992). Association of Need for Cognition and Course Performance. *Perceptual And Motor Skills*, 74(2), 498.
- Thahane, L., Myburgh, C. & Poggenpoel, M. (2005). The Life-World of Visually Impaired Adolescents: An Educational Guidance Perspective, *Education*, 125(3), 393



REBT in Resilience Building among Adolescents

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Abstract

Resilience is the tendency to bounce back after a stressful event. Building resilience among adolescents is a very powerful way of helping them to deal with the present life since resilience is one of the important protective factors. Several programs are developed to promote resilience. The present study focused on studying the role played by restructuring the cognitions in building resilience amongst adolescents. Rational Emotive Behavioral Therapy (REBT) was used on a group of adolescents to study its effect on resilience. A controlled group study was conducted amongst adolescents to understand the role of REBT to build resilience among adolescents. 34 participants who enrolled into the REBT course were compared on resilience before and at the end of the course. The scores of the experimental group were compared to a matched group of adolescents who served as control group. T-tests were conducted to know if there was a statistical significant difference in the resilience of the experimental group with that of the control group and also to compare the resilience score of the pre and the post condition. REBT produced significant increase in the resilience among adolescents. The study thus provides an encouraging role of REBT in building resilience.

Keywords: REBT, Resilience

Introduction

Adolescence stage is characterized by exposure to different challenging situations on one hand and on the other hand, limited experience to handle these problems. Very often an adolescent responds to such challenging situation by giving an overwhelming response, at times even with a response that interferes with different aspects of their lives like educational, social and personal life.

Psychological interventions work towards treatment, maintenance as well as prevention of these disturbances and enhancing well-being. While Primary enhancement aims at improving the functioning secondary enhancement involves going still further and bringing about optimal well-being. These interventions aim at building different protective factors and strengths that helps an individual to face challenges without developing maladaptive consequences.

A very important strength, building of which is found to be helpful in facing negative situations, is resilience. Resilience means positive adaptations shown by human beings when they are exposed to adverse situations in life. It is an individual's capacity to revert back from negative events in life in a successful manner. This characteristic is very important in helping an individual to manage the different stresses in one's life.

Research has shown that fostering resilience among adolescents may be very beneficial. It helps people face and manage negative life events.

It improves the coping strategies (Steinhardt and Dolbier, 2010), prevents negative emotional reactions like depression, anxiety and aggression (Reivich and Gilham, 2010) and in dealing with psychological disturbances. (Woodier, 2011) It also enables an individual to carry on despite of the barriers in one's life (Bonanno, 2004) with minimal damage to physical and mental health (Rutter, 1985; Yi. et. al., 2008). In case of unavoidable challenges it enables an individual to accept events that cannot be changed (Bonanno, 2004).

The above benefits suggest that resilience building is an important protective factor. However the level of this protective factor is not the same in every individual. One's biological, psychological and social factors interact to determine the level of this protective factor.

Resilience researchers have developed different programs for the development of this protective resource. These programs work with the goal to develop the psychological and social resources that enhance resilience. The psychological resources consist of positive self-concept, sense of independence and the belief that one can competently manage the barriers created by external forces. The social resources consist of capacity to build healthy relationship with others and to draw support from others when required. (Baumgardner & Crothers, 2009). The various programs that are developed to enhance resilience help individuals to develop these necessary psychosocial resources.

The resilience enhancement programs follow different models to build resilience. Some programs like that by Reivich and Shatte (2002) work towards understanding of barriers in the path of resilience development, identifying the irrational thoughts underlying the barriers and thereby helping the individual to build resilience. On the other hand Mooney and Padesky (2000) believed that rather than focussing on what is not right it would be more effective to building new skills that foster resilience. Hence they suggested focussing on construction of beliefs and behaviours that helps in developing psychological resilience.

Present study aimed at understanding the role played by group counselling based on Rational Emotive Behavioral Therapy in building resilience

amongst adolescents. It incorporated both the models and aimed at building resilience by restructuring the irrational beliefs that blocks the development of resilience and also building resilience-developing cognitions.

Rational Emotive Behavioral Therapy focuses on the cognitive element. It helps an individual to change maladaptive behaviour like anxiety and depression by identifying the underlying maladaptive irrational belief pattern, and replacing them with a more functional, rational and adaptive one (David D, 2003)

As stated by REBT, maladaptive emotional and behavioural reactions are the result of (1) difficulties in tolerating frustrations (2) magnifying the problems in one's and/or (3) drawing conclusions which are global rather than specific. These maladaptive reactions may be altered by replacing the cognition with: flexible preference, motivational relevance, and acceptance. (David 2003) Individuals who experience distress also demonstrate difficulties in tolerating dissatisfying situation, catastrophizing cognitions and a tendency to evaluate situations globally. Replacing these with a more flexible preference, motivationally relevant response and acceptance of situations that cannot be changed, will enable an individual to face adverse situations with more adaptive reactions. These features of REBT suggested that it may be helpful in building resilience among adolescents.

REBT has been used to deal with various human problems and in improving psychological health and well-being. Principles of REBT promote an understanding of stresses of one's life through the ABCDE model, facilitates analysis of the irrational cognitions that promote and maintain the distress level, enables replacing those irrational cognitions with a more rational and adaptive ones and helps an individual to respond in a more adaptive manner. Elegant REBT further enables positive adaptation to stressful situations and rebound from such experiences without mental scars. REBT may thus help in not only identifying obstacles to resilience but also in building psychological, social and spiritual resources required for enhancement of resilience. Several recent researches have also shown that REBT and the concept of resilience have many



similarities.(Dryden, 2007; Neenan, 2009; Fletcher and Sarkar, 2013)

The present study hence was undertaken to study the effectiveness of REBT therapy in building resilience among adolescents.

Methodology

Purpose

Present study was undertaken to evaluate the role played by REBT in development of resilience among adolescents.

Hypothesis

It was hypothesized that REBT facilitates resilience building among adolescents.

Sample

34 adolescents who voluntarily registered for a short-duration course on basic REBT conducted by an educational institution formed a part of this study. The sample consisted of 33 females and 1 male participant. The age of the participants ranged from 18 to 20 years. The mean age was 19.4 years. The resilience scores of these individuals forming the Experimental group was compared with 34 students comprising of another group of adolescents from the same institution of the same age range, who were not a part of this course.

Instrument

Resilience was measured using Resilience Scale constructed by Wagnild and Young (1993). This scale consists of 25 items to which the participants have to respond using a 7 point scale ranging from disagree (1) to agree (7). The responses are summed up to derive the resilience score for the participant.

Procedure

The sample included in the study involved participants who voluntarily enrolled into the basic REBT course conducted annually by an educational institution. The data was collected over a period of 2 years. It was an 8- session course conducted over a span of one month.

The course involved helping adolescents to understand the stress and psychological and social barriers to reliance based on the REBT. It focussed

on building the skills to understand the difficulties and problems of their lives in terms of the ABCDE model, understand and analyse the role played by the maladaptive beliefs patterns in those situations and modification of the maladaptive reactions and responses to those difficulties. Elegant REBT focussed on further empowering the individuals with cognitive and behavioural responses that enhances resilience to future situations.

Resilience was measured at two points, once in the beginning of the course (pre-intervention) and then at the end of the course (post-intervention)

The mean resilience scores of the participants in the REBT course was compared to a group of 34 adolescents of the same institution.

Results and Discussion

Table showing resilience of the two groups under the two conditions

Groups	Pre- Intervention	Post- Intervention
E.G	92.1	126.12
C.G.	96.34	98.76

As seen in the table the mean score on Resilience Scale of the Experimental group and the Control group was found to be 92.1 and 96.34 respectively during the pre-intervention condition. T-test was conducted to know whether the two groups differed in the resilience score significantly. The calculated t-value of 0.94, was not statistically significant. This suggested that the two groups of adolescents were comparable in the resilience, in the pre-intervention stage.

After the 8-session course on REBT, resilience was again measured using the Resilience scale. The mean scores on the Resilience Scale of the two groups of participants were 126.12 for the Experimental group and 98.76 for the Control group, after the intervention. The data thus suggests that the resilience of the participants in the Experimental group not only showed an increase over their scores in the pre-intervention scores but also greater resilience as compared to the Control group participants. T-value was calculated to determine whether the resilience scores of the participants from the two groups showed statistically significant

difference. The calculated t-value of 5.34 ($p < 0.05$) suggested a statistically significant difference in the resilience score between the pre-intervention and post-intervention scores of the E.G. T-test was also conducted to compare the resilience scores of the two groups of participants in the post-intervention stage. The calculated t-value of 6.13 ($p < 0.05$) suggested that the resilience of the participants in the E.G. was significantly higher than that of the participants in the C.G.

The data is suggestive of the positive impact of REBT in building resilience among adolescents. The role of REBT in building resilience may be said to be multi-fold. Firstly, it helps the adolescents to realize that the problems and stresses in their life (antecedent events) are neutral and that it produces stress reaction due to the intervening irrational thoughts. Secondly, it equips the adolescents to use different methods of disputations for their irrational beliefs. Thirdly, the different rational beliefs worked to inoculate the adolescents from future stress reactions.

Other studies too have shown positive effect of use of REBT on resilience. Study by Mahmoud (2013) used REBT along with Art Therapy and found an increase in self-reported resilience. Deen (2017) also reported that using REBT amongst squash players produce increased resilience qualities.

Challenging and adverse situations in life cannot always be avoided. Death of near and dear ones, failure in different areas of life, personal and social losses are some of the major problems in the life of an adolescent. Rational beliefs related to the negative events in one's life help an individual to undertake positive emotional and cognitive coping strategies as well as adaptive reactions to such events. Understanding that it may happen to anybody and everybody helps them to prevent awfulizing and build tolerance to frustration. As a result it promotes frustration tolerance which enhances resilience in face of future stressful conditions. (David, Freeman, & DiGiuseppe, 2010)

One of the important problems experienced by adolescents in the present study was that of acceptance. Their experience of stress revolves around their need to be accepted by others and difficulties in accepting others and events in their lives. REBT promotes three major forms of

unconditional acceptance – Acceptance of oneself, others as well as life. These forms of acceptance help an individual to embrace life with its positive and well as negative aspects (Ellis, 2001 Ellis and Harper, 1997.) It also motivates an individual to undertake self-directed growth in areas that are of importance to them. Helping the adolescent to analyse the irrational beliefs related to their difficulties helping in building awareness that they were held due to irrational beliefs related to masturbation and awfulization. Using the different methods of disputation enabled them to replace those irrational thoughts with more rational and unconditional acceptance.

Another element of REBT that facilitates resilience building is the role played by Elegant REBT. The principles of Elegant REBT equip adolescents with rational coping statements and a spiritual attitude. It empowers adolescents to undertake more purposive actions and develop social interest.

Thus REBT works at different levels --- cognitive, emotional, social and behavioural to build the different physical, emotional, social and cognitive resources necessary to build resilience. Its effect is not only therapeutic but also prophylactic.

Conclusion

REBT may provide a promising role in building resilience among adolescents. It equips adolescents with the skills to analyse their stress behaviour, identify the irrational thoughts and actively engage in disputing the irrational thoughts. It also fosters modification of the irrational thoughts and making it more rational. Through these skills it improves an adolescent's reactions to stresses in their life. It equips an adolescent with resources that helps them in dealing with the barriers to resilience and also in enhancing the necessary psychological and social resources that enhances resilience. Thus REBT based resilience building program may be seen as an effective primary as well as secondary intervention for promoting psychological health among adolescents.

Limitations

The conclusion needs to be considered in light of some of the limitations of the present study.



The study was conducted on a small sample of adolescents coming from a single institution of India. This limits the generalizability of the study. Also the study involved majorly female participants. The study did not control for any personality variables such as psychological well-being of the participants and external events experienced by the participants. Thus further research is necessary with a larger sample and across different genders. Also the present study focused on short-term effect on resilience. A long-term study may be required to study the long-term effect of REBT on resilience.

References

- Baumgardner, S. & Crothers, M. (2009) Positive Psychology, Upper Saddle River, NJ: Prentice Hall/ Pearson Education.
- Bonanno GA Loss, trauma and Human Resilience. Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist*, vol.59, no.1, 2004, pp.20-28.
- David D. (2003) Rational Emotive Behavior Therapy (REBT): The View of a Cognitive Psychologist. In *Rational Emotive Behavior Therapy: Theoretical Developments*, Edited by Windy Dryden, New York: Brunner-Routledge, pp.130- 159
- David D. Freeman A., & Di Giuseppe R. (2010) Rational and Irrational beliefs: Implications for mechanisms of change and practice in psychotherapy, In *Rational and Irrational beliefs: Research, theory and clinical practice*. Ed. D David, S.J. Lynn and A. Ellis, New York: Oxford University Press, pp 195-217
- Davis, NJ., (1999) Resilience: Status of research and research-based programs. Working paper, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Retrieved from <http://resilnet.uiuc.edu/library.html>
- Deen S. (2017) The Effects of REBT and the Use of Credos on Irrational Beliefs and Resilience Qualities in Athletes, *Sport Psychologist*, 10, 2016-2037
- Dryden, W. “*Resilience and Rationality*”, *Journal of Rational Emotive and Cognitive-Behavior Therapy*, vol.25, no.3, 2007, pp.213-226.
- Ellis, A. (2001) *Feeling Better, Getting Better, Staying Better: Profound Self-Help Therapy for Your Emotions*, Atascadero
- Ellis, A. and Harper RA. (1997) *A guide to rational living*. North Hollywood, CA: Melvin Powers.
- Fletcher, D. & Sarkar, M. (2013) Psychological resilience: A review and critique of definitions, concepts and theory, *European Psychologist*, 18, 19- 23.
- Mahmoud R (2013) The effect of integrating Rational Emotive Behavior Therapy and Art Therapy on self-esteem and resilience, *The Arts in Psychotherapy*, 40 (2), pp 179-184
- Mooney KA. & Padesky, CA. (2002) *Transformations and Resilience*, 24 hour workshop presented at Palm Desert, California.
- Neenan M. & Dryden W. (2009) *Understanding and Developing Resilience*. In *Cognitive Behavioral Coaching in Practice: An evidence based approach*, Eds. M. Neenan and Palmer, London: Routledge, 133-152
- Revich, K. & Gilham, J. (2010) *Building Resilience in Youth: The Penn Resiliency Program*, *Communique*, 38 (6), 17-19.
- Rutter M. (1985) Resilience in the face of adversity: Prospective factors and resistance to psychiatric disorder, *The British Journal of Psychiatry*, 147, 598-611
- Steinhardt, M. & Dolbier, C. (2010) Evaluation of a resilience Intervention to Enhance Coping strategies and Protective Factors and Decrease symptomatology, *Journal of American College Health*, 56(4), 445-453.
- Wagnild, G. & Young, H. (1993) Development and Psychometric Evaluation of the Resilience Scale, *Journal of Nursing Measurement*, 1 (2), 165-178.
- Woodier, D. (2011) *Building Resilience in Looked after Young people: A moral value approach*, *British Journal of Guidance and Counselling*, 39 (3), 359- 382.
- Yi, J.P., Vitaliano, P., Smith, R., Yi, JC, & Weinger, K. (2008). The role of resilience on psychological adjustment and physical health in patients with diabetes, *British Journal of Health Psychology*, 13, 311-325

Reflection of Trauma in Phillis Wheatley's Selected Poems

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Abstract

Psychological traumas are experiences that place a person's life or bodily integrity in jeopardy (Dass-Brailsford, 2007, p. 7). In modern medicine, diagnosis of psychological trauma follows a universally accepted system known as the International Classification of Diseases (ICD) and Diagnostic and Statistical Manual of Mental Disorders (DSM). The diagnoses that are most relevant to psychological traumas are categorized under Trauma and Stress-Related Disorders in the DSM-5. Some examples of subtypes under this disorder are Post Traumatic Stress Disorder (PTSD), Acute Stress Disorder (ASD) and Reactive Attachment Disorder. This research intends to highlight the evidence of traumatic stress disorders or more specifically, PTSD that can be detected through Phillis Wheatley's (1753-1784) poems. Her poems will be analyzed using the 8 criteria that exist in the latest revision on PTSD, the DSM-5. Following an exposure to a traumatic event, the DSM-5 further elaborates on 4 other symptoms that continue to be the basis of PTSD diagnosis. The 4 clusters of symptoms includes, intrusive recollection of traumatic event, avoidance of stimuli associated with traumatic event, negative cognitions and mood associated with traumatic event and hyper arousal associated with traumatic event. Although on the surface level, Wheatley's poems appear to be praising Christianity and supporting slavery for delivering the Africans from the pagan land (Mani, 2015, p. 75), a closer look will reveal that she has been suffering from PTSD. Wheatley was a slave woman who was given the opportunity to acquire the skills of writing and reading by her white owners. Unlike the modern times, where a patient suffering from PTSD can be easily diagnosed and noticed by the society, these Black slaves suffered in silence and no one noticed it. The only way to proof this is by studying the works of Black slaves which is very scarce because slaves were forbidden by law to acquire the skill of reading and writing. This study will further show how Wheatley developed psychological defense mechanisms which she exhibits through her poems to cope with the anxiety and stress that she and her fellow Blacks faced due to slavery.

Keywords: slavery, defense mechanism, trauma, PTSD, DSM-5, psychological.

Introduction

The term trauma originated from the ancient Greek word for injury or wound. It originally "connotes a physical injury and parallels the psychic wounding that can potentially follow a traumatic episode" (Dass-Brailsford, 2007, p. 5). It can refer to either physical or psychological trauma. Physical trauma means physical illness or injury which puts a person's life in jeopardy or causes a potentially irreparable damage to the body. Psychological traumas on the other hand are experiences that place a person's life or bodily integrity in jeopardy (Dass-Brailsford, 2007, p. 7).



Initially, psychological trauma was considered as an abnormal experience. Later on, it was redefined when epidemiological evidences demonstrated that a majority of adults (Kessler, Chiu, Demler, Merikangas & Walters, 2015) and a substantial minority of children (Costello, Mustillo, Keeler & Angold, 2004) were initially exposed to a traumatic event or events. Before World War 2 there was no single acknowledged diagnosis for the people who were experiencing distress after being exposed to an extreme psychological stressor or a traumatic incident. Several conditions such as the “railway spine” and the “soldier’s heart” which appear to reflect post-traumatic stress was described in medical literature in the nineteenth century (Ford, Courtois, van der Hart, Nijenhuis & Steele, 2005). In 1980, the American Psychiatric Association added PTSD to the third edition of its Diagnostic and Statistical Manual of Mental Disorders (3rd ed.; DSM-3; American Psychiatric Association [APA], 1980, p. 143) nosology classification scheme. The Diagnostic and Statistical Manual of Mental Disorders (DSM) is predominantly used at the United States and Canada by clinicians and psychiatrists to diagnose psychiatric illnesses. However, the International Classification of Diseases, Tenth Revision (ICD-10) is favored by the European countries. Although controversial when first introduced, the PTSD diagnosis has filled an important gap in psychiatric theory and practice.

Looking from a historical perspective, the significant change ushered in by the PTSD concept was the stipulation that the etiological agent was due to an external factor (e.g. a traumatic event) rather than an inherent individual weakness (e.g. a traumatic neurosis). The key to understanding the scientific basis and clinical expression of PTSD is the concept of “trauma”. The DSM-III diagnostic criteria for PTSD were revised in DSM-III-R (1987), DSM-IV (1994), and DSM-IV-TR (2000). A very similar disorder is classified in ICD-10 (The ICD-10 Classification of Mental and Behavioral Disorders: Clinical Descriptions and Diagnostic Guidelines) (WHO, 1992, p. 334). One important finding, which was not evident when PTSD was first proposed as a diagnosis in 1980, is that it is relatively common. Data from the National Comorbidity Survey Replication

recently indicated a lifetime PTSD prevalence rates of 3.6% and 9.7% among American men and women respectively (Kessler et al., 2005). Rates of PTSD are also much higher in post-conflict settings such as Algeria (37%), Cambodia (28%), Ethiopia (16%), and Gaza (18%) (De Jong et al., 2001, p. 286).

The latest revision on PTSD, the Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5; APA, 2013), has made a number of notable evidence-based revisions to PTSD diagnostic criteria. The DSM-5 consists of 8 criteria that need to be satisfied in order to diagnose a patient as having PTSD. These include exposure to a traumatic event (Criteria A), intrusive recollection (Criteria B), avoidance (Criteria C), negative cognitions and mood (Criteria D) and hyperarousal (Criteria E). The other three components in DSM-5, which are criteria F, G and H, will also assist in diagnosing PTSD and will be explained in depth later. So, in order to diagnose a person of having PTSD, the patient must be carefully interviewed by the doctor in person and all the criteria as stated in the DSM-5 or ICD-10 must be met.

This study intends to highlight the evidence of PTSD suffered by Phillis Wheatley (1753-1784) using the criteria in DSM-5, by detailed interpretation of her character and feelings which she expressed through her poems. Phillis Wheatley was a Black slave who lived in America in the middle of 18th century. She is often seen as the first Black woman writer in the United States. Wheatley’s poems appear to be praising Christianity and supporting slavery for delivering the Africans from the pagan land (Mani, 2015, p. 74) but a closer look at her poems will reveal that she has been suffering from PTSD. Wheatley was given the opportunity to acquire the skills of writing and reading by her white owners. Though she may have enjoyed a better life compared to her counterparts, she being a Black would have witnessed all the atrocities committed by the Whites onto her Black people. According to Caruth (1996), colonialism and trauma are inter-related. Trauma refers to “an injury inflicted to a body” (Caruth, 1996, p. 4). Colonization and slavery caused so much of trauma for the victims as many writers have written about the painful trauma faced by these people through their writings. In the case of black slaves

suffering from PTSD, however, this information is absent. This is because, slavery ended years ago even before a medical diagnosis of PTSD was introduced. Unlike the modern times, where a patient suffering from PTSD, can be easily diagnosed and noticed by the society, these Black slaves suffered in silence and no one noticed it. This study will show the traces of PTSD in her poems and how she justified the fate that befell her. The information left by slaves is very little as almost all of them did not know how to read or write. And what little information regarding them that is present today may not be even true as it was mostly written by their white masters. The only way to prove this is by studying the works of Black slaves which is of course is very limited because slaves were forbidden by law to acquire the skill of reading and writing. However, in rare incidences such as Phillis Wheatley where she was able to read and write, the absolute truth regarding what happened to her and what she felt is present in the writings that she left behind. However, these representations were all concealed behind her poetry and have to be analyzed to know how she really felt and subsequently relate her symptoms with those who are suffering from PTSD. This study will further show how Wheatley developed psychological defense mechanisms which she exhibited through her poems to cope with the anxiety and stress that she and her fellow Blacks faced due to slavery.

The Presence of PTSD using DSM-5 in Wheatley's Poems

The first criterion in DSM-5 (APA, 2013), the "A" or the stressor criterion refers to a person who has been exposed to an event involving actual or threatened death, a serious injury, or sexual violence to him/herself or others. A traumatic event can be experienced by either direct or indirect means. Wheatley has been directly exposed to a traumatic incident that could have started the PTSD. When she was about 8, she was taken on a slave ship called *The Phillis* to the British-ruled Boston, Massachusetts on July 11, 1761 (Odell, 1999, p. 9). She was then bought by a merchant named John Wheatley who assigned her to help his wife Susanna. Psychologically, such a traumatic event, which involves being separated from her parents at a very young age and put on auction,

would have definitely scarred her for life. Besides directly experiencing a traumatic event, an indirect exposure to a traumatic event such as getting to know about the violent or accidental death or execution of sexual violence to a friend or family member can also be a cause of PTSD. This indirect form of stressor could have affected Wheatley especially when she realized her fellow blacks were ill-treated as slaves.

Besides this, experiencing repeated or extreme exposure to horrific consequences of a traumatic event (e.g., police personnel being exposed to child abuse, body handlers, etc.) is also considered traumatic. In the case of Wheatley, she would have witnessed the harsh treatment towards the Blacks in the ship. Living with the White family as a slave, she was treated differently as compared to her counterparts. From the age of eight, she has been trained to follow orders. In short, she was trained to please the White masters. She was taught to read and write by the Wheatley's children, Mary and Nathaniel who actually fancied her abilities. Slaves were forbidden from learning to read and write. In some states, the penalties were very heavy. However, by the age of twelve, she was able to read Latin and Greek classics as well as the Bible. She wrote her first poem at the age of fourteen titled, "To the University of Cambridge, in New England". On the surface level, all the poems written by Phillis shows that she was indeed a very religious person. She has written mostly elegies to the white folks as well. Nevertheless, some of her poems express her happiness about being brought from Africa into the Christian society. The tone in most of her poems shows her thankfulness in being brought to the civilization and her exposure to Christianity. It also projects her thankfulness and obligations to Christianity.

This poem below was dedicated to the Right Honourable William, Earl of Dartmouth, His Majesty's Principal Secretary of State for North-America, & co. Lines 16–30.

Should you, my lord, while you peruse my song,
Wonder from whence my love of Freedom sprung,
Whence flow these wishes for the common good,
By feeling hearts alone best understood,



I, young in life, by seeming cruel fate
Was snatch'd from Afric's fancy'd happy seat:
What pangs excruciating must molest?
What sorrows labour in my parent's breast?
Steel'd was that soul and by no misery mov'd
That from a father seiz'd his babe below'd:
Such, such my case. And can I then but pray
Others may never feel tyrannic sway?

Through this poem one can see how traumatized she was when she was abducted from her parents as she vividly recalls her cruel abduction from her native land, Africa. She laments how her loss would have affected her parents (Mani, 2015, p. 74). Besides, several studies have shown that the risk of developing PTSD is significantly greater if a traumatic event/incident has taken place during childhood (Powers, Etkin, Gyurak, Bradley & Jovanovic, 2015). As in the case of Wheatley, she was only 8 years old when she was abducted from her homeland and separated from her parents. There is little or no example given pertaining slavery as a traumatic event predisposing towards PTSD, but we know now from the countless of studies done that slavery is definitely an event to be considered as traumatic in nature.

The "B" criteria or the intrusive recollection criterion includes symptoms that are the most unmistakable and readily identifiable symptoms of PTSD. For individuals with PTSD, the traumatic event remains for decades or sometimes, even a lifetime. These memories of these events are capable of evoking panic, terror, dread, grief, or despair. These emotions manifest themselves as intrusive daytime images of the event, traumatic nightmares, and vivid reenactments known as PTSD flashbacks (which are dissociative episodes). Furthermore, any stimuli that are related with the traumatic event can trigger recollections of the original event and have the power to evoke mental images, emotional responses, and physiological reactions associated with the trauma. Researchers have used this phenomenon to reproduce PTSD symptoms in the laboratory by exposing affected individuals to auditory or visual trauma-related stimuli (Keane, Wolfe & Taylor, 1987).

From Wheatley's poems, we can comprehend that the thought which was playing in her mind everyday was related to her condition as a slave.

The poems show that there is always a recurrent and intrusive memory of the traumatic event that she had experienced as a slave. In the poem titled, "On Being Brought from Africa to America (1773)", she clearly states the trauma of being a black. She feels that the Blacks were put into this pathetic condition due to their sins. It was time for their redemption now (Lines 5-8).

On Being Brought from Africa to America (1773)

'Twas mercy brought me from my pagan land,
Taught my benighted soul to understand
That there's a God, that there's a Saviour too:
Once redemption neither sought nor knew.
Some view our sable race with scornful eye'
"Their color is a diabolic dye."
Remember, Christians, Negroes, black as Cain,
May be refined, and join the angelic train.

When we examine the poem carefully, she seemed to have been brainwashed by her owners using the religion, making her believe how inferior she was. Lines 3 and 4, "That there's a God, that there's a Saviour too: Once redemption neither sought nor knew", clearly shows that the thought of slavery is always in her mind. Though she was always kept separated from the other slaves and was treated like a daughter, she never forgot her place in the society as she always requested for a side table for eating her dinner separately. This clearly shows that she was fully aware of her position that she does not fit in neither with the slaves nor the whites. It also shows that even after years of being a slave and being brainwashed by her masters, the intrusive recollections of the traumatic event still haunts her. Information regarding how these memories manifest, either through nightmares or vivid reenactments, is not present. However, whenever she has these recollections, she shows her despair and grief through her poems.

The "C" criteria or the avoidance criterion comprise of behavioral strategies that PTSD patients use in order to reduce the probability that they will expose themselves to a trauma-related stimuli. These patients additionally use these strategies in an attempt to minimize the intensity of their psychological response if they are exposed

to such stimuli. The behavioral strategies include avoiding any situation or thought which is likely to elicit distressing traumatic memories. This is evident in Wheatley's poem titled "To the Honorable Earl of Dartmouth", where she advocates America's fight for independence, which they obtained from Britain in 1774. It is ironic here because the Black slaves themselves were not free. Though she realizes this, she tries to avoid thinking about it. But the phrase "dread the iron chain" is subtly referring to her fellow Blacks.

To the Honorable Earl of Dartmouth (1772)

She shines supreme, while hated faction dies:
Soon as appear'd the Goddess long desir'd,
Sick at the view, she languish'd and expir'd;
Thus from the splendors of the morning light
The owl in sadness seeks the caves of night.
No more, America, in mournful strain
Of wrongs, and grievance unredress'd
complain,
No longer shalt thou dread the iron chain,
Which wanton Tyranny with lawless hand
Had made, and with it meant t' enslave the
land. (Lines 10-19)

This poem is an example of how Wheatley is succumbing to the DSM-5's third major criteria which is avoidance (APA, 2013). But according to Mani (2015) in her article titled "Racial Awareness in Phillis Wheatley's Selected Poems", Wheatley has subtly and cleverly indicated the freedom that was refused to her race. Mani (2015, pg. 77) reiterates that the phrase, "the greatness of the Statue of Liberty (Lines 5-12), that is supposedly to represent America's independence and freedom indirectly shows that Wheatley is aware of the unjust situation around her but chose to avoid it". Mani (2015, p. 74) adds, "By supporting the independence of America she is actually hinting that an enslaved community still exist in a free America". Wheatley here avoids thinking of the enslavement of her race by talking about the nation's freedom.

The next DSM-5's criteria are negative cognitions and mood which is Criteria D (APA, 2013). Symptoms included in this criterion reflect negative alterations in beliefs or mood that have developed after exposure to the traumatic event. Individuals with PTSD often have incorrect cognitions about

the consequences or causes of the traumatic event which drives them to point the finger at themselves or others. One of the symptoms under this criterion is the belief that one is not up to par, weak, or permanently changed for the worse since exposure to the traumatic event or that one's assumptions regarding the future have been permanently changed as a result of the event (e.g., "no one can be trusted", "nothing good can ever happen to me", "the world is completely dangerous", "I am bad").

In Wheatley's poems, she seemed to have accepted her misfortune as a black slave and blames her race for her suffering. Wheatley has grown up believing that Blacks were a cursed lot. She uses the biblical knowledge taught to her by her master, to relate the Blacks with the cruel son of Adam, Cain, who killed his own brother, Abel out of jealousy. From that incident, Cain was cursed by the Lord to shoulder his sins without salvation. This poem conveys a deep meaning to her race. In her poem, "On Being Brought from Africa to America" (Mani, 2015, p. 74).

On Being Brought from Africa to America (1773)

'Twas mercy brought me from my pagan land,
Taught my benighted soul to understand
That there's a God, that there's a Saviour too:
Once redemption neither sought nor knew.
Some view our sable race with scornful eye'
"Their color is a diabolic dye."
Remember, Christians, Negroes, black as
Cain,
May be refined, and join the angelic train.

The entire stanza shows how she had accepted her fate and the fate of her race. She says it was a blessing for the Blacks to be brought to America to experience the life of a slave as redemption for the past sin of Cain. It was an opportunity to refine these pagans and be sent back to heaven. This shows how negatively she thinks about herself and blames her race for the suffering they are enduring. Besides negative beliefs about the past, present and future, people with PTSD have a variety of persistent negative emotional states such as fear, anger, guilt, or shame. From the poem, we can see that she



has expressed her shame of being colored as she writes "Their color is a diabolic dye". Inability to remember an important aspect of the traumatic event (dissociative psychogenic amnesia) is also included in this criterion and involves forgetting the conscious experience of trauma-based memories and feelings. Other symptoms include diminished interest or participation in significant activities and feeling detached or estrangement from others. Finally, they are also unable to experience positive feelings such as happiness, satisfaction or love.

The "E" criteria specifies about marked alterations in arousal or reactivity associated with a traumatic event. Under this category, symptoms such as hyper vigilance and exaggerated startle response are characteristic. The hypervigilance in PTSD may sometimes become very intensified as to appear like frank paranoia. Other symptoms include irritable and angry outbursts which are expressed as verbal or physical aggression towards people or objects. Reckless and self-destructive behavior such as reckless driving, unsafe sex and suicidal behavior are newly included in DSM-5 (APA, 2013). Other symptoms in this criterion include problems with concentrating and sleep disturbance.

This criterion is difficult to find in her poems. This is because, as in the medical field, observations of these symptoms need to be done on the suspected PTSD patient. However, her anger on her condition as a slave can be seen in her poem, "On Being Brought from Africa to America (1773)" where she notes how people look at the Blacks as evil people and warns them that they too will attain salvation.

Some view our sable race with scornful eye'
"Their color is a diabolic dye."

Remember, Christians, Negroes, black as
Cain,

May be refined, and join the angelic train.

However, the "F" or duration criterion specifies that the duration of the disturbance must persist for at least one month before PTSD may be diagnosed and anything lesser, would change the diagnosis to acute stress disorder (ASD). This can be easily detected in her poems as all the poems written at different times (which mean more than one month period of time) seem to be talking about slavery.

The "G" or functional significance criterion specifies that these symptoms causes a clinically significant impairment in the patient's social, occupational, or other important areas of functioning while the "H" or exclusion criterion specifies that the symptoms are not due to the physiological effects of substance use or another medical illness. Therefore, due to insufficient information regarding her personal life, these two criteria cannot be used to analyze Wheatley's poems.

Although some of the extracted information from the poems are vague and some information required regarding her social life are absent, Wheatley's character as analyzed from the poems she has written satisfies most of the criteria in the DSM-5. Following such a traumatic incident and her symptoms she might have had as derived from her poems, it is safe to say she might have been suffering from PTSD. It's just that, a diagnosis of PTSD never existed in that era.

Wheatley and her defense mechanism to overcome PTSD

Defense mechanism is an unconscious process serving to provide relief from emotional conflict and anxiety. Sigmund Freud proposed a tripartite concept to explain how the human mind works. These were the interactions between the Id, Ego and Super-Ego which makes up a person's personality. To put things simple, Id is a set of uncoordinated instinctual trends; the Ego is the organized realistic part and the Super-Ego plays the critical and moralizing role (Snowden, 2006, p. 105). During an episode of anxiety, the ego can be overwhelmed in order to keep one's equilibrium. To avoid decomposition and to reduce the accompanying tension, the ego has to develop defense mechanisms which are often unconsciously utilized to tackle the stressful event. Anxiety and emotional conflicts were all part of slavery. Wheatley would have suffered a great deal of emotional conflict during her time as a slave and even after she was a free woman. Even when she was armed with the knowledge to write about her life as slave and the horrors her people were going through, she was unable to do so openly. This is because she was under the mercy of her masters to get her work published. Emotionally, she is torn between striving

for her people through her poems and at the same time, satisfying her master in order to get her work published.

Mani(2015, p. 74)writes that one “must understand that Phillis lived in an era where slavery was still legal andthat it was illegal for slaves to read and write”. She was at the mercy of her master to get her poem published. Thus, it doesn’t come as a surprise if the writings appear to be nothing but a bundle of praises for the white man’s culture, religion and their act of enslavement. Whatever repressed feelings she had, she could only show them in a subtle manner. Not only that, living with the Wheatley family, she was treated differently from the other slaves. She was treated like a daughter and given education when the rules at that time stated heavy penalty for providing slaves with education. But, at the same time, the other slaves that were working for her master and other white folks were not treated as specially as she was. Wheatley would have realized this. In midst of this, she would have suffered a great deal of internal conflict on whether the white folks were good or the black folks were bad. Due these emotional conflicts, she has exhibited a few notable defense mechanisms through her poem to help combat her anxiety.

Repression is the first defense mechanism used when ego is under threat. It is an unconscious blocking of unpleasant impulse, thought or feelings from awareness. The level of “forgetting” in repression can fluctuate from a temporary nullification of uncomfortable thoughts to a high level of amnesia, where events that causes anxiety are buried very deep within. For example, a child who is constantly abused by a parent later has no memory of the event, but has difficulty forming relationships in the future or a woman who found labor particularly painful continues to have children (and each time she does so, the level of pain is surprising). In the case of Wheatley, this primary defense mechanism is not seen in her poems. Instead of just forgetting about what happened in the past she continues to dwell about it and writes about her fate as a slave in her poems.

The other defense mechanism is denial which is an unconscious refusal to accept the existing truth or reality. It is a relatively common defense mechanism used by all of us. The most common occasion for

denial is death. When someone finds out of the sudden, unexpected death of a loved one, he or she may not be able to accept the reality of this loss. The initial denial of this situation acts to shield that person from the intense grief and emotional shock that often accompanies the news of death. Other examples are like a person who is diagnosed with cancer, who leads an active life and acts as though he is healthy (Omar & Che Bakar, 2015, p. 100). In the poem, “On Being Brought from Africa to America”, Wheatley writes in denial that her abduction from Africa by the whites is not for cruel intentions. She accepts her position as a slave and says that her race is cursed. She says whites have introduced Christianity to her for her own benefit and to make her better. This is an unconscious act of where she copes her stress and anxiety of being slave by denying that slavery was ever a bad thing. However, some writers believe that there is a deeper meaning in her poems (Mani, 2015, p. 74). But from the medical point of view, she lived in denial.

The next stage of defense mechanism is the Reaction Formation which occurs when an individual feels an urge to do or say something and then actually does or says something that is the opposite of what they really wanted. It also appears as a defense against a feared social punishment. If an individual fears that they will be criticized for something, he or she very visibly act in a way that shows that the person is personally a long way from the feared position. A typical example is when an individual offers exaggerated kindness or friendliness to someone they actually dislike. All of Phillis Wheatley’s poems have always shown that she was a very religious person. She has written mostly elegies to the white folks who took her from her native land. The tone in most of her poems shows her happiness in being brought to the civilization and her exposure to Christianity (Mani, 2015, p. 75). It also projects her thankfulness and obligations to Christianity. Because she fears being criticized by the white society, she shows excessive piety and happiness in her poems when actually, her true intentions were to express the horrors of slavery.

Rationalization is a defense mechanism that involves giving or offering a false but an acceptable explanation for an unacceptable behavior, thought



or feeling (Omar & CheBakar, 2015, p. 101). This defensive maneuver is frequently called “making excuses.” People who rationalize know to a certain level (conscious or unconscious) that they have done something rash or foolish and therefore come up with a reason (or many reasons) for why they felt or behaved as they did. For example, a man who had cheated on his wife and wouldn’t want to confess may state, “Telling her would hurt her even more” in order to make himself feel less guilty about his dishonesty (while the real reason is that he’s afraid she would leave him). Or a person who applies for a job but doesn’t get it may state, “I didn’t really want that job anyway,” in order to avoid feelings of disappointment and rejection. This is clearly seen in Wheatley’s poem where she rationalizes her peoples suffering as slaves by writing that they were the descendants of Cain and so they were cursed. In order to save them from their cursed lives, white men took them as slaves and introduced Christianity.

Fantasizing is also used as a defense mechanism when one cannot accomplish or do something that they want, so they channel the energy created by the longing into fantastic imaginings because fantasy provides temporary relief from the general stresses of everyday living. For example, a man who is attracted to a woman but realizes that she is beyond his league fantasizes about seducing her or a boy who has been punished by his teacher creates fantasies of shooting the teacher. Wheatley shows her racial awareness through some of the elegies she wrote discussing freedom through the imaginative world. She uses poetry to escape to a world of imagination.

Passive Aggression is a method used to cope with stress by the means of ‘attacking’ others through passive means. In this way, the aggressive intent is masked by the passive method. Passive aggression is often seen when an individual is asked to accomplish something which they want to avoid for some reason. By appearing to agree to the task but not making any real commitment, they can avoid the action. The “aggressive” portion of passive aggression is that when a person agrees to do something (in a situation where they are often unable to say no) they resist in more subtle way, creating problems while appearing to collaborate. For example, when a person in a meeting is asked to do something which

they do not want to, they will talk a great length about it, discussing the importance and difficulties in completing the task. At the end of the meeting, they would have still not agreed to do anything. Wheatley, in her position as a slave and under the mercy of her masters would not have been able to aggressively defend her rights. Instead, she uses a more passive approach to creating awareness about slavery by indirectly writing about it in her poems. In the poem, the phrase, “dread the iron chain” reflects her passive aggression. Since only the Black slaves are chained, these lines definitely refer to her race. She subtly voices her disapproval against slavery of the fellow Blacks in the poem, “To the Honorable Earl of Dartmouth (1772)” where in lines 10-19, she clearly talks about the freedom of the Blacks and not America from the hands of the Britain. The statue of liberty, “Sick at the view, she languish’d and expir’d” (line 13) is actually sick with the attitudes of the Whites against the Blacks.

To the Honorable Earl of Dartmouth (1772)

She shines supreme, while hated faction dies:
Soon as appear'd the Goddess long desir'd,
Sick at the view, she languish'd and expir'd;
Thus from the splendors of the morning light
The owl in sadness seeks the caves of night.
No more, America, in mournful strain
Of wrongs, and grievance unredress'd
complain,
No longer shalt thou dread the iron chain,
Which wanton Tyranny with lawless hand
Had made, and with it meant t' enslave the
land. (Lines 10-19)

Though these lines seem to be singing the independence of America, however the ‘iron chain’ and ‘lawless hand’ definitely refers to the institution of slavery (Mani, 2015, p. 75). Her aspirations for freedom from the institution of slavery are cleverly weaved through these lines.

Sublimation is another type of defense mechanism where it involves transformation of unwanted impulses, into something less harmful. This can either be a distracting release or may be a constructive and valuable piece of work. When we are faced with uncomfortable thoughts, we create psychic energy which has to go somewhere. Sublimation helps channel this energy away from

destructive acts and into something that is socially acceptable or creatively effective. Examples would be like when a person has an obsessive need for control and order he channels his energy in becoming a successful business entrepreneur. An individual with strong sexual urge diverts his needs and energy into art and becomes an artist. A surgeon who is aggressive and has a deep desire to cut people instead turns his urge into life-saving acts. Wheatley channeled her traumatic life experiences and all the unwanted impulse she was bombarded with by the society, into poems of great meaning. Subtly, she fought with her inner desire to voice out about her unhappiness through poetry.

Conclusion

Today, PTSD can be traced in the works of many African American writers. However, these works were produced by the descendants of the Black slaves. They can merely imagine and relate the experiences of their ancestors in the United States of America. Analyzing Phillis Wheatley's poems which were written some two centuries ago, gives the first hand information on the condition of the Black slaves and how Wheatley herself had suffered from PTSD and the defense mechanism that she used to cope with the trauma. Today, Phillis Wheatley (1753-1784) is considered as the first prominent Black writer in the United States to publish a book of imaginative writing. She is also the first to start the African-American literary tradition, as well as the African-American women literary tradition. Her work was published in the collection, *Poems on Various Subjects* (1773) and in various other magazines (Mani, 2015, p. 74). The second volume existed in manuscript but it was not published and was subsequently lost. Phillis would later travel to England where she would obtain her freedom and was much admired by the society. However, she eventually dies in poverty. Analyzing Phillis Wheatley's poems gives the first hand information on the trauma faced by a slave woman. This opens rooms for further studies on Black slaves' writings and trauma faced by these people during the period of enslavement. This paper also gives a further understanding on why African American writers like Toni Morrison still harp on the issue of slavery.

References

- American Psychiatric Association (1980). *Diagnostic and statistical manual of mental disorders*, (3rd ed.). Washington, DC.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders*, (5th ed.). Washington, DC.
- Black, Jeremy (2011). *A Brief History of Slavery*. London: Constable and Robinson.
- Caruth, Cathy (1995). *Trauma: Explorations in Memory*. Baltimore: John Hopkins University Press.
- Caruth, Cathy (1996). *Unclaimed Experience: Trauma, Narrative, and History*. Baltimore: John Hopkins University Press.
- Comorbidity Survey Replication. *Archives of General Psychiatry*, 62, 617-627. doi: 10.1001/archpsyc.62.6.617
- Costello E, Mustillo S, Keeler G, Angold A. (2004). Prevalence of psychiatric disorders in childhood and adolescence. In: Levin B, Pettila J, Hennessy K, editors. *Mental Health Services: A Public Health Perspective*. Oxford: pp. 111–128.
- Dass-Brailsford, P. (2007). *Ecological and Cultural Considerations in the Aftermath of Disasters*. *PsycEXTRA Dataset*. doi:10.1037/e693292007-001
- De Jong, J., Komproe, T.V.M., Ivan, H., von Ommeren, M., El Masri, M., Araya, M., Khaled, N., van de Put, W., & Somasundaram, D.J. (2001). "Lifetime events and Posttraumatic Stress Disorder in 4 Post Conflict settings". *Journal of the American Medical Association*, 555-562. doi: 10.1001/jama.286.5.555
- Ford, J. D., Courtois, C. A., van der Hart, O., Nijenhuis, E., & Steele, K. (2005). "Treatment of complex post-traumatic self-dysregulation". *Journal of Traumatic Stress*, 18, 437-447
- Keane, T.M., Wolfe, J., & Taylor, K.I. (1987). "Post-traumatic Stress Disorder: Evidence for diagnostic validity and methods of psychological assessment". *Journal of Clinical Psychology*. 43, 32-42
- Kessler, R.C., Chiu, W. T., Demler, O., Merikangas, K. R. & Walters, E.E. (2005). Prevalence,



- severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62, 617-627
- Mani, Manimangai (2015). "Racial Awareness in Phillis Wheatley's Selected Poems". *International Letters of Social and Humanistic Sciences*. Vol. 56 (2015) pp 74-79. Print.
- Odell, Matilda (1999). *Memoir and Poems of Phillis Wheatley, a Native African and a Slave. Dedicated to the Friends of the Africans*, University of North Carolina at Chapel Hill: Academic Affairs Library, UNC-CH.
- Omar, A. & Che Bakar, O. (2015). *Principles and Practice of Psychiatry*, Ampang: Percetakan Maju Jaya.
- Powers, A., Etkin, A., Gyurak, A., Bradley, B. and Jovanovic, T. (2015). *Associations Between Childhood Abuse, Posttraumatic Stress Disorder, and Implicit Emotion Regulation Deficits: Evidence From a Low-Income, Inner-City Population*. *Psychiatry*, 78(3), pp.251-264.
- Snowden, Ruth (2006). *Freud-The Key Ideas (Teach yourself)*. McGraw-Hill. Pp. 105-107
- Wheatley, Phyllis (1988). John C. Shields. ed. *The Collected Works of Phillis Wheatley*. New York: Oxford University Press.
- Wheatley, Phyllis (2001). Vincent Carretta. ed. *Complete Writings*. New York: Penguin Books
- World Health Organization (1992). *The ICD-10 classification of mental and behavioural disorders*. Geneva, Switzerland.



The Untold Truth: Psychological Disorders in the Cartoon Characters of *The Little Mermaid*

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Abstract

The Little Mermaid is an animated film with a musical theme released in 1989. This fantasy film is an adaptation of a short story written by Hans Christian Andersen in 1837. The fictional tale is about Princess Ariel, a mermaid who gave up her identity to live as a human after falling in love with a human prince. Although it may seem like a typical and joyful film meant for children's entertainment, a meticulous inspection will reveal that the characters in The Little Mermaid suffer from various psychological problems. Previously, similar theories have been proposed by researchers about the characters in the movie Winnie-the-Pooh. The diagnosis of psychiatric illnesses is fundamentally based on globally accepted classification systems which are known as the Diagnostic and Statistical Manual of Mental Disorders (DSM) and International Classification of Diseases (ICD). Hence, this study aims to highlight the presence of psychiatric illnesses suffered by the characters in The Little Mermaid using the criteria listed in DSM-5 and how they are displayed in this animated movie.

Keywords: The Little Mermaid, Ariel, Disney, psychology, psychiatry, DSM-5.

Introduction

The Little Mermaid (Musker, Ashman & Clements, 1989) is an animated Disney film produced by Walt Disney Feature Animation and was first released in the year 1989 by Walt Disney Pictures. It was loosely based on a fairy tale titled "The Little Mermaid" (Danish: Den lille havfrue) which was written by a Danish author, Hans Christian Andersen (1837). Ever since its first publication in the year 1837, this fictional tale has been adapted to various media such as anime, musical play, and to this Disney animated film.

On the surface level, this adventurous film tells the story of a mermaid princess named Ariel who is entranced by the human world. After falling in love with the human prince, she subsequently embarks on an adventure for a chance to be with him. She willingly gives up her identity as a mermaid in the pursuit of love. What may seem like a typical and entertaining cartoon for children may actually harbour a deeper meaning upon closer inspection. A close analysis will reveal that the characters in *The Little Mermaid* suffer from various psychological problems.



This is not the first time that such a theory has been applied to Disney films. In the year 2000, Shea and her colleagues published an article titled “Pathology in Hundred Acre Woods: A Neurodevelopmental Perspective on A.A. Milne”, where she described psychological problems faced by the characters in Winnie-the-Pooh movie based on the DSM-IV (Shea, Gordon, Hawkins, Kawchuk & Smith, 2000). Subsequently, Smith (2015) wrote a more detailed article titled “Winnie the Pooh Characters and Psychological Disorders”, this time using the criteria in DSM-V to diagnose the characters.

Before getting into the detailed interpretation of the possible psychological problems the characters face, it is important to understand the DSM-V which the diagnoses are based upon. In modern medicine, mental and behavioural disorders are diagnosed based on either one of the following universally accepted classification systems: Diagnostic and Statistical Manual of Mental Disorders (DSM) or International Classification of Diseases (ICD). The Diagnostic and Statistical Manual of Mental Disorders (DSM) was first introduced in 1952 in the United States of America and is currently being used widely in many other countries around the globe by psychiatrists and clinicians alike (Tyrer, 2014). The previous version, Diagnostic and Statistical Manual of Mental Disorders (4th ed.; DSM-IV; American Psychiatric Association [APA], 1994) was used from the year 1994 to 2013 (Tyrer, 2014). Later on, the American Psychiatric Association made a few notable revisions to it and published the updated version, the Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5; APA, 2013). Its counterpart, the International Classification of Diseases (ICD) is the official world classification intended for the use of health practitioners. The International Classification of Diseases, Tenth Revision (ICD-10) is the latest to be published in 1992 (World Health Organization, 1992).

This study intends to highlight the evidence of psychiatric illnesses suffered by the characters in *The Little Mermaid* using the criteria listed in the latest edition of DSM, the DSM-5 by comprehensive interpretation of each character. Although there have been three animated movies of *The Little Mermaid*, this study is only based on the first movie which was released in the year 1989.

Psychological Disorders in the Characters of *The Little Mermaid*

The first character we would like to discuss is Princess Ariel, the youngest of the seven daughters of King Triton. She is portrayed as a 16-year-old rebellious teenager who constantly ventures off to explore the world of mankind despite her old man’s instructions to make no contact with humans. Her fascination with the life on land leads her into the habit of collecting and storing man-made objects that somehow end up in the ocean. Considering this behaviour, we can diagnose that Ariel is most likely suffering from Hoarding Disorder based on the criteria listed in DSM-5 (APA, 2013). Hoarding Disorder is a persistent struggle in discarding possessions, regardless of their actual value due to the perceived need to save them. These patients have difficulty disposing things that they have collected, thinking that each item is unique and might be useful at some point in the future. In the film, when Ariel seeks comfort in her secret grotto after an argument with her father, Ariel is seen to have collected an array of objects but never discarded any of them. This makes her a pathological hoarder.

Through the second song in the movie, titled “Part of Your World”, one can clearly visualize Ariel’s hoarding behaviour.

Part of Your World (Musker et al., 1989)

Look at this stuff, isn’t it neat?
Wouldn’t ya think my collection’s complete?
Wouldn’t ya think I’m the girl, the girl who has everything?
Look at this trove, treasures untold
How many wonders can one cavern hold?
Lookin’ around here you’d think, “Sure, she’s got everything”
I’ve got gadgets and gizmos aplenty
I’ve got whozits and whatzits galore
You want thingamabobs? I’ve got twenty!
But who cares, no big deal
I want more (Lines 1-10)

When examined carefully, these lyrics prove that Ariel has been keeping various objects of distinct shapes and sizes in her possession although she has no clue of their worth or function. Another vivid example is when she finds a fork in a sunken

ship, without knowing what it was, she picked it up and said to Flounder, “Oh my gosh, have you seen anything so wonderful in your entire life?”(Musker et al., 1989). Her tendency for excessive acquisition and the absence of insight are demonstrated by Lines 8-10, “You want thingamabobs? I’ve got twenty! But who cares, no big deal; I want more”(Musker et al., 1989). This implies that she continuously collects similar objects despite not needing them. She is also completely convinced that her behaviour is not problematic although the evidence proves the contrary.

Besides this, the thought of discarding hoarded items often inflicts significant distress in individuals with this disorder. Over time, a substantial number of patients develop other psychiatric comorbidities such as depression and anxiety disorders. Major Depressive Disorder is present in about 50% of the patients while anxiety disorders (Generalised Anxiety Disorder and Social Phobia) are reported in about 25% of patients (Frost, Steketee & Tolin, 2011). The following scene in the movie vividly highlights the presence of anguish when hoarded objects are discarded. After getting to know about Ariel’s secret hideout and her frequent interactions with the human world, the furious King Triton destroys every item in Ariel’s collection with his magical trident. Ariel is seen clearly upset and in shock at the sight of King Triton destroying the artefacts that she has so dearly collected over the years. She then broke into tears when her most valued possession (statue of Prince Eric) was turned into ashes.

The refusal or failure to discard items causes accumulation, leading to congestion of living areas and compromising the actual purpose of the space. Sebastian, the poor little crab, is seen colliding into heaps of objects in the grotto, indicating restricted casual movements which may also lead to catastrophic accidents due to building up of clutter. In everyday living, crowded and disorganised piles of items are bound to narrow active living spaces and hamper their usage as intended. For instance, one will be unable to shower in the bathroom, study in the study area or cook in the kitchen.

Clinically, hoarding often causes significant impairment in the level of functioning of the affected individual. At the beginning of the movie, Ariel

misses an important concert which was meant to introduce her spectacular singing abilities to the mermaid community because she, being delinquent as usual, went on a quest with Flounder to collect items from a shipwreck. Ariel and Flounder barely escaped a shark preying on them at the sunken ship only to get herself into an argument with her father who was disappointed by her behaviour. This incident shows how hoarding got Ariel into trouble by jeopardizing her safety and her family bond.

Exclusion criteria must also be met in order to diagnose an individual with Hoarding Disorder. The symptoms of this disorder should not be attributed to other medical or mental illnesses. However, the exclusion criterion is not applicable in this context due to the lack of information from the film. Despite being unable to analyse the exclusion criteria, a diagnosis of Hoarding Disorder can be safely given to Ariel as she meets all the inclusion criteria.

On the surface level, Ariel appears to be a typical Disney Princess who pursues the love of her life by giving up her identity as a mermaid to be with Prince Eric. Nevertheless, a meticulous interpretation actually reveals that she also has comorbid Body Dysmorphic Disorder (BDD). Based on the DSM-5 (APA, 2013), patients with BDD are habitually preoccupied worrying about body parts perceived as defective that usually goes unnoticed or may appear insignificant to others.

The song below highlights the distorted view Ariel has concerning herself. Unlike the rest of her siblings who enjoy living the normal life of a mermaid, Ariel, however, has an endless preoccupation about having a pair of feet rather than a mermaid’s tail. Even before she met Prince Eric, she revealed her hidden feelings about the joy of having legs through her singing which is depicted in the lyrics below.

Part of Your World (Musker et al., 1989)

I wanna be where the people are
I wanna see, wanna see them dancin’
Walking around on those - what do ya call ‘em? Oh, feet!
Flippin’ your fins, you don’t get too far
Legs are required for jumpin’, dancin’
Strollin’ along down a - what’s that word again? Street
Up where they walk, up where they run



Up where they stay all day in the sun
Wanderin' free
Wish I could be part of that world
(Line 11-20)

Patients with BDD have the tendency to frequently engage in repetitive behaviour or mental acts in regards to the perceived physical imperfection. Repetitive behaviour includes excessive grooming, mirror checking, reassurance seeking and multiple dermatological or surgical procedures. Mental acts, on contrary, involve comparing oneself to another person. Lines 11-13, "I wanna be where the people are; I wanna see, wanna see them dancin'; Walking around on those - what do ya call 'em? Oh, feet!" (Musker et al., 1989), undoubtedly explains how Ariel yearns to have a pair of legs as she compares herself with humans for being able to accomplish the things she can't as a mermaid such as walking, jumping and dancing.

As a result of such preoccupations, individuals suffering from BDD experience significant social, occupational or other distress which subsequently affects activities of daily living. They constantly torment themselves by viewing their flaws as grotesque and nurturing strong beliefs about being unattractive due to the perceived defect. This eventually leads to social dysfunction, depression and ultimately acts of self-harm or suicide (Krebs, Fernández de la Cruz & Mataix-Cols, 2017). Strikingly high rates of suicidal ideations and attempts have been reported among patients suffering from BDD (Krebs et al., 2017; Bjornsson, Didie, & Phillips, 2010). As for Princess Ariel, she sacrificed her enchanting voice to the sea witch in exchange for a pair of legs just to attain the human form. Giving up her voice not only means she can no longer speak or sing, but more importantly, she can no longer communicate with her loved ones. The exclusion criterion for BDD is when the preoccupation is not better elucidated by concerns regarding body weight in an eating disorder.

Analysis of Ariel's character in the film satisfies most of the criteria for Hoarding Disorder and BDD as stated in the DSM-5. Not only that, many studies showed that both these disorders have an onset during adolescence which correlates with Ariel's age (Ivanov et al., 2013; Bjornsson et al., 2013). With the

evidence collected and the criteria satisfied in the DSM-5, we can safely conclude that she is affected by Hoarding Disorder and Body Dysmorphic Disorder.

Moving on to the next character, we would like to discuss regarding the main antagonist of the film, Ursula, the wicked sea witch. She became one of the most iconic villains of Disney films through her character portrayal as a flamboyant yet spiteful witch. Based on DSM-5 (APA, 2013), her excessive hunger for power and greed over King Triton's throne depicts Narcissistic Personality Disorder (NPD). The hallmark of NPD is characterised by a triad of grandiosity, excessive need for admiration and lack of empathy towards others. Manifesting in early adulthood, at least five of the following features related to NPD must be evident in various contexts of daily living.

Individuals with NPD display a grandiose sense of self-importance as they exaggerate their abilities without corresponding accomplishment in advocating such an attitude. For instance, achievements that, in reality, may appear minimal to someone else will be blown out of proportion by a narcissist to create an illusion they would like others to believe.

The song below, titled "Poor Unfortunate Souls" is an exceptional representation of Ursula's narcissistic personality. Ursula sang this song in an attempt to convince Ariel into making a deal with her.

Poor Unfortunate Souls (Musker et al., 1989)

I admit that in the past I've been a nasty
They weren't kidding when they called me,
well, a witch
But you'll find that nowadays
I've mended all my ways
Repented, seen the light and made a switch

And I, fortunately, know a little magic
It's a talent that I always have possessed
And here lately, please don't laugh
I use it on behalf
Of the miserable, lonely and depressed

Poor unfortunate souls
In pain, in need
This one longing to be thinner

That one wants to get the girl
 And do I help them?
 Yes, indeed
 Poor unfortunate souls
 So sad, so true
 They come flocking to my cauldron
 Crying, "Spells, Ursula, please!"
 And I help them?
 Yes, I do

Now it's happened once or twice
 Someone couldn't pay the price
 And I'm afraid had to rake 'em across the
 coals
 I've had the odd complaint
 But on the whole, I've been a saint
 To those poor unfortunate souls

At first glance, the lyrics of this song gives an impression that Ursula is a misunderstood and a humble witch who only wants to use her powers to help the mermaids. But a closer look will reveal an element of grandiosity where she recognises herself as a saviour to the mermaid community. She indirectly sings to Ariel about her powers and capabilities but masks it behind a sorrowful act.

Exploiting others for personal gain without any sense of remorse is another key feature of those with NPD. Gifted with excellent manipulative skills, Ursula often takes advantage of the mermaids' desperation by coaxing them into an unreasonable contract. When these poor mermaids fail to meet the end of the bargain, she sadistically strips them of their souls, making her more powerful along the process. This is evident in the fourth verse of the song where she absolutely shows no guilt for making such deals and stealing souls of the mermaids.

Narcissistic individuals relatively lack empathy by thinking that the world is staged around them. They choose to disregard the feelings and needs of others by viewing themselves as of primary importance. Ursula fails to show her empathy towards Ariel when she selfishly casts a spell on Prince Eric to make him fall in love with her human form, Vanessa, despite knowing how much Ariel loves the prince. The main reason for her action isn't because she harbours any intimate feeling for Prince Eric, but to prevent Ariel from upholding the end of the contract. By doing so, she will be able to use Ariel to revenge her greatest rival, King Triton.

Relentless preoccupation with fantasies about themselves (e.g. infinite success, power, beauty, etc.) makes narcissistic individuals believe that they are special and should only associate with people of similar status or uniqueness. This trait enhances arrogance and haughtiness as they consider themselves as high and mighty. Therefore, patients with NPD are often caught dominating conversations and patronizing others they perceive as inferior. Throughout the film, Ursula is portrayed to be persistently engrossed in fantasies of overthrowing King Triton and subsequently conquering the Seven Seas. Her resilient greed for power is immensely highlighted when she crowned herself as the Queen during the climax of the movie. Upon defeating her archenemy and conquering the throne, she proudly acclaimed, "At last, it's mine. You pitiful, insignificant fools! Now, I'm the ruler of the entire ocean. The waves obey my every whim! The sea and all its spoils bow to my power!" (Musker et al., 1989).

Patients with NPD are typically jealous of others. Not only that, they also have a persistent feeling that other people are envious of them. In the film, Ursula shows jealousy towards Ariel's captivating voice and devises a malicious plan to castrate Ariel of her voice. She managed to persuade Ariel into sacrificing her voice in exchange for a pair of legs.

Narcissism also causes excessive attention seeking behaviour which is partly attributable by the unreasonable sense of entitlement. The patient believes that he/she deserves special privileges and expects unfaltering compliance to their requests just as how Ursula believes she is to be the rightful ruler of the ocean and wants everyone to obey her every whim. Looking at all the above facts, Ursula without a doubt has Narcissistic Personality Disorder.

Now, we would like to give a detailed interpretation of two other characters in this film, Sebastian and Flounder, who played important roles as Ariel's sidekicks. Sebastian is a musical character known for his distinguished abilities as the royal court composer with a cool Jamaican accent. Flounder, on the contrary, is notably known for being Ariel's loyal companion as he constantly embarks on adventures with Ariel and unconditionally supports all her actions. Both Sebastian and Flounder are prone to



panicking during stressful situations. Although this may be viewed as cowardice, a thorough analysis reveals that these two unfortunate characters are suffering from Generalised Anxiety Disorder based on the DSM-5 (APA, 2013).

Generalised Anxiety Disorder (GAD) refers to a triad of anxiety, worry, and associated symptoms, occurring on most days for at least 6 months. Patients with GAD have exaggerated uncontrollable anxiousness and unrealistic worry about a variety of situations that is relatively out of proportion compared to the actual impact. When Flounder and Ariel went on an adventure to the shipwreck, Flounder is noted to be continuously panicking about the possible harm that might befall them as the two have wandered off too far. Flounder was repeatedly looking at every corner of the sunken ship, trembling in fear about the possibility of being attacked by sharks. Sebastian, the crab, encountered a similar experience especially after Ariel traded her voice to Ursula in an attempt to acquire the human form. After the transformation, Sebastian has a nervous breakdown about being painfully murdered by King Triton. This is because he failed miserably at the task entrusted to him by the King to watch over and keep Ariel out of trouble. The following quote shows how flustered he was at the disbelief of Ariel's action. "Just look at her! On legs! On human legs! My nerves are shot! This is a catastrophe! What would her father say? I'll tell you what her father'd say, he'd say he's gonna kill himself a crab, that's what her father'd say!" (Musker et al., 1989).

Besides that, the presence of at least 3 of the following symptoms is required to diagnose an adult with GAD. Children, however, only need to fulfil one of the symptoms. The symptoms include restlessness, muscle tension, irritability, impaired concentration, fatigue, and trouble sleeping. Sebastian and Flounder are seen to be overwhelmed with restlessness and muscle tension on multiple occasions throughout the movie. Ariel's interaction with the surface world often leaves them devastated and petrified about being coldly punished by King Triton for being unable to keep Ariel out of trouble. Muscle tension is evidenced by the presence of stuttering, fidgeting, and jitteriness. Flounder and Sebastian frequently have irritable outbursts towards Ariel who often

wanders off into dangerous journeys. In the film, the scene where Flounder accompanies Ariel to the shipwreck, he is clearly noted to be lagging behind because he was anxious thinking about Ariel's decision. When Ariel tells him to hurry, Flounder with an irritated look on his face said: "You know I can't swim that fast" (Musker et al., 1989). Despite the irritation, Flounder proves to be the epitome of loyalty as he willingly puts up with Ariel's recklessness and mustered his courage into the ship. On the other hand, Sebastian is often portrayed to be a very grumpy and worrisome crab throughout the movie especially after being assigned by the King to watch over Ariel. With clear exasperation on his face, Sebastian was quoted saying, "How do I get myself into these situations? I should be writing symphonies!" (Musker et al., 1989). The following incident offers an ideal illustration of impairment in concentration. Upon hearing that Ariel has fallen in love, the ecstatic King Triton summoned Sebastian to the palace. Believing that Ariel has fallen in love with a merman, King Triton playfully lures Sebastian into revealing the identity of Ariel's crush. But Sebastian, whose mind went blank and blinded by anxiety, accidentally blurts out about Ariel's act of rescuing and subsequently falling in love with a human.

Clinically, GAD also causes significant impairment in social, occupational or other important areas of functioning. Socially, both Sebastian and Flounder have challenged their friendship with Ariel by accidentally exposing her adventures and interaction with humans because of their nervousness. Ariel was especially disappointed with Sebastian after he unintentionally revealed her secrets to King Triton. She responded by ordering Sebastian to leave her grotto although the poor crab tried explaining himself about his anxiety attack. Later on, Ariel is also seen reacting sarcastically to Sebastian by saying "Why don't you go tell my father? You're good at that" (Musker et al., 1989) when the crab tries to stop her from meeting with the sea witch. From another perspective, fishes usually travel in schools. However, Flounder is always seen travelling with Ariel and not with other fishes of his kind. This may be due to his GAD which socially disables him and leaves him segregated from his own species.

GAD results in physical symptoms such as light-headedness, dizziness, and epigastric discomfort. When presenting to primary care physicians, as opposed to the mental health setting, patients with GAD rarely report symptoms of worry (Stein & Sareen, 2015). Instead, they are more likely to present with physical complaints which often lead to unnecessary medical procedures and treatment. Nonetheless, these symptoms are not shown by the two characters anywhere in the movie. The exclusion criterion for GAD is that the symptoms are not better described by the use of drugs (medications or recreational drugs) or any other medical/mental disorders. Such information is also absent in the film.

Flounder and Sebastian are able to satisfy all the inclusion criteria for GAD as stated in DSM-5. Therefore, it is plausible to conclude that these two characters are actually suffering from Generalised Anxiety Disorder.

Finally, we would like to discuss the character of King Triton, the King of Seven Seas and the father of Princess Ariel. Armed with supreme powers and a magical trident, King Triton is a notable ruler of the underwater Kingdom of Atlantica. He is also known for his fond disposition towards Ariel. Although critics may debate the existence of Separation Anxiety Disorder in King Triton, we, on the contrary, would like to view his strict nature as an act of disciplining his rebellious teenage daughter. His overprotectiveness and special attention towards Ariel should not be misinterpreted as Separation Anxiety Disorder. It is rather a simple act of favouritism, possibly because she is the youngest. Using DSM-5 (APA, 2013) criteria as the reference, we would like to prove that the diagnosis of Separation Anxiety Disorder does not apply to King Triton.

Separation Anxiety Disorder denotes the intense fear or anxiety in response to separation from major attachment figure which is viewed as age inappropriate. Patients with this disorder experience overwhelming distress when separation occurs. Even the mere anticipation of such incident will inflict grief in them. In the opening scene of the movie, King Triton who was eagerly anticipating Ariel's musical debut quickly became upset and infuriated after learning about her absence. This incident should not be attributed to separation anxiety

because it is only natural for parents to get angry at such mischievousness for missing such an important event. After engaging in an argument with her father, Ariel, being hasty as usual, ran away from home in the attempt to protest her father's action of destroying her personal collections of human artefacts. Clearly distressed by Ariel's disappearance, King Triton frantically and tirelessly searches for his daughter. This is nothing unusual or pathologic as any parent in such a situation would do the same.

Patients with this disorder are also constantly worried about losing the attachment figure due to the possible harm befalling them. King Triton is noted to be persistently apprehensive about the safety of his daughter, Ariel, in view of her inquisitive and adventurous nature. Being prejudiced towards mankind, he believes that humans bring nothing but harm to the mermaids and therefore strictly forbids any form of contact with them. The repeated clashes between King Triton and Ariel are mainly due to their different opinions about the humans and Ariel's disobedience. While King Triton believes that humans are "barbarians and dangerous" (Musker et al., 1989), Ariel chooses to believe otherwise. Such conflict never broke between King Triton and his six other daughters because they readily conform to his logical restrictions, unlike Ariel. His parenting style may seem authoritative and harsh, but he is just a benevolent father trying to protect his delinquent teenage daughter. Ariel's defiance and frequent interactions with humans ignite fear in King Triton about the possibility of losing his daughter to the human world. Although this may seem like separation anxiety at a glance, King Triton is just a loving father who is genuinely afraid of losing his daughter. Similarly, losing a child, regardless of their behaviour, is every parent's worst nightmare.

Individuals with this disorder are usually engrossed in unrealistic worry about experiencing an unfortunate event which will subsequently lead to their separation from their loved ones. Situations that are perceived to evoke danger and the misery of separation may vastly vary depending on the patient's age. For example, they may be frightful over monsters, animals, kidnappers, accidents or falling ill. Adversely, the reluctance to part from the major attachment figure will result in significant impairment in functioning, as often manifested by



the refusal to be alone, sleeping alone or attending school/work. School refusal may lead to academic difficulties and social withdrawal, resulting in the poor educational background and socialising skills. Patients often experience somatic symptoms (e.g. headaches, nausea, vomiting, etc.) or nightmares on occasions that involve separation. The typical features of Separation Anxiety Disorder characterised by intense fear, anxiety, and avoidance should be present for at least six months to diagnose an adult with this disorder. Considering the symptoms mentioned above, King Triton does not satisfy the criteria in the DSM-5 for Separation Anxiety Disorder. In fact, at the end of the film, he grants Ariel her wish to live with the humans which is very unlikely for a person to do so if he is suffering from this disorder.

Conclusion

The Little Mermaid undoubtedly is an iconic Disney film that has been loved and admired by generations of children and adults. Exciting plot, colourful characters and wonderful songs, altogether, made the movie nothing less than amazing. Many of us have grown up wanting to be the characters in the movie. However, the characters in this film manifest various psychiatric problems that are obvious to some but camouflaged to the untrained mind. We are sure that this persona of the characters was not deliberately meant to project psychiatric problems. Such a portrayal was done only to make the characters more lively and attractive. Anyhow, this article proves the presence of mental illnesses suffered by these characters with evidence and in relation to the DSM-5. Having said that, the movie is a pleasurable and exciting experience altogether.

References

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Washington, DC.

American Psychiatric Association. (1994). Diagnostic and statistical manual of mental disorders (4th ed.). Washington, DC.

Andersen, H. (1837). *Den lillehavfrue*. Demark: C.A. Reitzel.

Bjornsson, A. S., Didie, E. R., & Phillips, K. A. (2010). Body dysmorphic disorder. *Dialogues in Clinical Neuroscience*, 12(2), 221–232.

Bjornsson, A. S., Didie, E. R., Grant, J., Menard, W., Stalker, E., & Phillips, K. A. (2013). Age at onset and clinical

correlates in body dysmorphic disorder. *Comprehensive Psychiatry*, 54 (7), 893-903. doi: 10.1016/j.comppsy.2013.03.019

Frost, R., Steketee, G., & Tolin, D. (2011). Comorbidity in hoarding disorder. *Depression And Anxiety*, 28(10), 876-884. doi: 10.1002/da.20861

Ivanov, V., Mataix-Cols, D., Serlachius, E., Lichtenstein, P., Anckarsäter, H., & Chang, Z. et al. (2013). Prevalence, Comorbidity and Heritability of Hoarding Symptoms in Adolescence: A Population Based Twin Study in 15-Year Olds. *Plos ONE*, 8(7), e69140. doi: 10.1371/journal.pone.0069140

Krebs, G., Fernández de la Cruz, L., & Mataix-Cols, D. (2017). Recent advances in understanding and managing body dysmorphic disorder. *Evidence Based Mental Health*, 20(3), 71-75. doi: 10.1136/eb-2017-102702

Musker, J., & Ashman, H. (Producers), & Clements, R., & Musker, J. (Directors). (1989). *The little mermaid* [Motion picture on DVD]. United States: Walt Disney Pictures.

Shea, S. E., Gordon, K., Hawkins, A., Kawchuk, J., & Smith, D. (2000). Pathology in the Hundred Acre Wood: a neurodevelopmental perspective on A.A. Milne. *CMAJ: Canadian Medical Association Journal*, 163(12), 1557–1559.

Smith, R. C. (2015). *Winnie the Pooh Characters and Psychological Disorders*. (Master's Thesis, Ball State University Muncie). Retrieved from http://cardinalscholar.bsu.edu/bitstream/handle/123456789/200123/A371_2015SmithRachelC.pdf;sequence=1

Stein, M., & Sareen, J. (2015). Generalized Anxiety Disorder. *New England Journal Of Medicine*, 373 (21), 2059-2068. doi: 10.1056/nejmcp1502514

Tyrer, P. (2014). A comparison of DSM and ICD classifications of mental disorder. *Advances In Psychiatric Treatment*, 20(4), 280-285. doi: 10.1192/apt.bp.113.011296

World Health Organization. (1992). *The ICD-10 classification of mental and behavioural disorders: Clinical descriptions and diagnostic guidelines*. Geneva: World Health Organization.

Positive Effects of Psychological Interventions among the Children of War-torn Regions of Sri Lanka

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Abstract

When the civil war came to an end in Sri Lanka in 2009, it left thousands and thousands of young children emotionally scarred and psychologically affected. Children and teens experience Post Traumatic Stress Disorder and seem to be the most affected showing symptoms such as depression, fear psychosis, nightmares, sleeplessness, aggressive behaviour and a sense of hopelessness. As has been observed, after eight long years, the psychological consequences are very serious and long lasting. Many governmental and non-governmental initiatives and mental health programmes have touched only a small segment of the population. This paper is based on a study made during a teacher training programme in the Northern Province of Sri Lanka in January 2018, which impressed upon the teachers to double as counsellors in order to provide psychological interventions and emotional healing. During the student counselling programme some of the interventionist techniques like Narrative Exposure Therapy, drawing The Trauma Tree, using Life Story work sheet, focusing on the past, the present and the future were found to be therapeutic. The children drew scenes from the war including shelling, aerial bombing, tank and machine gun fire, bombed out buildings and streets and so on. Based on their drawings they were encouraged to discuss their traumatic experiences and feelings. These therapeutic techniques were found to be effective as the children and the teens responded better. It is important to involve in the intervention the local teachers, mental health professionals and people who interact daily with children.

Keywords: War, Children, Trauma, PTSD, Psychological Effect, Intervention, Trauma Tree, Life Story.

Introduction

This paper focuses on the study and psychological interventions carried out during the first two weeks of January 2018 in the Northern Province of Sri Lanka. The researcher went as a member of a team from India that visited Sri Lanka on the invitation of a Canada based Non Governmental Organization called 'Puthiya Vellicham' and the Indian High Commission of Sri Lanka. The group was involved in a teacher training programme as well as a student counselling program in Jaffna, Killinochi and Mullaithivu.

When the civil war came to an end in Sri Lanka in 2009, it left thousands and thousands of young children, the most vulnerable part of the population, emotionally scarred and psychologically affected. Children and teens continue to experience severe psychological problems such as Post Traumatic Stress Disorder, depression, fear psychosis, nightmares, sleeplessness, aggressive behaviour and a sense of hopelessness. As children differ from adults both physiologically and psychologically, they ought to be treated with utmost sensitivity and care. Forced internal displacements, the loss of their childhood, living under unhygienic conditions, facing malnutrition and other atrocities of war have a harmful effect on their psyche and their mental health. Children are the worst affected when they witnessed the killing



or maiming of their parents and their beloved ones. Such children are severely traumatised and remain unresponsive, mute and stunned. They are prone to lifelong anxiety and panic attacks. Moreover, children from post-war zones report of physical abuse, sexual abuse, emotional or psychological abuse. Such multiple and prolonged exposure to violence and abuse result in 'complex trauma' which calls for sustained and patient psychological interventions.

A Note on Earlier Studies

As has been observed, after eight long years, the psychological consequences are very serious and long lasting. Many governmental and non-governmental initiatives and mental health programmes have touched only a small segment of the population. For instance, Elbert et al (2009) made a study involving 420 school children in Sri Lanka that assessed their mental health. The study came up with a startling finding of 92 % of these children suffering from severe trauma and impairment of cognitive development. It also showed their school grades slipping, their memory skills suffering and their language skills diminishing. Though the consequences are many, the trauma that these children underwent has a direct bearing on their education and life skills. Again an attempt was made in the year 2012 to integrate mental health into primary care. Jenkins et al (2012) started a 40 hour training programme called 'train the trainers', focusing on psychiatrists and medical practitioners. It helped the health professionals to enter into the field of mental health for interventions and evaluations. It was presumed at that time to have a lasting effect on the affected communities' mental hygiene. Yet another significant study made by Siriwardhana, Adikari, Pannala, Siribaddana, Abas, Sumathipala & Stewart (2013) discovered that absenteeism would increase among the affected children. The children's performance would also be affected because of the total burden of the traumatic events. Other major studies too warned of increase in the number of suicides and suicidal thoughts besides substance abuse. However, there are no significant studies on treatment or intervention outcomes for traumatized children. Here it is pertinent to quote Lalith Senarathna, a clinical researcher at the

School of Public Health at the University of Sydney, Australia. He says, "The prevalence of undiagnosed mental health issues – temporary or permanent – may be higher than we expect." Though no study has quantified the mental health issues, it is understood that mental health problem exists especially among the children. So the regional government has appointed a few counsellors, psychotherapists and community workers to deal with such children who need special attention. Expressing his concern about such children Patrick McCormick, Emergencies Communications Officer at UNICEF, says, "Children are the most vulnerable of all in conflict and post-conflict situations."

Psychological Interventions

To restore the mental health of these children, psychological interventions are quite important. The counselling and psychotherapy approach focuses on individuals and groups. Interventions were done in the past in the form of after school programs and physical activities with the aim of integrating the children and the teens with the communities that were resilient. Any intervention that is realistic, short and focused, less time consuming, requiring no extensive educational requirements, can be used effectively.

A Report on the Study

The researcher/counsellor went in turn to the post-conflict towns namely Jaffna, Killinochi and Mullaitivu over a period of three weeks. A total of 50 children and teens were identified in each town for intervention process with the consent of families, relatives and foster families. In all cases the participation was volitional with the girls in the majority. They all belonged to the age group of 12 to 18. The language of the health professional and the terminology related to psychiatry was completely avoided and extreme care was taken to use the participants' language. The participants cooperated well with the counsellor. An analysis of the pre-tests and post-tests shows these therapeutic interventions work as they had a cathartic effect. Traumatic fear showed considerable decline and 80% of the participants was relieved of their symptoms related to Post Traumatic Stress Disorder. These

counselling and psychotherapy sessions give hope and transform the depressed teens into optimistic beings. The promotion of their mental health will help communities in the long run.

During the student counselling programme some of the interventionist techniques like Narrative Exposure Therapy, drawing The Trauma Tree, using Life Story worksheet, focusing on the past, the present and the future were found to be therapeutic. Narrative Exposure Therapy (NET) is based on cognitive-behavioural therapy and aims at providing relief through narrating one's life as a continuum, including the traumatic and devastating events. Story telling is an inherent human trait and some of the teens were really forthcoming about their lives. They wrote brief sketches about their traumatic childhood (these writings were done nine years after the war) and the gruesome and bloody events to which they were personal witnesses. Their memory was found to be sharp and clear in spite of the passage of time. By transforming their disorderly memories into a cohesive story, most of the participants found relief from their depressed state of mind. A private testimonial of this kind was found to be both cathartic and restorative.

The aim of encouraging the children to draw The Trauma Tree is to revive their buried emotions and help them to reconstruct the autobiographical details from their memory. The children drew scenes from the war including shelling, aerial bombing, tank and machine gun fire, bombed out buildings and streets and so on. Based on their drawings they were encouraged to discuss their traumatic experiences and feelings. Sometimes the pictures were more eloquent than their words. Their words aptly described their state of mind. Many used words descriptive of their current state of my mind like 'hopelessness,' 'sorrow,' 'struggle,' 'friendless' etc. In contrast they used words like 'peace,' 'joy,' 'comfortable life,' 'bright future,' and so on to refer to their future. Nearly 30% of the children opted to draw the trauma tree and other pictures. They all found relief from their present worries and their minds were purged of bitter memories. Though these memories cannot be completely erased, an exercise of this kind helps them to come to terms with their emotions (mostly negative) and find balance and equanimity.

A Life Story worksheet is divided into three

sections – 'The Past' helps the children to recount their traumatic experiences, 'The Present' helps them to assess their present status and 'The Future' reveals their dreams and hopes. In short, the narrative is about memories, realities and expectations. These therapeutic techniques were found to be effective as the children and the teens responded better. When they wrote the story of their past, they were careful to describe how they saw hell on earth and how many of them became orphans with no physical or emotional support. At the same time, they have pointed out their personal strengths which help them to lead their present life and how they have developed emotional hardiness and grit to survive. Describing the ideal future, they seek the community's approval through educational attainment. Some seek creature comforts, a steady job, opportunities abroad, and above all a life free from poverty. Another 40% of children and teens responded through the Life Story worksheet. After some initial reluctance, they wrote with clarity. They appreciated the counsellor for the writing exercise which was highly therapeutic.

Group therapy was found to be effective as they all shared common tragic events, except for a few participants from Jaffna city. The participants in group therapy stand to gain from the interventions of the counsellor as well as from other members of the group. There is a sense of identification with others. Stories of successful handling of problems, coping skills, and different perspectives on the same issues are educative and deeply motivational. While the teens shared their problems like depression, anxiety disorders, sleeplessness and nightmares, they commonly agreed that focussing on their studies and frequent positive self-talk proved to be effective. The young boys talked about male bonding through games and sports which helped them to find relief from frequent bouts of emotional distress. Interestingly enough the girls talked about watching television, mostly Tamil programs with movie content aired from India have helped them forget their mental worries. 30% of the participants found this group therapy extremely useful.

One to one individual counselling was also done in select cases after assessing their needs. A few of them wanted to be listened to in private as they found their problems to be too personal to be shared



in a group. The follow up shows good results and these therapeutic techniques are found to be effective and lasting. In fact these counselling sessions have strengthened their confidence level and improved their self-esteem.

Recommendation

Based on the study, it is found that it is important to involve in the intervention the local teachers, mental health professionals and people who interact daily with children and teens, especially the teachers ought to be impressed upon to double as counsellors in order to provide psychological interventions and emotional healing. Teachers have to be specially trained in diagnosing psychological problems and counselling skills. Training in counselling and psychotherapy may also be provided in the form of short-term intervention courses, periodic workshops and seminars for teachers in schools and community development workers or social workers in community centres.

Conclusion

To conclude, the therapies that were used like Narrative Exposure Therapy, drawing The Trauma Tree, using Life Story worksheet and Group Therapy require less professional training than other therapies. The trained personnel need to have the patience to listen to stories, some motivational skill to encourage the participants to draw and again the readiness of mind to read others' stories. In post-conflict societies, children and teens are to be rehabilitated emotionally and a hope for the future has to be instilled in their minds. So intervention strategies have to be periodically redrawn and revised and an integrated approach using psycho-social-educational and clinical interventions would be the remedy.

References

- Catani, C., Kohiladevy, M., Ruf, M., Schauer, E., Elbert, T., &Neuner, F. (2009). Treating children traumatized by war and tsunami: a comparison between exposure therapy and meditation-relationship in North-East Sri Lanka. *BMC Psychiatry*, 9:22.
- Eakin PJ. How our lives become stories: making selves. New York: Cornell University Press; 1999. Sep 2.
- Elbert, T., Schauer, M., Schauer, E., Huschka, B., Hirth, M., &Neuner, F. (2009). Trauma-related impairment in children – a survey in Sri Lankan provinces affected by armed conflict. *Child Abuse & Neglect*, 33(4): 238-246.
- Fernando, GA., Miller, KE.,& Berger, DE. (2010). Growing pains: the impact of disaster-related and daily stressors on the psychological and psychosocial functioning of youth in Sri Lanka. *Child Development*, 81(4): 1192-1210.
- Husain, F., Anderson, M., Lopes Cardozo, B., Becknell, K., Blanton, C., Araki, D., &Vithana, EK. Prevalence of war-related mental health conditions and association with displacement status in postwar Jaffna District, Sri Lanka.*JAMA*, 306(5): 522-531
- Jenkins, R., Mendis, J., Cooray, S., Cooray, M. (2012).Integration of mental health into primary care in Sri Lanka.*Mental Health in Family Medicine*, 9: 15-24.
- Lopes Cardozo, B., Sivilli, TI., Crawford, C., Scholte, WF., Petit, P., Chitis, F., Alastair, A., & Eriksson, C. (2013). Factors affecting mental health of local staff working in the Vanni region, Sri Lanka.*Psychological Trauma: Theory, Research, Practice, and Policy*, 5(6): 581-590.
- Murphy, RS.,& Lakshminarayana, R. (2006). Mental health consequences of war: a brief review of research findings. *World Psychiatry*, 5(1): 25-30.
- Nagai, M., Abraham, S., Okamoto, M., Kita, E., & Aoyama, A. (2007). Reconstruction of health service systems in the post-conflict northern province in Sri Lanka. *Health Policy*, 83: 83-93.
- Peiris - John, RJ. (2013). Disability studies in Sri Lanka: priorities for action. *Disability Rehabilitation*
- Schauer E, Neuner F, Elbert T, et al. Narrative exposure therapy in children: a case study. *Intervention*. 2004; 2(1):18–34.
- Siriwardhana, C., Pannala, G., Siribaddana, S., Sumathipala, A., & Stewart, R. (2013d).

Impact of exposure to conflict, tsunami, and mental disorders on school absenteeism: findings from a national sample of Sri Lankan children aged 12-17 years. *BMC Public Health*, 13: 560.

Tol, WA., Komproe, IH., Jordans, MJ., Vallipuram, A., Sipsma H., Sivayokan, S., et al. (2012). Outcomes and moderators of a preventative school-based mental health intervention for children affected by the war in Sri Lanka: a cluster randomized trial. *World Psychiatry*, 11(2): 114-122.



Work Life Balance and Wellbeing among women of Unorganized Sector

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Abstract

The present research paper focuses on the well-being of women workers working in an unorganized sector. Today women from all the strata have entered the work force. This change is due to various reasons which a women felt ,it may be due to financial pressure, demand of the family, to follow a trend or to enhance the quality of life. Due to societal change, urbanization, costly living expenses and meaning of life, women are also becoming part of world of work. Usually women work in organized and unorganized sector both. In the organized sector job description, working conditions and rules are well defined. Hence women working in these organizations perceive well-being in a different manner. On the other hand women working in the unorganized sector face variety of social and employment related problems issues. They experience uncertainty, low payment, lack of social protection, poor working condition and exploitation at the employment place. Besides these women workers also do not get much social support from their spouse and other family members too. Thus the present study examined the women workers working as domestic assistant, vegetable vendors, small shop keepers, working in beauty parlors and NGO's. With the help of open ended interview schedule information was obtained from the 64 participants. Analysis of result reveals that they are deprived from essential life conditions that hinder their performance and lead them to experience poor well-being. It can be concluded that women belonging to unorganized sector should be supported by the family and the employer too to achieve positive state of mind to balance her work life and wellbeing.

Keywords: Well-being, Work Life Balance, Unorganized sector

With the change of era, changes are observed with the all the spheres of life, may it be India's progress at technology level or at the home front. Due to urbanization and rapid industrialization change is observed at the work place too. Today women of all strata have entered the work force outside their home. Specially, economic pressure has been instrumental in encouraging women to enter the work force. A wide plethora of opportunities are attracting women to join job front. As White and McGovern,(2003)studied and observed and defined the term work life balance as those practices at workplace that acknowledge and aim to support the needs of employees in achieving a balance between the demands of their family life and work life. As proven by most of the studies on Work Life Balance, flexibility was considered to be the most important factor for attaining a healthy work life balance.

Work life balance is the phenomenon which can be expressed as an individual's ability to prioritize work and household responsibilities meticulously such that none of the aspects (work and life) overpower each other and the individual is able to put in not only quantitative but also qualitative inputs in both the aspects of life.

Work-life balance can be expressed as the capability of individuals (despite of gender, age, marital status, children) to combine work and family responsibilities in a successful manner. In the changing climate of work, managing work life balance highlights the impact of multiple roles of women regarding, work and family performance.

The expression ‘work life balance’ was first used in United Kingdom in late 1970’s to describe the balance between an individual’s work and life. It is a state of equilibrium in which the demands of both a person’s job and personal life are equal.

In a transitioning society like India, where the traditional roles of women as home makers and caretakers are deeply entrenched, maintaining work–family balance is becoming a challenge for women and their employers. Work – life balance of women employees has become an important subject since the time has changed from men earning the family living in today’s world where both men and women equally share the responsibility of earning for the betterment of their family life.

The OECD Guidelines (2013) defines SWB as involving “good mental states, including all of the various evaluations, positive and negative, that people make of their lives and the affective reactions of people to their experiences. Diener (2006) gave the view that “subjective well-being is an umbrella term for the different valuations people make regarding their lives, the events happening to them, their bodies and minds, and the circumstances in which they live.”

The unorganized sector, on the other hand, has no such clear-cut employer-employee relationships and lacks most forms of social protection. Having no fixed employer, these workers are casual, contractual, migrant, home based, own-account workers who attempt to earn a living from whatever meager assets and skills they possess.

Dave Vandana (2012) focused on female construction workers, agriculture workers and domestic workers. Results revealed that workers faced problems like disparity in wages where female workers were paid less. Working hours were not fixed and harassment at work place was common.

Women are working in all sphere may it be home and work front but still when it comes to financial

or economic up gradation ,she is still treated as second grade. Women workers have to climb great heights carrying heavy loads. Falling from heights, electric shock, falling of objects and collapse of ladder, continuous exposure to dust and hay leading to respiratory problems are the major reasons for fatal problems. Apart from that accidents involving simple injuries occur every day. Women workers who carry the cement mix and wet bricks ,on their heads suffer serious problems like neck pain, chest pain, body ache and fever.

Geetha K.T. (2010) conducted a case study on Women in Informal Sector.This study was conducted on different types of socio-economic problems of female workers in urban informal sector. Results revealed that females in informal sector were overburdened with work and exploited. It was recommended that at the policy maker should sincerely prepare a policy to improve working and living condition of female workers in unorganized sector.

Study done by Kamala KantaMohapatra (2012) analyzed the degree of vulnerability of the women workers in informal sector in India.It was observed that poverty, sense of powerlessness, vulnerability, insecurity and social exclusion are high in percentage of women compel them to lead a life of compromises. Saha Debdulal (2008)conducted a study on Street Vendors in Mumbai , about their working conditions. Results revealed that street vendors faced problems like dependence on money lenders, persecution at the hands of local police and other authorities. The study concluded that there is a need for trade union and different member based associations to come forward and take necessary action for these types of problems faced by street vendors.

Based on the objectives of the study, an informal discussion were conducted with the participants and information was gathered in pilot study. It facilitated to prepare the open ended items for the main interview. The information gathered from the participants indicated that a variety of factors create imbalance between their life –work and wellbeing. The participants were selected randomly from unorganized sector mainly women running their own shops of beauty parlor, vegetable vendor, even who are working as domestic workers or casual



laborers from road construction sites. A good rapport was formed with them and then the demographic information was collected. With the help of open ended interview questions they were asked about the pattern of their working ,earning and how much support they get from the family members for work –life balance, how they cope up in their day to day life ? What strategies they use to maintain their wellbeing.

Objectives of the study

By approaching and examining the status of working women in unorganized sector coming from different back grounds this study aims to explore the following objectives.

1. What are the strategies used by women working in unorganized sector to attain work life balance?
2. What is the role of family support in achieving work life balance?
3. What is the role of entrepreneurship in achieving work life balance?
4. What is the role of resource mobilization and governmental support in achieving work life balance?
5. What is the role of work life balance in achieving well being?

Sample

The universe of the study included a random sample of 64 participants from unorganized sector from different age groups. In view of the focus of the study it was proposed to draw a sample from many sub groups varying in marital status (married/unmarried), types of job (self-employed/domestic workers/women working in NGO/ casual laborers etc.) and different types of families (nuclear/joint or extended).

Measures

In this study personal interview was conducted with the help of interview schedule to gather the information from the participants. Hence in the present study an interview schedule was prepared related to the objectives of the study.

The interview schedule covered the following

Do they feel the need to work, what is the process of joining the work, nature of work, experience at the work place, family support ,resource mobilization and government support, what is the present status of well-being, what strategies are applied to achieve and maintain well-being.

The interview schedule was used to conduct the interview. Open ended questions were preferred in the schedule to attain the relevant information from the participants.

Data Analysis

In the present study the important tool is the interview schedule. Hence the data, therefore, was in terms of verbal descriptions and narratives. Therefore analysis of narratives, their interactions and relationships was analyzed. For this purpose qualitative technique was employed to analyze and interpret the data.

Result

In the present study four groups of the women working in the unorganized sector participated. With the help of semi structured interview schedule information were collected from them. A close look on the information collected indicates that majority of workers working in any unorganized area gave importance to sharing their views either with friends, family members or neighbors' as salient coping for feeling good as well as help them for effective work life balance. Although the workers who are educated, they narrated that they used social media and gave attention on their body make-up. As another effective way to attain wellbeing .Women working in NGO'S reported that giving assistance to needy people also provide them with the state of wellness.

These findings reflect that women working with unorganized sector should be given proper social support to achieve a sense of wellbeing .It was also observed that workers working as casual labors and domestic worker get little social support from their family members. Usually the females working in these areas have to work alone to fulfill the domestic responsibilities too. However the workers related to NGO sector indicated that they usually complete the work with the help of family members and even the work is also distributed. It seems that women who

are educated and possibly the family members are also educated they come forward to share household responsibilities.

The employer's role towards their fellow workers was also examined in this study. It was recorded that women workers have to spend long hours at the workplace for which they are not additionally paid. Due to this their kids do not get proper attention and even they become deprived from basic nutritional needs and education. Although Madhya Pradesh government has indicated a number of policies for development of women working in unorganized sector. Findings from the present study indicated that the respondents working in unorganized sector did not know much about the government schemes aimed for their development. Hence it is suggested that these schemes should be popularized in practical and effective manner so that the target group could get benefits from the schemes. Schemes are for health, education and support to start their own venture with the help of gadgets at nominal prices or installments.

Conclusion

Wellbeing among women working in unorganized sector is an exploratory study in which attention was paid to the female workers working in unorganized sector. Due to poverty and lack of education, women workers are not in a position to perform well for their kids. If state government policies are properly

disseminated among the target groups then only they can avail the benefits from the schemes.

References

- Dave Vandana (2012). Women Workers in Unorganized Sector, *Women's Link*, 18,3, 9-12.
- Diener, E., (2006). Guidelines for national indicators of subjective well-being and ill-being. *Applied Research in Quality of Life* 1(2): 151-157.
- Geetha K.T. (2010), Women in Informal Sector-A Case Study, *IJBEMR*, 1, 2, 23-26.
- Mohapatra Kamala Kanta (2012), "Women Workers in Informal Sector in India: Understanding the Occupational Vulnerability", *International Journal of Humanities and Social Science*, 2, 21.
- OECD, (2013). *OECD Guidelines on Measuring Subjective Well-being*. Paris: OECD. Available: <http://www.oecd.org/statistics/Guidelines%20on%20Measuring%20Subjective%20Well-being.pdf>.
- Saha, D. (2008) Conditions of Decent Working Life of street Vendors in Mumbai, 1-9
- White M, Hill S, McGovern P, et al., (2003), "High-Performance Management Practices, B. A. Gutek, S. Searle, and L. Klepa, Rational versus gender role explanations for Work-family conflict, *Journal of Applied Psychology*, 1991, Vol. 76 (4), pp. 560-568.



Critical Analysis of CSR – An Integrated Tree Approach (Employees vs. Beneficiaries Perspectives)

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Abstract

Organizations which use CSR as an effective instrument enhance its brand image and status. Used as a right tool CSR, offers manifold benefits. The present conceptual frame work is a novel approach in trying to integrate the factors from vivid reviews into a holistic tree model. The study was undertaken to provide an all-inclusive understanding in analyzing the effectiveness of the CSR Programmes as perceived by the employees and beneficiaries. The study also seek to understand how both the employees of the organization and the beneficiaries of the community perceive CSR practices. Research was conducted in one of the top Multinational IT Sectors in Tamil Nadu and adopted the integration of the census method and the two-phase sampling technique respectively while selecting the population from both employees and beneficiaries. The descriptive research design was adopted and standardized tools were established for collecting data. The study undertaken brings to light the core elements of CSR and depicts it as a tree (Figure 3) integrating both employees and the beneficiaries under one entity. It portrays a significant high response with regard to the CSR practices of the organization as perceived by the employees and beneficiaries. The study also cross verifies both the perspectives of the employees of the organization and the beneficiaries of the community and clearly signifies that the CSR Activities though conducted in an effective standard should match the acclaims of the community with the programmes carried out by the employees of the organization.

Keywords: Corporate Social Responsibility, CSR Activities, Corporate Social Responsiveness, Corporate Ethics, Social Responsibility, Employees & Beneficiaries.

Introduction

Organizations which use CSR as an effective instrument enhance its brand image and status. The success of any CSR Programme could be seen in the improvement of its sales and customer loyalty. By adopting the right programmes organizations and multinational corporations increase their ability to attract and retain employees. Used as a right tool CSR, offers manifold benefits both internally and externally to both its employees and beneficiaries. Internally, it cultivates a sense of loyalty and trust amongst the employees. It improves operational efficiency and is often accompanied by increases in quality and productivity. It also serves as an alteration from the routine workplace practices and gives a feeling of satisfaction and meaning to the lives of the employees by contributing to the society at large. Externally, it aims at establishing a positive public relation and earns a special respect amongst its peers.

The meaning and scope of CSR initiatives in India is limited to matching programmes carried out by the organization with that of the community. This aspect is mostly self-action driven by the business needs of the organization not in accordance with the felt needs of the community. Programmes dealing with stakeholders are limited to compliance with legal procedures and there have hardly been companies seen taking voluntary and proactive actions on these counts. Corporates partnering with NGO, according to Partners in Change (PiC)'s survey; indicate that; 16% companies had worked in partnership with NGOs and these organizations fail to establish CSR as part of its core function.

Review of Literature

Stuart L. Esrock (2000), in an article on "Social responsibility and corporate web pages: Self-presentation or agenda-setting", examined how large corporate entities are making use of the Web to present themselves as socially responsible citizens and to advance their own policy positions. Analysis of a random sample of Fortune 500 companies revealed 90% had Web pages and 82% of the sites addressed at least one corporate social responsibility issue. Majority (67.1%) addressed concerns on environmental issues, less than one third (30.6%) addressed programmes on education.

Irina Iamandi (2007), in her study on "Corporate Social Responsibility and Social Responsiveness in a Global Business Environment a Comparative Theoretical Approach", stated that, the evolution of Corporate Social Responsiveness in recent years demonstrates that companies are increasingly trying to adapt their business strategies to social pressures, for deontological or pragmatic reasons. The debates on corporate social responsibility show that there is no unique approach when considering the appropriateness of assuming extended social responsibilities by companies.

Krista Jaakson, and Katrin Tamm (2009), carried out a study to investigate the effect of organizational culture on corporate social responsibility (CSR) in service companies in Estonia. According to the methodological approach of the study; the culture at the organizational and societal level and social responsibility were analyzed, leading the

authors to the hypotheses that the more extensively an organization engaged in Corporate Social Responsibility activities, organizational culture in general would be stronger. An empirical study was conducted in 17 service organizations operating in Estonia. It used task- and relationship-orientation as characteristics of organizational culture. Even though results could not statistically confirm the hypothesis that strong organizational culture characterizes higher Corporate Social Responsibility performers, but results are inconclusive in this respect.

Leena James (2010), in her research thesis on "A Study on Corporate Social Responsibility Practices in Relation to Organizational Culture and Business Ethics in the Information Technology Industry at Bangalore City", stated that majority (63.7%) of respondents revealed an overall high level of rating with regard to the influence of Business/Corporate Ethics in the Information Technology Industry at Bangalore, India. The conceptual model adopted in this study revealed a relationship between Corporate Social Responsibility, Organizational Culture and Business Ethics. This model further aimed to benefit both academics and practitioners through its consideration of organizational culture, business ethics in the formation of a CSR practices. The combination of these two antecedents together with CSR practices provide sustainability to the companies.

Moon Seop Kim (2012), in a study on "CSR for Sustainable Development: CSR Beneficiary Positioning and Impression Management Motivation" stated that; consumers will be more likely to buy products from those companies which employ a self-benefit CSR positioning. In addition, the findings also suggest that the effect of the CSR beneficiary positioning on purchase intention depends on product type, situation, and self-monitoring level. Specifically, when the impression management motivation is heightened, people will pay more attention to information about companies' CSR efforts.

Ignatius (2014), conducted a study on "Perception of Beneficiaries on the Corporate Social Responsibility Programmes Sponsored by DCBL Dalmiapuram, Tiruchirappalli District, Tamil Nadu". The quantitative data revealed that the community perception towards Corporate Social Responsibility programme and company CSR programme was very



high. Via case studies, the researcher revealed that there was a mismatch between their expectation and in reality what they received and further emphasized that need based analysis was necessary.

From the present reviews, it can be inferred that though the concept of Corporate Social Responsibility has gained much importance and recognition, its holistic ideology is still to be addressed. It is evident that there are vast number of studies illustrated, but however these studies are myopic and rather only focus on either the organizations' perspective, the employee's contributions or the community's involvement. The present conceptual frame work is a novel approach in trying to integrate the above presented entities into a holistic point of view. The concept seeks to understand how the factors dominant in CSR influence the organization, its employees and the community (beneficiaries) at large.



Figure 1. CSR Tree 'Employees Perspective' – (Clayton and Umesh Samuel, 2016).

Core Elements

The Social Responsibility of the Beneficiaries

The organizations/employee involvement in CSR activities

CSR Practices &

The Effectiveness of the Programmes as rated by the Beneficiaries



Figure 2. CSR Tree 'Beneficiaries Perspective' – (Clayton and Umesh Samuel, 2016).

Core Elements

CSR Responsiveness

Corporate Ethics of the Organization

The Social Responsibility of the employee

The Beneficiaries involvement in CSR activities

CSR Practices

The Effectiveness of Programmes Conducted

The present 'CSR Tree Conceptual Model' below seeks to integrate both the employees and the beneficiaries perspective in to a holistic advert which would conceptualize the effective practices of

CSR. This model was put forth in an attempt to draw meaningful congruence since studies and research have only focused on one area either the employee's perspective or the beneficiary's perspective. This approach illustrates that only when there is a mutual integration of efforts pertaining to the CSR Practices of the employees and the beneficiaries the true essence/shade of Corporate Social Responsibility is portrayed. The most essential aspect of the above model is that the element and factors contributing to CSR can still be integrated into the tree whereby an holistic outreach could be administered.



Figure 3: The CSR Tree Model – (Clayton and Umesh Samuel, 2016)

The dynamics in defining the problem pertaining to the study reflects on the factors that play an important role when adhering to Corporate Social Responsibility. Corporate Social Responsiveness is one such factor that emphasizes actions and activities known to the individuals of the organization in caring out CSR activities. This aspect is interlinked with the organizations Corporate Ethics, which is a form of applied ethics or professional ethics that examines ethical principles and moral or ethical problems that arise in a business environment. It applies to all aspects of business conduct and is relevant to the conduct of individuals and business organizations as a whole especially when catering to the activities of CSR. Social Responsibility is also an important

factor which correlates in determining the nature of the study. It is an ethical framework which suggests that an entity, be it an organization or individual, has an obligation to act for the benefit of individual and society at large. This factor is also greatly influenced with the organizations CSR Practices. It is a concept whereby companies carry out CSR activities with its employees in involving them in initiatives that benefit society. This is the key area to be reckoned with while trying to understand how these factors independently and collectively influence each other in the aspect of identifying the overall effectiveness of CSR Activities of the organization.

Organization does not function in isolation in the society around them. The literature review reveals that corporates are expected to operate in the interest of society and have a sense of obligation towards it to solve the problems they have caused. The organization should hold ethical standards and practice a strong organizational culture and social responsibility for the sustainability and success of the business. There is an obligation and responsibility from the part of the corporate to take action that protects and improves the welfare of the society as a whole along with their interest and culture of the organization. (Keith Davis, 1975).

Significance of the Study

The growth in the service sector in India has been led by the IT-ITES sector, contributing substantially to increase in GDP, employment, and exports. The sector has increased its contribution to India's GDP from 1.2% in FY1998 to 7.5% in FY2013. According to 'The National Association of Software and Services Companies (NASSCOM)', the IT/ITES sector in India aggregated revenues of US\$108 billion in FY2013. If corporates could create such a huge difference in the GDP of our country, how much would it take for an organization to contribute towards CSR? (Only 2% as per Companies Bill 2013). Then why there is no significant difference in the outcome of CSR activities. From the review of literature, it is evident that there are studies that focus on CSR, but very few in number in matching the prerequisites of the community with that of the organization (Ignatius, 2014).



Materials and Methods

Aim

The study was undertaken to provide a holistic understanding in analyzing the effectiveness of the CSR Programmes as perceived by the employees and beneficiaries.

Objectives

- To analysis the existing CSR practices of the organization as perceived by the employees and beneficiaries.
- To highlight the Employees perception of the Beneficiaries Involvement in CSR Activities.
- To understand how the Beneficiaries perceive the Employees Involvement in CSR Activities.

Universe & Sampling Frame Work

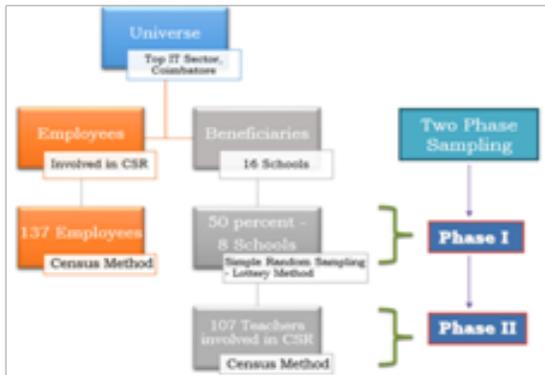


Figure 4: Universe & Sampling Frame work

The study was conducted in one of the top Multinational IT Sectors in Tamil Nadu. The name of the organization was asked not to be disclosed for the want of confidentiality and the conventional applicability of adhering to the research ethics and norms.

Employees

The organization has a separate division for its CSR Initiatives and employees from various departments and designations are pooled in to perform CSR Activities. It is a novel initiative of the organization to use its own employees in contributing to CSR Practices. The census method was applied and all the 137 employees responsible for the CSR practices of the organization were taken for the study.

Beneficiaries

The organization as part of its CSR drive reaches out to Government Higher Secondary Schools, and Middle Schools in its community circle. This constitutes 16 schools in the local community of Coimbatore in which the organization administers its Programmes on CSR. The researcher adopted the two phase sampling technique.

It is a procedure by which information is collected at different degrees of detail for samples that are subsamples of the original population. The sample & subsamples are divided into two distinct phases (Wayne Fuller, 1998).

Kristofer Jennings (2009), further explained the two phase sampling procedure where probability sampling methods can be adopted to distinct between phase one and two to arrive at meaningful representations from the total population.

- Phase I:

Simple random sampling technique was adopted using the lottery method and out of 16 schools in which the organization administers its CSR practices, 50 percent of the population was chosen for the study which resulted in 8 schools being selected for the study.

- Phase II:

There were 107 respondents in the aforesaid 8 schools involved in CSR activities as promoted by the organization. The census method was applied and all the 107 respondents were selected for the study.

Research Design

The descriptive research design was adopted to understand the significance and effectiveness of the CSR Programmes as perceived by the employees and beneficiaries since descriptive research studies are those studies which are concerned with describing the characteristics of a particular individual or group.

Tools of Data Collection

Employees			
Name of the Instrument	Reliability	Rating Scale	Data Collection Method
CSR Practices - Standardized Scale Marcia Fadzai Kwaramba (2012) Cronbach's Alpha (.918)	Re-established .953 Cronbach's Alpha	Likert 5 Point Rating Scale	Questionnaire Method was adopted
Employees Rating Beneficiaries Involvement - Self Structured	.899 Cronbach's Alpha	Likert 5 Point Rating Scale	Questionnaire Method was adopted

Beneficiaries			
Name of the Instrument	Reliability	Rating Scale	Data Collection Method
CSR Practices - Self Structured	.894 Cronbach's Alpha	Likert 5 Point Rating Scale	Questionnaire Method was adopted
Beneficiaries Rating the Organizations/Employees Involvement - Self Structured	.838 Cronbach's Alpha	Likert 5 Point Rating Scale	Questionnaire Method was adopted

Analysis of Data

- Employees Perspective

Table 1 Employees Perspectives based on CSR Practices carried out by the Organization

S.No.	Variable	No. of respondents (n:137)	Percentage
1	CSR Practices		
	Low level	63	46.0
	High level	74	54.0

It is evident from table 1 that more than half (54%) of the respondents perceived a high level pertaining to the CSR Practices of the organization, while 46 percent expressed a low level with regard to the same. The study made by Leena James (2010) differed with the above findings and revealed that majority (69.9%) of the respondents show a high degree of response with regard to Corporate Social Responsibility Practices in IT Industries setup in Bangalore. It is evident from the presented table that though more than half of the respondents denote a high rating, there is still room for improvement with regard to the CSR Activities carried out by the organization.

Table 2 Employees Perception based on the Beneficiaries Involvement in CSR Activities

S.No.	Variable	No. of respondents (n:137)	Percentage
1	Beneficiaries Attitude		
	Low level	53	38.7
	High level	84	61.3
2	Beneficiaries Practices		
	Low level	56	40.9
	High level	81	59.1
3	Overall Beneficiaries Involvement		
	Low level	54	39.4
	High level	83	60.6

With regard to how the employees perceive the beneficiaries attitude towards CSR Activities, it is revealed that a majority (61.3%) expressed a high level, while 38.7 percent denoted a low level pertaining to the same. The beneficiaries practices with regard to how they are perceived by the employees denoted that majority (59.1%) of the respondents had a high level of opinion, while 40.9% denoted a low level with reference to the same.

The table also signifies that majority (60.6%) of the beneficiaries are perceived by the employees in having a high level of involvement in the CSR activities put forth by the organization, while 39.4 percent were found to have a low level of perception in relationship to the same. From this table it is



evident that the community participation was found to be of a significant level with regard to the CSR Activities carried out by the organization.

- Beneficiaries Perspective

Table 3 Beneficiaries Perspectives based on CSR Practices carried out by the Employees of the Organization

S.No.	Variable	No of respondents (n:107)	Percentage
1	Reality		
	Low level	52	48.6
	High level	55	51.4
	Expectation		
2	Low level	48	44.9
	High level	59	55.1
3	Future		
	Low level	40	37.4
	High level	67	62.6
4	Overall CSR Practices		
	Low level	49	45.8
	High level	58	54.2

From the presented table based on the reality of the programmes carried out, it is evident that a little more than half (51.4%) of the respondents reveal a high rating, while 48.6 percent reveal a low rating based on the same. With reference to the expectation of the beneficiaries with regard to the programmes conducted, it was found that more than half (55.5%) of the respondents infer a high rating, while 44.9 percent revealed a low rating. The beneficiaries perception on the future of the programmes to be conducted revealed that a majority (62.6%), have a high anticipation with reference to the future of these programmes while more than one third of the respondents revealed a low perception based on the same. The above table also denotes that more than half (54.2%) of the respondents express a high level with reference to the overall CSR Practices of the organization, while 45.8 reveal a low inference pertaining to the same.

The table also reveals that though more than half of the beneficiaries from the community denote a high

rating in terms of the CSR Activities carried out by the organization, there is still a huge gap with regard to what they expect and what has been provided. This also correlates with a study made by Ignatius (2014), which states that “there was a mismatch between the expectation of the beneficiaries from the community and in reality what they received”.

Table 4 Beneficiaries Perception based on the Employees Involvement in CSR Activities

S.No.	Variable	No of respondents (n:107)	Percentage
1	Employee Attitude		
	Low level	43	40.2
	High level	64	59.8
	Employee Practices		
2	Low level	32	29.9
	High level	75	70.1
3	Overall Organizations Involvement in CSR		
	Low level	51	47.7
	High level	56	52.3

The above table infers that majority (59.8%) of the beneficiaries perceive a high level with regard to the attitude of the employees, while 40.2 percent reveal a low level pertaining to the same. Based on the practices of the employees, majority (70.1%) rated the same to be of a high level, while less than one third (29.9) of the beneficiaries rated the same to be low.

Table 4, also denotes that the beneficiaries perspective with reference to the overall organizations involvement revealed more than half (52.3%) of the respondents stating that a high level of the organizations involvement in CSR was found, while 47.7 percent revealed a low rating pertaining to the same. From the table, it is also evident that though the beneficiaries of the community denote a high rating with regard to the employees of the organizations involvement, there could be more room for development. This would enable optimum effectiveness in the practices of CSR Activities.

Conclusion

The study brings to light the core elements of CSR and depicts it as a tree (Figure 3) integrating both employees and the beneficiaries under one entity. The beauty of this depiction is that the tree could still grow and more factors could be added to highlight the effectiveness of CSR. As stated ‘Organization do not function in isolation, corporates are expected to operate in the interest of society and have a sense of obligation’.

When 2% as per Companies Bill 2013 is spent by every company, private limited or public limited, which either has a net worth of Rs 500 crore or a turnover of Rs 1,000 crore or net profit of Rs 5 crore, there could be tremendous changes that could take place. However, for any organization to be successful in administering its CSR Practices, it is essential that there should exist a congruence between the employees of the organization and the beneficiaries of the community. If this bond could come into existence, there could be a mass change in the growth and economy of the nation.

Though the study portrays a significant high response with regard to the CSR practices of the organization as perceived by the employees and beneficiaries, this could be taken as benchmark to ascertain better CSR Practices. The study also cross verifies both the perspectives of the employees of the organization and the beneficiaries of the community and clearly signifies that the CSR Activities though conducted in an effective standard should match the acclaims of the community with the programmes carried out by the employees of the organization.

Suggestions

• Employees of the Organization

The study revealed that 46 percent of the employees expressed a low level with regard to the CSR Practices of the organization. It is suggested that common meetings between the community and the various stakeholders to be conducted. This should consist of representatives of self-help groups, government officials, youth club leaders and prominent people from the local villages. This would enable the organization and the community to have a common platform to identify the felt needs of the community before the actual implementation the

CSR Schemes. It can be inferred from the study that 39.4 percent of the employees have expressed a low rating with regard to the beneficiaries involvement. It is suggested that proper ice breaking sessions and leisure meetings be conducted between the employees and the beneficiaries to enable a progressive environment towards the optimum outcome of CSR Practices.

• Beneficiaries of the Community

From the study it is inferred that 47.7 percent of the beneficiaries express a low level pertaining to the organizations involvement. It is suggested that, a monthly work schedule be constituted that would enable the beneficiary’s intuition to plan well in advance with regard to the employees visits in relation to CSR Activities. This would ascertain beneficiaries well in advance to successfully carry out the programmes with regard to CSR.

It is inferred from the study that 45.8 percent of the beneficiaries reveal a low rating with regard to the CSR Practices of the organization. It is suggested that, exclusive workshops on CSR may be organized for the key functionaries at the community level. This would enable them to understand the objectives of CSR Activities, the programme content, the working modalities and whereby ascertain successful implementations of the CSR Programmes.

References

- Confederation of Indian Industry. (2013). Retrieved from The Handbook of CSR in India: <http://www.pwc.in/assets/pdfs/publications/2013/handbook-on-corporate-social-responsibility-in-india.pdf>
- Davis, K. (n.d.). Management Innovations. Retrieved September 19, 2013, from Davis Model of Corporate Social Responsibility: <https://managementinnovations.wordpress.com/tag/davis-model-of-corporate-social-responsibility/>
- Esrock, S. L. (2000). Social responsibility and corporate web pages: Self-presentation or agenda-setting. *Science Direct*, 305-319.
- Fuller, W. (1998). *Statistica Sinica*. Retrieved from Two Phase Sample: <http://www3.stat.sinica.edu.tw/statistica/oldpdf/A8n48.pdf>



- Iamandi, I. (2007). Corporate Social Responsibility and Social Responsiveness in a Global Business Environment a Comparative Theoretical Approach. Retrieved from Research Gate: https://www.google.co.in/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=0CCQQFjAB&url=http%3A%2F%2Fwww.researchgate.net%2Fprofile%2FIRina-Eugenia_IAMANDI%2Fpublication%2F24047489_Corporate_Social_Responsibility_and_Social_Responsiveness_in_a
- Ignatius. (2014, March). Unpublished Thesis. Perception Of Beneficiaries on the Corporate Social Responsibility Programmes Sponsored by DCBL Dalmiapuram, Tiruchirappalli District, Tamil Nadu. Trichy, Tamilnadu.
- James, L. (2010, November). Shodhganga. Retrieved from <http://shodhganga.inflibnet.ac.in/handle/10603/5311>
- Jennings, K. (2009). Sampling and Survey Techniques. Retrieved from <http://www.stat.purdue.edu/~jennings/stat522/notes/topic10.pdf>
- Jennings, M. M. (2002). Social responsibility and supply chain relationships, uses the term purchasing social responsibility. Pergamon, 37-52.
- Kaliski. (n.d.). Social Responsibility. Retrieved January 24, 2014, from Wikipedia: http://en.wikipedia.org/wiki/Social_responsibility
- Kim, M. S. (2012). Wiley Online Library. Retrieved from CSR for Sustainable Development: CSR Beneficiary Positioning and Impression Management Motivation: <http://onlinelibrary.wiley.com/doi/10.1002/csr.1300/abstract>
- Lee, K.-H. (2007). Corporate social responsiveness in the Korean electronics industry. Retrieved from Research Gate: http://www.researchgate.net/publication/229600942_Corporate_social_responsiveness_in_the_Korean_electronics_industry
- McDonald, D. (2013). Triangulation: Establishing the Validity of Qualitative Studies. Retrieved November 25, 2014, from EDIS: <http://edis.ifas.ufl.edu/fy394>
- Taylor, B. (2004). Research Methodology: A Guide To For Researchers in Management and Social Sciences. In G. Sinaha. New Delhi: Allied Publishers.

Development of Selective Extractive Spectrophotometric Method for Determination of Cobalt (II) from Synthetic Mixtures and Alloy Samples using 2 – Hydroxy 1- Naphthaldehyde thiosemicarbazone (HNT) Reagent

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Abstract

2 – Hydroxy 1- Naphthaldehydethiosemicarbazone (HNT) is prepared in laboratory and identified by NMR, IR and elemental analysis for its composition and purity. HNT forms a yellow complex with Co (II) which can be extensively extracted into ethyl acetate at pH 7. An intense absorption peak of 290 nm was seen for the complex in ethyl acetate. Beer's law is obeyed in the range of 10µg to 100µg of metal solution. Linear and reproducible graph was observed with the complex having a molar absorptivity of $0.273 \times 10^6 \text{ L mol}^{-1} \text{ cm}^{-1}$, Sandell's sensitivity calculated was found to be $2.730 \times 10^2 \text{ µg cm}^2$. Job's continuous variation method, Slope ratio method determined the nature of the extracted complex and the composition of Co (II): HNT is 1:2. The method has been applied for the determination of Co (II) in the variety of samples like Pharmaceutical samples, alloys and synthetic mixtures. The results of the analysis are found to be corresponding with those obtained by standard method.

Keywords: Cobalt (II); extractive spectrophotometric determination; 2 – hydroxy 1- naphthaldehyde thiosemicarbazone (HNT).

Introduction

Cobalt-57 (Co-57 or ^{57}Co) is most often used in medical tests, also as a radiolabel and for the Schilling test and also as a source in Mössbauer spectroscopy and is one of several possible sources in XRF devices.

^{59}Co is incorporated in Nuclear weapon designs which would be activated in a nuclear explosion to produce ^{60}Co . The ^{60}Co creates what is sometimes called a dirty bomb or cobalt bomb. Several compounds of cobalt are used in chemical reactions as catalysts.

Materials and Methodology

Cobalt Solution

A weighed amount of cobalt sulphate was dissolved in double distilled water containing dilute sulphuric acid and then diluted to the desired volume using double distilled water. An aliquot of this solution was analyzed for cobalt by the thiocyanate - pyridine method gravimetrically¹.



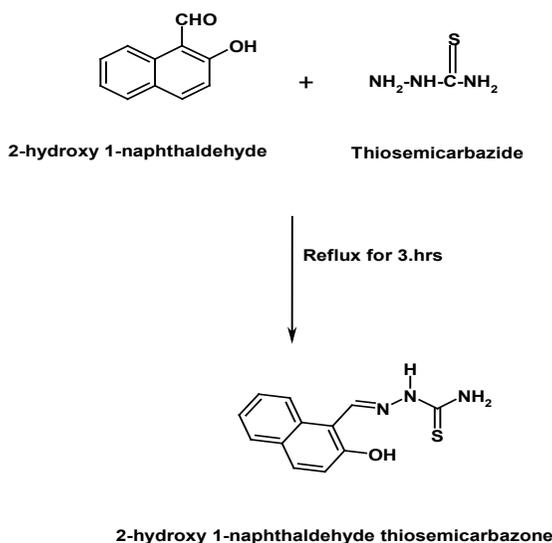
All the measurements of absorption spectra² were made on Shimadzu UV 2100 one cm silica cells or 1 cm glass cells. For pH measurements an Elico120 model pH meter of Electronic Instruments Co. Ltd. was used². For calibration of pH meter appropriate buffer solutions were used¹.

Reagent Preparation³ of 2-Hydroxy1-Naphthaldehyde Thiosemicarbazone (HNT):

Hydrazine Carbothioamide, 2-[(2-hydroxy-1-naphthalenyl)methylene]

2-Hydroxy 1-naphthaldehyde (0.5 m mol) and thiosemicarbazide (0.5 m mol) were added to a dry 250 ml round bottom flask. The mixture dissolved in 10 ml of anhydrous methyl alcohol. The mixture was refluxed for 3 hours on a water bath with stirring. The resulting solid of HNT was rinsed with sufficient amount of water and recrystallized. The yellow colour of 2-hydroxy-1-naphthaldehyde thiosemicarbazone in the alkaline range was studied by the spectrophotometric⁴ method.

Reaction



Proposed Analytical Method

A working solution⁵ was obtained by diluting stock Co (II) solution. 1.0 ml of aqueous solution of Co (II) [containing 100 µg of Co (II)]was taken in a separating funnel. The pH was adjusted to 7.0. To this 0.5ml of 0.01% reagent in dimethyl formamide was added. Total volume of aqueous solution was made to 10ml. The yellow coloured complex was shaken for 1 minute. After separation of the phases, absorbance of the organic layer was measured at 290 nm using a reagent blank.

Results and Discussion

Extraction as a Function of pH

The quantitative extraction was found between pH 6.5 and 7.5 and pH 7.0 was selected for further measurements. (Fig. 1).

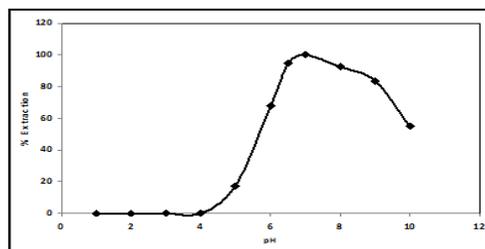


Fig Effect of pH on extraction of Co(II) :HNT

Selection of Solvents

The extraction of Co(II): HNT was found to be quantitative with organic solvent Ethyl Acetate and it also gave clean and quick separation. Therefore, Ethyl Acetate was selected as organic solvent for the extraction of Co(II) for further studies.

Reagent Concentration

Varying concentration of reagent shows that 1.0 ml of 0.01 % of HNT in dimethyl formamide solution is enough for development of color and extraction of 100 µg of Co(II).

Effect of Equilibration Time

From 30 seconds to 60 minutes of equilibrium time was studied and it was measured that 30 seconds are adequate for the quantitative extraction of Co (II).

Stability of the Complex with Time

The stability of the extracted complex is checked and it was found to be stable up to 48.0 hours.

The Calibration Plot

The calibration plot of the absorbance against concentration of the Co(II) was studied quantitatively. It is observed that the linear reproducible graph in the concentration range of 10µg to 100 µg (Fig.2) is produced which indicates that the Beer's law is obeyed in this range. The Molar Absorptivity and Sandell's Sensitivity values were calculated and they are found to be $0.273 \times 10^6 \text{ L mol}^{-1} \text{ cm}^{-1}$ and $2.730 \times 10^2 \text{ µg cm}^{-2}$.

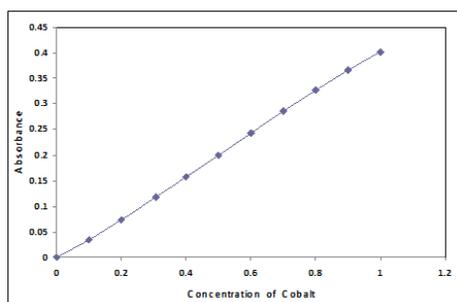


Fig Calibration plot of Co(II) : HNT complex

Composition of Extracted Species

The composition of extracted species Co (II): HNT complex is 1:1 and it was studied by Job's Continuous Variation method (Fig. 3), Slope Ratio method (Fig.4).

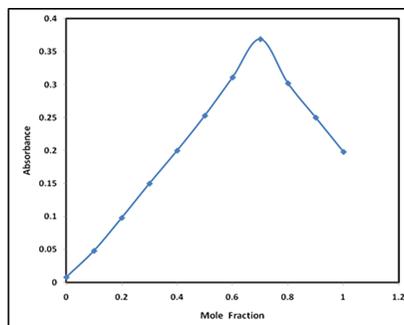


Fig Job's continuous variation method Co(II): HNT

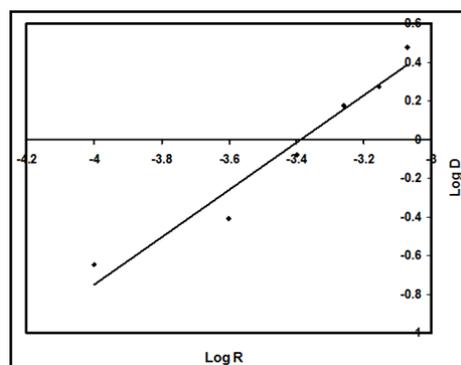


Fig Slope ratio of the Co(II): HNT

Precision and Accuracy of the Method

The measurements were done for precision and accuracy and even for standard deviation and confidence limits, in which the extractives spectrophotometric method was studied by analyzing five solutions of each containing 100 µg of cobalt. (Table 1).



Table

S. No.	Absorbance	Amount of Co(II) in µg	X-	Deviation from mean $D= x_i - \bar{x} $	$D^2 = (x_i - \bar{x})^2$
1	0.510	095	112	0.6	0.36
2	0.530	130		0.5	0.25
3	0.510	095		0.3	0.09
4	0.515	110		0.6	0.36
5	0.530	130		0.8	0.64

Standard Deviation : 0.6519

Confidence Limit at (99%) : 112 ± 1.175

Applications

The proposed method was studied for the amount of the cobalt in the variety of samples like Pharmaceutical samples, alloys and synthetic mixtures. The results were found in accordance with those of the standard method. (Table 2)

Determination of the cobalt in pharmaceutical samples

Vitamin B₁₂

1 ml of vitamin B₁₂ was reacted with 1 ml of H₂SO₄ and 5 ml of HNO₃. The solution was then subjected to the dryness and then residue obtained was dissolved in dilute HCl. 5 ml of 30 % H₂O₂ was added to this solution and then it was heated till the solution turns colorless. Then this solution was diluted with distilled water to obtain the total volume of 10 ml. From this, 1 ml of this solution was used for the determination of cobalt content. The results found are in accordance with the certified value.

Injectable liquid/Tablet

To a 2 ml of injectable liquid or a tablet, 1 ml of concentrated HCl and 5 ml of HNO₃ were added.

The solution was then subjected to the dryness. It was then treated with 5 ml of 30% H₂O₂, till solution turns colorless. This solution was then treated with dilute HCl and evaporated to dryness. This was diluted with distilled water to the total volume of 10 ml. Then 1 ml of this solution was used for the determination of cobalt content. Then residue was dissolved in the 10 ml of distilled water and an aliquot of this solution was used for the cobalt analysis by developed method. The results found are in good agreement with the standard value.

Determination of Cobalt in Cobalt Alloys

About 0.3 to 0.5 g of sample (alloy) was dissolved in 15 ml of aqua regia. The solution was then evaporated to the dryness. The residue was treated with concentrated HNO₃ and diluted to 100 ml. An aliquot of this solution was used for the extraction and spectrophotometric determination of cobalt by present method.

The present method was verified with various samples for the determination of the Co and the results obtained are in good accordance with the result obtained by the standard method. (Table 2).

Table Determination of Cobalt in Some Analytical Samples

Commercial Samples	Amount in mg	
	Certified method	Present method
Glaxo (injection)	4.350	4.30
Surbex - T (Abbott)	0.326	0.318
Vit. B12	50.0	48.0
Synthetic Mixtures		
Co(5) + Mo (5)	4.95	5.02
Co(5) + V(5)	4.98	5.01

Conclusion

The result obtained shows that HNT can be effectively used as the reagent for the quantitative extraction of the Co (II) from the aqueous media. The method is sensitive, precise, simple and faster. In the conclusion, the present method has some advantages for the extraction of Co(II) over other methods available. The method is compatible with the known methods of the determination of cobalt.

References

- A.I. Vogel, 1961, "Text book of Quantitative Inorganic Analysis" Longman green and Co.Ltd. London,
- Sudheer K. Lingayat; 2006, Ph.D. Thesis, University of Mumbai
- W. W.Scott, 1939, "Standard Methods of Chemical Analysis" , Vol.1, Van Norstrand Company, Inc
- Xiaohui Du, Chun Guo, 2002, Elizabeth Hansell, Patricia S.Doyle, Journal of Medicinal Chemistry, 45, 2695-2707
- Rusina, R.; Sirota, A. , Chemicke Zvesti 1966, 20(5), 366-72.
- Vogel, 1989, "Text book of Quantitative Chemical Analysis", 5th ed., G. H. Jeffory; J. Bassett, J. Mendhan, R.C. Denney, Addison Wesley Longman Inc.,
- F. D. Snell 1978. "Photometric and Fluorometric methods of Analysis", Part 2, New York, Wiley - Interscience, pg – 1191, 1295.
- S.O. Ross and D. W Wilson, 1961, "Spectrovision" 1, 10.
- E. B. Sandell 1959 "Colorimetric Determination of Trace Metals", Interscience Publishers, N. Y., London
- Sadanand B. Dharap; 2006, Ph.D. Thesis, University of Mumbai.



Unveiling the Structure-Property Relationship of Newly Designed D-A-D based Electron Transport Materials for OLED Applications: Insights from DFT-TDDFT Calculations

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Abstract

Recently studied Pyrimidine Conjugate based organic D-A-D molecules I have induced the interest to explore new set of D-A-D moieties by replacing pyrimidine group with other heteroaromatic rings for OLED applications and are suitable for structural tuning. Among the four derivatives studied here, one of them is already reported and remaining three have been newly designed. Optoelectronic properties such as Absorption and Emission spectra have been probed via density functional theory and time dependant density functional theory (DFT-TDDFT) studies. Different heteroaromatic rings have been completely studied to understand their role in altering the optoelectronic properties of these organic systems and to be fabricated for OLED devices. All the newly studied compounds have good electron delocalization, electron transport properties than the already reported one. Over all, this work presents fine correlation between computed optoelectronic properties and HOMO-LUMO gaps which portrayed the role of heteroaromatic rings on the photo physical properties of new derivatives and throw light in designing novel candidates for OLED applications.

Keywords: Pyrimidine, DFT, TDDFT, HOMO-LUMO, OLEDs

Introduction

Organic light emitting diodes (OLEDs) have attracted good attention in both scientific and commercial applications since the pioneering work by Tang and Van Slyke in 1987 because of their characteristic low power, enhanced brightness, full-colour emission, speed response time, wide viewing angle and self-emitting properties. Extensive research has been carried out to promote OLEDs into commercial applications as flat-panel displays and solid-state lighting resources due to their low cost.^{1,2,3} OLEDs have been successfully applied in mobile phones, computers, car stereos, digital cameras,⁴ wrist watches and white solid state lighting etc. The search for new and efficient emitting materials and charge transport layers remains as one of the most active areas in this field.⁵ While giving potential devices is one challenge, studying the interactions, properties due to effect of substitution, geometry and packing of the molecules in the solid state is another. The latter would help us not only to improve the device efficiency but also give us a more detailed insight into the mechanism of OLED⁶.

Recently Komatsu et al have explored pyrimidine conjugate based D-A-D based compound as efficient emitters for OLEDs. In the present work, three novel organic compounds have been designed by modifying the already reported pyrimidine conjugate based D-A-D based molecules with different hetero ring as acceptor group. Our aim is to study the structure property relationship of newly designed candidates for its effectiveness. We have studied theoretically the electronic structure, photo physical properties such as absorption, emission, thermally activated delayed fluorescence (TADF) and ionic properties such as ionization potential(IP), electron affinity(EA), electron extraction potential(EEP), hole extraction potential (HEP) of three newly designed compounds and compared their higher efficiency with the already reported pyrimidine conjugate D-A-D based compound.

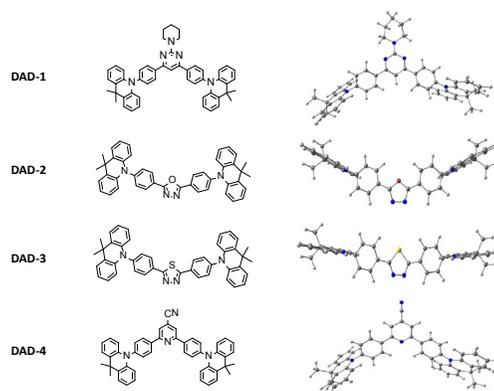
Computational Methods

All the ground and excited state geometries, cationic and anionic state optimization were carried out using density functional theory (DFT) with Becke's three parameter hybrid method7 combined with the Lee–Yang–Parr correlation functional8a (denoted as B3LYP) in 6-31G(d,p) level of basis set. Frequency calculations have been performed followed by optimization of these molecules to confirm that the optimized structures correspond to minimum energy on the potential energy surface (PES). Low lying triplet and singlet excited states in gas phase were probed with time dependant density functional theory (TD-DFT) method employing 6-311+G(d,p) level of basis set. Frontier molecular orbital analysis (FMO) of the ground state geometries were mapped by QM Forge program8b. All calculations have been done using Gaussian 09 suite of programs9, 10.

Results and Discussion

Optimization of the Ground State Geometry

Scheme 1. Represents D-A-D based organic molecules namely DAD-1 which is already reported and DAD-2, DAD-3 and DAD-4 are newly designed by substituting the acceptor group (pyrimidine) in DAD-1 by oxadiazole, thiadiazole and 4-cyano pyridine respectively.



Scheme-1. Optimized geometries of DAD molecules in B3LYP/6-31G(d,p) level

Frontier Molecular Orbital (FMO) Analysis

Frontier molecular orbitals of DAD molecules are listed in Fig.1. It clearly depicts that all the molecules have intra valence charge transfer (ICT) which supports electron transport property of these molecules by transferring the electron charge cloud from one group to another. The highest occupied molecular orbitals (HOMO) are clouded in donor groups whereas lowest unoccupied molecular orbitals (LUMO) are clouded in acceptor groups.

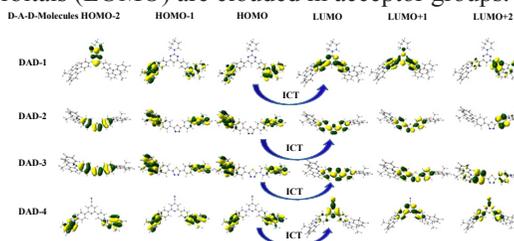


Fig Frontier Molecular Orbitals of DAD molecules

In DAD-2, DAD-3 and in DAD-4 the oxadiazole, thiadiazole and 4-cyano pyridine moieties are fully occupied with LUMO orbitals, whereas in DAD-1, the LUMO orbitals are not fully clouded the pyrimidine moiety. This is because of the LUMO contribution in acceptor groups which alters the overall photo physical properties of above studied molecules. In addition to that the HOMO-LUMO percentage contribution map was drawn by QM Forge diagram is given in Fig-2. Among the four molecules studied, DAD-4 has 4-cyanopyridine as acceptor group which has highest LUMO contribution 98.68% for π -delocalization and accept

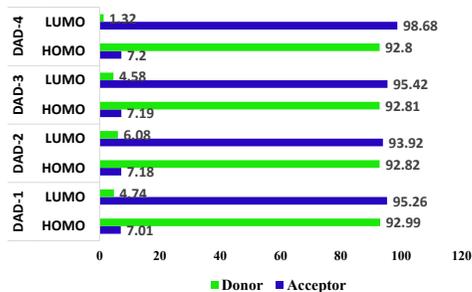


Fig % Contribution of HOMO-LUMO Orbitals in the Ground State

Electrons easily than the rest of the series. While considering the HOMO-LUMO gap obtained by the molecules studied in the present work, fig.3 has shown that there is decrease in band gap. Smaller the band gap, higher will be its electron transporting ability.

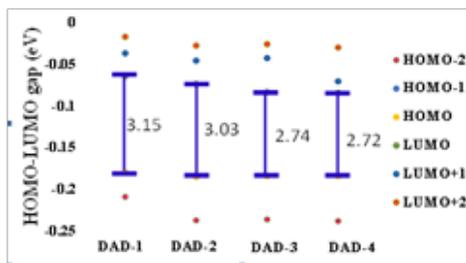


Fig-3. HOMO-LUMO Gap of DAD Molecules

DAD 1 has 3.15 eV, whereas the new designed molecules DAD-2 has 3.03 eV and DAD-3 has 2.74 eV and DAD-4 has 2.72 eV respectively. This decrease in band gap portraying that the new candidates are better electron transport candidates than the already reported molecule.

Excited State Properties

Absorption and Emission Spectra

TDDFT calculations have been widely used in the recent years to predict the excited state properties of the molecules such as absorption and emission spectra^{11, 12}. Both absorption and emission spectra has been calculated in B3LYP/6-311+G (d,p) level of basis sets. Fig.4, conveys that, among the four molecules taken in the study, DAD-1 has absorption λ_{max} 449.83 nm which is lower than DAD-2 has λ_{max} 477.37 nm. DAD-3 has the highest λ_{max}

515.21nm whereas DAD-4 has 495.05nm which is slightly less than DAD-3. Among the four studied, DAD-3 has highest λ_{max} value than the rest of the series. But while considering the emission spectra, DAD-2 has the highest emission λ_{max} which is 566.96 nm. All the newly designed have higher λ_{max} in both absorption and emission than the reported one.

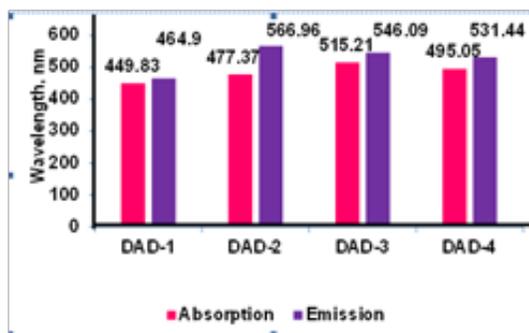


Fig Absorption and Emission Spectra (λ_{max}) in nm of DAD Molecules

Thermally Activated Delayed Fluorescence property (TADF)

Organic light emitting diodes (OLEDs) based thermally activated delayed fluorescence (TADF) are the emerging trend for their potential to target 100% internal quantum efficiencies through efficient up-conversion of non-radiative triplets to radiative singlets¹³. Although the performance of most TADF OLEDs are not as good as that of phosphorescent OLEDs, TADF OLEDs show the enhanced potential as the next-generation OLEDs due to high costs and lack of resources of phosphorescent materials¹⁴. Here in the present work, among the four molecules studied, all the newly designed are having lower singlet- triplet gap which is the criteria for a molecules to have TADF property. Lowest Singlet (S₁)-triplet (T₁) gap ΔE_{ST} is given in fig-5.

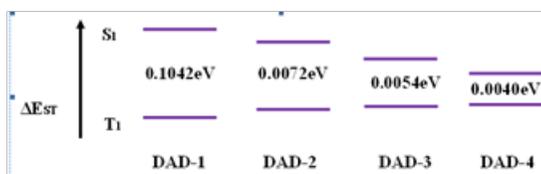


Fig ΔE_{ST} gap of DAD Molecules

The organic species that possess less than 0.02eV of ΔE_{ST} is said to have TADF property¹⁵.

Here DAD-2 has 0.0072eV which is very low than DAD-1 has 0.1042eV. DAD-3 and DAD-4 has even lower Δ EST gap 0.0054 and 0.0040eV respectively than DAD-1. Hence all the studied molecules in the present work have very low Δ EST gap value desirable to have TADF property.

Electron Transport Property Reorganization Energy

The reorganization energy is one of the major key factors that determine the rate of charge transport in organic semiconductors. Higher charge transport rate is achieved with the lower reorganization energy (λ)¹⁶. Hence the Ionization energy (IP), Electron affinity (EA), Hole extraction potential (HEP), Electron extraction potential (EEP) and reorganization energy (λ) are calculated and listed in Table 1. A molecule which has smaller ionization potential would admit effective hole injection from the source electrode¹⁶. All the studied molecules under study have shown high IP values than that of already reported one. Hence they does not have hole injection ability but EA value is increased so as to have a lower LUMO level to accept the electrons. DAD-2, DAD-3 and DAD-4 have higher electron affinities than the reported molecule. The high charge transport rate is obtained with the lower reorganization energy¹⁶. Table 1 shows that the reorganization energy is very low to all of the studied molecules. Hence it can be concluded that the investigated molecules of the present study can act as better candidates for optoelectronic materials with a good charge transport rate.

IP	EA	HEP	EEP	λ Hole	λ Electron	λ Total	λ Difference
4.35	2.59	4.32	2.78	0.03	0.19	0.22	-0.16
4.62	2.67	5.92	0.86	-1.3	-1.81	-3.11	0.51
4.62	2.88	4.59	3.03	0.03	0.15	0.18	-0.12
4.54	2.92	4.5	3.09	0.04	0.17	0.21	-0.13

Table 1. Calculated ionization potentials (IPs in eV), electron affinities (EAs in eV), extraction potentials (eV), reorganization energies λ (eV), of DAD molecules.

Conclusion

All the molecules studied in the present work have shown excellent photo physical properties such as low HOMO-LUMO gap, high absorption and emission λ max and low Δ EST gap. They have shown

good electron transport properties which witness their efficiency that can be taken forward to fabricate in OLED devices.

Notes

The Authors Declare No Competing Financial Interest

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References

- Becke, A D. "Density functional thermochemistry. III. The role of exact exchange." *The Journal of Chemical Physics*, 98(7), 1993, 5648-5652.
- Dias, F B, K N Bourdakos, V Jankus, K C Moss, K T Kamtekar, V Bhalla, ... and Monkman, A P. "Triplet harvesting with 100% efficiency by way of thermally activated delayed fluorescence in charge transfer OLED emitters." *Advanced Materials*, 25(27), 2013, 3707-3714.
- Im, Y M Kim, Cho, Y J, Seo, J A, Yook, K S, and Lee, J Y. "Molecular design strategy of organic thermally activated delayed fluorescence emitters." *Chemistry of Materials*, 29(5), 2017, 1946-1963.
- Komatsu, R, H Sasabe, K Nakao, Y Hayasaka, T Ohsawa and J Kido. "Unlocking the Potential of Pyrimidine Conjugate Emitters to Realize High Performance Organic Light Emitting Devices. *Advanced Optical Materials*, 5(2).
- b) Tang, C. W., & VanSlyke, S. A. (1987). *Organic electroluminescent diodes*. *Applied physics letters*, 51(12), 913-915.
- Komatsu, R, T Ohsawa, H Sasabe, K Nakao, Y Hayasaka and J Kido. "Manipulating the Electronic Excited State Energies of Pyrimidine-Based Thermally Activated Delayed Fluorescence Emitters To Realize Efficient Deep-Blue Emission." *ACS Applied Materials & Interfaces*, 9(5), 2017 4742-4749.



- Lee, C., W Yang and R G Parr. "Development of the Colle-Salvetti correlation-energy formula into a functional of the electron density." *Physical review B*, 1988, 37(2), 785.
- Nithya, R, Sowmiya, M, Kolandaivel, P and Senthilkumar, K. "Structural, optical, and charge transport properties of cyclopentadithiophene derivatives: a theoretical study." *Structural Chemistry*, 25(3), 2014, 715-731.
- Nuyken, O, S Jungermann, V Wiederhirn, E Bacher and K Meerholz. "Modern trends in organic light-emitting devices (OLEDs)." *Monatshefte für Chemie/Chemical Monthly*, 137(7), 2006, 811-824.
- Panneerselvam, M., A Kathiravan, R V Solomon and Jaccob, M. "The role of π -linkers in tuning the optoelectronic properties of triphenylamine derivatives for solar cell applications—A DFT/TDDFT study." *Physical Chemistry Chemical Physics*, 19(8), 2017, 6153-6163.
- Raj, MR, S Anandan, R V Solomon, Venuvanalingam, P, Iyer, S S K and Ashokkumar, M. "Conjugated polymer based on oligobenzo [c] thiophene with low-lying HOMO energy level as potential donor for bulk heterojunction solar cells." *Journal of Photochemistry and Photobiology A: Chemistry*, 262, 2013, 34-44.
- Seino, Y, S Inomata, H Sasabe, Pu, Y. J., and Kido, J. "High-Performance Green OLEDs Using Thermally Activated Delayed Fluorescence with a Power Efficiency of over 100 lm W⁻¹." *Advanced Materials*, 28(13), 2016, 2638-2643.
- Solomon, R V, P Veerapandian, S A Vedha and Venuvanalingam, P. "Tuning nonlinear optical and optoelectronic properties of vinyl coupled triazene chromophores: A density functional theory and timedependent density functional theory investigation." *The Journal of Physical Chemistry A*, 116(18), 2012, 4667-4677.
- Solomon, R V, A P Bella, S A Vedha and Venuvanalingam, P. "Designing benzosiloles for better optoelectronic properties using DFT & TDDFT approaches." *Physical Chemistry Chemical Physics*, 14(41), 2012, 14229-14237.
- Tao, Y, K Yuan, Chen, T, Xu, P, Li, H., Chen, R., ... and Huang, W. "Thermally activated delayed fluorescence materials towards the breakthrough of organoelectronics." *Advanced Materials*, 26(47), 2014, 7931-7958.
- Tenderholt, A L. QMForge, v. 2.1, 2007.
- Udagawa, K, H Sasabe, F Igarashi and Kido, J. "Simultaneous Realization of High EQE of 30%, Low Drive Voltage, and Low Efficiency Roll-Off at High Brightness in Blue Phosphorescent OLEDs." *Advanced Optical Materials*, 4(1), 2016, 86-90.
- Zhu, M, and C Yang. "Blue fluorescent emitters: design tactics and applications in organic light-emitting diodes." *Chemical Society Reviews*, 42(12), 2013, 4963-4976.

Nano-Metal Particles Decorated PEGylated fluor-hydroxyapatite Nanocomposites in the Ionic Liquid Medium: Detailed Investigation of Orthopedic Performances

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Abstract

In this present investigation, we developed the composite material design and structural improvement of nanostructured PEGylated fluor-apatite composites decorated with bio-active nanoparticles for hard tissue engineering. The PEGylation and ionic liquid assisted process of this research have been tuning the particle nature, surface morphology and stability of product. The fluorinated ionic liquid has represented as a fluorine source and also soft template in the synthetic process. The progress of crystalline size and morphological structure of the synthesized composites were investigated and documented by important analytical techniques. The developed metal composites would boost the antibacterial efficiency and favourable cytocompatibility with normal cells. The morphologically established composites could be auspicious candidate for hard tissue implantation.

Keywords: F-apatite; Nanoparticles; PEGylation; Cell viability; Antibacterial.

Introduction

The bone tissue regeneration with nanoscience has designed to progress effective biological implants and bone substitutes for the injured hard impant therapy [1]. Naturally, human bone has a composite structure with maximum amount of inorganic hydroxyapatite (n-HAp; 70 %) and other constituents (30 %) [2].



Recently, fluorinated hydroxyapatite (f-HAp) is produced by the placement of F⁻ ions from different sources to influence on the structural and biological properties for applying bio-medical applications [3, 4]. The combination of apatite nanostructure with selected biocompatible synthetic polymers to prepare biomaterials for obtain important biological properties, because of polymeric chain accumulation on nanoparticles enhances compatibility and tunable degradation rate [5].

The surface improved polymeric nanocomposite materials have been provide exceptional protein adsorption, osteoblast attachment, fibroblast adhesion, cell proliferation and differentiation in the bone regeneration applications. The biocompatible synthetic polyethylene glycol (PEG) combined with nanostructured apatite phases exhibited noteworthy influence on the surface properties with compatibility that depended on the PEG polymer concentrations [6]. In the recent tissue engineering materials, metal nanoparticles (Mt NPs) are playing an significant role in wound healing, drug delivery and bactericidal activity with their controlled nano-size and high surface area for avert the risk in disinfection of wound regeneration [7, 8]. In this present research investigation, fluorinated ionic liquid (IL) has been applied as twin role material for the synthesis of nanocomposite [9]. Herein, we established that a simplistic strategy for the synthesis of metal nanoparticles embeded f-HAp/PEG nanocomposite via sol-gel method. In vitro bactericidal and cytocompatibility of these synthesized nanocomposites were evaluated on different bacterial pathogens and human osteoblast (HOS (MG-63)) cell line.

Experimental Methods

Fabrication of Mt NPs on the PEGylated f-HAp nanocomposites

The metal nanoparticles loaded f-HAp/PEG composites were prepared via sol-gel method [10]. About 4g of polyethylene glycol (PEG; Sigma Aldrich Ltd.) was dissolved and make polymer solution with DI water under vigorously stirring to get viscous solution. The ionic liquid ([bmim]BF₄) and aqueous solution of calcium precursor was added into the above prepared PEG solution at 90 °C with

constant stirring for 20 minutes, followed by aqueous phosphate precursor solution added after aqueous ammonia solution for adjusting alkaline pH (10±1). Then, 10 mL (1 mM) of aqueous metal precursors was added to the above preparing f-HAp/PEG composite gel and subsequently continued stirring for 8 h. The nanostructured Mt particles were formed by IL and it was loaded on the f-HAp/PEG composite with influence van der Waals and electrostatic attraction. The synthesized nanostructured f-HAp/PEG/Mt composites were washed by DI water force of times to remove unreacted and residual impurities and settling down for 24 h. The composite product was separated by centrifugation and was dried under air oven at 100 °C in hot for 12 h.

Antibacterial Property

The gram negative pathogenic bacterial organism such as *Escherichia coli* was taken to examine the antibacterial abilities of the prepared n-Mt/f-HA/PEG/ composites. The pathogenic bacterial strain was cultured under LB broth with Mueller Hinton Agar and incubated at suitable conditions (37°C) in shaking incubator. The bacterial attachment on the n-Mt/f-HAp/PEG composites were visualized by a fluorescence confocal laser scanning microscopic technique. In brief, the presterilized cut-glass pieces (1 × 1 cm) were placed in the 24 well plates comprising LB fresh medium, and then 200 µL of test bacterial cultures were added with 50 µL of nanocomposites at suitable condition (37 °C) for 24 h. After the incubation, the cut-glass were taken prudently and washed with PBS solution and then consequently stained a crystal violet (0.01%) for 5 minutes. Finally, living bacterial cells after samples treatment were exhibited by using a CLSM at a 63× magnification.

In vitro Cytotoxicity

Human osteoblast (MG-63) cell line was taken to evaluate the in vitro cytocompatibility of the n-Mt/f-HAp/PEG composites. The HOS cells were cultured by using Dulbecco's modified Eagles minimal essential medium with 10% fetal bovine serum with containing 1% antibiotics (penicillin & streptomycin). The prepared HOS cell culture was preserved in a suitable environment (5% CO₂; 37 °C)

for one day. The confluent MG-63 cell culture were detached by using 0.1% trypsin and EDTA (0.1%). For the samples treatment, the cultured cells are transported into a new culture plate and treated with synthesized Mt nanocomposites. The culture medium was refreshed after 1, 3 and 7 days of incubation and transferred to a new 24-cell culture plates. The cell survival (viability) on the treated nanocomposites were assessed by determining dehydrogenase activity using MTT assay. Cell viability(%) were calculated by the standard of triplicates procedures using the subsequent equation 1.

$$\% \text{ Cell viability} = \frac{[A]_{\text{test}}}{[A]_{\text{control}}} \times 100 (1)$$

Results and Discussion

The phase structure and crystallinity of synthesized Mt NPs loaded f-HAp/PEG composites were categorized by powder XRD investigation. As shown in Figure 1A, the XRD intense peaks have been signified to JCPDS database such as HAp (# 09-0432), f-HAp (# 15-0876), Ag NPs (# 89-3722), Au NPs (#65-2870) and PdNPs(# 88-2335). The results showed that the well-ordered intense peaks, which designated improved crystallizability phases of nanostructures with PEGylated composites and structures has been influenced by the presence of bitemplate materials. This proposes that amphiphilic PEG polymer matrix and IL medium are successfully play as a structure directing agent and also that might tuned the nucleation and growth of nanostructured apatite phase [11, 12]. These XRD analysis results clearly exhibited that the formation of pure phase fluorinated apatite with n-Mt/PEGylated composites. The high intensity peaks of samples demonstrating that nanocrystallinity has been amplified significantly with fluorine ion substitution onto the structure. The very sharp peaks rising from nano-Mt NPs are highly matched with particular JCPDS data files, which was established that the crystalline Ag, Au and Pd nanoparticles are formed and muscuarly interacted with apatite nanocrystals with support of PEG matrix. FT-IR spectral investigation of synthesized n-Mt/f-HAp/PEG composites with IL medium are exhibited in Figure 1B. The bands at 564 cm⁻¹, 602 cm⁻¹ and 963 cm⁻¹ are ascribed to the phosphate (PO₄³⁻) group of apatite phase and bands at 897 cm⁻¹ and

1383 cm⁻¹ are resembled to the vibration modes of carbonate adsorption. The absorbed water (O-H & H-O-H) molecules on the samples was signified from the broad bands around at 3400 cm⁻¹ and 1650 cm⁻¹, respectively. The weak spectral band around at ~2900 cm⁻¹ are confirmed presence of PEG in the composite through stretching vibration of methylene (C-H) groups. The IR spectrum of raw PEG matrix was provided for the comparative study.

The surface morphology of the n-Mt/f-HAp/PEG composites were examined and visualized using microscopic (FE-SEM&HR-TEM) techniques is shown in Fig. 2 & Fig.3. The FE-SEM microscopic images of the samples displayed that rod-like structure with self-assembled nature. In our previous investigation, we elaborated that PEG mediated apatite phase synthesis has chelate interactions and were formed the kind of PEG-O-Ca²⁺-O-PEG bond, which are produced as spherical structured particles [7, 13]. However, the apatite nanostructure of the present investigation presented that the fine rod-like nanoparticles have been formed, which confirms the fluorine dramatically influences in the morphology behavior and modify the crystallinity of nanostructured phases. The huge number of active oxygen bearing groups of PEG chains could play main role in the materials stabilization and successfully prevent the accumulation of nanomaterials. In addition, the [bmim]⁺ groups of IL contain hydrophobic chain with positive ends could be support for the capping of nanomaterials by its forming micelles with the precursors and making favourable mechanism through electrostatic attraction. The HR-TEM microscopic images are clearly displayed that the addition of bioactive Mt NPs on to the f-HAp/PEG nanocomposites. These results demonstrated polar hexagonal structure of nanostructured apatite phase has been converted to a rod-like anisotropic crystalline structure with the addition of active fluorine ions. The formed Mt NPs are simply loaded on the surface of f-HA/PEG nanostructures with sustenance of van der Waals attraction and electrostatic interactions. The effective combination of Mt NPs into the apatite composites were evidenced from EDS spectrum, which displayed Ag, Au and Pd peaks, in addition Ca & P peaks with carbon and oxygen are confirmed



the formation of apatite/PEG matrix. The SAED diffraction patterns results revealed the prepared materials are pure polycrystalline nature.

For scrutinizing antibacterial efficacy of nanocomposites, equally weighed samples were treated with pathogenic *E. coli* bacterial cells. The growth of these bacterial cells have been completely inhibited by the Ag loaded nanocomposites comparable to the other two metal (Au & Pd) nanocomposites, which established that the effectual bactericidal efficacy of surface functionalized nAg/f-HAp/PEG composite it has been releasing of Ag⁺ ions efficiently to create cellular interactions on the bacterial cell walls. The live and dead bacterial cells were visualized by CLSM microscopic technique by using acridine orange stains. The results of bacterial activity established that Ag nanocomposite have provided efficient disfunction of bacterial cells as shown in Fig.4(a) comparable to the other metal (Au & Pd) nanocomposites, which is marked through disappearance of green fluorescence emitted cells [14, 15].

In vitro compatibility of samples were explored through cell survival analysis by using optical photomicroscopic technique with CCK-8 assay on HOS MG-63 cell line. As shown in Fig.5D, the cell survival of osteoblast MG-63 cells have been increased with increasing culture days from 1 day to 7 days treated with three different nanocomposites. The optical microscopic images are exhibited that the synthesized samples are grown flawlessly on PEGylated nanocomposites as shown in Figure 5 (A, B & C). The cell survival of Ag nanocomposite has some what greater viability than the other two nanocomposites, which is inveterated that the nano-Ag has been provide compatibility and lesser toxicity with MG-63 cells. The toxicological nature and cellular behaviour of treated composites are contingent with the product nanostructure, nanoscale size, crystallinity and mainly surface functionality of nanoparticles [16].

Conclusion

We have developed the Mt doped PEG/f-HAp composites can be effectively prepared by using fluoro anionic IL. The enhanced nanocrystallinity of composites by an ionic gelation and fluorination

on apatite phase were established by FT-IR and XRD studies. The rod-like f-HAp and Mt NPs have uniformly loaded with good interfacial bonding and mechanical interlocking on polymer surface were exhibited by FE-SEM and HR-TEM microscopic techniques. The synthesized Ag composites show excellent biological activity (antibacterial efficacy & cytocompatibility) comparable to Au and Pd composites. These established composites are may be respectable candidate for hard tissue implantation devices.

References

- Azami, M, Jalilifiroozinezhad, S, Mozafari, M, Rabiee, M. "Synthesis and solubility of calcium fluoride/hydroxy-fluorapatite nanocrystals for dental applications." *Ceramics International* 2011, 37, 2007-2014.
- Boomi, P, Prabu, H G, Mathiyarasu, J. "Synthesis, characterization and antibacterial activity of polyaniline/Pt-Pd nanocomposite." *European Journal of Medicinal Chemistry*, 2014, 72, 18-25.
- JagajjananiRao, K, Paria, S. "Mixed Phytochemicals Mediated Synthesis of Multifunctional Ag–Au–Pd Nanoparticles for Glucose Oxidation and Antimicrobial Applications." *ACS Appl. Mater. Interfaces*. 2015, 7, 14018–14025.
- Jegatheeswaran, S, Selvam, S, SriRamkumar, V, Sundrarajan, M. "Facile green synthesis of silver doped fluor-hydroxyapatite/ β -cyclodextrin nanocomposite in the dualacting fluorine-containing ionic liquid medium for bone substitute applications." *Applied Surface Science*. 2016, 371, 468–478.
- Jegatheeswaran, S, Sundrarajan, M. "PEGylation of novel hydroxyapatite/PEG/Ag nanocomposite particles to improve its antibacterial efficacy." *Materials Science and Engineering. C* 2015, 51, 174–181.
- Kaygili, O, Keser, S, Al Orainy, R H, Ates, T, Yakuphanoglu, F. "In vitro characterization of polyvinyl alcohol assisted hydroxyapatite derived by sol-gel method." *Materials science & engineering C* 2014, 35, 239-44.

- Kim, J S, Kuk, E, Yu, K. N, Jeong, D. H, Cho, M H. "Antimicrobial effects of silver nanoparticles." *Nanomedicine: Nanotechnology, Biology, and Medicine*. 2007, 3, 95-101.
- Liu, H, Chen, F, Cheng, J, Shao, C, Wang, J, Bai, D, Zeng, Z. "Biocompatible Fluorescent Hydroxyapatite: Synthesis and Live Cell Imaging Application." *J. Phys. Chem. C* 2011, 115, 18538–18544.
- Mostafa, A, Oudadesse, H, Legal, Y, Foad, E, Cathelineau, G. "Characteristics of Silver-Hydroxyapatite /PVP Nanocomposite." *Bioceramics Development and Applications*. 2010, 1, 1-3.
- Persson, Maria, Gabriela S. Lorite, Sung-Woo Cho, JuhaTuukkanen and Mikael Skrifvars. "Melt Spinning of Poly (lactic acid) and Hydroxyapatite Composite Fibers : Influence of Filler Content on the Fiber Properties." *ACS Applied Materials & Interfaces*
- Sundrarajan, M, Jegatheeswaran, S, Selvam, S, Sanjeevi, N, Balaji, M. "The ionic liquid assisted green synthesis of hydroxyapatite nanoplates by Moringaoleifera flower extract: A biomimetic approach." *Materials & Design*. 2015, 88, 1183-1190.
- Swetha, M, Sahithi, K, Moorthi, A, Srinivasan, N, Ramasamy, K, Selvamurugan, N. "Biocomposites containing natural polymers and hydroxyapatite for bone tissue engineering." *International Journal of Biological Macromolecules*. 2010, 47, 1-4.
- Wang, L, He, S, Wu, X, Liang, S, Mu, Z, Wei, J. "Polyetheretherketone/nanofluorohydroxyapatite composite with antimicrobial activity and osseointegration properties." *Biomaterials*. 2014, 35, 6758-6775.
- Xiao, Y, Gong, T, Zhou, S. "The functionalization of multi-walled carbon nanotubes by in situ deposition of hydroxyapatite." *Biomaterials*. 2010, 31, 5182-5190.
- Yuan, J, Antonietti, M. "Poly(ionic liquid)s: Polymers expanding classical property profiles." *Polymer* 2011, 52, 1469-1482.
- Zhang, Lijie, Thomas J. Webster. "Nanotechnology and nanomaterials: Promises for improved tissue regeneration." *Nano Today* 4 , 2009, 66-80.

Figure Captions

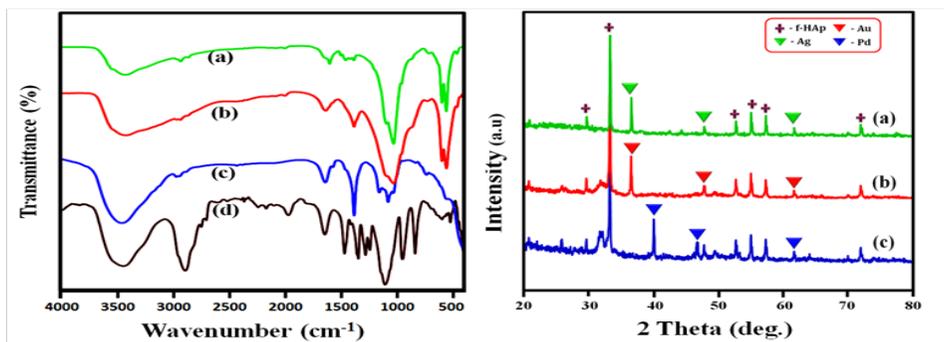


Figure 1 FTIR and XRD patterns of (a) f-HAp/PEG/Ag, (b) f-HAp/PEG/Au and (c) f-HAp/PEG/Pd nanocomposites

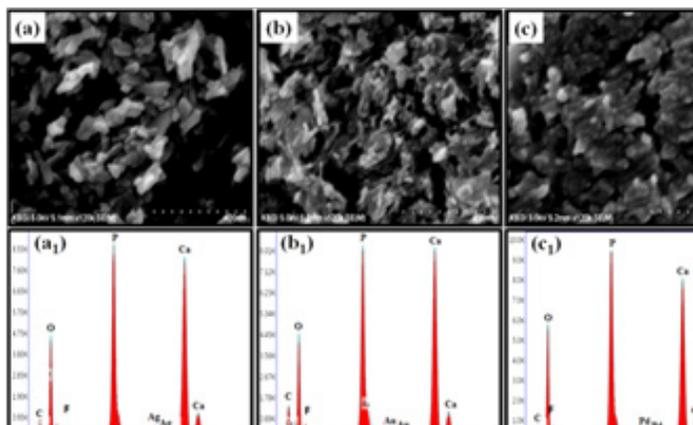


Figure2 FE-SEM and EDAX images of (a1 & a2) f-HAp/PEG/Ag, (b1 & b2) f-HAp/PEG/Au and (c1 & c2) f-HAp/PEG/Pd nanocomposites

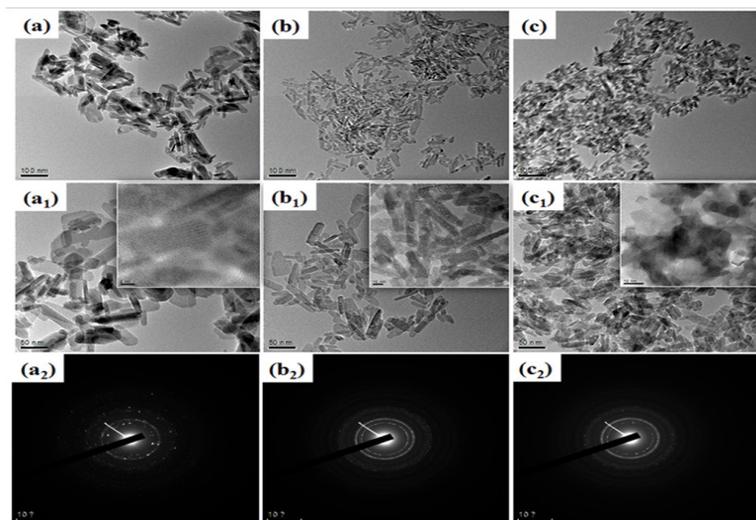


Figure 3. HR-TEM and SAED pattern images of (a, a1 & a2) f-HAp/PEG/Ag, (b, b1 & b2) f-HAp/PEG/Au and (c, c1 & c2) f-HAp/PEG/Pd nanocomposites

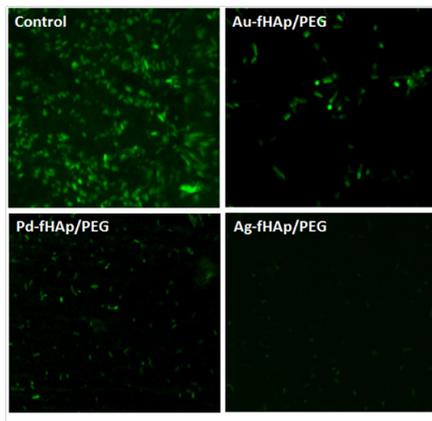


Figure 4. CLSM bacterial live/dead images of composites against *E. coli* (G-) bacterial organism

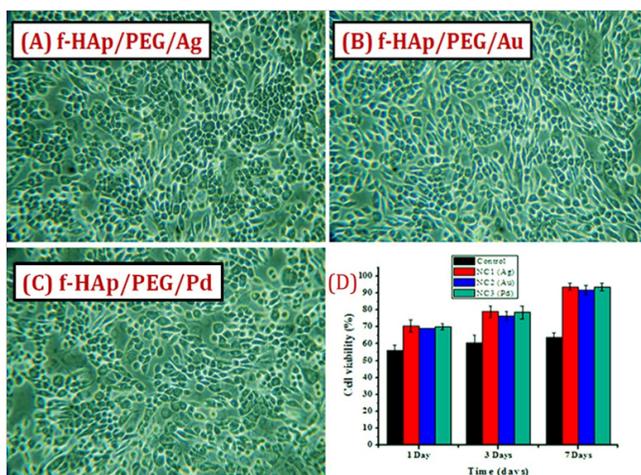


Figure 5. Optical microscopic images of HOS (MG-63) cells on composites after 7 days of incubation with cell viability diagram in different days.



Modified Third Order Runge-Kutta Method Based on Root Mean Square for Fuzzy Initial Value Problems and Hybrid Fuzzy Initial Value Problems

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Abstract

Numerical algorithm is proposed to solve fuzzy and hybrid fuzzy initial value problem by using modified third order Runge-Kutta method based on Root Mean Square (RK3RM). The suggested algorithm is tested using linear fuzzy and hybrid fuzzy initial value problems and using triangular fuzzy number. The outcomes show that the proposed methods work well.

Keywords: Numerical solution, Fuzzy Initial Value Problems, Hybrid Fuzzy Initial Value Problems, Triangular fuzzy number, Third order Runge-Kutta method, Root Mean Square

Introduction

Chang and Zadeh^[5] bring together the concept of fuzzy derivative. Dubois and Prade^[6] gave the fuzzy derivative by using extension principle and tracked by Puri and Ralescu^[23]. The modelling of real life problems which is uncertain and incomplete in nature have been done using fuzzy initial value problems and existence of solutions of fuzzy differential equations has been studied by some authors^[3,4,9,10]. The numerical methods were proposed because of the difficulty in obtaining an exact solution for fuzzy differential equations^[11, 12, 14,18]. Abbasbandy and Allahviranloo^[2] used “Seikkala’s derivative of fuzzy process”^[25]. The study of Runge-Kutta method for fuzzy differential equation has been done by the authors^[1,19].

Evans and Yaacub^[7] have introduced “the fourth order Runge-Kutta method based on Centroidal Mean formula for first order IVPs”. Murugesan et al.^[16] compared “fourth order RK methods based on variety of means”. According to Pederson and Sambandham “The differential systems which contain fuzzy valued functions and interaction with a discrete time controller are named hybrid fuzzy differential systems”. The hybrid fuzzy systems has been solved by the authors^[8, 20,21,22 &24].

In this paper, the third order RK3RM is applied to obtain the solution of fuzzy and hybrid fuzzy initial value problems.

Definitions and notations were clearly explained by Kanagarajan. K, Sambath. M, in “Numerical solution of fuzzy differential equations by third order Runge-Kutta method”^[11,12]. “The basis of Runge – Kutta Method for Initial Value Problem” was explained by Abbasbandy. S, Allah Viranloo. T (2004)^[1]

2. The Modified Third Order Runge-Kutta method Based On Root Mean Square For Solving Initial Value Problem

A.M. Wazwaz^[26] have established a “new third order RK method based on Root Mean Square to solve first order differential equation” and the formula used is

$\sqrt{\frac{x_1^2 + x_2^2}{2}}$ for the two points x_1 & x_2 .

For the IVP the “Third Order Runge- Kutta methods^[26] using different types of means” which is as follows

$$y_{n+1} = y_n + \frac{h}{2} \left[\sum_{i=1}^2 \text{Means} \right] \tag{2.1}$$

where,

$$k_1 = f(t_n, y_n)$$

$$k_2 = f(t_n + a_1 h, y_n + a_1 h k_1)$$

$$k_3 = f(t_n + (a_2 + a_3) h, y_n + a_2 h k_1 + a_3 h k_2) \tag{2.5}$$

where the parameters for

Root Mean Square:

$$a_1 = \frac{2}{3}, a_2 = \frac{-1}{6}, a_3 = \frac{5}{6} \tag{2.2}$$

The third order Runge- Kutta Root Mean Square formula is as follows:

Root Mean Square :

$$y_{n+1} = y_n + \frac{h}{2} \left(\sqrt{\frac{k_1^2 + k_2^2}{2}} + \sqrt{\frac{k_2^2 + k_3^2}{2}} \right) \tag{2.3}$$

with the grid points $a = t_0 \leq t_1 \leq \dots \leq t_N = b$ and

$$h = \frac{(b-a)}{N} = t_{i+1} - t_i \tag{2.4}$$

3. Fuzzy Initial Value Problem

Taking the fuzzy initial value problem

$$\begin{aligned} y'(t) &= f(t, y(t)); 0 \leq t \leq T \\ y(0) &= y_0 \end{aligned} \tag{3.1}$$

with the grid points

$$0 \leq t_1 \leq t_2 \leq \dots \leq t_N = T \text{ and } h = \frac{(b-a)}{N} = t_{i+1} - t_i \tag{3.2}$$

where f is a continuous mapping from $R_+ \times R$ into R and $y_0 \in E^1$ with r -level sets

$$[y_0]_r = [y(0; r), \bar{y}(0; r)], r \in (0, 1],$$

The extension principle of Zadeh leads to the following definition of $f(t, y)$ when $y = y(t)$ is a fuzzy number

$$f(t, y)(s) = \text{Sup} \{y(\tau) \mid s = f(t, \tau)\}, s \in R$$

It follows that

$$[f(t, y)]_r = [f(t, y; r), \bar{f}(t, y; r)], r \in (0, 1],$$

where

$$\underline{f}(t, y; r) = \min \{f(t, u) \mid u \in [y(r), \bar{y}(r)]\}$$

$$\bar{f}(t, y; r) = \max \{f(t, u) \mid u \in [y(r), \bar{y}(r)]\} \tag{3.3}$$

The uniqueness of the fuzzy solution of the fuzzy initial value problem is proved by Seikkala. S (1987)^[25]

3.1. The Modified Third Order Runge-Kutta method based on Root Mean Square For Fuzzy Initial Value Problem

Let $[Y(t)]_r = [Y(t; r), \bar{Y}(t; r)]$ be the exact

solution and $[y(t)]_r = [y(t; r), \bar{y}(t; r)]$ be the approximate solution.

The numerical algorithm for this method can be followed from Kanagarajan. K, Sambath. M,^[12]

By replacing the parameters for Root Mean Square as $a_1 = \frac{2}{3}, a_2 = \frac{-1}{6}, a_3 = \frac{5}{6}$

Define

$$\begin{aligned}
 F[t, y(t; r)] &= \sqrt{\frac{k_1^2(t, y(t; r)) + k_2^2(t, y(t; r))}{2}} + \sqrt{\frac{k_2^2(t, y(t; r)) + k_3^2(t, y(t; r))}{2}} \\
 G[t, y(t; r)] &= \sqrt{\frac{k_1^2(t, y(t; r)) + k_2^2(t, y(t; r))}{2}} + \sqrt{\frac{k_2^2(t, y(t; r)) + k_3^2(t, y(t; r))}{2}}
 \end{aligned}
 \tag{3.4}$$

The solution is calculated by grid points at (2.4).
we have

$$\begin{aligned}
 \underline{Y}(t_{n+1}; r) &\approx \underline{Y}(t_n; r) + \frac{h}{2} F[t_n, Y(t_n; r)] \\
 \bar{Y}(t_{n+1}; r) &\approx \bar{Y}(t_n; r) + \frac{h}{2} G[t_n, Y(t_n; r)]
 \end{aligned}
 \tag{3.5}$$

We define

$$\begin{aligned}
 \underline{y}(t_{n+1}; r) &\approx \underline{y}(t_n; r) + \frac{h}{2} F[t_n, y(t_n; r)] \\
 \bar{y}(t_{n+1}; r) &\approx \bar{y}(t_n; r) + \frac{h}{2} G[t_n, y(t_n; r)]
 \end{aligned}
 \tag{3.6}$$

Let $F(t, a, b)$ and $G(t, a, b)$ are obtained by substituting $[y(t)]_r = [a, b]$ in (3.4),

$$\begin{aligned}
 F[t, a, b] &= \sqrt{\frac{k_1^2(t, a, b) + k_2^2(t, a, b)}{2}} + \sqrt{\frac{k_2^2(t, a, b) + k_3^2(t, a, b)}{2}} \\
 G[t, a, b] &= \sqrt{\frac{k_1^2(t, a, b) + k_2^2(t, a, b)}{2}} + \sqrt{\frac{k_2^2(t, a, b) + k_3^2(t, a, b)}{2}}
 \end{aligned}$$

F and G are defined in the domain

$$K = \{(t, a, b) \mid 0 \leq t \leq T, -\infty < b < \infty, -\infty < a \leq b\}.$$

3.2. Numerical Example

Example 3.1

Consider

$$\begin{cases}
 y'(t) = y(t), & t \in [0, 1] \\
 y(0) = (0.75 + 0.25r, 1.125 - 0.125r)
 \end{cases}
 \tag{3.7}$$

The exact solution is given by

$$Y(t; r) = [(0.75 + 0.25r)e^t, (1.125 - 0.125r)e^t], \quad 0 \leq r \leq 1.$$

At $t=1$

$$Y(1; r) = [(0.75 + 0.25r)e^1, (1.125 - 0.125r)e^1],$$

The absolute error by the FRK3RM and FRK3AM for the approximate solution of FRK3RM, FRK3AM for the r -level set with $h=0.1$ and $t=1.0$ of example 3.1 is given in Table 3.1. The graphical representation figure.3.1.

Table.3.1. The absolute error table using FRK3RM and FRK3AM for example 3.1 for r -level set with $h=0.1$ and $t=1.0$

FRK3RM and FRK3AM when $h=0.1$ and $t=1$				
R	Absolute error FRK3RM		Absolute error FRK3AM	
0	6.85E-05	1.03E-04	7.84E-05	1.18E-04
0.1	7.08E-05	1.02E-04	8.10E-05	1.16E-04
0.2	7.31E-05	1.01E-04	8.37E-05	1.15E-04
0.3	7.54E-05	9.94E-05	8.63E-05	1.14E-04
0.4	7.77E-05	9.82E-05	8.89E-05	1.12E-04
0.5	8.00E-05	9.71E-05	9.15E-05	1.11E-04
0.6	8.22E-05	9.60E-05	9.41E-05	1.10E-04
0.7	8.45E-05	9.48E-05	9.67E-05	1.08E-04
0.8	8.68E-05	9.37E-05	9.93E-05	1.07E-04
0.9	8.91E-05	9.25E-05	1.02E-04	1.06E-04
1	9.14E-05	9.14E-05	1.05E-04	1.05E-04

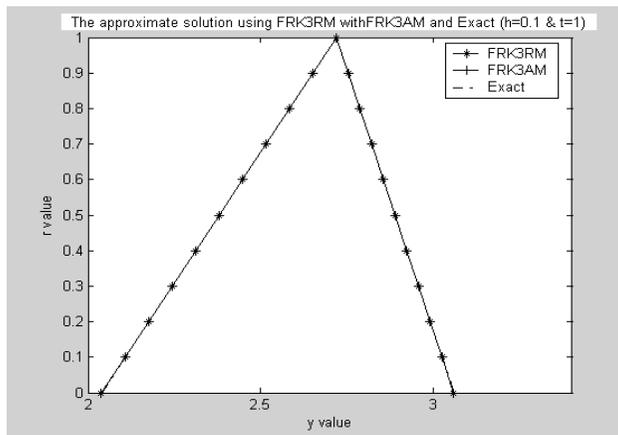


Figure 3.1. Comparison of the approximate solution of FRK3RM with FRK3AM and the exact solution

4. The Hybrid Fuzzy Differential System

4.1 Preliminaries

Consider the hybrid fuzzy differential system



$$\begin{cases} y'(t) = f(t, y(t), \lambda_k(x_k)), t \in [t_k, t_{k+1}] \\ y(t_k) = y_k, \end{cases}, \quad (4.1)$$

Here seikkala differentiation is used

$$0 \leq t_0 < t_1 < \dots < t_k < \dots t_k \rightarrow \infty, f \in C[R^+ \times E^1 \times E^1, E^1], \lambda_k \in C[E^1, E^1]$$

This system can be re written as

$$y'(t) = \begin{cases} y_0'(t) = f(t, y_0(t), \lambda_0(y_0)), y_0(t_0) = y_0, t_0 \leq t \leq t_1, \\ y_1'(t) = f(t, y_1(t), \lambda_1(y_1)), y_1(t_1) = y_1, t_1 \leq t \leq t_2, \\ \dots \\ y_k'(t) = f(t, y_k(t), \lambda_k(y_k)), y_k(t_k) = y_k, t_k \leq t \leq t_{k+1}, \\ \dots \end{cases} \quad (4.2)$$

Assume that the existence and uniqueness solution of (4.1) hold for each , by the solution of (4.1) we mean the following function:

$$y(t) = y(t, t_0, y_0) = \begin{cases} y_0(t), t_0 \leq t \leq t_1, \\ y_1(t), t_1 \leq t \leq t_2, \\ \dots \\ y_k(t), t_k \leq t \leq t_{k+1}, \\ \dots \end{cases}$$

We note that the solution of (4.1) are piecewise differentiable in each interval for $t \in [t_k, t_{k+1}]$ for fixed $x_k \in E^1, k = 0, 1, 2, \dots$

Therefore the equation (4.2) may be replaced as

$$\begin{aligned} \underline{y}'(t) &= \underline{f}(t, y, \lambda_k(y_k)) \equiv F_k[t, \underline{y}, \bar{y}], \underline{y}(t_k) \in \underline{y}_k, \\ \bar{y}'(t) &= \bar{f}(t, y, \lambda_k(y_k)) \equiv G_k[t, \underline{y}, \bar{y}], \bar{y}(t_k) \in \bar{y}_k, \end{aligned} \quad (4.3)$$

which has a unique solution (\underline{y}, \bar{y}) . That is for each t, the pair $(\underline{y}(t; r), \bar{y}(t; r))$ is a fuzzy number, the parametric form given by

$$\begin{cases} \underline{y}'(t; r) = F_k[t, \underline{y}(t; r), \bar{y}(t; r)], \underline{y}(t_k; r) \in \underline{y}_k(r), \\ \bar{y}'(t; r) = G_k[t, \underline{y}(t; r), \bar{y}(t; r)], \bar{y}(t_k; r) \in \bar{y}_k(r), \text{ for } r \in [0, 1] \end{cases} \quad (4.4)$$

4.2 The Modified Third Order Runge-Kutta Method based on Root Mean Square for Hybrid Fuzzy Initial Value Problems

The numerical algorithm is developed for Hybrid fuzzy initial value problem (4.1) using the modified third order Runge – Kutta method based on Root

Mean Square. Here the assumption is that the existence and uniqueness of the solutions of (4.1) hold for each $[t_k, t_{k+1}]$.

For a fixed r, to integrate the system (4.2)

in $[t_0, t_1], [t_1, t_2], \dots, [t_k, t_{k+1}], \dots$, we replace each interval by a set of $N_k + 1$ discrete equally spaced grid points at which the exact solution

$Y(t; r) = (\underline{Y}(t; r), \bar{Y}(t; r))$ is approximated by some $(\underline{y}_k(t; r), \bar{y}_k(t; r))$

For each chosen grid points on $[t_k, t_{k+1}]$ at $t_{k,n} = t_k + nh_k, h_k = \frac{t_{k+1} - t_k}{N_k}, 0 \leq n \leq N_k$.

The modified third order Runge – Kutta method based on Root Mean Square is an approximation of $\underline{Y}'_k(t; r)$ and $\bar{Y}'_k(t; r)$.

To develop the modified third order Runge – Kutta method based on Root Mean Square for (2.3), and it can be followed from Pederson.S and Sambandham.M,^[21] for $\underline{k}_1, \bar{k}_1, \underline{k}_2, \bar{k}_2, \underline{k}_3$ & \bar{k}_3 where,

$$\begin{aligned} \underline{z}_{k1}(t_{k,n}; y_{k,n}(r)) &= \underline{y}_{k,n}(r) + \frac{2}{3} h_k \underline{k}_1(t_{k,n}; y_{k,n}(r)) \\ \bar{z}_{k1}(t_{k,n}; y_{k,n}(r)) &= \bar{y}_{k,n}(r) + \frac{2}{3} h_k \bar{k}_1(t_{k,n}; y_{k,n}(r)) \end{aligned}$$

$$\begin{aligned} \underline{z}_{k2}(t_{k,n}; y_{k,n}(r)) &= \underline{y}_{k,n}(r) + \frac{-1}{6} h_k \underline{k}_1(t_{k,n}; y_{k,n}(r)) + \frac{5}{6} h_k \underline{k}_2(t_{k,n}; y_{k,n}(r)) \\ \bar{z}_{k2}(t_{k,n}; y_{k,n}(r)) &= \bar{y}_{k,n}(r) + \frac{-1}{6} h_k \bar{k}_1(t_{k,n}; y_{k,n}(r)) + \frac{5}{6} h_k \bar{k}_2(t_{k,n}; y_{k,n}(r)) \end{aligned}$$

Next define

$$\begin{aligned} S_k [t_{k,n}; \underline{y}_{k,n}(r), \bar{y}_{k,n}(r)] &= \sqrt{\frac{\underline{k}_1^2(t_{k,n}; y_{k,n}(r)) + \underline{k}_2^2(t_{k,n}; y_{k,n}(r))}{2}} \\ &+ \sqrt{\frac{\underline{k}_2^2(t_{k,n}; y_{k,n}(r)) + \underline{k}_3^2(t_{k,n}; y_{k,n}(r))}{2}} \\ T_k [t_{k,n}; \underline{y}_{k,n}(r), \bar{y}_{k,n}(r)] &= \sqrt{\frac{\bar{k}_1^2(t_{k,n}; y_{k,n}(r)) + \bar{k}_2^2(t_{k,n}; y_{k,n}(r))}{2}} \\ &+ \sqrt{\frac{\bar{k}_2^2(t_{k,n}; y_{k,n}(r)) + \bar{k}_3^2(t_{k,n}; y_{k,n}(r))}{2}} \end{aligned}$$

The exact solutions at $t_{k,n+1}$ is given by

$$\begin{aligned} \underline{Y}_{k,n+1}(r) &\approx \underline{Y}_{k,n}(r) + \frac{1}{2} h_k S_k [t_{k,n}; \underline{Y}_{k,n}(r), \bar{Y}_{k,n}(r)] \\ \bar{Y}_{k,n+1}(r) &\approx \bar{Y}_{k,n}(r) + \frac{1}{2} h_k T_k [t_{k,n}; \underline{Y}_{k,n}(r), \bar{Y}_{k,n}(r)] \end{aligned} \tag{4.4}$$

The approximate solutions at $t_{k,n+1}$ is given by

$$\begin{aligned} \underline{y}_{k,n+1}(r) &\approx \underline{y}_{k,n}(r) + \frac{1}{2} h_k S_k [t_{k,n}; \underline{y}_{k,n}(r), \bar{y}_{k,n}(r)] \\ \bar{y}_{k,n+1}(r) &\approx \bar{y}_{k,n}(r) + \frac{1}{2} h_k T_k [t_{k,n}; \underline{y}_{k,n}(r), \bar{y}_{k,n}(r)] \end{aligned} \tag{4.5}$$



4.2. Numerical Example

Recall the fuzzy IVP 3.1 in section 3.2

By the third order Range – Kutta method based on RootMean Square with N=2, (4.6) gives

$$y(1.0; r) = [(0.75 + 0.25r)(c_{0,1})^2, (1.125 - 0.125r)(c_{0,1})^2], \quad 0 \leq r \leq 1 \quad (4.6)$$

Where

$$c_{0,1} = 1 + \frac{h}{2} \left[\sqrt{1 + \frac{2}{3}h + \frac{2}{9}h^2} + \sqrt{1 + \frac{4}{3}h + h^2} + \frac{10}{27}h^3 + \frac{25}{162}h^4 \right]$$

Example 4.1. consider

$$\begin{cases} y'(t) = y(t) + m(t)\lambda_k(y(t_k)), & t \in [t_k, t_{k+1}], t_k = k, k = 0, 1, 2, 3, \dots, \\ y(t; r) = [(0.75 + 0.25r)e^t, (1.125 - 0.125r)e^t], & 0 \leq r \leq 1, \end{cases} \quad (4.7)$$

Where

$$m(t) = \begin{cases} 2(t \pmod{1}) & \text{if } t \pmod{1} \leq 0.5, \\ 2(1 - t \pmod{1}) & \text{if } t \pmod{1} > 0.5, \end{cases}$$

$$\lambda_k(\mu) = \begin{cases} 0, & \text{if } k=0 \\ \mu, & \text{if } k \in \{1, 2, \dots\} \end{cases}$$

The hybrid fuzzy IVP (4.7) is equivalent to the following systems of fuzzy IVPs.

$$\begin{cases} y_0'(t) = y_0(t), & t \in [0, 1] \\ y_0(0; r) = [(0.75 + 0.25r)e, (1.125 - 0.125r)e], & 0 \leq r \leq 1 \\ y_i'(t) = y_i(t) + m(t)y_{i-1}(t), & t \in [t_i, t_{i+1}], y_i(t) = y_{i-1}(t), i = 1, 2, \dots, \end{cases}$$

In (4.7) $y(t) + m(t)\lambda_k(y(t_k))$ is continuous function of t, x and $\lambda_k(y(t_k))$. For each $k=0, 1, 2, \dots$, the fuzzy IVP

$$\begin{cases} y'(t) = y(t) + m(t)\lambda_k(y(t_k)), & t \in [t_k, t_{k+1}], t_k = k \\ y(t_k) = y_{t_k}, \end{cases} \quad (4.8)$$

has a unique solution on $[t_k, t_{k+1}]$. The modified Mean Square is applied to solve (4.7) with N=2 to obtain $y_{1,2}(r)$ approximating $x(2.0; r)$. Let

$f : [0, \infty) \times R \times R \rightarrow R$ be given by

$$f(t, y, \lambda_k(y(t_k))) = y(t) + m(t)\lambda_k(y(t_k)), t_k = k, k = 0, 1, 2, \dots,$$

where $\lambda_k : R \rightarrow R$ is given by

$$\lambda_k(y) = \begin{cases} 0, & \text{if } k=0 \\ y, & \text{if } k \in \{1, 2, \dots\} \end{cases}$$

Since the exact solution of (4.7) for $t \in [1, 1.5]$ is

$$Y(t; r) = Y(1; r)(3e^{t-1} - 2t), 0 \leq r \leq 1, \quad Y(1.5; r) = Y(1; r)(3\sqrt{e} - 3), 0 \leq r \leq 1.$$

Then $Y(1.5; r)$ is approximately 5.29 and $y_{1,1}$ is approximately 5.206423. Since the exact solution for (4.7) for $t \in [1.5, 2]$ is

$$Y(t; r) = Y(1; r)(2t - 2 + e^{t-1.5}(3\sqrt{e} - 4)), 0 \leq r \leq 1$$

Therefore

$$Y(2.0; r) = Y(1; r)(2 + 3e - 4\sqrt{e}).$$

Then $Y(2.0; r)$ is approximately 9.6769 and $y_{1,1}(2.0; 1)$ is approximately 9.536875.

given in Table 4.1. The graphical representation for the approximate values of RK3RM, RK3AM and the exact solution of example 4.1 when $N=2$ and $t=2$ is given in figure.4.1.

The absolute error by RK3RM for the r -level set with $h=0.5$ and for $t=1.5, 2$ of example 4.1 is compared with the absolute error by RK3AM and is

Table 4.1 The absolute error table for example 4.1 for r - level set with $h=0.5$ and $t=1.5, 2$.

r	Absolute Error Value (h=0.5 and t=1.5)				Absolute Error Value (h=0.5 and t=2)			
	HFRK3RM		HFRK3AM		HFRK3RM		HFRK3AM	
0	4.59E-03	6.88E-03	2.94E-02	4.41E-02	1.74E-02	2.62E-02	5.40E-02	8.10E-02
0.1	4.74E-03	6.80E-03	3.04E-02	4.36E-02	1.80E-02	2.59E-02	5.58E-02	8.01E-02
0.2	4.89E-03	6.72E-03	3.14E-02	4.31E-02	1.86E-02	2.56E-02	5.76E-02	7.92E-02
0.3	5.04E-03	6.65E-03	3.23E-02	4.26E-02	1.92E-02	2.53E-02	5.94E-02	7.83E-02
0.4	5.20E-03	6.57E-03	3.33E-02	4.22E-02	1.98E-02	2.50E-02	6.12E-02	7.74E-02
0.5	5.35E-03	6.50E-03	3.43E-02	4.17E-02	2.03E-02	2.47E-02	6.30E-02	7.65E-02
0.6	5.50E-03	6.42E-03	3.53E-02	4.12E-02	2.09E-02	2.44E-02	6.48E-02	7.56E-02
0.7	5.66E-03	6.34E-03	3.63E-02	4.07E-02	2.15E-02	2.41E-02	6.66E-02	7.47E-02
0.8	5.81E-03	6.27E-03	3.72E-02	4.02E-02	2.21E-02	2.38E-02	6.84E-02	7.38E-02
0.9	5.96E-03	6.19E-03	3.82E-02	3.97E-02	2.27E-02	2.35E-02	7.02E-02	7.29E-02
1	6.11E-03	6.11E-03	3.92E-02	3.92E-02	2.32E-02	2.32E-02	7.20E-02	7.20E-02

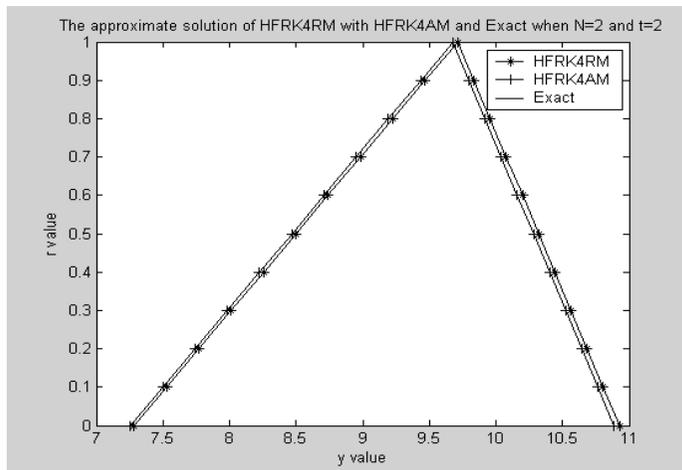


Figure 4.1 Comparison of HFRK3RM with HRK3AM and the Exact Solution when $h=0.5$ and $t=2$

Conclusions

In this work, the proposed RK3RM method works very well to solve the FIVPs and HFIVPs. From Table 3.1 and figure 3.1 of example 3.1, it is shown that the modified RK3RM gives better result than the modified RK3AM for getting the solution of FIVPs. From the Table 4.1 and figure 4.1 of example 4.1, it is shown that the proposed method is most suitable than RK3AM to get the solution of hybrid fuzzy initial value problem.

References

- Abbasbandy. S., & Allah Viranloo. T., (2004) Numerical solution of fuzzy differential equations by Runge-Kutta method, *Nonlinear studies*, vol. 11, no. 1, pp. 117-129.
- Abbasbandy. S., & Allahviranloo. T., (2002) Numerical solution of fuzzy differential equations by Taylor method, *Journal of Computational Methods and Applied Mathematics*, vol. 2, pp. 113-124.
- Balachandran. K., & Prakash. P., (2002) Existence of solutions of fuzzy delay differential equations with nonlocal condition, *Journal of the Korea Society for Industrial and Applied Mathematics*, vol. 6, pp. 81-89.
- Balachandran. K., Kanagarajan. K., (2005) Existence of solutions of fuzzy delay integrodifferential equations with nonlocal condition, *Journal of the Korea Society for Industrial and Applied Mathematics*, vol. 9, pp. 65-74.
- Chang. S.L., & Zadeh. L.A., (1972) On fuzzy mapping and control, *IEEE Trans, Systems Man Cybernet.* vol. 2, pp. 30-34.
- Dubois. D., & Prade. H., (1982) Towards fuzzy differential calculus part 3 : Differentiation, *Fuzzy Sets and Systems*, vol. 8, pp. 225-233.
- Evans, D.J., & Yaacub, A.R., (1993). A new fourth order Runge – Kutta Method based on the Centroidal Mean (CeM) formula. *Computer Studies 851*. Department of Computer Studies, University of Technology, Loughborough, U.K.
- Jayakumar. T., & Kanagarajan. K., (2012) “Numerical solution for hybrid fuzzy system by Runge-Kutta method of order five”, *Applied Mathematical Sciences*, vol. 6, no.72, pp. 3591 – 3606.
- Kaleva. O., (1987) Fuzzy differential equations, *Fuzzy Sets and Systems*, vol. 24, pp. 301-317.
- Kaleva. O., The Cauchy problem for fuzzy differential equations, *Fuzzy Sets and Systems*, (1990), vol. 35, pp. 389 -396.
- Kanagarajan. K., Sambath. M., & Runge- Kutta, (2010) Nystrom method of order three for solving fuzzy differential equations, *Computational methods in Applied Mathematics*, vol.10, no.2, pp. 195-203.
- Kanagarajan. K., & Sambath. M., (2010) Numerical solution of fuzzy differential equations by third order Runge-Kutta method,

- International journal of Applied Mathematics and Computaion*, vol. 2, no. 4, pp. 1-8.
- Lambert. J.D., (1990) Numerical Methods for ordinary differential systems, John Wiley & Sons.
- Ma. M., Friedman. M., Kandel. A., (1999) Numerical solutions of fuzzy differential equations, *Fuzzy Sets and Systems*, vol. 105, pp. 133-138.
- Murugesan. K., Paul Dhayabaran.D., Henry Amirtharaj. E.C., & David J. Evans., (2003) Numerical Strategy for the system of second order IVPs using RK method based on Centroidal Mean., *Intern.J.Comp.Math.* vol. 80, no. 2, pp. 233-241.
- Murugesan. K., Paul Dhayabaran. D., Henry Amirtharaj. E.C., & David J. Evans., (2001) A Comparison of extended Runge – Kutta formulae based on Variety of means to solve system of IVPs, *Intern.J.Comp.Math.* vol. 78, pp. 225-252.
- Murugesan. K., Paul Dhayabaran. D., Henry Amirtharaj. E.C., & David J. Evans., (2002) A fourth order embedded Runge – KuttaRKACeM (4,4) method based on Arithmetic and Centroidal means with error control, *Intern.J.Comp.Math.* vol. 79, no. 2, pp. 247-269.
- Nirmala. V., Chenthur Pandian. S., (2011) “Numerical Solution of Fuzzy Differential Equation by Fourth Order Runge-Kutta Method with Higher Order Derivative Approximations”, *European Journal of Scientific Research*, vol. 62, no. 2, pp. 198-206.
- Palligkinis. S.ch., Papageorgiou. G., & Famelis, I.TH., (2009) “Runge-Kutta methods for fuzzy differential equations”, *App.Math. Comp*, vol. 209, pp. 97-105.
- Pederson. S., & Sambandham, (2007) “Numerical solution to hybrid fuzzy systems”, *Mathematical and Computing Modelling*, vol. 45, no. 9-10, pp.1133-1144.
- Pederson. S., & Sambandham. M., (2006) “The Runge-Kutta method for hybrid fuzzy differential equations”, *Nonlinear Analysis: hybrid systems*, no. 2, pp. 626-634.
- Prakash. P., & Kalaiselvi. V., (2009) “Numerical solution of hybrid fuzzy differential equations by predictor-corrector method”, *International Journal of Computer Mathematics*, vol. 86, no. 1, pp. 121-134.
- Puri. M.L., & Ralescu. D.A., (1983) Differentials of fuzzy functions, *Journal of Mathematical Analysis and Applications*, vol. 91, pp. 552-558.
- Saveetha. N., & Chendur Pandian. S., (2012) “Numerical solution of fuzzy hybrid differential equation by third order nystrom method”, *Mathematical Theory and Modeling*, vol. 2, no. 4.
- Seikkala. S., (1987) On the fuzzy initial value problem, *Fuzzy Sets and Systems*, vol. 24, pp. 319-330.
- Wazwaz A. M., (1994) A comparison of modified Runge- Kutta formulas based on a variety of means, *International Journal of Computer Mathematics*, vol. 50, pp. 105-112.



Stability Analysis of Composite Runge Kutta Methods for Delay Differential Equations Using Different Interpolations

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Abstract

This paper presents the fourth order composite RungeKutta (RK) methods to solve the Delay Differential Equations (DDEs). These methods are based on variety of means such as Arithmetic Mean (AM), Geometric Mean (GM), Harmonic Mean (HaM), Heronian Mean (HeM), Root Mean Square (RM), Centroidal Mean (CeM) and Contraharmonic Mean (CoM) The formulae for HaM, HeM, RM, CeM and CoM are given in terms of AM and GM. The delay term is approximated using Continuous Extension of RungeKutta (CERK) formula, Lagrange interpolation and Hermite interpolation. The order conditions for the continuous extensions of the fourth order composite RK methods are obtained. The stability polynomials are derived for these cases and the corresponding stability regions of composite RK methods are obtained and compared.

Keywords: Stability, Delay differential equations, CERK, Lagrange, Hermite Interpolation.

1. Introduction

Delay differential equations have been rapidly developing in chemical kinetics[1], population dynamics [2], management systems[3] and in several areas of science and engineering. Many researchers have tried to extend and modify the RK methods according to their needs. In this way, RK methods based on variety of means have been developed in solving ODEs. Such works can be referred in [4,5]. Ismail and Sulieman [6] examined the p-stability and q-stability of singly diagonally implicit RungeKutta method for delay differential equations. In'tHout [7] dealt with the stability properties of Runge-Kutta methods. Baker and Paul [8] discussed about the stability regions for RungeKutta method for Delay differential equations. Fudziah Ismail and Lwin [9] have explained the stability aspects of explicit RungeKutta method for delay differential equations.

The purpose of this study is to compare and analyze the composite RK methods based on different means such as AM, CeM, HaM, HeM, CoM, RM and GM in solving DDEs. Here, the delay term is approximated using Continuous Extension of RungeKutta (CERK) formula, Lagrange and Hermite interpolations. A simple estimate on the stability regions of composite RK methods have been presented.

2. Fourth Order Composite RK Methods for DDEs

Consider the first order DDEs of the following form:

$$y'(t) = f(t, y(t), y(t - \tau)), \quad t > t_0$$

$$y(t) = \Phi(t), \quad t \leq t_0$$

The classical fourth order RK formula for DDEs is given by

$$y_{n+1} = y_n + \frac{h}{6} [k_1 + 2k_2 + 2k_3 + k_4] \tag{2.1}$$

which involve $k_i, 1 \leq i \leq 4$, given by

$$k_i = f(t_n + c_i h, y_n + h \sum_{j=1}^i a_{ij} k_j, y(t_n + c_i h - \tau)) \text{ where } c_i = \sum_{j=1}^i a_{ij}$$

The formula (2.1) can be rewritten as

The formula (2.1) can be rewritten as (2.2)

$$y_{n+1} = y_n + \frac{h}{3} \sum_{i=1}^3 \left[\frac{k_i + k_{i+1}}{2} \right] = y_n + \frac{h}{3} [\sum_{i=1}^3 (AM)]$$

By replacing AM in (2.2) by variety of means such as GM, HaM, HeM, RM, CeM and CoM, we get the composite RK methods. The formulae for HaM, HeM, RM, CeM and CoM in terms of AM and GM and also the corresponding values of a_{ij} 's and c_i 's in all these cases are referred from [5]. The fourth order composite RK formulae are given in Table 2.1.

Table 2.1 Fourth Order Composite RK Formulae

S.No.	Means	$y_{n+1} =$
1.	AM	$y_n + \frac{h}{6} [k_1 + 2(k_2 + k_3) + k_4]$
2.	GM	$y_n + \frac{h}{3} [\sqrt{ k_1 k_2 } + \sqrt{ k_2 k_3 } + \sqrt{ k_3 k_4 }]$
3.	HaM	$y_n + \frac{h}{3} \left[\frac{k_1 k_2}{k_1 + k_2} + \frac{k_2 k_3}{k_2 + k_3} + \frac{k_3 k_4}{k_3 + k_4} \right]$
4.	HeM	$y_n + \frac{h}{9} [k_1 + 2(k_2 + k_3) + k_4 + \sqrt{ k_1 k_2 } + \sqrt{ k_2 k_3 } + \sqrt{ k_3 k_4 }]$
5.	RM	$y_n + \frac{h}{3} \left[\sqrt{\frac{k_1^2 + k_2^2}{2}} + \sqrt{\frac{k_2^2 + k_3^2}{2}} + \sqrt{\frac{k_3^2 + k_4^2}{2}} \right]$

6.	CeM	$y_n + \frac{2}{9}h \left[\frac{k_1^2 + k_1k_2 + k_2^2}{k_1 + k_2} + \frac{k_2^2 + k_2k_3 + k_3^2}{k_2 + k_3} + \frac{k_3^2 + k_3k_4 + k_4^2}{k_3 + k_4} \right]$
7.	CoM	$y_n + \frac{h}{3} \left[\frac{k_1^2 + k_2^2}{k_1 + k_2} + \frac{k_2^2 + k_3^2}{k_2 + k_3} + \frac{k_3^2 + k_4^2}{k_3 + k_4} \right]$

3. Stability of Composite RK methods

There are many concepts of stability in numerical methods when applied to DDE, depending on the test equation as well as the delay term involved. The most commonly used test equation in the literature is the linear test equation of the form:

$$\begin{cases} y'(t) = \lambda y(t) + \mu y(t - \tau), & t \geq 0 \\ y(t) = \Phi(t), & t \in [-\tau, 0] \end{cases} \quad (3.1)$$

where $\lambda, \mu \in R, \tau > 0$ and Φ is continuous.

When q-stage RK method is for DDEs, interpolation is needed to approximate the value of the delay term $y(t_n + c_i, h - \tau)$. In this article, the stability polynomials

are determined by using three types of interpolations for the delay term. These are discussed in the following sections.

3.1 Stability Polynomial of Composite RK methods using CERK formula

Assume that the delay $\tau = Nh + \theta h$, where N is an integer and $\theta \in [0, 1]$. To find the stability polynomial of composite RK methods using a continuous approximation for the delay term, we need the dense output $b(\theta)$ where $\theta \in (0, 1]$. From the order conditions for 4-stage fourth order RK method, the 4th order interpolant for composite RK method has been determined and is given in Table 3.1.

Table 3.1 Fourth Order Interpolant for Composite RK Method

$b^T(\theta)$ Means	$b_1(\theta)$	$b_2(\theta)$	$b_3(\theta)$	$b_4(\theta)$
RKAM	$\theta - \theta^2 + \frac{1}{6}\theta^4$	$\frac{2}{3}\theta^3 - \frac{1}{3}\theta^4$	$\frac{2}{3}\theta^3 - \frac{1}{3}\theta^4$	$\frac{1}{6}\theta^4$
RKGM	$\theta - \theta^2 + \frac{16}{99}\theta^4$	$\theta^2 - \frac{16}{27}\theta^3$	$\frac{16}{27}\theta^3 - \frac{32}{99}\theta^4$	$\frac{16}{99}\theta^4$
RKHaM	$\theta - \theta^2 + \frac{4}{27}\theta^4$	$\theta^2 - \frac{8}{15}\theta^3$	$\frac{8}{15}\theta^3 - \frac{8}{27}\theta^4$	$\frac{4}{27}\theta^4$
RKHeM	$\theta - \theta^2 + \frac{48}{289}\theta^4$	$\theta^2 - \frac{16}{25}\theta^3$	$\frac{16}{25}\theta^3 - \frac{96}{289}\theta^4$	$\frac{48}{289}\theta^4$
RKRM	$\theta - \theta^2 + \frac{16}{99}\theta^4$	$\theta^2 - \frac{16}{21}\theta^3$	$\frac{16}{21}\theta^3 - \frac{32}{99}\theta^4$	$\frac{16}{99}\theta^4$
RKCeM	$\theta - \theta^2 + \frac{12}{73}\theta^4$	$\theta^2 - \frac{8}{11}\theta^3$	$\frac{8}{11}\theta^3 - \frac{24}{73}\theta^4$	$\frac{12}{73}\theta^4$

RKCoM	$\theta - \theta^2 + \frac{4}{27}\theta^4$	$\theta^2 - \frac{8}{9}\theta^3$	$\frac{8}{9}\theta^3 - \frac{8}{27}\theta^4$	$\frac{4}{27}\theta^4$
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According to Paul and Baker [8], we consider the stability analysis of CERK formula,

$$u_n(nh + \theta h) = u_n(nh) + h \sum_{i=1}^q b_i(\theta) Y_{n,i} \text{ and}$$

$$Y_{n,i} \approx \lambda Y_{n,i} + \mu u_m(nh + c_i h - \tau), \quad Y_{n,i} = u_n(nh) + h \sum_{j=1}^q a_{ij} Y_{n,j}$$

where $u_n(nh + \theta h) \approx y(nh + \theta h)$.

If $\theta \leq c_i$, we define $\delta_i = 1, \gamma_i = 0$ and $\varepsilon_i = c_i - \theta$. Otherwise we define $\delta_i = 0, \gamma_i = 1$ and $\varepsilon_i = c_i - \theta + 1$. If we denote $\delta = [\delta_1, \dots, \delta_v], \gamma = [\gamma_1, \dots, \gamma_v], \Delta = \text{diag}(\delta_1, \dots, \delta_v), \Gamma = \text{diag}(\gamma_1, \dots, \gamma_v)$ and $B(\theta) = [b_i(\varepsilon_i)]$, the RK method yields,

$$y_{n+1} = r(\lambda h) y_n + \mu h b^T S [\delta y_{n-(N+\theta)} + \Delta B(\theta) \psi_{n-(N+\theta)} + \gamma y_{n-(N+\theta)-1} + \Gamma B(\theta) \psi_{n-(N+\theta)-1}]$$

where $\psi_n = h [Y_{n,1}, \dots, Y_{n,q}]^T, r(\lambda h) = 1 + \lambda h b^T (I - \lambda h A)^{-1} e$ and $S = (I - \lambda h A)^{-1}$.

This recurrence is stable if the zeros ζ_i of the stability polynomial

$$S_h(\lambda, \mu, \zeta) = \det[\zeta^{N+2} \mathbf{I} - \zeta^{N+1} \mathbf{U} - \zeta^2 \mathbf{V} - \zeta \mathbf{W} - \zeta \mathbf{X} - \mathbf{Z}] \tag{3.1.1}$$

where

$$\mathbf{U} = \begin{bmatrix} r(\lambda h) & \mathbf{0} \\ \lambda h \mathbf{S} e & \mathbf{0} \end{bmatrix}, \quad \mathbf{V} = \begin{bmatrix} \mathbf{0} & \mu h b^T \mathbf{S} B(\theta) \\ \mathbf{0} & \mu h \mathbf{S} B(\theta) \end{bmatrix}, \quad \mathbf{W} = \begin{bmatrix} \mu h b^T \mathbf{S} \delta & \mathbf{0} \\ \mu h \mathbf{S} \delta & \mathbf{0} \end{bmatrix}$$

$$\mathbf{X} = \begin{bmatrix} \mathbf{0} & \mu h b^T \mathbf{S} \Gamma B(\theta) \\ \mathbf{0} & \mu h \mathbf{S} \Gamma B(\theta) \end{bmatrix}, \quad \mathbf{Z} = \begin{bmatrix} \mu h b^T \mathbf{S} \gamma & \mathbf{0} \\ \mu h \mathbf{S} \delta \gamma & \mathbf{0} \end{bmatrix}$$

satisfies the root condition $|\zeta_i| \leq 1$. If $|\zeta_i| = 1$, then ζ_i is semi-simple.

The stability polynomials for composite RK methods are determined from (3.1.1) by taking $\tau = 1$ and are listed below.

For RKAM:

$$S(\alpha, \beta; \zeta) = \zeta^{5N+10} - \zeta^{5N+9} \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right)$$

$$- \zeta^{4N+10} \left(\frac{7}{24} \beta + \frac{1}{24} \alpha \beta + \frac{1}{192} \alpha^2 \beta \right) - \zeta^{4N+9} \left(\frac{17}{24} \beta + \frac{43}{72} \alpha \beta + \frac{137}{576} \alpha^2 \beta + \frac{19}{288} \alpha^3 \beta \right)$$

$$- \zeta^{3N+10} \left(-\frac{1}{72} \beta^2 - \frac{1}{288} \alpha \beta^2 \right) - \zeta^{3N+9} \left(\frac{11}{72} \beta^2 + \frac{23}{288} \alpha \beta^2 + \frac{7}{288} \alpha^2 \beta^2 \right)$$



For RKCeM:

$$S(\alpha, \beta; \zeta) = \zeta^{5N+10} - \zeta^{5N+9} \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) - \zeta^{4N+10} \left(\frac{115}{292} \beta + \frac{1}{24} \alpha \beta + \frac{1}{192} \alpha^2 \beta \right) - \zeta^{4N+9} \left(\frac{177}{292} \beta + \frac{989}{1752} \alpha \beta + \frac{3583}{14016} \alpha^2 \beta + \frac{349}{4672} \alpha^3 \beta \right) - \zeta^{3N+10} \left(-\frac{9}{292} \beta^2 - \frac{1}{292} \alpha \beta^2 \right) - \zeta^{3N+9} \left(\frac{10}{73} \beta^2 + \frac{57}{584} \alpha \beta^2 + \frac{463}{14016} \alpha^2 \beta^2 \right)$$

For RKCoM:

$$S(\alpha, \beta; \zeta) = \zeta^{5N+10} - \zeta^{5N+9} \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) - \zeta^{4N+10} \left(\frac{41}{108} \beta + \frac{1}{24} \alpha \beta + \frac{1}{192} \alpha^2 \beta \right) - \zeta^{4N+9} \left(\frac{67}{108} \beta + \frac{149}{576} \alpha \beta + \frac{125}{216} \alpha^2 \beta + \frac{389}{5184} \alpha^3 \beta \right) - \zeta^{3N+10} \left(-\frac{1}{36} \beta^2 - \frac{1}{324} \alpha \beta^2 \right) - \zeta^{3N+9} \left(\frac{4}{27} \beta^2 + \frac{65}{648} \alpha \beta^2 + \frac{173}{5184} \alpha^2 \beta^2 \right)$$

For RKGm:

$$S(\alpha, \beta; \zeta) = \zeta^{5N+10} - \zeta^{5N+9} \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) - \zeta^{4N+10} \left(\frac{155}{396} \beta + \frac{1}{24} \alpha \beta + \frac{1}{192} \alpha^2 \beta \right) - \zeta^{4N+9} \left(\frac{241}{396} \beta + \frac{449}{792} \alpha \beta + \frac{541}{2112} \alpha^2 \beta + \frac{1421}{19008} \alpha^3 \beta \right) - \zeta^{3N+10} \left(-\frac{1}{33} \beta^2 - \frac{1}{297} \alpha \beta^2 \right) - \zeta^{3N+9} \left(\frac{5}{36} \beta^2 + \frac{233}{2376} \alpha \beta^2 + \frac{629}{19008} \alpha^2 \beta^2 \right)$$

For RKHaM:

$$S(\alpha, \beta; \zeta) = \zeta^{5N+10} - \zeta^{5N+9} \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) - \zeta^{4N+10} \left(\frac{457}{1156} \beta + \frac{1}{24} \alpha \beta + \frac{1}{192} \alpha^2 \beta \right) - \zeta^{4N+9} \left(\frac{699}{1156} \beta + \frac{3905}{6936} \alpha \beta + \frac{14167}{55488} \alpha^2 \beta + \frac{1381}{18496} \alpha^3 \beta \right) - \zeta^{3N+10} \left(-\frac{9}{289} \beta^2 - \frac{1}{289} \alpha \beta^2 \right) - \zeta^{3N+9} \left(\frac{157}{1156} \beta^2 + \frac{225}{2312} \alpha \beta^2 + \frac{1631}{55488} \alpha^2 \beta^2 \right)$$

For RKHeM:

$$S(\alpha, \beta; \zeta) = \zeta^{5N+10} - \zeta^{5N+9} \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) - \zeta^{4N+10} \left(\frac{155}{396} \beta + \frac{1}{24} \alpha \beta + \frac{1}{192} \alpha^2 \beta \right) - \zeta^{4N+9} \left(\frac{241}{396} \beta + \frac{449}{792} \alpha \beta + \frac{541}{2112} \alpha^2 \beta + \frac{1421}{19008} \alpha^3 \beta \right) - \zeta^{3N+10} \left(-\frac{1}{33} \beta^2 - \frac{1}{297} \alpha \beta^2 \right) - \zeta^{3N+9} \left(\frac{5}{36} \beta^2 + \frac{233}{2376} \alpha \beta^2 + \frac{629}{19008} \alpha^2 \beta^2 \right)$$

For RKRM:

$$S(\alpha, \beta; \zeta) = \zeta^{5N+10} - \zeta^{5N+9} \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) - \zeta^{4N+10} \left(\frac{155}{396} \beta + \frac{1}{24} \alpha \beta + \frac{1}{192} \alpha^2 \beta \right) - \zeta^{4N+9} \left(\frac{241}{396} \beta + \frac{449}{792} \alpha \beta + \frac{541}{2112} \alpha^2 \beta + \frac{1421}{19008} \alpha^3 \beta \right) - \zeta^{3N+10} \left(-\frac{1}{33} \beta^2 - \frac{1}{297} \alpha \beta^2 \right) - \zeta^{3N+9} \left(\frac{5}{36} \beta^2 + \frac{233}{2376} \alpha \beta^2 + \frac{629}{19008} \alpha^2 \beta^2 \right)$$

3.2. Stability polynomial of Composite RK method using Lagrange interpolation

When RK method is applied to DDE (3.1) by approximating the delay term using Lagrange interpolation, we get

$$k^{(i)} = f \left(t_n + c_i h, y_n + h \sum_{j=1}^q \alpha_{ij} k^{(j)}, \sum_{l=-r_2}^{s_1} L_l(c_i) y_{n-(N+\theta)+l} \right), \quad r_1, s_1 > 0$$

$$y_{n+1} = y_n + h \sum_{i=1}^q b_i k^{(i)} \tag{3.2.1}$$

Define $\mathbf{u} = (1, \dots, 1)^T$, $\mathbf{k} = (k^{(1)}, k^{(2)}, \dots, k^{(q)})^T$, $\mathbf{b} = (b_1, b_2, \dots, b_q)^T$ and $\mathbf{L}_1(\mathbf{c}) = (L_1(c_1), \dots, L_1(c_q))^T$.

For $n \geq (N + \theta)$,

$$\begin{aligned} \underline{k} &= \lambda(y_n \mathbf{u} + hA \underline{k}) + \mu \sum_{l=-r_2}^{s_1} L_l(c_i) y_{n-(N+\theta)+l} \\ y_{n+1} &= y_n + h \mathbf{b}^T \underline{k} \end{aligned} \tag{3.2.2}$$

Taking $\alpha = \lambda h$, $\beta = \mu h$, $\eta = [I - \lambda h A]^{-1}$ and I is the identity matrix, we get

$$y_{n+1} = y_n + \alpha \mathbf{b}^T \eta y_n \mathbf{u} + \beta \mathbf{b}^T \eta \sum_{l=-r_2}^{s_1} L_l(\mathbf{c}) y_{n-(N+\theta)+l} \tag{3.2.3}$$

Taking $\mathbf{Y}_n = (y_n, h \underline{k})^T$, (3.2.3) can be written in matrix form as $\mathbf{Y}_{n+1} = \mathbf{X} \mathbf{Y}_n + \mathbf{Z} \mathbf{Y}_{n-(N+\theta)+1}$

where $\mathbf{X} = \begin{bmatrix} 1 + \alpha \mathbf{b}^T \eta \mathbf{u} & \underline{0} \\ \alpha \eta \mathbf{u} & \underline{0} \end{bmatrix}$ and $\mathbf{Z} = \begin{bmatrix} \beta \mathbf{b}^T \eta \sum L_l(\mathbf{c}) & \underline{0} \\ \beta \eta \sum L_l(\mathbf{c}) & \underline{0} \end{bmatrix}$. Here $\underline{0}$ is matrix 1 by (s-1) with all

zero entries and $\bar{0}$ is matrix (s-1) by (s-1) with all zero entries. By putting $n - (N + \theta) + l = 0$, the stability polynomial will be in the standard form. This recurrence is stable if the zeros ζ_i of the stability polynomial



$$S(\alpha, \beta; \zeta) = \zeta^{n+1} - (1 + \alpha \mathbf{b}^T \boldsymbol{\eta} \mathbf{u}) \zeta^n - \beta \mathbf{b}^T \boldsymbol{\eta} (L_{-1}(c) + L_0(c)\zeta + L_1(c)\zeta^2 + L_2(c)\zeta^3)$$

satisfies the root condition $|\zeta_i| \leq 1$ by taking $r = 1$. The stability polynomials for composite RK methods are determined from the above equation and are listed below.

For RKAM:
$$S(\alpha, \beta; \zeta) = \zeta^{n+1} - \zeta^n \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) - \zeta^3 \left(\frac{-1}{24} \beta - \frac{1}{48} \alpha \beta - \frac{1}{192} \alpha^2 \beta \right) - \zeta^2 \left(\frac{13}{24} \beta + \frac{3}{16} \alpha \beta + \frac{3}{64} \alpha^2 \beta \right) - \zeta \left(\frac{13}{24} \beta + \frac{17}{48} \alpha \beta + \frac{25}{192} \alpha^2 \beta + \frac{1}{24} \alpha^3 \beta \right) - \left(\frac{-1}{24} \beta - \frac{1}{48} \alpha \beta - \frac{1}{192} \alpha^2 \beta \right)$$

For RKCeM:
$$S(\alpha, \beta; \zeta) = \zeta^{n+1} - \zeta^n \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) - \zeta^3 \left(\frac{-49}{1168} \beta - \frac{1}{48} \alpha \beta - \frac{1}{192} \alpha^2 \beta \right) - \zeta^2 \left(\frac{633}{1168} \beta + \frac{3}{16} \alpha \beta + \frac{3}{64} \alpha^2 \beta \right) - \zeta \left(\frac{633}{1168} \beta + \frac{17}{48} \alpha \beta + \frac{25}{192} \alpha^2 \beta + \frac{1}{24} \alpha^3 \beta \right) - \left(\frac{-49}{1168} \beta - \frac{1}{48} \alpha \beta - \frac{1}{192} \alpha^2 \beta \right)$$

For RKCoM:
$$S(\alpha, \beta; \zeta) = \zeta^{n+1} - \zeta^n \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) - \zeta^3 \left(\frac{-19}{432} \beta - \frac{1}{48} \alpha \beta - \frac{1}{192} \alpha^2 \beta \right) - \zeta^2 \left(\frac{235}{432} \beta + \frac{3}{16} \alpha \beta + \frac{3}{64} \alpha^2 \beta \right) - \zeta \left(\frac{235}{432} \beta + \frac{17}{48} \alpha \beta + \frac{25}{192} \alpha^2 \beta + \frac{1}{24} \alpha^3 \beta \right) - \left(\frac{-19}{432} \beta - \frac{1}{48} \alpha \beta - \frac{1}{192} \alpha^2 \beta \right)$$

For RKGM:
$$S(\alpha, \beta; \zeta) = \zeta^{n+1} - \zeta^n \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) - \zeta^3 \left(\frac{-67}{1584} \beta - \frac{1}{48} \alpha \beta - \frac{1}{192} \alpha^2 \beta \right) - \zeta^2 \left(\frac{859}{1584} \beta + \frac{3}{16} \alpha \beta + \frac{3}{64} \alpha^2 \beta \right) - \zeta \left(\frac{859}{1584} \beta + \frac{17}{48} \alpha \beta + \frac{25}{192} \alpha^2 \beta + \frac{1}{24} \alpha^3 \beta \right) - \left(\frac{-67}{1584} \beta - \frac{1}{48} \alpha \beta - \frac{1}{192} \alpha^2 \beta \right)$$

$$\text{For RKHaM: } S(\alpha, \beta; \zeta) = \zeta^{n+1} - \zeta^n \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) - \zeta^3 \left(\frac{-19}{432} \beta - \frac{1}{48} \alpha \beta - \frac{1}{192} \alpha^2 \beta \right) \\ - \zeta^2 \left(\frac{235}{432} \beta + \frac{3}{16} \alpha \beta + \frac{3}{64} \alpha^2 \beta \right) - \zeta \left(\frac{235}{432} \beta + \frac{17}{48} \alpha \beta + \frac{25}{192} \alpha^2 \beta + \frac{1}{24} \alpha^3 \beta \right) \\ - \left(\frac{-19}{432} \beta - \frac{1}{48} \alpha \beta - \frac{1}{192} \alpha^2 \beta \right)$$

$$\text{For RKHeM: } S(\alpha, \beta; \zeta) = \zeta^{n+1} - \zeta^n \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) - \zeta^3 \left(\frac{-193}{4624} \beta - \frac{1}{48} \alpha \beta - \frac{1}{192} \alpha^2 \beta \right) \\ - \zeta^2 \left(\frac{2505}{4624} \beta + \frac{3}{16} \alpha \beta + \frac{3}{64} \alpha^2 \beta \right) - \zeta \left(\frac{2505}{4624} \beta + \frac{17}{48} \alpha \beta + \frac{25}{192} \alpha^2 \beta + \frac{1}{24} \alpha^3 \beta \right) - \left(\frac{-193}{4624} \beta - \frac{1}{48} \alpha \beta - \frac{1}{192} \alpha^2 \beta \right)$$

$$\text{For RKRM: } S(\alpha, \beta; \zeta) = \zeta^{n+1} - \zeta^n \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) - \zeta^3 \left(\frac{-67}{1584} \beta - \frac{1}{48} \alpha \beta - \frac{1}{192} \alpha^2 \beta \right) \\ - \zeta^2 \left(\frac{859}{1584} \beta + \frac{3}{16} \alpha \beta + \frac{3}{64} \alpha^2 \beta \right) - \zeta \left(\frac{859}{1584} \beta + \frac{17}{48} \alpha \beta + \frac{25}{192} \alpha^2 \beta + \frac{1}{24} \alpha^3 \beta \right) \\ - \left(\frac{-67}{1584} \beta - \frac{1}{48} \alpha \beta - \frac{1}{192} \alpha^2 \beta \right)$$

3.3. Stability polynomial of RK Method using Hermite interpolation for the delay term

When RK method is applied to DDE (3.1) using Hermite interpolation for the delay term, we obtained,

$$k^{(i)} = f \left(t_n + c_i h, y_n + h \sum_{j=1}^q a_{ij} k^{(j)}, \sum_{i=-r_1}^{s_1} H(c_i) y_{n-(N+\theta)+i} + H(c_i) y_{n-(N+\theta)+i} \right), \\ r_1, s_1 > 0 \\ y_{n+1} = y_n + h \sum_{i=1}^q b_i k^{(i)} \tag{3.3.1}$$

where H and H' are the coefficients of Hermite interpolation.

Define $\mathbf{u} = (1, \dots, 1)^T$, $\mathbf{k} = (k^{(1)}, k^{(2)}, \dots, k^{(q)})^T$, $\mathbf{b} = (b_1, b_2, \dots, b_q)^T$ and $\mathbf{H}(\mathbf{c}) = (H(c_1), \dots, H(c_q))^T$ and $\mathbf{H}'(\mathbf{c}) = (H'(c_1), \dots, H'(c_q))^T$ are the coefficients of Hermite interpolation.

$$\text{Form } \geq (N + \theta), r_1, s_1 > 0 \\ \underline{k} = \lambda (y_n \mathbf{u} + h A \underline{k}) + \mu \sum_{i=-r_1}^{s_1} H(c_i) y_{n-(N+\theta)+i} + H(c_i) y_{n-(N+\theta)+i} \\ y_{n+1} = y_n + h \mathbf{b}^T \underline{k} \tag{3.3.2}$$

where

$$\mathbf{X} = \begin{bmatrix} 1 + \alpha \mathbf{b}^T \eta \mathbf{u} & \mathbf{0} \\ \alpha \eta \mathbf{u} & \mathbf{0} \end{bmatrix}, \mathbf{Z} = \begin{bmatrix} \beta \mathbf{b}^T \eta \sum (H(c) + \alpha H'(c)) & \mathbf{0} \\ \beta \eta \sum (H(c) + \alpha H'(c)) & \mathbf{0} \end{bmatrix} \text{ and } \mathbf{W} = \begin{bmatrix} \beta^2 \mathbf{b}^T \eta \sum H'(c) & \mathbf{0} \\ \beta^2 \eta \sum H'(c) & \mathbf{0} \end{bmatrix}$$



Replacing $y'_{n-(N+\theta)+l}$ by $\lambda y_{n-(N+\theta)+l} + \mu y_{n-2(N+\theta)+l}$ we have

$$k = \lambda y_n \mathbf{u} [I - \lambda h A]^{-1} + \mu [I - \lambda h A]^{-1} \sum_{i=-r_1}^{s_1} [(H(c_i) + \lambda h H'(c_i)) y_{n-(N+\theta)+l} + \mu h H'(c_i) y_{n-2(N+\theta)+l}] \quad (3.3.3)$$

Substitute (3.3.3) in (3.3.2),

$$y_{n+1} = y_n + \alpha \mathbf{b}^T \eta y_n \mathbf{u} \beta \mathbf{b}^T \eta \sum_{i=-r_1}^{s_1} [(H(c_i) + \lambda h H'(c_i)) y_{n-(N+\theta)+l} + \mu h H'(c_i) y_{n-2(N+\theta)+l}] \quad (3.3.4)$$

where $\alpha = \lambda h$, $\beta = \mu h$, $\eta = [I - \lambda h A]^{-1}$ and \mathbf{I} is the identity matrix.

Taking $\mathbf{Y}_n = (y_n, h \underline{k})^T$, (3.3.3) and (3.3.4) can be written as

$$\mathbf{Y}_{n+1} = \mathbf{X} \mathbf{Y}_n + \mathbf{Z} \mathbf{Y}_{n-(N+\theta)+1} + \mathbf{W} \mathbf{Y}_{n-2(N+\theta)+1}$$

where

$$\mathbf{X} = \begin{bmatrix} 1 + \alpha \mathbf{b}^T \eta \mathbf{u} & \mathbf{0} \\ \alpha \eta \mathbf{u} & \mathbf{0} \end{bmatrix}, \mathbf{Z} = \begin{bmatrix} \beta \mathbf{b}^T \eta \sum (H(c) + \alpha H'(c)) & \mathbf{0} \\ \beta \eta \sum (H(c) + \alpha H'(c)) & \mathbf{0} \end{bmatrix} \text{ and } \mathbf{W} = \begin{bmatrix} \beta^2 \mathbf{b}^T \eta \sum H'(c) & \mathbf{0} \\ \beta^2 \eta \sum H'(c) & \mathbf{0} \end{bmatrix}.$$

$$S(\alpha, \beta; \zeta) = \zeta^{n+1} - (1 + \alpha \mathbf{b}^T \eta \mathbf{u}) \zeta^n - \beta \mathbf{b}^T \eta (H_{-1}(c) + H_0(c) \zeta + H_1(c) \zeta^2 + \lambda H'_{-1}(c) + \lambda H'_0(c) \zeta + \lambda H'_1(c) \zeta^2) - \beta^2 \mathbf{b}^T \eta (H'_{-1}(c) + H'_0(c) \zeta + H'_1(c) \zeta^2)$$

satisfies the root condition $|\zeta_i| \leq 1$ by taking $\tau = 1$. The stability polynomials for composite RK methods are determined from the above equation and are listed below.

For RKAM:

$$S(\alpha, \beta; \zeta) = \zeta^{n+1} - \zeta^n \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) - \zeta^2 \left(\frac{17}{48} \beta + \frac{3}{32} \alpha \beta + \frac{3}{128} \alpha^2 \beta - \frac{3}{128} \alpha \beta^2 - \frac{3}{64} \beta^2 - \frac{3}{512} \alpha^2 \beta^2 \right) - \zeta \left(\frac{35}{48} \beta + \frac{43}{96} \alpha \beta + \frac{59}{384} \alpha^2 \beta + \frac{3}{32} \alpha \beta^2 + \frac{3}{16} \beta^2 + \frac{3}{128} \alpha^2 \beta^2 + \frac{1}{24} \alpha^3 \beta \right) - \left(\frac{7}{96} \beta + \frac{7}{192} \alpha \beta + \frac{7}{768} \alpha^2 \beta + \frac{1}{128} \alpha \beta^2 + \frac{1}{64} \beta^2 + \frac{1}{512} \alpha^2 \beta^2 \right)$$

For RKCeM:

$$S(\alpha, \beta; \zeta) = \zeta^{n+1} - \zeta^n \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) - \zeta^2 \left(\frac{825}{2336} \beta + \frac{3}{32} \alpha \beta + \frac{3}{128} \alpha^2 \beta - \frac{3}{128} \alpha \beta^2 - \frac{3}{64} \beta^2 - \frac{3}{512} \alpha^2 \beta^2 \right) - \zeta \left(\frac{1707}{2336} \beta + \frac{43}{96} \alpha \beta + \frac{59}{384} \alpha^2 \beta + \frac{3}{32} \alpha \beta^2 + \frac{441}{2336} \beta^2 + \frac{3}{128} \alpha^2 \beta^2 + \frac{1}{24} \alpha^3 \beta \right) - \left(\frac{343}{4672} \beta + \frac{7}{192} \alpha \beta + \frac{7}{768} \alpha^2 \beta + \frac{1}{128} \alpha \beta^2 + \frac{147}{9344} \beta^2 + \frac{1}{512} \alpha^2 \beta^2 \right)$$

For RKCoM:

$$\begin{aligned}
 S(\alpha, \beta; \zeta) &= \zeta^{n+1} - \zeta^n \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) \\
 &\quad - \zeta^2 \left(\frac{299}{864} \beta + \frac{3}{32} \alpha \beta + \frac{3}{128} \alpha^2 \beta - \frac{3}{128} \alpha \beta^2 - \frac{13}{384} \beta^2 - \frac{3}{512} \alpha^2 \beta^2 \right) \\
 &\quad - \zeta \left(\frac{641}{864} \beta + \frac{43}{96} \alpha \beta + \frac{59}{384} \alpha^2 \beta + \frac{3}{32} \alpha \beta^2 + \frac{19}{96} \beta^2 + \frac{3}{128} \alpha^2 \beta^2 + \frac{1}{24} \alpha^3 \beta \right) \\
 &\quad - \left(\frac{133}{1728} \beta + \frac{7}{192} \alpha \beta + \frac{7}{768} \alpha^2 \beta + \frac{1}{128} \alpha \beta^2 + \frac{19}{1152} \beta^2 + \frac{1}{512} \alpha^2 \beta^2 \right)
 \end{aligned}$$

For RKGM:

$$\begin{aligned}
 S(\alpha, \beta; \zeta) &= \zeta^{n+1} - \zeta^n \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) \\
 &\quad - \zeta^2 \left(\frac{1115}{3168} \beta + \frac{3}{32} \alpha \beta + \frac{3}{128} \alpha^2 \beta - \frac{3}{128} \alpha \beta^2 - \frac{67}{1408} \beta^2 - \frac{3}{512} \alpha^2 \beta^2 \right) \\
 &\quad - \zeta \left(\frac{211}{288} \beta + \frac{43}{96} \alpha \beta + \frac{59}{384} \alpha^2 \beta + \frac{3}{32} \alpha \beta^2 + \frac{67}{352} \beta^2 + \frac{3}{128} \alpha^2 \beta^2 + \frac{1}{24} \alpha^3 \beta \right) \\
 &\quad - \left(\frac{469}{6336} \beta + \frac{7}{192} \alpha \beta + \frac{7}{768} \alpha^2 \beta + \frac{1}{128} \alpha \beta^2 + \frac{67}{4224} \beta^2 + \frac{1}{512} \alpha^2 \beta^2 \right)
 \end{aligned}$$

For RKHaM:

$$\begin{aligned}
 S(\alpha, \beta; \zeta) &= \zeta^{n+1} - \zeta^n \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) \\
 &\quad - \zeta^2 \left(\frac{299}{864} \beta + \frac{3}{32} \alpha \beta + \frac{3}{128} \alpha^2 \beta - \frac{3}{128} \alpha \beta^2 - \frac{13}{384} \beta^2 - \frac{3}{512} \alpha^2 \beta^2 \right) \\
 &\quad - \zeta \left(\frac{641}{864} \beta + \frac{43}{96} \alpha \beta + \frac{59}{384} \alpha^2 \beta + \frac{3}{32} \alpha \beta^2 + \frac{19}{96} \beta^2 + \frac{3}{128} \alpha^2 \beta^2 + \frac{1}{24} \alpha^3 \beta \right) \\
 &\quad - \left(\frac{133}{1728} \beta + \frac{7}{192} \alpha \beta + \frac{7}{768} \alpha^2 \beta + \frac{1}{128} \alpha \beta^2 + \frac{19}{1152} \beta^2 + \frac{1}{512} \alpha^2 \beta^2 \right)
 \end{aligned}$$

For RKHeM:

$$\begin{aligned}
 S(\alpha, \beta; \zeta) &= \zeta^{n+1} - \zeta^n \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) \\
 &\quad - \zeta^2 \left(\frac{3273}{9248} \beta + \frac{3}{32} \alpha \beta + \frac{3}{128} \alpha^2 \beta - \frac{3}{128} \alpha \beta^2 - \frac{1737}{36992} \beta^2 - \frac{3}{512} \alpha^2 \beta^2 \right) \\
 &\quad - \zeta \left(\frac{6747}{9248} \beta + \frac{43}{96} \alpha \beta + \frac{59}{384} \alpha^2 \beta + \frac{3}{32} \alpha \beta^2 + \frac{1737}{36992} \beta^2 + \frac{3}{128} \alpha^2 \beta^2 + \frac{1}{24} \alpha^3 \beta \right) \\
 &\quad - \left(\frac{1351}{18496} \beta + \frac{7}{192} \alpha \beta + \frac{7}{768} \alpha^2 \beta + \frac{1}{128} \alpha \beta^2 + \frac{579}{36992} \beta^2 + \frac{1}{512} \alpha^2 \beta^2 \right)
 \end{aligned}$$

For RKRM:

$$\begin{aligned}
 S(\alpha, \beta; \zeta) &= \zeta^{n+1} - \zeta^n \left(1 + \alpha + \frac{\alpha^2}{2} + \frac{\alpha^3}{6} + \frac{\alpha^4}{24} \right) \\
 &- \zeta^2 \left(\frac{1115}{3168} \beta + \frac{3}{32} \alpha \beta + \frac{3}{128} \alpha^2 \beta - \frac{3}{128} \alpha \beta^2 - \frac{67}{1408} \beta^2 - \frac{3}{512} \alpha^2 \beta^2 \right) \\
 &- \zeta \left(\frac{211}{288} \beta + \frac{43}{96} \alpha \beta + \frac{59}{384} \alpha^2 \beta + \frac{3}{32} \alpha \beta^2 + \frac{67}{352} \beta^2 + \frac{3}{128} \alpha^2 \beta^2 + \frac{1}{24} \alpha^3 \beta \right) \\
 &- \left(\frac{469}{6336} \beta + \frac{7}{192} \alpha \beta + \frac{7}{768} \alpha^2 \beta + \frac{1}{128} \alpha \beta^2 + \frac{67}{4224} \beta^2 + \frac{1}{512} \alpha^2 \beta^2 \right)
 \end{aligned}$$

Their corresponding stability regions of the composite RK methods are given in Figure 3.1- 3.7.

Figure 3.1 (RKAM)

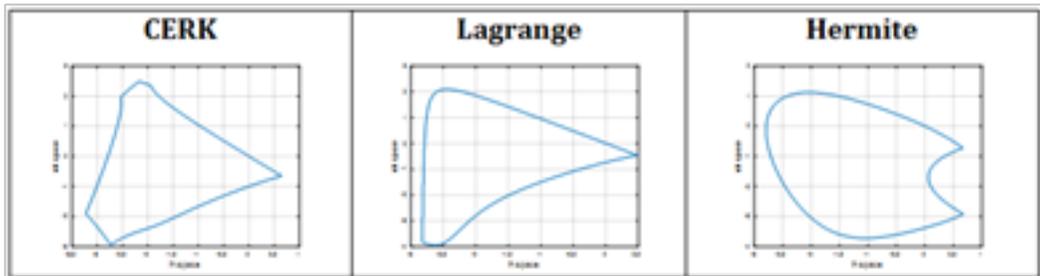


Figure 3.2 (RKCeM)

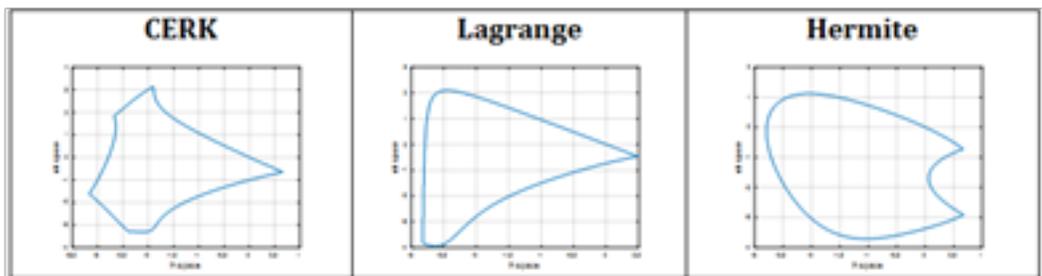


Figure 3.3 (RKCoM)

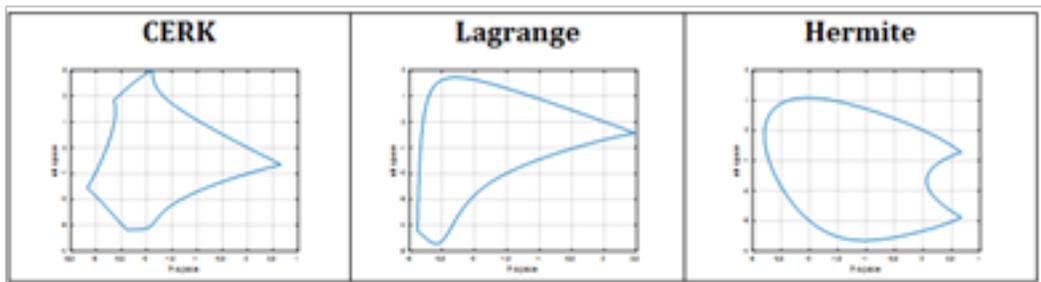


Figure 3.4 (RKGM)

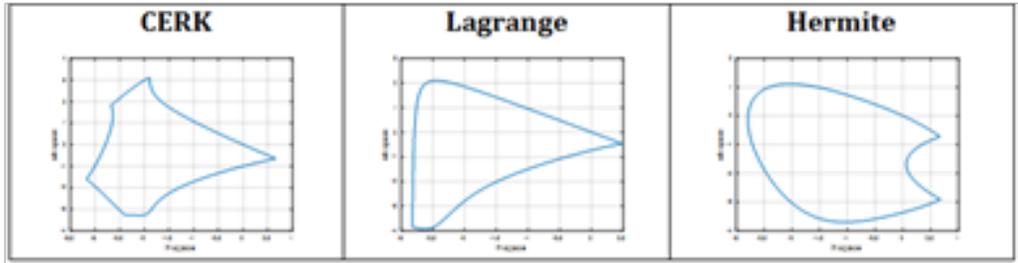


Figure 3.5 (RKHaM)

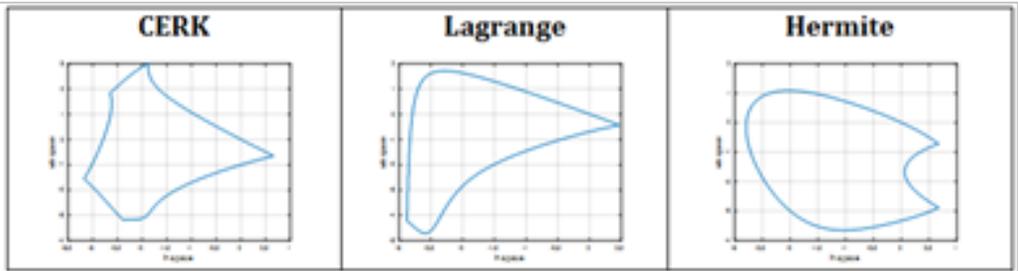


Figure 3.6 (RKHeM)

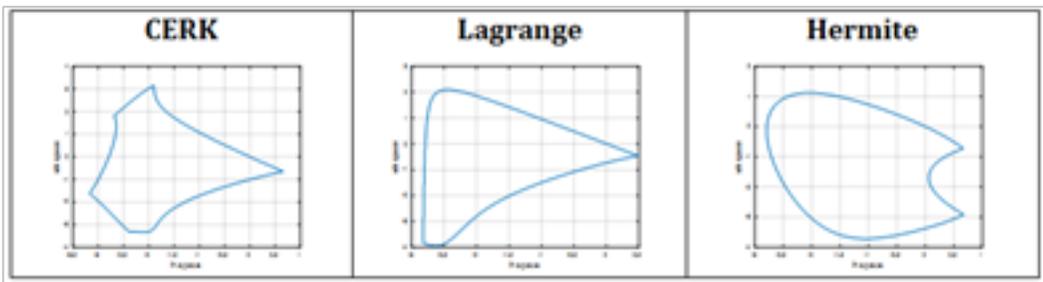
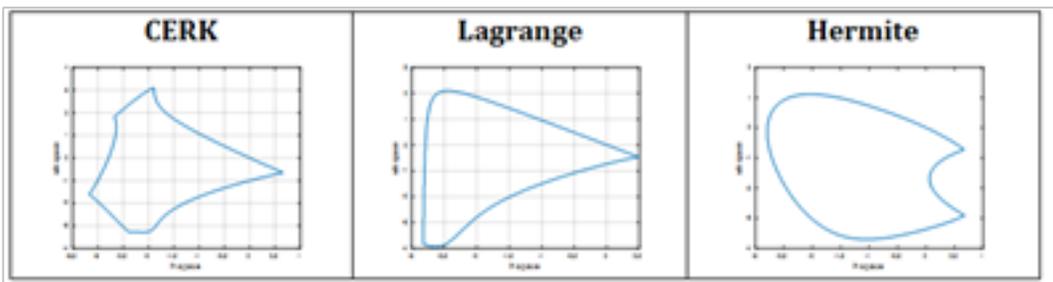


Figure 3.7 (RKRM)



Conclusion

This paper presents the fourth order composite RungeKutta (RK) methods which are based on variety of means for solving the Delay Differential Equations (DDEs). The delay term is approximated using Continuous Extension of RungeKutta (CERK) formula, Lagrange interpolation and Hermite interpolation. The order conditions for the continuous extensions of the fourth order composite

RK methods are obtained. The stability polynomials are derived for these cases and the corresponding stability regions of composite RK methods are obtained and compared. When analysing the stability regions of composite RK methods, it is observed that

$$\text{Lagrange} < \text{CERK} < \text{Hermite}$$

From the Fig. 3.1, we find that the stability regions are stable according to the root condition and also symmetry about . The obtained stability regions are



asymptotically stable since its complex left hand half plane . It is seen that when using Lagrange and Hermite interpolations, stability region of RKAM stands in the first position and when using CERK formula RKHeM takes the first position.

References

- Baker, C.T.H., & Paul, C.A.H. (1994) Computing stability regions - Runge Kutta methods for delay differential equations, *IMA Journal of Numerical Analysis*, vol. 14, pp. 347-362.
- Epstein, I., & Luo, Y. (1991) Differential delay equations in chemical kinetics: non-linear models; the cross-shaped phase diagram and the Oregonator, *Journal of Chemical Physics*. vol. 95, pp. 244-254.
- Evans, D.J. (1989) New RungeKutta methods for initial value problems, *Appl. Math. Letters*, vol. 2, pp. 25-28.
- Fridman, E., Fridman, L.E. Shustin, (2000) Steady modes in relay control systems with time delay and periodic disturbances, *Journal of Dynamical Systems Measurement and Control* vol. 122, pp. 732-737.
- In'tHout, K. J. (1992) A new interpolation procedure for adapting delay differential equations, *BIT Numerical Mathematics*, vol. 32, pp. 634-649.
- Ismail, F., & Lwin, A. (2006) Stability aspects of explicit Runge-Kutta method for delay differential equations, *Journal Teknologi*, vol. 44, pp. 1-12.
- Ismail, F., & Suleiman, M. (2000) The p-stability and q-stability of singly diagonally implicit Runge-Kutta method for delay differential equations, *International Journal of Computer Mathematics*, vol. 76, no. 2, pp. 267-277.
- Kuang, Y., (1993) Delay differential equations with applications in population dynamics, *Academic Press*, Boston, San Diego, New York.
- Murugesan, K., Paul Dhayabaran, D., Henry Amirtharaj, E.C., David J. Evans, (2000) A comparison of extended RungeKutta formulae based on variety of means to solve system of IVPs, *Int. J. Computer Math.* vol. 78, pp. 225-252.

Equitable Regular Total Strong (weak) Domination in Bipolar Fuzzy Graph

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Abstract

In this paper, we define an Equitableregular Total strong (weak) domination in Bipolar Fuzzy Graph and its various classifications. Size, Order and Degree of Equitable regular Total strong (weak) domination in Bipolar Fuzzy Graph is derived with some examples. Some basic parametric conditions are introduced with suitable examples. The properties of regular total strong (weak) domination number of a Bipolar Fuzzy Graph and Equitableregular total strong (weak) domination number in Bipolar Fuzzy Graph are discussed. Throughout this paper the bipolar fuzzy graph under the consideration will have only.

Keywords: Bipolar Fuzzy Graph, dominating set in BFG, total strong (weak) dominating set in BFG, regular dominating set in BFG, regular strong (weak) dominating set in BFG, regular total strong (weak) dominating set in BFG, Equitable regular total strong (weak) dominating set in BFG.

1. Introduction

The concept of fuzzy graph was proposed by Zadeh.L. A[9]. Although, In 1975, Rosenfeld introduced another elaborated concept, including fuzzy vertex and fuzzy edges and several fuzzy analogues of graph theoretic concepts such as paths, cycles, connectedness and etc. In the year 2003, A.NagoorGani and M. Basheer Ahamed[7] investigated Order and Size in fuzzy graph. In 2010, C.Natarajan and S.K. Ayyasamy[6] introduced On strong (weak) domination in fuzzy graph. In 2011, Muhammad Akram introduced Bipolar fuzzy graphs[1]. In 2012, P.J.Jayalakshmi[3] et.al introduced total strong (weak) domination in fuzzy graph. In 2013, Akram.M, Karunambigai. M.G[5] introduced Domination in Bipolar Fuzzy Graph.

In 2018, R.Muthuraj, P.J.Jayalakshmi and A.Kanimozhi introduced regular total strong (weak) domination in Bipolar Fuzzy graph.

Mathematical Classification: 03E72, 05C07, 05C69,05C72, 05C76.

2. Preliminaries

This section contains some basic definitions, examples which are useful in developing in subsequent section.

2.1 Definition[1]

Let X be a non-empty set. A **bipolar fuzzy set** B in X is an object having the form $B = \{(x, \mu_B^P(x), \mu_B^N(x)) / x \in X\}$ where $\mu_B^P : X \rightarrow [0,1]$ and $\mu_B^N : X \rightarrow [-1,0]$ are mappings.



We use the positive membership degree $\mu^P(x)$ to denote the satisfaction degree of an element x to the property corresponding to a bipolar fuzzy set B , and the negative membership degree $\mu^N(x)$ to denote the satisfaction degree of an element x to some implicit counter-property corresponding to a bipolar fuzzy set B . If $\mu^P(x) \neq 0$ and $\mu^N(x) = 0$, it is the situation that x is regarded as having only positive satisfaction for B . It is possible for an element x to be such $\mu^P(x) \neq 0$ and $\mu^N(x) \neq 0$, when the membership function of the property overlaps that of its counter property overlaps that of its counter property over some portion of x . For the sake of simplicity, the symbol $B = (\mu^P, \mu^N)$ is used for the bipolar fuzzy set $B = \{(x, \mu_B^P(x), \mu_B^N(x)) : x \in X\}$

2.2 Definition[1]

By a **bipolar fuzzy graph**, we mean a pair $G = (A, B)$ where $A = (\mu_A^P, \mu_A^N)$ is a bipolar fuzzy set in V and $B = (\mu_B^P, \mu_B^N)$ is a bipolar relation on V such that $\mu_B^P(\{x, y\}) \leq \min(\mu_A^P(x), \mu_A^P(y))$ and $\mu_B^N(\{x, y\}) \geq \max(\mu_A^N(x), \mu_A^N(y))$ for all $\{x, y\} \in E$. A is the bipolar fuzzy vertex set of V , B is the bipolar fuzzy edge set of E , respectively. Note that B is symmetric bipolar fuzzy relation on A . The notation xy for an element of E . Thus, $G = (A, B)$ is a bipolar graph of $G^* = (V, E)$ if $\mu_B^P(xy) \leq \min(\mu_A^P(x), \mu_A^P(y))$ and $\mu_B^N(xy) \geq \max(\mu_A^N(x), \mu_A^N(y))$ for all $xy \in E$.

2.3 Definition [4]

Let $G = (A, B)$ be a bipolar fuzzy graph where $A = (\mu_A^P, \mu_A^N)$ and $B = (\mu_B^P, \mu_B^N)$ be two bipolar fuzzy sets on a non-empty finite set V and $E \subseteq V \times V$ respectively. The positive degree of a vertex is $d(\mu_A^P(x)) = \sum_{xy \in E} \mu_B^P(xy)$. Similarly, the negative degree of a vertex is $d(\mu_A^N(x)) = \sum_{xy \in E} \mu_B^N(xy)$. The degree of a vertex μ is $d(\mu_A^P(x), \mu_A^N(x)) = d(\mu_A(x))$

2.8 Definition[5]

Let $G = (A, B)$ be a bipolar fuzzy graph. Let x and y be any two vertices. Then x **totally strong dominates** y (y **totally weak dominates** x) if

- i. $\mu_B^P(xy) = \min(\mu_A^P(x), \mu_A^P(y))$ and $\mu_B^N(xy) = \max(\mu_A^N(x), \mu_A^N(y))$ $xy \in E$.
- ii. $d_N^P(x) \geq d_N^P(y), d_N^N(x) \geq d_N^N(y)$ and
- iii. x dominates y .

2.4 Definition[6]

Let $G = (A, B)$ be a bipolar fuzzy graph. The order of a bipolar fuzzy graph, denoted $O(G)$, is defined as $O(G) = (O^P(G), O^N(G))$, where $O^P(G) = \sum_{x \in V} \mu_A^P(x)$, $O^N(G) = \sum_{x \in V} \mu_A^N(x)$. Similarly, the size of bipolar fuzzy graph, denoted by $S(G)$, is defined as $S(G) = (S^P(G), S^N(G))$, where The size of a bipolar fuzzy graph is $S^P(G) = \sum_{xy \in E} \mu_B^P(xy)$, $S^N(G) = \sum_{xy \in E} \mu_B^N(xy)$.

Here, the vertex cardinality of is $p = |V| = \sum_{xy \in E} \frac{1 + \mu_B^P(xy) + \mu_A^N(y)}{2}$ and Edge cardinality of $q = |E| = \sum_{xy \in E} \frac{1 + \mu_B^P(xy) + \mu_B^N(xy)}{2}$.

2.5 Definition[4]

Let $G = (A, B)$ be a bipolar fuzzy graph. Let $x, y \in V$. We say that x dominates y in G if

$$\mu_B^P(xy) = \min(\mu_A^P(x), \mu_A^P(y)) \text{ and}$$

$$\mu_B^N(xy) = \max(\mu_A^N(x), \mu_A^N(y))$$

for all $xy \in E$. A subset D of V is called a dominating set in G if for every $y \in D$, there exists $x \in D$ such that x dominates y .

2.6 Definition[4]

A bipolar fuzzy graph $G = (A, B)$ is called **strong bipolar fuzzy graph**, if

$$\mu_B^P(xy) = \min(\mu_A^P(x), \mu_A^P(y)) \text{ and}$$

$$\mu_B^N(xy) = \max(\mu_A^N(x), \mu_A^N(y)) \text{ for all } xy \in E.$$

2.7 Definition[6]

Let G be a bipolar fuzzy graph. The **closed neighbourhood degree of a vertex x in G** is defined by $\text{deg}[x] = (\text{deg}_A[x], \text{deg}_B[x])$, where

$$\text{deg}_A[x] = \sum_{y \in N(x)} [\mu_A^P(y) + \mu_A^P(x)] \text{ and}$$

$$\text{deg}_B[x] = \sum_{y \in N(x)} [\mu_A^N(y) + \mu_A^N(x)]$$

2.9 Definition[6]

Let $G = (A, B)$ be a bipolar Fuzzy Graph. T_b is a subset of V is said to be **total strong (weak) dominating bipolar set of G** if

$$d_N^P(x) \geq d_N^P(y), d_N^N(x) \geq d_N^N(y) \text{ for all}$$

$x \in T_b, y \in V - T_b$ and x dominates y .

2.10 Definition[6]

Let $G = (A, B)$ be a bipolar Fuzzy Graph. A total strong (weak) dominating bipolar fuzzy set T_b

is called **minimal total strong (weak) dominating bipolar fuzzy set** of G , if for every vertex $x \in T_b, T_b - \{x\}$ is not a total strong (weak) dominating bipolar fuzzy set of G .

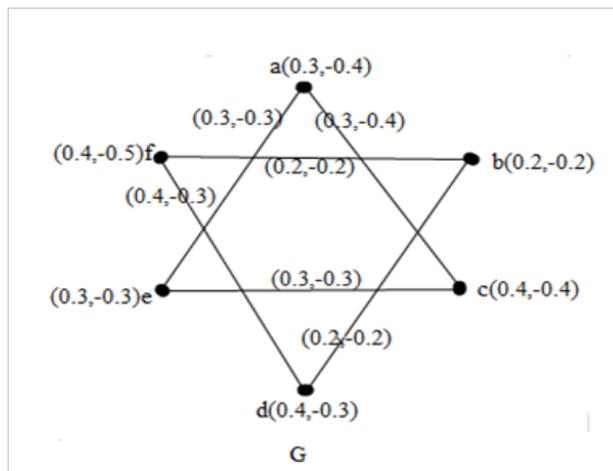
2.11 Definition[6]

The minimum fuzzy cardinality among all minimal total strong (weak) dominating bipolar fuzzy set T_b is called **total strong (weak) dominating bipolar fuzzy set of G** and its total strong (weak) domination bipolar fuzzy number is denoted by

$$\gamma_{T_b}(G) = \sum_{y \in V} \frac{1 + \mu_A^P(y) + \mu_A^N(y)}{2}$$

2.12 Example

Let G be a Total strong (weak) domination in bipolar fuzzy graph.



Here, $T_b = \{ a,c,b,d\}, \gamma_{T_b}(G) = 2, O(G) = (2, -2.1), S(G) = (1.7, -1.7), \delta_N(G) = (0.6, -0.5)$
 $\Delta_N(G) = (0.8, -0.8), \delta_E(G) = (0.4, -0.4), \Delta_E(G) = (0.6, -0.7), p = 2.45, q = 2.1$

3. Regular Total strong (weak) domination in bipolar fuzzy graph

In this section, we introduced regular total strong (weak) domination in bipolar fuzzy graph with example.

3.1. Definition[4]

Let $G = (A, B)$ be a bipolar Fuzzy Graph. A Total strong (weak) domination in bipolar fuzzy graph RT_b is subset of V is said to be regular total strong (weak) domination in bipolar fuzzy graph, if all the vertices $x \in RT_b$ have the same degree.

3.2. Definition[4]

Let $G = (A, B)$ be a bipolar Fuzzy Graph. A

regular total strong (weak) dominating bipolar fuzzy set RT_b is called **minimal regular total strong (weak) dominating bipolar fuzzy set** of G , if for every vertex $x \in RT_b, RT_b - \{x\}$ is not a regular total strong (weak) dominating bipolar fuzzy set of G .

3.3. Definition[4]

The minimum fuzzy cardinality among all minimal regular total strong (weak) dominating bipolar fuzzy set is called **regular total strong (weak) dominating bipolar fuzzy set of G** and its regular total strong (weak) domination bipolar fuzzy number is denoted by

$$\gamma_{RT_b}(G) = \sum_{y \in V} \frac{1 + \mu_A^P(y) + \mu_A^N(y)}{2}$$



3.4. Theorem

In a bipolar fuzzy graph G , $\gamma_{RT_b}(G) \leq p \leq q$

Proof

Let G be a regular total strong (weak) domination in bipolar fuzzy graph. Let $p = |V| = \sum_{y \in V} \frac{1 + \mu_A^P(y) + \mu_A^N(y)}{2}$ and $q = |E| = \sum_{xy \in E} \frac{1 + \mu_B^P(xy) + \mu_B^N(xy)}{2}$. Here $\gamma_{RT_b}(G)$ be a regular total strong (weak) domination number in bipolar fuzzy graph.

$$\text{Clearly, } \gamma_{RT_b}(G) \leq p = |V| = \sum_{y \in V} \frac{1 + \mu_A^P(y) + \mu_A^N(y)}{2} \text{ and } p \leq q$$

$$\text{Hence, } \gamma_{RT_b}(G) \leq p \leq q$$

3.5. Theorem

In a BFG, if $\gamma_{RT_b}(G) \leq p - \delta_N^{(p)}(G) \leq q - \delta_N^{(N)}(G)$

Proof

Let G be regular total strong (weak) domination in bipolar fuzzy graph. Let $p = |V| = \sum_{y \in V} \frac{1 + \mu_A^P(y) + \mu_A^N(y)}{2}$ and $q = |E| = \sum_{xy \in E} \frac{1 + \mu_B^P(xy) + \mu_B^N(xy)}{2}$. Here $\gamma_{RT_b}(G)$ be an equitable regular total strong (weak) domination number in bipolar fuzzy graph. If

$$\delta_N^{(p)} \leq \gamma_{RT_b}(G) \leq p$$

Clearly, $\gamma_{RT_b}(G) \leq p - \delta_N^{(p)}$ and $p \leq q$

Hence, $\gamma_{RT_b}(G) \leq p - \delta_N^{(p)}(G) \leq q - \delta_N^{(N)}(G)$

3.6. Theorem

In a BFG, if $\gamma_{RT_b}(G) \leq p - \Delta_N^{(p)}(G) \leq q - \Delta_N^{(N)}(G)$

Proof

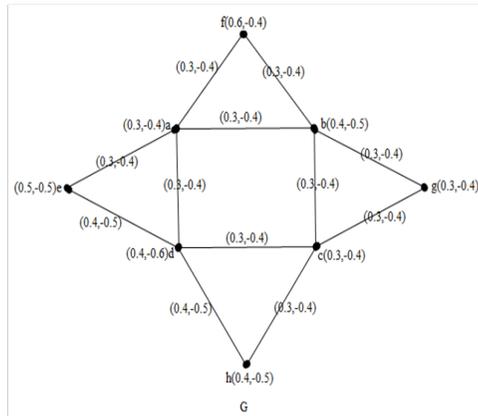
Let G be a regular total strong (weak) domination in bipolar fuzzy graph. Let $p = |V| = \sum_{y \in V} \frac{1 + \mu_A^P(y) + \mu_A^N(y)}{2}$ and $q = |E| = \sum_{x \in V} \frac{1 + \mu_B^P(x) + \mu_B^N(x)}{2}$. Here $\gamma_{RT_b}(G)$ be a regular total strong (weak) domination number in bipolar fuzzy graph. If $\Delta_N^{(p)} \leq \gamma_{RT_b}(G) \leq p$

Clearly, $\gamma_{RT_b}(G) \leq p - \Delta_N^{(p)}$ and $p \leq q$

Hence, $\gamma_{RT_b}(G) \leq p - \Delta_N^{(p)}(G) \leq q - \Delta_N^{(N)}(G)$

3.7. Example

Let G be a regular total strong (weak) domination in bipolar fuzzy graph.



$$RT_b(G) = \{a, b, c\}, \gamma_{RT_b}(G) = 2.7, p = 3.75, q = 4.5, O(G) = (3.2, -3.7), S(G) = (3.8, -5)$$

$$\delta_N(G) = (0.7, -1.9), \Delta_N(G) = (1.9, -0.8), \delta_E(G) = (0.6, -1.8), \Delta_E(G) = (1.4, -0.8)$$

4. Equitable regular Total strong (weak) domination in bipolar fuzzy graph

In this section we discussed about an Equitable regular total strong (weak) domination in bipolar fuzzy graph.

4.1 Definition

Let $G = (A, B)$ be a bipolar Fuzzy Graph. A regular total strong (weak) domination in bipolar fuzzy graph E_{RT_b} is a subset of V is said to be equitable regular total strong (weak) domination in bipolar fuzzy graph, if $|\deg(x) - \deg(y)| \leq 1$ where $x \in E_{RT_b}, y \in V - E_{RT_b}, xy \in E(G)$.

4.2 Definition

A equitable regular total strong (weak) dominating

4.4. Theorem

In a BFG, if $\gamma_{E_{RT_b}}(G) \leq p \leq q$

Proof

Let G be an equitable regular total strong (weak) domination in bipolar fuzzy graph. Let $p = |V| = \sum_{y \in V} \frac{1 + \mu_A^P(y) + \mu_A^N(y)}{2}$ and $q = |E| = \sum_{xy \in E} \frac{1 + \mu_B^P(xy) + \mu_B^N(xy)}{2}$. Here $\gamma_{E_{RT_b}}(G)$ be an equitable regular total strong (weak) domination number in bipolar fuzzy graph.

Clearly, $\gamma_{E_{RT_b}}(G) \leq p = |V| = \sum_{y \in V} \frac{1 + \mu_A^P(y) + \mu_A^N(y)}{2}$ and $p \leq q$

Hence, $\gamma_{E_{RT_b}}(G) \leq p \leq q$

bipolar fuzzy set E_{RT_b} is called **minimal equitable regular total strong (weak) dominating bipolar fuzzy set** of G , if for every vertex $x \in E_{RT_b}$, $E_{RT_b} - \{x\}$ is not an equitable regular total strong (weak) dominating bipolar fuzzy set of G .

4.3 Definition

Let $G = (A, B)$ be a bipolar Fuzzy Graph. The minimum fuzzy cardinality among all minimal equitable regular total strong (weak) dominating bipolar fuzzy set E_{RT_b} is called an **equitable regular total strong (weak) dominating bipolar fuzzy set of G** and its equitable regular total strong (weak) domination bipolar fuzzy number is denoted by

$$\gamma_{RT_b}(G) = \sum_{y \in V} \frac{1 + \mu_A^P(y) + \mu_A^N(y)}{2}$$



4.5. Theorem

In a BFG, if $\gamma_{E_{RT_h}}(G) \leq p - \Delta_E^{(p)}(G) \leq q - \Delta_E^{(N)}(G)$

Proof

Let G be an equitable regular total strong (weak) domination in bipolar fuzzy graph. Let $p = |V| = \sum_{y \in V} \frac{1 + \mu_A^P(y) + \mu_A^N(y)}{2}$ and $q = |E| = \sum_{xy \in E} \frac{1 + \mu_B^P(xy) + \mu_B^N(xy)}{2}$. Here $\gamma_{E_{RT_h}}(G)$ be an equitable regular total strong (weak) domination number in bipolar fuzzy graph. If

$$\Delta_E^{(p)} \leq \gamma_{E_{RT_h}}(G) \leq p$$

Clearly, $\gamma_{E_{RT_h}}(G) \leq p - \Delta_E^{(p)}$ and $p \leq q$ and $p \leq q$

Hence, $\gamma_{E_{RT_h}}(G) \leq p - \Delta_E^{(p)}(G) \leq q - \Delta_E^{(N)}(G)$

4.6. Theorem

In a BFG, if $\gamma_{E_{RT_h}}(G) \leq p - \delta_N^{(p)}(G) \leq q - \delta_E^{(N)}(G)$

Proof

Let G be an equitable regular total strong (weak) domination in bipolar fuzzy graph. Let $p = |V| = \sum_{y \in V} \frac{1 + \mu_A^P(y) + \mu_A^N(y)}{2}$ and $q = |E| = \sum_{xy \in E} \frac{1 + \mu_B^P(xy) + \mu_B^N(xy)}{2}$. Here $\gamma_{E_{RT_h}}(G)$ be an equitable regular total strong (weak) domination number in bipolar fuzzy graph. If

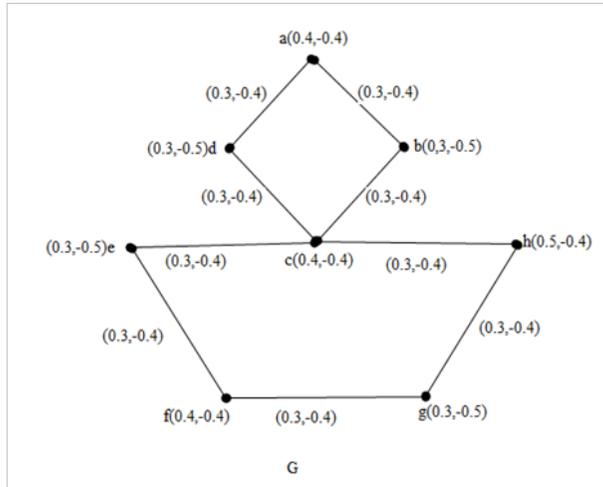
$$\delta_N^{(p)} \leq \gamma_{E_{RT_h}}(G) \leq p$$

Clearly, $\gamma_{E_{RT_h}}(G) \leq p - \delta_N^{(p)}$ and $p \leq q$ and $p \leq q$

Hence, $\gamma_{E_{RT_h}}(G) \leq p - \delta_N^{(p)}(G) \leq q - \delta_E^{(N)}(G)$

4.7. Example

Let G be an equitable regular total strong (weak) in bipolar fuzzy graph.



$$E_{RT_1} = \{a, b, e, f, h\}, \gamma_{E_{RT_1}}(G) = 2.35, p = 3.65, q = 4.05, O(G) = (2.6, -3.1), S(G) = (2.7, -3.6)$$

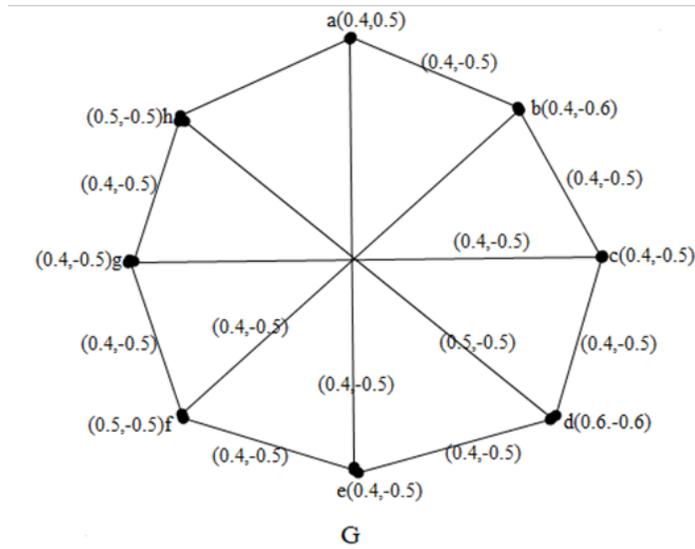
$$\delta_N(G) = (0.6, -1.9), \delta_E(G) = (0.6, -0.8), \Delta_N(G) = (1.4, -0.8), \Delta_E(G) = (0.6, -0.8)$$

Remark

In a BFG, if $\gamma_{E_{RT_1}}(G) = \gamma_{RT_1}(G) \leq p \leq q$

4.8. Example

Let G be an equitable regular total strong (weak) in bipolar fuzzy graph.



$$RT_b = \{a, b, c\}, \gamma_{RT_b}(G) = 1.35, E_{RT_b} = \{e, f, g\}, \gamma_{RT_b}(G) = 1.35, p = 3.7, q = 5.45$$



5. Conclusion

In this paper, the effective degree of a vertex and degree of a vertex in bipolar fuzzy graph are examined and some proposition and theorem are introduced. In our future investigation, various types of total strong (weak) domination bipolar fuzzy graph are introduced. We have extended our research work to other areas by using bipolar fuzzy graph.

References

- Akram. M., & Dudek. W.A. (2012) Regular bipolar fuzzy graphs, *Neural Computing and Applications*, 1 pp. 197 – 205.
- Akram. M., (2011) Bipolar fuzzy graphs, *Information Sciences*, vol. 181, pp. 5548 – 5564.
- Jayalakshmi. P.J., & Harinarayanan. C.V.R. (2012) Total strong (weak) domination in fuzzy graph, *International Journal of Computational Engineering Research*, vol.4, no. 1.
- Karunambigai. M.G., Akram. M., Palanivel. K., & Sivasankar. S., (2013) Domination in Bipolar fuzzy graph, *Proceedings of the International Conference on Fuzzy Systems, FUZZ-IEEE – 2013*, Hyderabad, India, pp. 1-6.
- Muthuraj. R., Jayalakshmi. P.J., & Kanimozhi. A., (2018) Regular total strong (weak) domination in bipolar fuzzy graph, *International Journal of Mathematical Archieve*, vol. 9, no. 5, pp. 40 – 44.
- NagoorGani. A., & Basheer Ahamed. M., (2003) Order and Size in Fuzzy Graphs *Bulletin of Pure and Applied Sciences*, vol. 22E, no.1, p. 145-148.
- Natarajan. C., & Ayyasamy. S., (2010) Strong (weak) domination in fuzzy graphs, *International Journal of Computational and Mathematical sciences*.
- Rosenfeld. A., (1975) Fuzzy graphs, Fuzzy Sets and their Applications to Cognitive and Decision Processes (Proc. U.S.-Japan Sem., Univ. Calif., Berkeley, Calif., 1974), *Academic Press, New York*, pp.77-95.
- Zadeh. L.A, (1965) Fuzzy Sets, *Information and Control*, vol-8, pp. 38-353.
- Zhang. W.R. (1994) Bipolar fuzzy sets and relations: a computational framework for cognitive modelling and multivalent decision analysis, *Proc. Of IEEE Conf.,*

The Function Associated with Ruler Function and A Bijective Function from \mathbb{N} to $\mathbb{N} \times \mathbb{N}$

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Abstract

This paper defines the function associated with ruler function on set of natural numbers and proves some simple properties of it. These properties have been discussed with the help of properties of ruler function which have been already proved in our earlier research papers. In addition, this paper defines function from \mathbb{N} to $\mathbb{N} \times \mathbb{N}$ using ruler function and the function associated with ruler function and proves that this function is injective and surjective.

Keywords: Ruler Function, The Function associated with Ruler Function, Set of natural numbers \mathbb{N}

Introduction

The pseudo periodicity property of ruler function has been already proved [Ref. [1]]. With the help of this pseudo periodicity property we have proved that composite function of ruler function with factorial function has infinite number of fixed points [Ref. [2]]. Here we use following definition of ruler function on \mathbb{N} and its 5 properties [Ref. [1], Ref. [2]] and define the function associated with ruler function. Some simple properties of this associated function of ruler function has been proved. Lastly function from \mathbb{N} to $\mathbb{N} \times \mathbb{N}$ has been defined and proved that this function is injective and surjective function.

Ruler Function has been defined as follows [Ref. [3] & Ref. [4]]:

Definition 1: Function $\rho : \mathbb{N} \rightarrow \mathbb{N}$ defined by $\rho(i) = k$, where k is the smallest natural number such that $i/2^k$ is not natural number, is called the Ruler Function.

Alternative Definition 1: Function $\rho : \mathbb{N} \rightarrow \mathbb{N}$ defined by $\rho(i) = k$, such that $i/2^{(k-1)}$ is natural number but $i/2^k$ is not natural number, is called the Ruler Function.

Ruler function has following properties [Ref. [1], Ref. [2]].

1. $\rho(2^{k-1}) = k, \forall k \in \mathbb{N}$
2. $\rho(2m - 1) = 1, \forall m \in \mathbb{N}$
3. $\rho(2^k + i) = \rho(i) = (2^k - i), \forall k, i \in \mathbb{N}$ with $i < 2^k$
4. $\rho(m \times n) = \rho(m) + \rho(n) - 1, \forall m, n \in \mathbb{N}$
5. $\rho(2^{ki}) = 2^k, \forall k \in \mathbb{N} \cup \{0\}$.

Remark: Above definition says that $i/2^{\rho(i)-1}$ is the largest odd factor of i



Moreover, it suggests that for every natural number i there is natural number m such that

$$m = \frac{i + 2^{\rho(i)-1}}{2^{\rho(i)}}$$

This leads us to define the function associated with ruler function on \mathbb{N} .

Definition 2: Function $\sigma: \mathbb{N} \rightarrow \mathbb{N}$ is said to be the function associated with ruler function ρ if

$$\sigma(i) = \frac{i + 2^{\rho(i)-1}}{2^{\rho(i)}} \quad \text{for each } i \in \mathbb{N}.$$

Note: As we know that every natural number i can be written uniquely in the form $i = 2^{k-1}(2m-1)$ for some $k, m \in \mathbb{N}$.

Therefore from above first three properties of ruler function ρ , we have

$$\rho(i) = \rho(2^{k-1}(2m-1)) = \rho(2^{k-1}) + \rho(2m-1) - 1 = k + 1 - 1 = k$$

Hence

$$i = 2^{\rho(i)-1}(2m-1)$$

$$\therefore m = \frac{i + 2^{\rho(i)-1}}{2^{\rho(i)}}$$

Hence we can write $i = 2^{\rho(i)-1}(2\sigma(i) - 1)$

Let us see the following properties of the function σ associated with ruler function with proof.

Property 1: $\sigma(2^k) = 1, \forall k \in \mathbb{N} \cup \{0\}$.

Proof: Let $k \in \mathbb{N} \cup \{0\}$,

$$\sigma(2^k) = \frac{2^k + 2^{\rho(2^k)-1}}{2^{\rho(2^k)}} = \frac{2^k + 2^{k+1-1}}{2^{k+1}} = \frac{2^k + 2^k}{2^{k+1}} = 1$$

Property 2: $\sigma(2m-1) = m, \forall m \in \mathbb{N}$.

Proof: Let $m \in \mathbb{N}$,

$$\sigma(2m-1) = \frac{(2m-1) + 2^{\rho(2m-1)-1}}{2^{\rho(2m-1)}} = \frac{(2m-1) + 2^{1-1}}{2^1} = \frac{(2m-1) + 1}{2} = m$$

Property 3: $\sigma(mn) = 2\sigma(m)\sigma(n) - (\sigma(m) + \sigma(n)) + 1, \forall m, n \in \mathbb{N}$.

Proof: Let $m, n \in \mathbb{N}$.

L. H. S = $\sigma(mn)$

$$= \frac{mn + 2^{\rho(mn)-1}}{2^{\rho(mn)}} = \frac{mn + 2^{(\rho(m)+\rho(n)-1)-1}}{2^{(\rho(m)+\rho(n)-1)}} = \frac{2mn + 2^{(\rho(m)+\rho(n)-1)}}{2^{(\rho(m)+\rho(n))}}$$

$$\text{R. H. S.} = 2\sigma(m)\sigma(n) - (\sigma(m) + \sigma(n)) + 1$$

$$= 2 \left(\left(\frac{m + 2^{\rho(m)-1}}{2^{\rho(m)}} \right) \left(\frac{n + 2^{\rho(n)-1}}{2^{\rho(n)}} \right) \right) - \left(\left(\frac{m + 2^{\rho(m)-1}}{2^{\rho(m)}} \right) + \left(\frac{n + 2^{\rho(n)-1}}{2^{\rho(n)}} \right) \right) + 1$$

$$= 2 \left(\frac{mn + n2^{\rho(m)-1} + m2^{\rho(n)-1} + 2^{(\rho(m)+\rho(n)-2)}}{2^{\rho(m)+\rho(n)}} \right) - \left(\frac{m2^{\rho(n)} + 2^{\rho(m)+\rho(n)-1} + n2^{\rho(m)} + 2^{\rho(m)+\rho(n)-1}}{2^{\rho(m)+\rho(n)}} \right) + 1$$

$$= \frac{2mn + n2^{\rho(m)} + m2^{\rho(n)} + 2^{(\rho(m)+\rho(n)-1)} - m2^{\rho(n)} - 2^{\rho(m)+\rho(n)-1} - n2^{\rho(m)} - 2^{\rho(m)+\rho(n)-1}}{2^{\rho(m)+\rho(n)}} + 1$$

$$= \frac{2mn - 2^{\rho(m)+\rho(n)-1} + 2^{\rho(m)+\rho(n)}}{2^{\rho(m)+\rho(n)}} = \frac{2mn + 2^{\rho(m)+\rho(n)-1}}{2^{\rho(m)+\rho(n)}}$$

$$\therefore \text{L. H. S.} = \text{R. H. S.}$$

Hence, $\sigma(mn) = 2\sigma(m)\sigma(n) - (\sigma(m) + \sigma(n)) + 1, \forall m, n \in \mathbb{N}$.

Property 4: $\sigma(2^k!) = \frac{2^{k!+2^{2^k-1}}}{2^{2^k}}, \forall k \in \mathbb{N} \cup \{0\}$

Proof: Let $k \in \mathbb{N} \cup \{0\}$,

$$\sigma(2^k!) = \frac{2^{k!} + 2^{\rho(2^k!)-1}}{2^{\rho(2^k!)}} = \frac{2^{k!} + 2^{2^k-1}}{2^{2^k}}$$

Above property gives us that $\frac{2^{k!}}{2^{2^k-1}}$ is the largest odd factor of $2^k!$

Let us define function from \mathbb{N} to $\mathbb{N} \times \mathbb{N}$ with the help of ruler function and the function associated with ruler function as follows.

Definition 3: Function $\tau: \mathbb{N} \rightarrow \mathbb{N} \times \mathbb{N}$ is defined by $\tau(i) = (\rho(i), \sigma(i)), \forall i \in \mathbb{N}$

$$\tau(1) = (1,1), \tau(2) = (2,1), \tau(3) = (1,2), \tau(4) = (3,1), \tau(5) = (1,3), \tau(6) = (2,2),$$

$$\tau(7) = (1,4), \tau(8) = (4,1), \tau(9) = (1,5), \tau(10) = (2,3), \tau(11) = (1,6), \tau(12) = (3,2), \dots$$



Theorem 1: $\tau: \mathbb{N} \rightarrow \mathbb{N} \times \mathbb{N}$ is bijective function.

Proof: First we prove that $\tau: \mathbb{N} \rightarrow \mathbb{N} \times \mathbb{N}$ is injective function.

Let $i, j \in \mathbb{N}$ with $i \neq j$

$$i = 2^{\rho(i)-1}(2\sigma(i) - 1) \text{ \& } j = 2^{\rho(j)-1}(2\sigma(j) - 1)$$

$$\therefore 2^{\rho(i)-1}(2\sigma(i) - 1) \neq 2^{\rho(j)-1}(2\sigma(j) - 1)$$

$$\therefore \rho(i) \neq \rho(j) \text{ or } \sigma(i) \neq \sigma(j)$$

$$\therefore (\rho(i), \sigma(i)) \neq (\rho(j), \sigma(j))$$

$$\therefore \tau(i) \neq \tau(j)$$

Hence $\tau: \mathbb{N} \rightarrow \mathbb{N} \times \mathbb{N}$ is injective.

Now we prove that $\tau: \mathbb{N} \rightarrow \mathbb{N} \times \mathbb{N}$ is surjective function.

Let $(k, m) \in \mathbb{N} \times \mathbb{N}$

$$\therefore \exists i \in \mathbb{N} \exists i = 2^{k-1}(2m - 1) \text{ \& } i = 2^{\rho(i)-1}(2\sigma(i) - 1)$$

$$\therefore \rho(i) = k \text{ \& } \sigma(i) = m$$

$$\therefore \tau(i) = (\rho(i), \sigma(i)) = (k, m)$$

$$\therefore \text{For each } (k, m) \in \mathbb{N} \times \mathbb{N} \exists i \in \mathbb{N} \exists \tau(i) = (k, m)$$

Hence $\tau: \mathbb{N} \rightarrow \mathbb{N} \times \mathbb{N}$ is surjective.

Hence $\tau: \mathbb{N} \rightarrow \mathbb{N} \times \mathbb{N}$ is bijective function.

Concluding Remark

With the help of properties of Ruler function and its associated function we can define function from \mathbb{N} to $\mathbb{N} \times \mathbb{N}$ which turns to be bijective.

References

- Ghodke Sanjay, N., Mishra. B. P. (2016) "Some Simple Aspects Of Ruler Function On Set Of Natural Numbers In Connection with Tower Of Hanoi Puzzle" *International Journal Of Multidisciplinary Research (IJMR)*, vol. 5, no. 11 (I), pp. 103-105
- Ghodke, S.N., (2017) "Composite Function Of Ruler Function With Factorial Function On Set Of Natural Numbers & Its Infinitely Many Fixed Points" *Management Guru: Journal of Management Research International Journal*, vol. 5, 02, pp. 82-85
- Sloane, N. J. A. Sequence A001511/M0127 in "The On-Line Encyclopedia of Integer Sequences." Retrieved on 12-07-2015 from <https://oeis.org/>
- Weisstein, EricW. "Ruler Function." Retrieved on 12-07-2015 from <http://mathworld.wolfram.com/RulerFunction.html>

Floriculture Practices and Potential in the Shivalik Hills of District Kathua, Jammu and Kashmir, India

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Abstract

Jammu & Kashmir has a rich floral diversity particularly in the Shivalik hills. Floriculture is the growing of cut flowers, potted foliage or flowering plants and bedding plants in greenhouses or in fields. Earlier floriculture was just a pastime of rich people and hobby of flower lovers. The importance of flowers has been realized throughout the world and today flower cultivation has become an integral and intensive form of agriculture opening new vista in commercial floriculture. Floriculture is seen in few villages of districts Kathua. There are many different species of flowers and plants that are grown as commercial crops. Cut flowers include such crops as Marigold, Roses, Gladiolus and Chrysanthemums. For unemployed youth and poor farmers floriculture has become an effective risk management tool that reduces their input costs, diversifies their production and caters to the local demand besides sustaining their livelihood. The agro-climatic conditions of the region hold good scope for the commercial floriculture. Keywords: greenhouse, trade, agro-climatic conditions, post-harvest technologies.

Introduction

Plants and flowers in particular have engaged the attention of humanity since times immemorial all over the world including India. India has a prehistoric tradition of floriculture. References to flowers and gardens are found in ancient Indian literature like the Rigveda (3000-2000 B.C), Ramayana (1200-1300 B.C) and Mahabharata (prior to 4th century B.C). Flowers have always remained an integral part of the social fabric of human life due to their essence and fragrance being essential in social, cultural and religious functions of any society. There is an ample reference of flowers in mythology and Puranas signifying their importance. Flower symbolizes beauty, purity, tranquility, honesty and divinity. The offering of flowers is a sign of reverence. In old times flowers were not of much economic importance. Floriculture, which was considered a gardener's activity till recently, is now fast emerging as an important and innovative commercial venture. The importance of flowers has been realized throughout the world and today flower cultivation has become an integral and intensive form of agriculture in several parts of the world including India as well as Jammu and Kashmir. Flowers have become a symbol of expression in any occasion, be it birthdays, anniversaries, valentines' day, mother's day, religious festivals, official functions, home decoration or any other celebration.



The changing lifestyles and increased urban affluence has influenced floriculture which has assumed a definite commercial status in recent times and during the past two to three decades particularly. The extensive potential of commercial floriculture has resulted in the blossoming of this field into a viable agri-business option earning foreign exchange, providing employment to youth and sustainability to the small and marginal farmers particularly in rural areas. The objective of the study is to examine the floricultural farms operating in the area, flowering species under cultivation, cultivation techniques employed, marketing areas, storage facilities, problems and constraints faced by the growers and to suggest suitable policy measures for further development of commercial floriculture in the area of study.

Materials and Methods

A random list of farmers cultivating flowers in different hamlets of the study area was prepared which constituted the total sample of commercial flower growers. The samples of flowering plant species were collected, preserved, photographed and identified through consultations with experts from floriculture. The cultivation practices in different seasons of the year were studied as also the cultural practices involved in the local enterprise. The investigation of soil samples, soil moisture content, soil PH, soil temperature were performed in all the different sampling units of study. The tools and equipments employed in the study involve soil thermometer, PH meter, oven and other related equipments. The floriculture farms were visited different times of the year to estimate the yields of different varieties under cultivation. The marketing pattern of the respondents was studied by asking them to indicate the nature of marketing which included where, when, to whom and through which channel they sell their produce of loose flowers of Marigold, Roses and Chrysanthemums. Responses obtained from the farmers were expressed in frequencies and percentages. The soil samples were collected for further analysis.

Results and Discussion

The district Kathua has five main regions Billawar, Basohli, Bani, Hiranagar and Kathua. The congenial agro-climatic conditions of the Shiwalik region are not even found in other parts of the country that are dominating the trade in floriculture. The prevailing agro-climatic conditions favour promotion of less water intensive crops like floriculture. The presence of fertile soil, cheap labour and congenial climatic conditions provide ample scope for the development of floriculture industry in the region. The agriculture sector which is the backbone of the economy is facing challenges of increase in cost effective production and value additions. There is need of renewed focus on identifying high value low voluminous crops to alleviate growth of allied and non-farm activities to improve value additions. The farmers in the area generally possess small and marginal land holdings and a small land holder could derive benefits from flower cultivation as compared to traditional crops. The cultivation of ornamental plants requires a number of operations to be done sequentially and systematically. The usual garden operations include selection of site, soil and seed sterilization, raising of permanent beds, seed sowing, pricking, watering, manuring and mulching. Propagation techniques involve seed sowing including vegetative propagules. Sexual propagation takes place by sowing the mature seeds at the appropriate time and under appropriate climatic and soil conditions. On the other hand, vegetative propagation involves various methods like bulbs, corms, rhizomes, cutting, layering, budding and tissue culture. Floriculture is a labour intensive industry since the plants require extensive care and attention almost all the times. There is no dearth of labour in the Shiwalik region especially in rural areas. The demand of floricultural products has been increasing over the period of time across the region. The cultivation of flowers in the area is very dismal owing to reluctance in shifting from traditional cropping pattern, lack of awareness, lack of training, market access and unsupportive response from the State Horticulture and Floriculture department. There are no large farms engaged in the organized floriculture. Only few open small farms are operating in the area. The data on the area under floriculture and the production generated is highly inadequate.

All the small floriculture farms operating in the area are solely devoted to the cultivation of marigold and to a small extent to the roses. The farmers do not have any storage facilities. There is no any hi-tech indoor cultivation in the area which requires proper training of the youth particularly the unemployed and support by the concerned department. The educated unemployed youth particularly those having nursery and gardening skills can avail of benefits through this lucrative hi-tech indoor as well as open loose and cut flower cultivation. There seem a good potential for the cultivation of marigold, rose, chrysanthemum, gaillardia, gladiolus, aster, jasmine, tulips and even orchids. The nearest market survey for the selling of both loose and cut flowers revealed that the produce is procured from neighboring states of Punjab, Haryana and Himachal Pradesh besides from the valley of Kashmir. Most of the domestic consumption requirement in the neighbouring market of Jammu is catered by Harayana. Marigold ranks first in the domestic consumption throughout the year and followed by rose and gladiolus. Some of the ornamental species under cultivation in the region are discussed as under.

- *Tagetes erecta*: Compact, stout, erect, branching annual, about 60 cm high, with angular, hairless stems. Leaves pinnate, to 10 cm long, leaflets 11-17 narrowly-lanceolate, 5 cm long, pointed, sharply toothed, all with a few large glands near the margins,. Flower heads large, terminal, pompon-like, densely double, to 12 cm across, yellow to orange, rays 5-8 or more, long clawed, disc florets many. Flowering: July to November.
- *Tagetes patula*: Bushy annual to 45 cm high, stem hairless, purple-tinged, branched from near the base. Leaves pinnate, to 10 cm long, leaflets about 12, lanceolate or oblong, toothed, to 3 cm long. Flower heads solitary, long pedunculate, usually double, to 5 cm across, rays few to many, red-brown, yellow, orange or yellow with red markings, disc florets many and with wide range of colours. Flowering: July to November.
- *Tagetes tenuifolia*: Upright branching annual, to 60 cm high, with cylindrical stems. Leaves pinnate, to 12 cm long, with about 12 linear

or narrowly lanceolate, toothed leaflets, to 2 cm long, each leaflet with two rows of large glandular dots. Flower heads in cyme-like inflorescences, single, to 2.5 cm across, rays few, usually 5, yellow or orange, disc florets many. Flowering: July to December.

- *Gaillardia grandiflora*: Bushy, often short lived perennial herb, upto 90 cm high. Leaves alternate, oblanceolate, grey-green, entire, simple or lobed. Flower heads large, about 13 cm across, ray florets yellow, ringed red at base, disc florets yellow-brown. Flowering: April to November.
- *Gaillardia pulchella*: Erect, bushy, hairy, branching annual herb, up to 60 cm high. Leaves oblong, spatulate or oblanceolate, 8 cm long, entire or coarsely toothed, grey-green and nearly sessile. Flower heads about 8 cm across, single or double, ray florets yellow or red, disc florets purple. Flowering: April to November.
- *Chrysanthemum grandiflorum*: Stout perennial, 0.6 to 1.5 m high, with grey-pubescent herbage. Leaves parted nearly to midrib, often toothed, up to 7.5 cm long. Flower-heads clustered, vary in size, variously coloured, rays usually exceeding disc, outer involucre scales herbaceous, with only scarious margins. Flowering: October-December.
- *Zinnia elegans*: An upright, bushy annual, up to 90 cm high. Leaves ovate to lanceolate, up to 10 cm long, sessile, more or less clasping. Flower heads up to 12 cm across, rays broad and showy, becoming reflexed, white, yellow, orange, red, pink, purple, greenish and lilac.

The ornamental flowering plant species with potential of cultivation in the area include *Gaillardia grandiflora*, *Gaillardia aristata*, *Gaillardia pulchella*, *Chrysanthemum cinerariifolium*, *Chrysanthemum grandiflorum*, *Chrysanthemum carinatum*, *Tagetes erecta*, *Tagetes patula*, *Tagetes tenuifolia*, *Lilium auratum*, *Lilium regale*, *Gladiolus sp.*, *Tulipa lanata*, *Cosmos sulphureus*, *Gerbera jamesonii*, *Zinnia elegans*, *Zinnia angustifolia*, *Dianthus barbatus*, *Dianthus caryophyllus*, *Dianthus deltoides*, *Dianthus plumarius*, *Rosa multiflora*, *Rosa damascena*,



Jasminum multiflorum, Jasminum sambac, Jasminum nudiflorum, Rudbeckia hirta, Gazania rigens, Salvia splendens, Delphinium ajacis, Ranunculus asiaticus, Phlox drummondii, Kerria japonica, Coreopsis tinctoria, Coreopsis grandiflora, Dahlia pinnata, Dahlia coccinea, Begonia sp., Gazania rigens, Campsis grandiflora and Lagerstroemia indica.

Conclusion

The agro-climatic conditions in the Shiwalik hills of Kathua are favourable to many species of ornamental plants like marigold, rose, chrysanthemum, gaillardia, gladiolus, tulips, jasmine, aster, carnation and many more. Flowers, if grown properly can yield 15-20 times more returns than cereals and other traditional crops. The flower cultivation can be undertaken even on small land holdings. These enterprises being labour intensive provide gainful employment to educated unemployed skilled youth, marginal farmers, rural artisans and others seeking employment. People of the area are less inclined to floriculture due to a number of constraints like training, access to quality seeds and propagules, technical and financial support, storage facilities, market access and like. Erroneously the impetus to floriculture is given to the valley of Kashmir where the production is restricted to only four months of the year. Given the opportunity some quality floricultural produce can be raised throughout the year in the area under study.

References

- Ajjan, N., & Raveendran, N. (2002), Economics of Production & Marketing of cut Flowers - *Gladiolus* in Nilgiri District, Tamil Nadu.
- Alagumani, T.M., Anjugam. & R.Rajesh. (1997). Performance of Flower Crops vis-à-vis Field Crops in Madurai District, Tamil Nadu. Indian Journal of Agricultural Economics.
- Armitage, Allan. M., & Theis, Rachel. (1993). Specialty Cut Flowers: The Production of Annuals, Perennials, Bulbs and Woody Plants for *Fresh and Dried Cut Flowers*. Ball Publishing, Chicago, USA.
- Bhattacharyya, R. (2012). Economics of Floriculture - Problems and Prospects. Pragun Publications, New Delhi.
- Brown, Kathy. (2005). *The Gardener's Guide to Bulbs: How to Create a Spectacular Garden throughout the Year with Bulbs, Corms, Tubers and Rhizomes*. Lorenz Books.
- Bycznski, Lynn. Bycznski, Lynn. & Wimbiscus, Robin. (1997). The Flower Farmer: An Organic Grower's Guide to Raising and Selling Cut Flowers. *Chelsea Green Publishing Company*, Vermont, USA.
- Chattopadhyay, P.K. (2007). Commercial Floriculture. Daya Publishing House, New Delhi.
- Datta, S.K.(2015). Indian Floriculture- *Role of CSIR*, Daya Publishing House, New Delhi.
- Dole, John. M., & Wilkins, H.F. (2004). *Floriculture - Principles and Species*. Pearson Indian Horticulture Database. (2014), National Horticulture Board, Ministry of Agriculture, Government of India.
- Larson, Roy. A. (1992). Introduction to Floriculture, Academic Press, *Cambridge, USA*.
- Nau, Jim. (2011). Ball Redbook: Crop Production. Ball Publishing, Chicago, USA.
- Nelson, Paul.V. (2011). Greenhouse Operation and Management. Prentice Hall, New Jersey, *USA*.
- Palwal, H.K., (2013). Ornamental Gardening- A User's Companion, National Book Trust, India.

Cost of Employment : Case of Medical Professionals

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Abstract

Present paper examines the pattern of stress and psychological wellbeing experienced by medical professionals working in private and government organizations. The duty of health care professionals is becoming very challenging and demanding although they are expected to give unconditional services with dedication and commitment to the people. Hence they are involved in performing their duties without considering their other personal and social responsibilities Health care practitioners are expected to give selfless services with continual devotion, but the demand of the family and society stretches the daily routine. Stress has become one of the major life style problem caused by changes in nature of work, breakdown in traditional family structure and many other features of contemporary urban environment. On the other hand Well-being is a combination of feeling good as well as actually having meaning good relationship and accomplishment. A total of 200 male and female doctors practicing in government and private clinic /hospital of Bhopal city participated in the study. With the help of structured questionnaires stress and psychological well-being were measured. The results of the study indicated inter group difference in the experience of stress. Results are discussed in the light of contextual variables.

Keywords: Stress & Psychological Wellbeing.

A step forward towards 21st century where goal oriented work with perfection is expected, the demand of family and society stretches the daily routine. One wants to attend all in short duration of time. Fulfilling all the demands and expectation ultimately leads to ill health and stress. Health care practitioners are expected to give selfless services, continual devotion to need of others and are expected to give medical care in all types of environment. Stress has become one of the major life styles problem caused specially changes in nature of work, breakdown in traditional family structure and many features of contemporarily urban environment. Stress has now a day's become is an unavoidable part of our personal and professional lives. If stress is not managed effectively, it may lead to issues related to health and wellbeing. Continuous exposure to stressful events may lead to different outcomes including health problems like anxiety, loss of sleep, and disturbed relationship with the family etc. Willcock, Daly, Tennant and Allard (2004) studied and concluded that medical professionals are more prone to mental illnesses and even to "three-D"- Depression, Drink and Drugs.

Stress creates a personal cost to the medical professionals, a financial cost to the organizations in terms of absence, early retirement and complaints, and a health cost to patients. As all these factors affect quality care of the patients from the stressed doctors.



At a time when health organizations worldwide are striving to reduce costs and to increase quality, addressing the psychological well-being of their staff has necessarily raised high on their priorities. Nowadays life is going more stressful, especially among health care professionals. To increase the efficiency and effectiveness of health care delivery, this study among the health care professionals would be a great help.

Researchers have indicated that a certain degree of stress is necessary to motivate a person to perform well, while stress beyond the optimal level can lead to failure, unhappiness, and economic loss. Stress is one of the main causes of wear and tear in life of the individual.

Girdano, Everly and Dusk (1993) studied about stress and its reaction on body and concluded that psycho physiological arousal can make body tired, may develop some malfunctioning and even the state of disease. According to Wheaton (1996) Stress act as a trigger stimulus for the internal and external forces and give response in the form of fatigue and vulnerable.

Stress is caused by physiological, psychological and environmental factors too.

Allen, Hitt & Green (1982) states Occupational Stress as disturbing the balance at psychological and physical level of the individual and keeping them away from normal. On the other hand Shrivastava (1999) concluded that Occupational Stress due to job situation or excess demand from the job situation arouses the mental state of employees. It also include role overload, role ambiguity, role conflict, group pressure low profitability, under participation, low status, responsibility for people, strenuous work condition, poor peer relation and powerlessness.

Occupational Stress has been classified in two categories-

Doctors- consistently experiencing high intensity of work, conflicting time demands, and heavy professional responsibility, physical and social resources are deficient, and there is the ever-present threat of medico-legal action. Often doctors have limited power to alter the conditions under which they work.

There are a large number of external pressures also like innate professional responsibilities of doctors, increased clinical workload due to insufficient staffing and resources in the health system, lack of control over work-life balance, professional, social and geographical isolation, the requirement for ongoing medical education, the demands of keeping pace with rapid developments in medical technology and knowledge, changes in the administration and regulations in the health system, and community expectations.

Interaction with patients and their families, which often involve dealing with suffering and death in emotionally charged clinical situations, can drain the "reserves" of the doctors with repercussions on their personal lives. Such experiences are in addition to the pressures experienced outside the workplace such as relationship and financial problems.

Ryff (1995) suggested a multidimensional model of psychological well-being that comprises six distinct dimensions: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance that supposedly vary in meaningful ways by personal characteristics including age.

According to Deiner (2009) psychological wellbeing is an overall evaluation of one's quality of life which comprises of the three component having life satisfaction, experiencing positive and pleasant emotions and also experiencing negative affect.. Shin and Johnson (1978) have stated that well-being is a form of happiness as "a global assessment of a person's quality of life according to his own chosen criteria". Similarly Bradshaw et al. (2007) defined that wellbeing plays an active role in creating the balance among different factors by developing and using various resources to respond to stress.

Susmita Halder and Akash Kumar Mahato (2013) researched and revealed that on level of stress and well-being of health care providers in Kolkata. It was concluded that 33% of nurses, 20% of paramedics and technicians and 13.3% of doctors face problems.

According to Wall et al. (1997) a large sample of National Health Service workers in Britain were studied on high levels of minor psychiatric disorders among doctors, nurses, allied health professionals, and managers. The results revealed higher rates

in health professional as compare to the general population.

With the view of above review of literature following objectives were formulated.

Objectives of the Study

The present study aims to examine the pattern and extent of stress and well being in male and female medical professionals. In view of the above propositions following are the research objectives:

1. To investigate the pattern of stress among medical professionals.
2. To investigate the pattern of wellbeing medical professionals.

Method

Sample – The medical professionals (Allopathic and Ayurvedic, Homoeopathic) working in government hospitals or doing private practice or working in private hospitals were randomly selected for the study. Equal number of male (N=100) and female (N=100) doctors participated in the study.

A total number of two hundred (N=200) male and female doctors practicing in Government and Private Clinic/Hospital of Bhopal city, located in Central India participated in the study. Equal number of Male Doctors (N=100) and Female Doctors (N=100) were taken as sample.

MEASURES- In the course of study following measures were prepared & used in the study. A brief description of the measures are given below-

Stress

The stress questionnaire was developed during the course of study. The questionnaire consists of 47 items including five dimensions- 1.patients, 2.Hospital/clinic, 3.Incentive, 4. Family and 5.self. A set of five point scale was used ranging from Never to Always .

Psychological Well Being Scale: The Ryff Scales of Psychological Well-Being is used. It consist of 42 items, the dimensions are Autonomy, Environmental mastery, Personal Growth, Positive Relations with others, Purpose in life, Self Acceptance.

Procedure

After finalization of the tools, data were collected for the main study, to investigate relationship among the variables. After due concern and permission from the competent authorities, a convenient time was fixed for data collection. After developing good rapport with them instructions were made clear. In the beginning the purpose of the study was explained to participants and they were assured that their responses will be kept confidential and will be used for academic purposes.

Result

Stress

The responses of the participants were given on dimensions of stress factors- Patient, hospital, Incentives, Family and Self were analyzed. Results of the scores depict that higher the score less is the stress and vice-versa.

Patient- Mean & Standard deviations of the scores obtained on patient dimension of stress factor shows that the effects of gender and effect of organization were not significant whereas the main effect of experience was significant $F(1,192) = 51.93, p < .01$. The pattern of results indicates that practitioners having higher experience showed less stress due to patient ($M=20.25$) as compared to less experienced participants ($M=16.67$). The interaction of gender x organization was significant $F(1,192) = 11.71, p < .05$. The pattern of result indicate that male medical practitioners of government organization were having low patient stress ($M=19.74$) as compared to practitioners working in private organizations ($M=17.22$). On the other hand female practitioner of government organization has more stress ($M=18.00$) as compared to female practitioners of private organization ($M=18.88$).

Hospital- Mean & standard deviations of scores indicates hospital dimension of stress factor shows the main effect experience was significant $F(1,192)=12.05, p < .05$. The pattern of results indicate that there was less stress between 10 years practitioners ($M=40.57$) as compared to less experienced practitioners ($M=36.89$).

Incentive-Mean and standard deviations on incentive dimension of stress factor are shows that the effect of gender was not significant but effect of



experience $F(1,192) = 19.91, p < .05$ was significant. The mean scores indicate that senior practitioners get lower incentives ($M=17.62$) as compared to the less experienced one ($M=15.17$). The interactional effect of gender with organization was also found highly significant $F(1,192) = 24.00, p < .05$. Government practitioners had low level of incentive ($M=17.04$) as compared to private practitioners ($M=15.75$).

Family-Mean and standard deviation of scores on family dimension of stress performed. It is evident that main effect of experience was significant $F(1,192) = 22.14, p < .05$. Mean scores indicate that more experience practitioners have less family stress ($M=17.19$) as compared to less experienced one ($M=14.77$). However effect of organization was significant $F(1,192) = 13.65, p < .05$. Mean scores indicate that government practitioners have less family stress ($M=16.93$) as compared to private ones ($M=15.03$). The interaction of gender with organization $F(1,192) = 6.00, p < .05$ was found significant. Mean of organization represents that male government practitioner scored lower ($M=17.58$) as compared to private practitioners ($M=14.42$). Similarly female government practitioners scored less ($M=16.28$) as compared with private female practitioners ($M=15.64$).

Self (Norms, Values & Belief)-Mean and standard deviations indicating self dimension of stress shows that the main effect of experience $F(1,192) = 22.45, p < .05$ was found significant. The mean scores indicate that more experienced have less stress ($M=47.46$) as compared to junior practitioners ($M=42.12$). The interaction of gender with organization was highly significant $F(1,192) = 20.96, p < .05$. The pattern of mean scores show that male medical professionals of government organization scored less ($M=49.50$) as compared to private practitioners ($M=42.58$) on self dimension. Whereas female professionals of private organization scored less ($M=45.24$) as compared government professionals ($M=41.84$).

Total Stress The total result indicated the effect of experience contributed significantly for stress experience ($1,192=33.56, p < .01$). The pattern of results indicated that more experienced participants were less stressed ($M=143.09$) as compared to the less experienced participants ($M=125.62$).

Similarly effect of organization also contributed significantly for stress experience, $F(1,192) = 3.86, p < .01$. The pattern of results indicated that the participants working in government organization noted less stress ($M=137.32$) as compared to participants belonged to private organization ($M=131.39$). The interaction of gender with experience was also obtained significant $F(1,192) = 8.65, p < .01$. The result reflects that higher experience male participants ($M=140.88$) experienced less stress as compared to less experienced participants ($M=132.28$). Similarly the female participants of higher experience tenure ($M=145.30$) indicated less stress as compared to less experience female participants ($M=118.96$).

The interaction of gender with organization was significant, $F(1,192) = 19.25, p < .01$. The pattern of scores indicates that male participants of government organizations showed less stress ($M=146.16$) as compared to private organization male participants ($M=127.00$), however, the female participants of private organization displayed less stress ($M=135.78$) as compared to female participants ($M=128.48$) of government organizations. Similarly interaction of experience with organization was significant $F(1,192) = 4.18, p < .05$.

The pattern of results hint that more experienced participants of government organization observed less stress ($M=149.14$) as compared to more experienced participants of private organization ($M=137.04$).

The interaction of gender with organization was significant, $F(1,192) = 19.25, p < .01$. The pattern of scores indicated that male participants of government organizations showed less stress ($M=146.16$) as compared to male participants of private organization ($M=127.00$), however, the female participants of private organization displayed less stress ($M=135.78$) as compared to female participants ($M=128.48$) of government organization.

Psychological Wellbeing

Autonomy: Mean and standard deviation on autonomy and the summary of ANOVA performed on the score on autonomy show the effect of gender is statistically not significant. The main effect of organization $F(1,192) = 8.75, p < .05$ was highly significant. The interaction effect of gender with

organization was not significant. The pattern of result indicate that on the psychological wellbeing factor government organization practitioners scored higher (M=23.86) as compared to private practitioners (M=22.70) on autonomy dimension.

Environmental Mastery: mean and standard deviation on environmental mastery are show results that reveal the effect of gender is not significant but the effect of organization was significant $F(1,192) = 5.86, p < .05$ on the environmental mastery dimension. The interaction of gender with organization was statistically not significant. The pattern of result reflect that medical practitioners from government organization scored higher (M=22.19) as compared to private practitioners (M=21.18) on the environmental mastery dimension of psychological wellbeing.

Personal Growth

Mean and standard deviation indicating personal growth shows that effect of gender and organization were observed statistically not significant. Whereas interaction of gender with organization $F(1,192) = 12.12, p < .05$ is found to be significant. On the other hand pattern of result shows government organization scored higher (M=22.65) as compare to private organization (M=21.89).

Positive Relations

The results indicate that the main effect of gender and organization was not significant. The interaction of gender with organization was also not significant. The pattern of results reveal that medical practitioners working in government organization (M=23.10) and private organization (M=23.09) displayed marginal difference on the dimension of positive relation of psychological wellbeing.

Purpose in life

The effect of gender and organization on purpose in life dimension was not significant, It was observed that the interaction of gender with organization is also statistically non significant. It reflects that medical practitioners of government organization scored higher (M=22.05) as compared to practitioners of private organization (M=21.94).

Self-acceptance

The Means and standard deviations of scores of gender and also main effect of organization indicated on self acceptance dimension of psychological wellbeing factor are not significant. The interaction effect of gender with organization was highly significant $F(1,168) = 29.76, p < .05$. The pattern of result indicate that on the dimension of self acceptance of psychological wellbeing the government & private organization showed marginal difference (M=23.19) and (M=23.13) respectively.

Discussion

Present study aimed to examine the role of gender, and nature of job on perceived stress and psychological wellbeing. It was assumed that participants associated with government establishment or private establishment will differ in the perception of stress and well being. In the present study equal numbers of male and female medical professionals were selected for participation in the study due to difference in perceived social and psychological context, these participants developed their views differently.

They organized and perceived the things in different manner. Thus the present study is exploratory in nature. Medical professionals face a variety of problems during their work; these problems come from variety of sources. It is perceived that the nature of work setting government and private may also contributed number of challenges of medical practitioners. Scarcity of resources, pressure to attend more patients within a time limit, other administrative responsibilities hamper the performance. Besides non availability of sufficient time for the family, availability of sufficient honorarium and reward are the common factors which influence the commitment and hindrance in medical professionals' in indicative manner. Similarly, lack of autonomy, lack of participation in decision making, bureaucratic hindrance and maximizing the profit for the organization are the challenges to the medical professionals.

Perceived stress was assessed on the basis of five dimensions namely- patient, hospital, incentive family, and self. ANOVA was applied on these dimensions separately. The findings of the study



indicated that male and female participants almost perceived the problems coming from patient equally. Usually patients and attendants ask variety of questions for their satisfaction. Sometimes these queries become problematic for medical professionals, irrespective of gender.

It was observed that male participants working in government establishment indicated lowest stress as compared to participants working in private sector, where as reversed trend was observed for female practitioners working in private establishment indicate less stress as compared to female professionals of government sector. For the hospital dimension perceived stress findings of the study indicated that Competition among colleagues, leg pulling, poor arrangements at work place, personal feeling about the job, not having required support, lack of information at work place are the common perceived concern of stress

Another factor responsible for stress was reported by the professionals was incentive or rewards. The professionals of government sector indicated the less amount of stress as compared to professionals of private organizations. It appears that professionals of government sector gets salary and opportunity for private consultation, due to this their financial requirements are met. The similar conditions are not available for the private practitioners. Thus they live in uncertainty and demonstrate higher stress.

Family was another source that produced stress. Present research indicated that a verity of problems are faced by the professionals and interfere their family life. Similarly the professionals of private organization displayed higher stress as compared to professionals of government organization. The high stressed professionals complain that they were not able to spend qualitative time with family members, fail to attend family functions, not able to spend holidays with family members and their family life is disturbed by frequent emergency calls. These problems affect the life of professionals more working in private organization as compared to government organization. The other problems related to self, norms, values and belief are also responsible for occurrence of stress among the participants. It was noticed that female participants were more worried about these problems as compared to male

participants. It appears that due to socialization pattern and lack of real life exposure female professionals become more sensitive and develops more stress as compared to their male counterparts.

In psychological wellbeing participants feelings were also studied A close look on the result obtained on autonomy dimension indicated that participants from government organization enjoyed better autonomy as compared to participants belonging to private sector. It was also observed that interaction of gender with organization jointly influence the perception of autonomy. It was observed that experienced male participants working in private organization enjoyed better autonomy than government sector participants. Participants from government sector and more experienced male participants were observed to enjoy higher autonomy which reflects that they are able to resist social pressure to thin and act in certain ways and evaluate self by personal standards. On the other hand female working in private organization were observed to have less autonomy which shows they rely on others for making important judgment and decisions.

The interaction of gender and organization indicated significant impact on personal growth, a close look on the result supported that male participants working in government sector evince that the high personal growth as compared to the participants of private sector. Which means they observe them self as growing and expanding and are open to new experiences whereas the revers observation was noted for the female participants. The participants of private organization gave higher importance to purpose in life as compared to participants of government organization. Interestingly it was also noted that female participants of private organization perceived them self in more positive way as compared to government participants. On the other hand the male participants of government organization indicated positive response about self as compared to male participants of private organization.

Conclusion

The present study thus suggests that the setting in which medical professionals work is important determinant of stress. Nowadays life is going more

stressful, especially among health care professionals because of numerous causes – patient, incentive, working hours and others. To increase the efficiency and effectiveness of health care delivery, policy makers should think to reorganize these factor. It was observed that probably the sense of security of job perceived by professionals at government organization enjoy better mental health as compared to private organizations. Similarly male participants in comparison to female participants enjoy better mental health. However in private hospitals the reverse trend was observed.

References

- Bradshaw J., P. Hoelscher & D. Richardson (2007) 'An Index of child well-being in the European Union 25', *Journal of social indicators research*, 80:133-177
- Cooper, C. L., Marshall, J. (1976), Occupational sources of stress: a review of the literature relating to coronary heart disease and mental ill health, *Journal of occupational psychology*, 49(1):11-28.1
- Diener, R. (2009). New measures of well-being: Flourishing and positive and negative feelings. *Social Indicators Research* 39, 247-266.
- Giordano, D. E., and G. S. Everly. (1986). *Controlling stress and tension*, 2nd ed. Englewood-Cliffs, NJ: Prentice-Hall Inc.
- Halder S., Mahato A. 2013. Stress and psychological well being status among health care professionals. *The International journal of occupational health & safety* 3(1), 32 – 35
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Pestonjee D.M., Pareek U., Agrawal R., Tripti Desai (1999). Studies in stress and its Assessment of the Relation-ship Between Stress and Work Performance. *Proceeding of the Royal Society of Medicine*, Vol, pp.321-324.
- psychological well-being. *Journal of Personality and Social Psychology*, 57, 1069-1080
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of
- Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69, 719-727
- Seley, H. (1946) *Journal of clinical endocrinology*, 6, 117
- Seley, H. (1947) *Text book of endocrinology*, 1st Edition, Montreal
- Selye, H. (1956). *The stress of life*. New York: McGraw-Hill
- Srivastava A.K. (1999). *Management of Stress*. Sage publications Ltd.
- Wall T, Bolden R, Borilla C, et al: Minor psychiatric disorders in NHS trust staff: occupational and gender differences. *Br J Psychiatry* 1997; 171:519–523.
- Wheaton, B. (1996). The domains and boundaries of stress concepts. In H. B. Kaplan (Ed.), *Psychosocial stress* (pp. 29–70). San Diego, CA: Academic Press

Evaluation of *Chrysanthemum Indicum* Flower Extract for Antibacterial, Anti-Proliferative and Antioxidant Activities

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Abstract

In China, Japan and Korea this flower is consumed as a tea. It is taken for the treatment of common cold, dizziness, red eyes, swelling, angina pectoris and hypertension. The present study reveals that cold and soxhlet extracts are active against E.coli and S.aureus. Chrysanthemum indicum soxhlet extract showed maximum inhibitory activity, 8mm to 20mm for 50-200mg/ml concentration against S.aureus and 11mm to 13mm for 50-100mg/ml concentration against E.coli respectively, whereas the cold extract showed zone of inhibition of 9mm to 10mm for 25-50mg/ml concentration against S.aureus and 9mm to 11mm for 25-100mg/ml concentration against E.coli. Methanolic flower extracts of C.indicum (soxhlet and cold) were tested for their effect on the growth of S.cerevisiae by using well diffusion assay. All the extracts showed zone of inhibition, but the best results were shown by cold extract (18.5mm). Both the soxhlet and cold extracts of C.indicum showed moderate antioxidant activities as compared to the standard used i.e. Ascorbic acid. The scavenging activities were 28.4-72.5% and 36.6-72% for cold and soxhlet extract respectively at the concentration range of 20-100µg/ml.

Keywords: Chrysanthemum indicum; antibacterial activity; antiproliferative activity; antioxidant activity; S.aureus; E.coli; S.cerevisiae; Diphenyl-1-picrylhydrazyl.

Introduction

Plant products could prove beneficial in reducing the unfavourable effects of diverse cytotoxic agents and also in sustaining longevity. The worldwide curiosity in the potential medicinal aspects of plants throughout the last few years is therefore rational. (Kaushik, P. and Dhiman, A.K., 1999)

In the recent years, the use of 'phytochemicals' has increased. WHO has noted that people around the world depend on traditional medicines for preliminary healthcare. Many plants are exploited because of their anti-bacterial, anti-fungal and antioxidant character, due to the synthesis of secondary metabolites in plants. They are characterised by their active substances; like phenolics, alkaloids and terpenoids. (Altwegg, M.; et al, 1999) (Prabuseenivasan, S. et al, 2006).

Chrysanthemum or Chrysanthemum indicum L. belongs to the Chrysanthemum genus in the family Asteraceae (Compositae). These flowers are indigenous to north Eastern Europe and Asia. The flowers are borne in inflorescence and bloom in different forms with variety of shapes and sizes and also in a wide range of colours. In China, Japan and Korea this flower is consumed as tea commonly called as 'chrysanthemum tea'.

It is a herbal beverage prepared from the dried flowers of chrysanthemum. It has a clear yellow colour and a delicate floral aroma with enormous nutritional value. The tea is a natural coolant. Hence chrysanthemum tea is popular in Southern China during summers because of its cooling effect. It is also widely taken for the treatment of common cold, dizziness, red eyes, swelling, angina pectoris and hypertension. (Huang, K.C., 1998).

Most chrysanthemums contain a glycoside called chrysanthemine which is capable of preventing the growth of several bacteria like E.coli, Staphylococci, Streptococci etc. So this makes them very useful for treating wounds. The flowers also contain anti-inflammatory, anti-fungal and sedative components. Besides this, it is also useful for lowering cholesterol. Apart from this chrysanthemum is also rich in nutrients, vitamins and minerals.

Thus, the following study was undertaken to assess the pharmacological properties of the extracts of C.indicum flowers (Indian origin) hence suggesting the use of this plant for several medicinal purposes.

Materials & Methods

Plant material

Chrysanthemum indicum flowers were collected from the flower market of Dadar, Mumbai and were authenticated by Dr. Nilima Gajbhiye, Department of Life Sciences, Ruia College (Mumbai).

Extract preparation

Soxhlet extract- The flowers had been washed thoroughly with tap water. Then the flowers were dried completely in hot air oven at 60°C and coarsely powdered with electric blender. This powder (10gm) was extracted in Soxhlet apparatus using methanol (250ml) as solvent. The extraction process was

carried out for 10-15 hours. The concentrated or the crude extract was collected in a clean beaker which was tightly sealed and kept in refrigerator till further use.

Cold extract- 5gm of the dried powder was soaked in a conical flask containing 50ml methanol. The flask was tightly sealed and kept in a shaking incubator for 72 hours for proper mixing. After 72 hours, the mixture was filtered using Whatman filter paper. The extract was collected in a beaker. Further, the extract was subjected to evaporation at R.T for 3-4 days to obtain the concentrated crude extract. The beaker containing the crude extract was tightly sealed and kept in a refrigerator till further use.

Anti-bacterial activity

Bacterial cultures- Overnight grown cultures of E.coli and S. aureus.

Disc diffusion assay (Kirby Bauer, 1961)-The crude extracts (soxhlet & cold) were dissolved in methanol and different concentrations were prepared. The NA plates were inoculated with the respective cultures (10⁵ cfu units/ml) by spreading the suspension of culture using sterile cotton swab. Sterile paper discs impregnated with extracts diluted in methanol were positioned on the agar plates which were then incubated at 37°C for 24 hours. Ampicillin was used as positive and methanol as negative control. The inhibition zone around the discs was measured and recorded.

Anti-proliferative activity

Test organism- Overnight grown culture of yeast cells i.e. S.cerevisiae in YPD broth.

Agar well diffusion assay (Kumar, et al, 2015)- An overnight grown culture of yeast cells was spread on the YPD plates using sterile cotton swabs. The wells were punched with a well borer and the plant extracts were loaded into the wells. The assay plates were incubated for 24hrs at 30°C. After 24 hrs the zone of inhibition was measured and recorded.

Anti-oxidant activity

DPPH radical scavenging method (Sharma, O.P. and Bhat, T.K., 2009)

Different dilutions of extracts (20-100µg/ml) were prepared in methanol. DPPH was freshly

prepared in methanol (0.1mM). 1ml of DPPH solution was added to 3ml of the extracts. The solution mixtures were kept in dark for 30 minutes. After 30 minutes the absorbance was measured at 517nm in spectrophotometer. Ascorbic acid was used as standard. The absorbance was recorded and percent inhibition was calculated using the formula given below

$$\% \text{ scavenging activity} = \frac{A-B}{A} \times 100$$

Where A= Blank absorbance and B= absorbance of the samples used

Results

Anti-bacterial activity

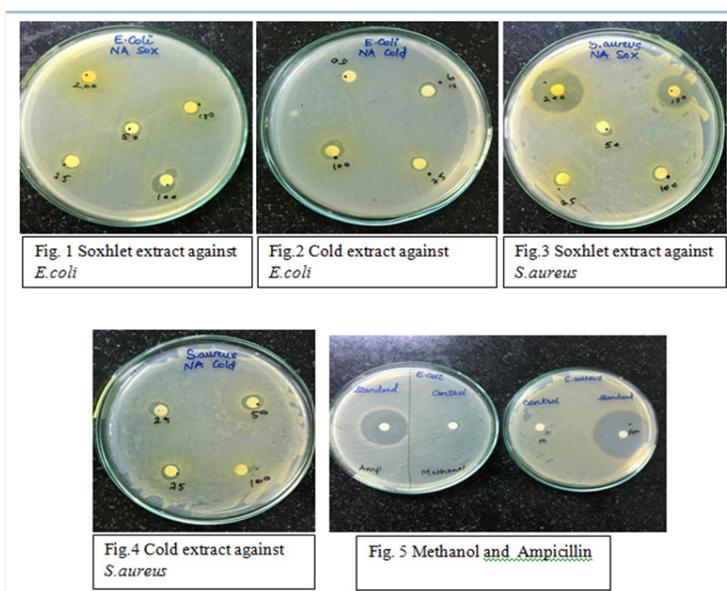
The results indicate that both soxhlet as well as cold extract are highly active against E.coli and S.aureus. C.indicum soxhlet extract showed maximum inhibitory activity, 20mm against S.aureus and 13mm against E.coli whereas the cold extract showed inhibition zones of 10mm and 11mm against S.aureus and E.coli respectively. (Table 1 and 2)

Table 1: Antibacterial activity of C.indicum against E.coli

Concentration (mg/ml)	Zone of inhibition(mm)	
	Cold	Soxhlet
25	9	-
50	-	11
75	9	7
100	11	13
150	-	8
200	-	3
Ampicillin (2.5)	25	
Methanol	-	

Table 2: Antibacterial activity of C.indicum against S.aureus

Concentration (mg/ml)	Zone of inhibition(mm)	
	Cold	Soxhlet
25	9	-
50	10	8
75	8	8
100	-	9
150	-	16
200	-	20
Ampicillin (2.5)	38	
Methanol	-	



Anti-proliferative activity

Table 3: The anti-proliferative activities of different extracts

Extracts used	Zone of inhibition (mm)
Diluted soxhlet extract (200mg/ml)	17.5
Undiluted soxhlet extract	15
Cold extract	18.5
Methanol (control)	–

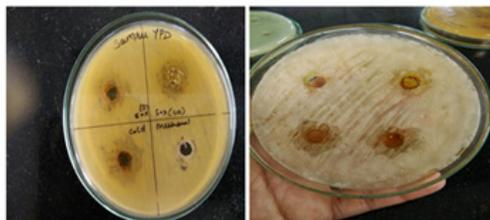


Fig. 6 Results showing zone of clearance on YPD plate against *S. cerevisiae* using *C. indicum* extracts (cold and soxhlet)

All the extracts of *C. indicum* inhibited the growth of yeast cells, thereby producing zone of clearance around their representative wells. The cold extract showed maximum zone of clearance (18.5mm). The effect was specific to the extracts used since methanol (control) alone failed to produce zone of clearance.

Antioxidant activity

The stable violet radical (DPPH) gets reduced to the yellow coloured form (DPPH-H). The efficiency of the examined extracts free radical DPPH scavenging activity is illustrated in the table (4). Both the extracts of *C. indicum* demonstrate moderate antioxidant activities in contrast to ascorbic acid. The scavenging activities were 28.4-72.5% and 36.6-72% for cold and soxhlet extract respectively at 20-100µg/ml concentration. (Table 4)

Table 4: Antioxidant activity of the extracts and ascorbic acid

Extract concentration (µg/ml)	Percent inhibition(%)		Ascorbic acid concentration (µg/ml)	Percent inhibition (%)
	Cold	Soxhlet		
			5	83.08
20	28.40	36.60	10	85.60
40	35.20	57.80	15	85.77
60	63.10	70.90	20	86.50
80	72.40	71.10	25	86.58
100	72.50	72.00	30	87.07

Discussion

The anti-microbial activities have been investigated due to their great medicinal significance in the modern years. The presence of anti-bacterial components in plants are effectively recognised since they have imparted an idea for formation of new drug compounds which has lead to significant contribution towards human health (Elamathi et al, 2011). The current study was conducted to analyse the potential anti-bacterial activity of flower extracts of *C. indicum*. The results given in the Table (1&2) demonstrate that the cold as well as soxhlet extract exhibited anti-bacterial activity against both *E. coli* and *S. aureus*. The results obtained in this study are in accordance with the past studies (Jung, E.K., 2009) (Khan, A.N., et al, 2015) The present study reveals that *C. indicum* soxhlet extract showed maximum inhibitory activity, 20mm and 13mm against *S. aureus* and *E. coli* respectively whereas the cold extract showed zone of inhibition of 10mm and 11mm against *S. aureus* and *E. coli* respectively. These results are consistent with the previous literature available. Therefore, it could be possible to use *C. indicum* as natural anti-bacterial.

Various assay methods for antioxidant activity both in-vitro and in-vivo have been improved for a huge number of plant extracts. The improved DPPH method was successfully used in this study to analyse the antioxidant activity of *C. indicum* flower extracts. Both soxhlet and cold extracts of *C. indicum* showed moderate antioxidant activities as compared to the standard used, Ascorbic acid. The scavenging activities were 28.4-72.5% and 36.6-72% for cold and soxhlet extract respectively at the concentration of 20-100µg/ml. Moreover this result is more intense and exceptional as compared to the results reported by (Debnath, T., et al, 2013) where the scavenging activities were 37.05-92.99% at the concentration of 0.25-2.0 mg/ml. Also this present study showed better results in comparison to the results of anti-oxidant activity of *Chrysanthemum coronarium* leaf methanolic extracts where antioxidant activity for cold and soxhlet extract was found to be 36.31-66.67% and 37.66-68.25% respectively at 200-800µg/ml. (Khan, A.N., et al, 2015) Many studies have shown that use of natural antioxidants helps in treating cancer, heart disease, diabetes and any other



diseases related to ageing. Therefore, *C.indicum* can serve as a good and an alternative antioxidant source.

Medicinal and aromatic plants are the largest source of bioactive compounds that have been used by humans for treating various diseases since ancient times. Plant based products have played an important role in cancer treatment. Budding yeast, *S.cerevisiae* is being used for the identification of various bioactive molecules in a variety of biological processes. The present study represents the screening of *C.indicum* for anti-proliferative effect against yeast growth. Here, methanolic flower extracts of *C.indicum* (soxhlet and cold) were tested for their effect on the growth of *S.cerevisiae* by using well diffusion assay. All the extracts showed zone of inhibition, but the best results were shown by cold extract (18.5mm). This study was based on the report by Kumar et al, (2015) wherein the anti-proliferative activity of *C.indicum* leaves (ethanolic extract) was screened against *S.cerevisiae*. The extract gave zone of clearance of 19.5mm and was classified as Class-I plant on the basis of zone of inhibition i.e. (18-26mm). Hence, the findings obtained in the present study are compatible and in agreement with the above report. Hence, it can be said that the flowers are also a good source of anti-proliferative agent.

Conclusion

On account of the results obtained, we can say that *Chrysanthemum indicum* flowers possess potent anti-bacterial, antioxidant, anti-proliferative activities. Further the potential uses of this plant can be explored more for various other pharmacological purposes. The present report also suggests that the use of this remedial plant may be exploited for various health related issues.

References

Al-Saadi, F.D.S., 2009. Activity Of Some Secondary Metabolites From *Tagetes patula* L. Flowers Against Microbial Infection (Doctoral dissertation, Ministry of Higher Education).

Altwegg, M.; Murray, P.; Baron, R.; Pfaller, M.; Tenover, F. and Tenover, R. (1999). Manual of Clinical Microbiology. 7th ed., Americ. Soc. for Microb., Washington. PP. 507-517

Bardaweel, S.K., Hudaib, M.M., Tawaha, K.A. and Bashatwah, R.M., 2015. Studies on the in vitro antiproliferative, antimicrobial, antioxidant, and acetylcholinesterase inhibition activities associated with *Chrysanthemum coronarium* essential oil. Evidence-Based Complementary and Alternative Medicine, 2015.

Debnath, T., Jin, H.L., HASNAT, M.A., Kim, Y., Samad, N.B., PARK, P.J. and Lim, B.O., 2013. Antioxidant potential and oxidative DNA damage preventive activity of *Chrysanthemum indicum* extracts. Journal of Food Biochemistry, 37(4), pp.440-448.

Elamathi, R., Deepa, T., Kavitha, R., Kamalakannan, P., Sridhar, S. and Suresh Kumar, J., 2011. Phytochemical screening and antimicrobial activity of leaf extracts of *Crossandra infundibuliformis* (L.) nees on common bacterial and fungal pathogens. Int j curr sci, 1, pp.72-77.

Huang, K.C., 1998. The pharmacology of Chinese herbs. Routledge.

Jung, E.K., 2009. Chemical composition and antimicrobial activity of the essential oil of *Chrysanthemum indicum* against oral bacteria. Journal of Bacteriology and Virology, 39(2), pp.61-69.

Kaushik, P. and Dhiman, A.K., 1999. Medicinal plants and raw drugs of India. Bishen Singh Mahendra Pal Singh.

Khan, A.N., Prakash, P. and Dar, M.S., The Journal of Free Radicals and Antioxidants.

Kim, C., Kim, M.C., Kim, S.M., Nam, D., Choi, S.H., Kim, S.H., Ahn, K.S., Lee, E.H., Jung, S.H. and Ahn, K.S., 2013. *Chrysanthemum indicum* L. extract induces apoptosis through suppression of constitutive STAT3 activation in human prostate cancer DU145 cells. Phytotherapy Research, 27(1), pp.30-38.

Kumar, A.N.I.L., Dev, K.A.M.A.L. and Sourirajan, A.N.U.R.A.D.H.A., 2015. Screening of medicinal and aromatic plants of Himachal Pradesh for antiproliferative activities against budding yeast *Saccharomyces cerevisiae*. International Journal of Pharma and Bio Sciences, 6(3), pp.280-288.

- Li, Z.F., Wang, Z.D., Ji, Y.Y., Zhang, S., Huang, C., Li, J. and Xia, X.M., 2009. Induction of apoptosis and cell cycle arrest in human HCC MHCC97H cells with *Chrysanthemum indicum* extract. *World Journal of Gastroenterology: WJG*, 15(36), p.4538.
- Prabuseenivasan, S.; Jayakumar M. and Ignacimuthu, S. (2006). In vitro antibacterial activity of some plant essential oils. *BMC comple. and alternat. Medici.* (6): 39-42.
- Sharma, O.P. and Bhat, T.K., 2009. DPPH antioxidant assay revisited. *Food chemistry*, 113(4), pp.1202-1205.
- Xie, Y.Y., Yuan, D., Yang, J.Y., Wang, L.H. and Wu, C.F., 2009. Cytotoxic activity of flavonoids from the flowers of *Chrysanthemum morifolium* on human colon cancer Colon205 cells. *Journal of Asian natural products research*, 11(9), pp.771-778.



Sewing Machine and Operators: A Macrocosmic Overview

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Abstract

This paper tries to illuminate on the craft of sewing which is one of the oldest arts that has undergone rapid change with the growth of technology. With sewing machines becoming affordable, women, especially are able to seek employment or be self-employed. The extension of the sewing machine expertise to the mechanized economies all over the world has given way to the spreading of Western-style sewing methods and clothing styles. Sewing Machine Operator Training, its benefits and Operator Training Modules, job description, duties and responsibilities, the skills and knowledge abilities are certain aspects that are highlighted in this paper.

Keywords: Sewing machine technology, sewing tools, operator, accessories, production, processing.

Introduction

In the days of the past, people used to stitch the textile material by hand with the assistance of a needle and thread. When people were exposed to the technology of the modern world they started to research and invent a sewing method that was fast and easy.

During the year 1790, the primary feasible sewing machine was invented and patented by the British inventor Thomas Saint. Then in 1834, Mr. Elias Howe, a mechanical engineer from America designed the lock stitch machine. Later in 1851, Issac M. Singer patented the first rigid-arm sewing machine. This was how the history of the sewing machines started.

Sewing machines can be categorized into two different types, first, the Industrial Sewing Machines that is made use of for heavy duty purpose in the garment manufacturing industries. They are bigger, quicker, more intricate, and different in size, cost and appearance for working. Various types are available for diverse types of operations. Secondly, the Domestic Sewing Machines which are used for Domestic sewing purpose only. These machines are operated by hand to sew the garment. They are all similar and made for an individual to physically sew individual material while using a single stitch type. These machines are relatively slow then the industrial sewing machines and only one type of stitch can be formed by these machines. Both these types have been in use for a long time for diverse applications and as per the requirements.

Parts of a Sewing Machine

Before learning to operate any machine, it is necessary for a person to know its parts. The same applies to a sewing machine also. This will naturally help the operator to operate the machine in a better manner without any problem. The assorted parts of the sewing machines are the Needle, which carries the thread for a stitch formation; the Needle Bar that works as the needle holder to keep it in the right perpendicular position; the Pressure Foot which holds the fabric's ply and guides them in sewing; the Presser Regulator which is used to increase or reduce the pressure of the presser foot; the Take Up Lever which takes the thread and supplies and required amount of thread in sewing and the bobbin hook catches the thread to create the loop; the Control Box that transfers the input data into the output data. Whatever input data is given to the control panel it transfers it in output data; the Control Panel is a box in which different instructions are given for sewing different designs. It is an input device of the machine; the Machine Motor is used to pass on the power to operate the machine; the Motor Pulley Guard envelops the motor's wheel and averts accidents from the base of the machine; Belt Guard covers the machine belt that rotates with the wheel and averts accidents that occur because of the open belt; Feed Dog is used to supply the fabric; Needle Guard is a protective guard which aids in preventing figure damages from the needle; SPI Regulator is used for increasing or decreasing the number of stitches in an inch; the Oil Tank is a part of the machine where the oil is conserved and it is from this that oil is supplied to the various parts; Oil Pump sucks the oil and supplies oil to all the working parts in the machine; Oil Indicator indicates the oil level; Oil Sight Window helps to see that the oil is supplied to the machine parts; Thread Guide guides the thread to structure the stitch; Tension Regulator is employed to adjust the thread tension of the machine to form a better quality of the stitch; Knee Lifter is used to elevate the pressure foot with the help of the knee; Hand Lifter is used to lift the pressure foot by hand; the Back Tack Lever helps in sewing the fabric the in reverse direction, by pressing the lever we can sew the fabric in the reverse direction to fortify at the start and end point of the sew; Throat Plate is one with

seam guides and covers the bobbin in the underside of the machine and helps to forward the fabric with less friction; Switch is used to turn on and turn off the machine. It allows power to flow in the machine and stops it; Pedal is used to run the machine and manage the speed of the machine by putting pressure on the pedal; Bobbin is a rotation spool on which the thread is wound and is fixed the in bobbin hook to release the lower thread to make a loop; the Bobbin Case is used to grip the bobbin inside the hook and it helps to release the bottom thread; Bobbin Holder or Hook Holder is one that holds the bobbin and rotates to clutch the sewing thread to form the lock stitch; Bobbin Winder is used to wind thread on the empty bobbin; Hand Wheel is a tool which is derived from the belt and motor pulley to pass on the power so that the main shaft gets rotated and the Thread Stand is used to escalate the thread cones from where the thread is supplied to the machine.

Types of Sewing Machines and its Makers

In the past, there were only a few types of machines used in the garment industry. But as technology developed, many kinds of machines were invented for a quick and better finishing of the fabric. Today, we have a mass production of garments, thanks to the different machines that go into the making of garments at a quick rate. The different types of machines used are the Lock Stitch Machine, Chain Stitch, Overlock, Cover Stitch, Blind Stitch, Button Attach, Buttonhole, Bar tack, Zigzag, Feed of the Arm, AMS Pattern Sewing and the Automatic Pocket Welting machine.

In today's market we have a number of manufacturers who manufacture garment machineries. Some of them are Juki, Brother, Singer, Yamato, Siruba, Pfaff, Pegasus, Jack and Sun, who are very prominent in the market.

Maintenance of Sewing Machines

Maintenance of the sewing machine is important so that work can be carried out without any interruption. After completion of work, it is vital to clean the machine and cover it up before leaving the place of work. If maintenance is there, breakdowns can be reduced and work can be started on time. Machine cleaning agenda should be maintained by



the operator. The steps involved in the process are switch off the machine, remove the lint, remove the threads, clean feed dog and bobbin hook, clean the oil tank, check and clean the loose points and clean and arrange the work station.

Lubricants should be used to avoid friction in the machines. For this, we have different lubricants like liquid lubricants and Silicon oil is an example, which is used in sewing machine. Then, solid lubricants like Boric acid powder that is used in band knife cutting machine on the table to move the fabric smoothly. And then we have the semi solid lubricants like the Grease and wax that are used in the machines. With the increase in the different types of machines, we have different lubrication systems like the Automatic lubrication where the oil pump will pump the oil with the help of an impeller and supplies it to all the moving parts automatically; Manual lubrication where we have to pour the oil manually to the machine every day to avoid friction; Wick lubrication in which we use a small oil tank and we have to pour the oil that will be supplied to the moving parts through a capillary action as a self lubricant by using a cotton wick. And then the Semi automatic lubrication in which we use the manual lubrication system as well as the oil wick lubrication system.

Sewing Machine Operators

A sewing machine operator is a person working in the textile industry who stitches the material or fabric with an electronic sewing machine. It is found that many fashion design houses make use of hand sewers to do flimsy beading and embroidery, and most clothing manufacturers also keep a band of sewing machine operators on their payroll because using the machine speeds things up to a great extent.

Sewing machine operators handle work on a huge extent and they are required to operate and be inclined to the industrial machineries. They escalate attachments such as needles and pattern blades and regulate machines according to the terms provided to them. They also adjust machine controls and control stitching speeds for every sewing project that they work on. It is important for the sewing machine operators to possess profound understanding of the sewing machinery and the garments industry. They

also need to have sound hand-eye dexterity and should be able to cope with the moderate physical effort. He/she makes utilizes the sewing machine to decorate and execute connected sewing operations in the making of garments and other materials.

Classification of Sewing Operators

Garment manufacturing units have their own way of categorizing the sewing operators. They categorize the operators as Grade-A, Grade-B and Grade-C. Certain units categorize their sewing operators as unskilled, semi-skilled, skilled and highly skilled operators.

When an employer hires a worker (sewing operators, press-men, cutter, spreader, packer and folder), he categorizes him/her according to their skill level. Habitually worker's skills are tested in the apparel manufacturing. It is done according to the work experience and the workers are classified as a Skilled, Semi-skilled or an Unskilled worker. The salary for the worker is then decided according to the skill level. They are then upgraded later based on their level of skill in working.

Skills of the Sewing Machine Operator

Talent and skills are very important in the garment industry. The operators have to be trained to have skills, knowledge and abilities that are the essence to their performance on the job. They should possess the ability to monitor and assessing the performance of himself, others and the organization to make improvements or take a curative action. He should use reason to spot the strengths and weaknesses of alternative solutions, conclusions or approaches to problems. He should pay attention to what other people are saying, take time to understand what is said, ask questions that are fitting, and most important is, he should not interrupt at inapt times. Surveillance of the gauges, dials, or other indicators should be done to make sure a machine is working properly. The operator should be able to identify the intricate problems and review interrelated information to develop and appraise options and implement solutions. And finally, he must conduct tests and inspections on the products, services and processes to assess the quality or performance.

Duties of the Sewing Machine Operator

With the technology that is rapidly developing, it may seem that machines have taken over our lives, but, in most instances it is the human beings who operate these machines. Every manufacturing method that uses machinery is actually run by some operator at the back, and they are called the machine operators. So it is these people who perform have certain duties as operators.

The operator's job sketch necessitates discreetly to operate the single, double, or the multiple sewing machines to set parts of clothes or diverse layers into fine completed materials. The duties of the operator embrace operating industrial mechanisms to pull together pieces of clothes, evaluating them for errors and inform its findings to the department supervisor.

To ensure the welfare of the workers, the machine operator is accountable for supervising the work location to build a clean and healthy condition, following the set safety rules. For a smooth flow of work, he/she will have to employ defensive protection measures outlined by the manufacturers. As a priority, these operators control the machine purpose and procedure; perform strategic methods and appliances to boost production output quality. The operators should maintain frequent communication with their superiors and other team members, informing about the production actions and its progress. In order to generate good quality products, the machine operators use their skill to pick the best raw materials that can be used for the production. They also scrutinize the production niceties and information to arrive at the best and most suitable solution to the problems that are at hand.

The operators, whose manual activities that are inevitable for the production of goods, also have to maintain a good health. For this, he has to keep his body fit by spending time in doing exercises and agility to move around in a brisk manner. The operators who supervise the process of production, materials, and his environment has to see that there

are no sudden developments or causalities. These operators whose job also comprises of appraising the substance of the products and other related things like their shapes, size, volume, the time taken for delivery, the cost of production, its resources and other necessary things that are needed for a smooth and calm production. The sewing machine operators also have the responsibility of fixing and setting up of the production machineries so that an exact sewing operation that is needed for the job can be achieved to have a good production quality.

Conclusion

A systematic knowledge of the sewing machines and the sewing machine operators who work in the garment sector form an essential part of the management structure of a garment production factory. Having a basic idea of these two important components of the garment sector, sewing machine operator training when given helps in the growth of the garment factory. Without the know-how of these two, a garment factory cannot fully meet its objectives. The above study tries to illuminate at a macroscopic level how these two are indispensable to the garment industry.

References

- Dora S. Lewin, Mabel Goode Bowers, Manetta Knttunen, "Clothing Construction and Wardrobe Planning", The Macmillan Co., New York.
- Jones, Richard, "The Apparel Industry", EPZ Edition Paperback – Import, 25 Oct 2006, Blackwell Publishing Ltd.
- Marsh J.T., (1979). "An Introduction to Textile Finishing", B.I. Publication, Bombay.
- Solinger, J, (1961). "Apparel Manufacturing Analysis", Textile Publisher Inc., New York
- Raheel, M. Marcel Dekker (1996). "Modern Textile Characterization Methods", Inc., New York,
- Rathinamoorthy, R. & Surjit, R. "Apparel Merchandising" Woodhead Publishing India.



Review and Updated Features of Android App, ‘Book- ₹ -Istan: Buy & Sell Used Books’

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Abstract

These days Android are the best and the most well-known working frameworks for smartphones. We trust that books are our closest companions and all the more critically, companions forever. Our application trusts that everybody who peruses a specific book contributes a remark comprehension of the book. It is every one of these commitments which we focus to unite on our stage where now individuals can purchase and offer your utilized books, therefore sharing and accepting a piece of the adoration, recollections, minutes and bliss the book has gotten it their life. 5th November 2017, the day on which we launch the application on the Google Play Store. From this very day we are constantly making efforts, to create this app more user friendly and more user useful. Here we present you a brief insight of our android app, and discuss about some advance features like, payment option (paytm) , nearby books, chat – call support. In addition to the above talk will also provide a brief app statistics stating figures to user rating, average rating, installations etc.

Keywords: Android Studio, Average Rating, Installation, Nearby, Paytm, Statistics.

Introduction

‘Book- ₹ -Istan: Buy & Sell Used Books’, objective is to supply a stage for all understudies and peruser to purchase and offer ancient books. This will offer assistance to spare paper and trees and advance the reusability of books. Clients can purchase or offer all sorts of books. Furthermore, the clients who are willing to contribute something to the society have a choice of giving books to adjacent NGOs. For this application, we have tied up with a few NGOs.

Objectives

“Books are our best companions and more importantly, friends for life.

App accepts that everybody who peruses a specific book or utilized books contributes something to the understanding of the book. It is these commitments which app point to bring together on our stage where presently you can purchase and sell your utilized books, in this way sharing and accepting a part of the cherish, recollections, minutes and bliss the book has brought it in our lives.

Android

Android could be a UNIX framework based for the most part working system it's printed fundamentally for bit screen phones, for example, PDAs and pill PCs. The working system have outlined up a generous live in most exceptional fifteen years beginning from to a great degree distinctive phones to late propelled cell phones or littler than conventional PCs. A champion among the first inexactly utilized adaptable OS today is humanoid. The humanoid is modifying structure that was set up nearby of CA in 2003

Android Features

- Head set layout
- Storage
- "Connectivity: GSM/EDGE, IDEN, CDMA, Bluetooth, WI-FI, EDGE,3G,NFC, LTE,GPS.
- Messaging: SMS, MMS, C2DM (could to gadget informing), GCM (Google could informing)
- Multilanguage support
- Multi touch
- Video calling
- Screen capture
- External storage
- Streaming media support
- Optimized graphics

Updated Features ND Funcnalities of the Application

- Payment, PAYTM
- Nearby adds sorted via Pin code
- Dedicated Chat Support
- More Formal communication to NGOs
- Dedicated Call Support

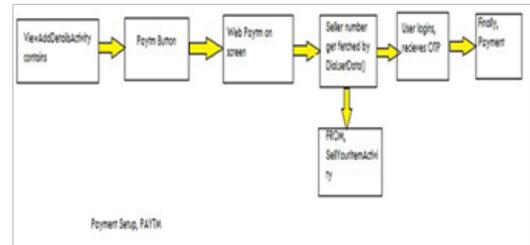
Paytm

Paytm is India's biggest versatile initial cash connected administrations stage providing installments, keeping cash, lending and protection. They spearheaded and ar the pioneer of QR based mostly moveable installments in Asian country. With the dispatch of Paytm Payments Bank, they arrange to convey managing associate degree account and financial administrations to an outsized portion of a-billion un-served and under-served Indians. They endeavor to stay up associate degree open culture wherever everyone could be a active good person

and feels sensible impartation thoughts and insights.

In our App, 'Book- रे -Istan', trafficker vendee will build payments via Paytm, easily.

Design and Implementation

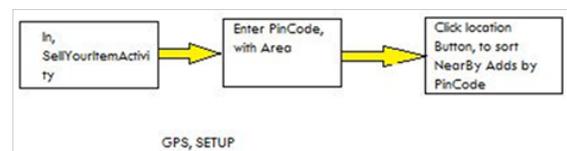


Nearer To You First,

The Area thought depends upon time and the known position of GPS specific satellites. The satellites pass on astoundingly stable nuclear tickers that are synchronized with each other and with the ground timekeepers. Any float from continuous kept up on the ground is relieved well ordered. So likewise, the satellite zones are known with heavenly accuracy. Region experts have tickers moreover in any case they are less persistent and less right.

We had comprehended that obtaining and offering is straightforward when it happens nearby. Our Application exhibits you cool things that are up at bargain at uncommon expenses around you. Ricochet across finished to lift them up from your neighborhood.

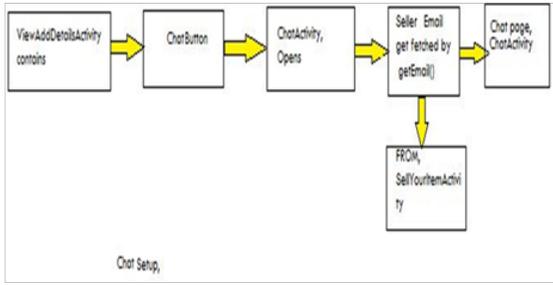
Design and Implementation



Visit First

We are presently a Talk empowered application. So no SPAM calls. Individuals would first be able to get in touch with you by means of visit and afterward if bargain fixes, at that point you choose whether you need to proceed on talk or call with them. Utilize alternate ways to influence your talking to encounter easy

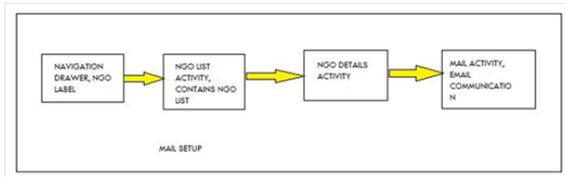
Design and Implementation



Email Communication to NGOs

We are now connected to various renowned NGOs, such that users can make their part by donating some unuseful books to needful students. This is possible through a written communication mentioning all the book details along with a contact number.

So automatically, NGO can contact the user as soon as possible.



Make Calls

User is entitled to call the other user by using his/her phone number with just a click away. There is a dedicated call button on every add such that the buyer/seller can easily communicate the other person through telecommunication as well.

Design and Implementation



App Statistics (Feb- March)

After uploading this app on G-store, we carefully monitored the no of installations, uninstalls, the average rating level, the types of rating, the active users in a day or two. This all helped a lot for future betterment. For the same, we present you our app

statistics over the last month, Feb-March 2018.

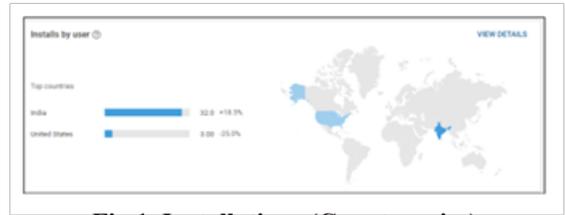


Fig 1. Installations (Country wise)

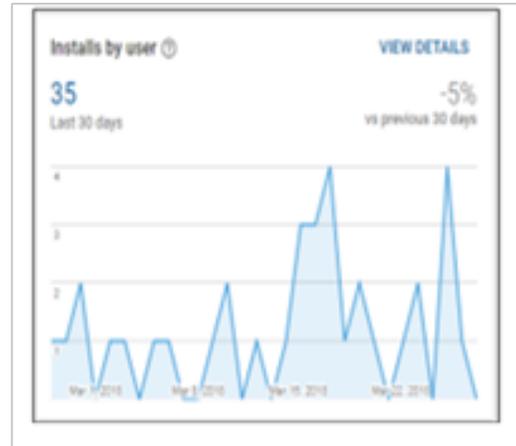


Fig 2. Installations in a month



Fig 3. Installations on different Android Versions

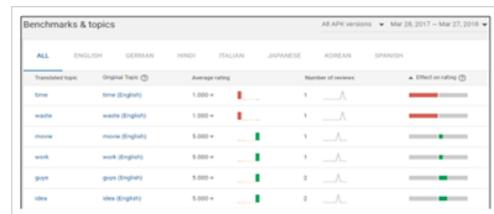


Fig 4. Review Topics

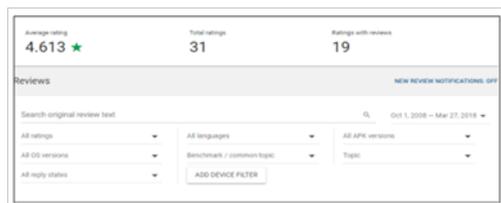


Fig 5. Average Rating

Screenshots

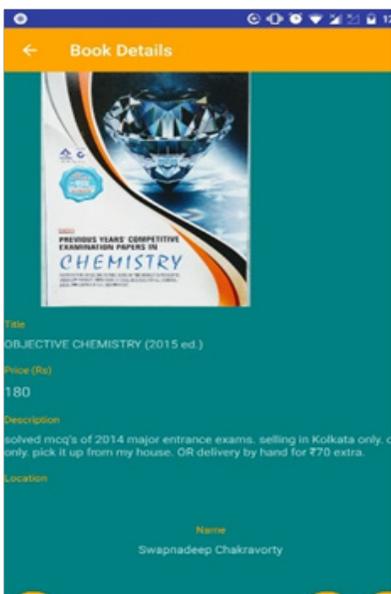


Fig 6. (Paytm Icon on the Lower Right Corner, Chat Button on the Lower Left Side and Call Button on the Lower Left Corner in the Add

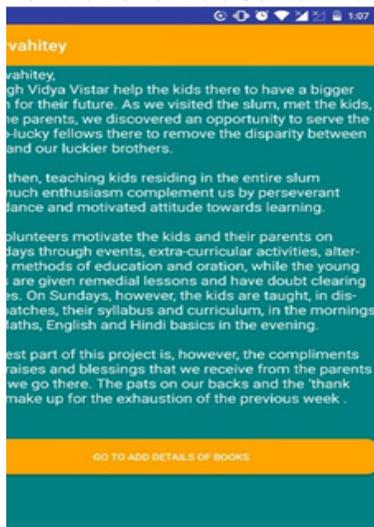


Fig 7. (Ngo Details Activity)

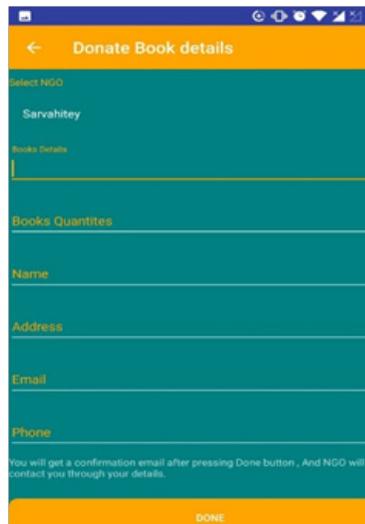


Fig 7. (Ngo Mail Activity)

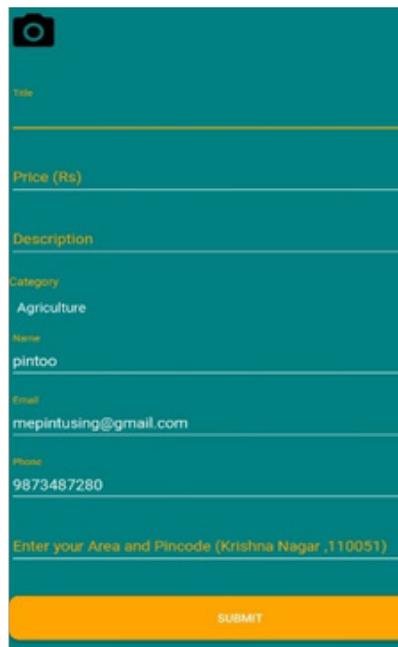


Fig 8. (Location Update Label in Addyouritem Activity)

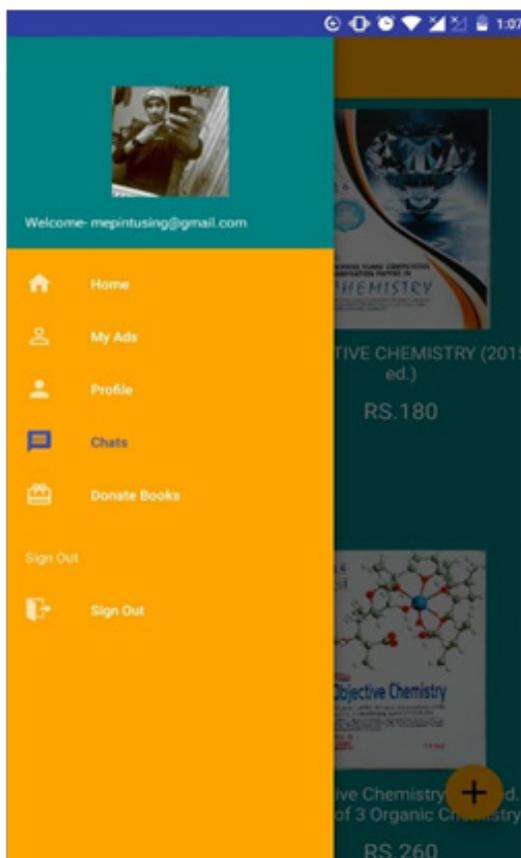


Fig 9. (Chats History Button In Navigation Drawer.)

Future scope and Conclusion

In this paper we presented brief insight of our application, 'Book-ऐ-Istan: Buy & Sell Used books' developed for Android using Firebase, which helped to change the way people buy and sell books online. Our futures updates and and efforts together, will try to make this app more user friendly and useful.

Some of them are

- Project assignment approach.
- Book Delivery
- In app book reviews system

References

- <http://firebase.google.com>
- www.javatpoint.com
- www.youtube.com
- <http://developers.facebook.com>
- www.tutorialspoint.com
- www.stackoverflow.com
- geeksforgeek website

ICT Based Tools and its Benefits in Library and Information Centre

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Abstract

Information and communication technologies (ICT) is playing very important role in Library and Information Centre. The present paper discusses the different ICT based tools and its usefulness in today's modern libraries. The importance of these ICT based tools is collecting, storing, implementing and dissemination of information to the users. Keywords: ICT, Library Automation, Barcode, Scanning, Network Technologies, Cloud Computing, Electronic Security Systems etc.

Introduction

In the course of recent years, the situation of instructing and learning has changed significantly. In the meantime, data correspondence innovation (ICT) has empowered better approaches for setting up learning exercises. There have been huge advances in the field of business data and correspondence innovation (ICT) in late decades. ICT assumes a noteworthy part in advancement, raising efficiency and expanding data stream and in this way influences every single financial area. The present ICT and data blast period has added another measurement to data looking for exercises and made an immense range of alternatives for getting data in e-frame over the web and utilizing web. A lot of data has relocated from print media to e-media and has likewise given numerous gets to the data sources. The clients are more acclimated in seeking free data over the net which is accessible day in and day out utilizing World Wide Web (WWW). Web data looking for has made new difficulties for the bookkeepers in overseeing administrations and such examinations may be helpful in setting the new practices in libraries.



The progressive changes in productions and capacity of data have changed from original copy to print to microforms and at display in electronic media. The progressions are ceaseless and the present patterns in distributing have now moved from print to electronic or advanced and this has been acknowledged by all i.e. distributors, academicians, scientists, researchers, library and data experts and so forth. In the present data and ICT period electronic diaries, electronic books, the World Wide Web and full content and additionally bibliographic and interactive media databases have picked up prominence because of the elements, for example, advantageous and simple to utilize access and it spares and diminishes the physical space, economy in purchasing, different access and moment get to.

Modern data and correspondence innovations (ICTs) give the premise to the production of open and adaptable virtual learning situations. Fittingly outlined ICT programs are straightforwardly steady of modern dynamic inclining approaches with educators and mentors going about as facilitators. ICTs additionally can possibly increment quickly advanced education enrolments in a financially savvy way. Because of the expanding significance of ICTs in our everyday exercises, an alternate arrangement of aptitudes is required in the work environment.

ICT devices and uses in libraries

Library Automation

Library mechanization was first monster advance towards the utilization of ICT based items and administrations in libraries. It brings incredible transformation and spare gigantic time of clients and library staff for gathering and dispersing data. Library mechanization alludes to utilization of PCs, related fringe media, for example, S/W for computerization, attractive tapes, circles, optical media and so on. Library computerization makes the arrangement to give the 'right data to right peruser at the opportune time in a correct shape in a correct individual manner' which is the fundamental point of libraries. Library computerization satisfies the above request of libraries by giving the library exercises as productively, quickly, successfully, enough and financially. In this manner, the ICT made workable for robotization in libraries.

Programming for Library Automation:

Commercial Software's: Soul, Libsys, Easylib, E-Granthalaya, Libsuit, SLIM and so forth.

Open Source Software's: Koha, NewGenLib, PhpMyLibrary, OpenBiblio and so on.

Bar Code Technology

In library bar-coding offers a ton of solace and simplicity to deal with mass routine undertakings effectively. The utilization of this innovation for charging/releasing of books is broadly distinguished and honed in the created nations of the world. With the assistance of an information gathering gadget, the standardized tags can be utilized to check stock, as libraries need to embrace stock confirmation at customary interims.

Scanning Technology

Scanner is essential in modernization of library. It is valuable for filtering content, picture and substance pages of books for show in the OPAC (Online Public Access Catalog) and furthermore utilized as a part of optical character (OCR) applications. Filtered archive might be coursed and gotten to effortlessly. Scanners are giving awesome help to setting up computerized and virtual library.

Electronic Information Resources

It incorporates

- Online Database
- E-diaries
- E-books
- CD's, DVD's
- Electronic Theses and Dissertations (ETD)

Networking Technology

Library organize is a specific library co-task framework for unified improvement of co-agent program and administrations. Systems administration innovation utilizes phones lines, satellite correspondence, microwave correspondence, open exchanging phone system and bundle exchanging information arrange and so forth. Contingent on remove systems are sorted into LAN (Local Area Network) those aides in library housekeep and asset sharing WAN (Wide Area Network) that permits electronic correspondence among remote client's

and MAN. DELNET, INDONET, INFLIBNET, NICNET, ADINET, ERNET, and so on are real WAN in India.

Internet

The Internet is a worldwide wide region organizes that associates PC frameworks over the world. It incorporates a few high-transfer speed information lines that contain the Internet “spine.” These lines are associated with real Internet center points that convey information to different areas, for example, web servers and ISPs.

With a specific end goal to associate with the Internet, you should approach an Internet specialist co-op (ISP), which acts the broker amongst you and the Internet. Most ISPs offer broadband Internet get to by means of a link, DSL, or fiber association. When you associate with the Internet utilizing an open Wi-Fi flag, the Wi-Fi switch is as yet associated with an ISP that gives Internet get to. Indeed, even cell information towers must interface with an Internet specialist co-op to furnish associated gadgets with access to the Internet.

The Internet gives diverse online administrations. A few cases include

Web – a gathering of billions of website pages that you can see with an internet browser

Email – the most widely recognized strategy for sending and accepting messages on the web

Social media – sites and applications that enable individuals to share remarks, photographs, and recordings

Online gaming – recreations that enable individuals to play with and against each other over the Internet

Software refreshes – working framework and application updates can ordinarily downloaded from the Internet

In the beginning of the Internet, a great many people associated with the Internet utilizing a home PC and a dial-up modem. DSL and link modems in the end furnished clients with “dependably on” associations. Presently cell phones, for example, tablets and cell phones, make it workable for individuals to be associated with the Internet constantly. The Internet of Things has transformed

basic apparatuses and home frameworks into “keen” gadgets that can be checked and controlled over the Internet. As the Internet keeps on developing and advance, you can anticipate that it will end up being a considerably more indispensable piece of everyday life. (Sources: <https://techterms.com/definition/web>).

ICT alludes to innovations that give access to data through media communications. It is like Information Technology (IT), however centers fundamentally around correspondence advancements. This incorporates the Internet, remote systems, mobile phones, and other correspondence mediums.

In the previous couple of decades, data and correspondence innovations have given society an immense range of new correspondence abilities. For instance, individuals can convey progressively with others in various nations utilizing advances, for example, texting, voice over IP (VoIP), and video-conferencing. Person to person communication sites like Face book permits clients from everywhere throughout the world to stay in contact and impart all the time.

Present day data and correspondence advances have made a “worldwide town,” in which individuals can speak with others over the world as though they were living nearby. Therefore, ICT is frequently contemplated with regards to how present day correspondence advances influence society through web as an instrument. (Source: <https://techterms.com/definition/ict>)

Library Consortia

A library consortium is a gathering of libraries which accomplice to facilitate exercises, share assets, and consolidate ability. Consortia are constituted for frequently being helpful for building up a formal structure in regards to asset offering to formal assertion by every member library. A library Consortium arrangement can be nearby, territorial, state, national and entomb institutional level.

Digital Archives

Libraries must give the best administration to its clients, keeping in mind the end goal to meet the client’s necessities, libraries in the past have refreshed their accumulations. All things considered, in the present situation, libraries must refresh their accumulations as well as give better access to



data through the new data expressways. This can be accomplished through computerized chronicles. Digitization in libraries is the present reaction towards a speedier conveyance of data to its clients through the advanced files. The idea of computerized documents develops after the fast headway of ICT. The coming of advanced chronicles has extraordinary effect on libraries. It gives data expediently to the end clients. The computerized documents implies: gather the data and put away it, in machine-decipherable arrangement or advanced organization for dispersal to end clients. The computerized substance can without much of a stretch repeat at global.

Library 2.0 / Web.2.0

The concept of library 2.0 derived from web 2.0. The library 2.0 encompasses a range of new and contemporary products and services of ICT that used for evolving collaborative environment required for library 2.0. Owing to library's services, have focusing more on the facilitation of information transfer and information literacy rather than providing controlled access to it. New products and services based of ICT in forms of "Library 2.0" are the interactive, collaborative, and multi-media web-based technologies to web-based library services and collections.

The library 2.0 is a loosely defined model for a modernized form of library service that reflects a transition within the library world in the way that services delivered to users. With library 2.0, library services constantly updated and reevaluated best serve library users. The library 2.0 also attempts to harness the library user in the design and implementation of library services by encouraging feedback and participation.

Michael Casey coined the term "Library 2.0" on his blog Library Crunch as a direct spin-off of the terms Business 2.0 and Web 2.0. Casey suggested that libraries, especially public libraries, are at a crossroads where many of the elements of Web 2.0 have applicable value within the library community, both in technology-driven services and in non-technology based services. He described the need for libraries to adopt a strategy for constant change while promoting a participatory role for library users.

There are some tools and techniques of library 2.0 which are being used by today's libraries: Blogs, Wikis, Streaming Media, Tags or Tagging, Social Networks, RSS Feeds, Synchronous Messaging, Podcasts, Mashups and etc.

Some benefits of Library 2.0 are as follows

CAS can receive in very effective manner.

A very quick communication can possible with library staff.

Library can easily get users feedback in minimum span of time.

It can keep update to library's users regarding its daily activities.

Multimedia data can be accessing by user and able to give feedback.

(Sources: <http://warse.org/pdfs/2013/ijccn02212013.pdf>)

Cloud Computing in Libraries

Cloud computing is being used in every domain like business, industries, corporate sectors. Through cloud computing one can access hardware and software promptly through internet. Application of cloud computing in libraries is a relatively new area as compared to its applications in business and corporate sector. Libraries all over the world are moving towards cloud computing implementation to use the features and services of it to make their infrastructures and services better. The basics of cloud computing along with its characteristics, types, advantages, needs and applications in field of libraries. Cloud computing is not the panacea of everything. There are some drawbacks also associated with it. The positive and negative aspect of cloud computing and it also tells the best practices for the implementation in the library environment to get the maximum benefit of it.

Libraries have travelled a long journey from its past phase to present. During its path of travel libraries also adopted the new and emerging technologies, though at slow pace as compared to other institutions. Libraries in the country like India are far behind as compared to their western counterparts. Libraries have been adopting these technologies for long back, although the pace of adoption is slow. But, these technologies are playing a very important role in re-shaping the structure and

services of libraries. The technologies like Printing press, computer, Internet, bar code, Radio Frequency Identification (RFID), web 2.0 and many others have transformed the libraries and now its turn of cloud computing.

As cloud computing becomes more pervasive, the libraries at all levels are in the process to embrace this revolutionary way of computing because of the potential cost savings and other important features. Cloud computing is a ray of hope even for those libraries which have no capacity to invest much on infrastructure. Through cloud computing implementation libraries can make their services better. Although there are many issues and challenges associated with cloud computing, but these can be taken care if a library follows the best practices associated with the implementing of cloud services. Cloud computing ensure that resources are offered quickly and easily. The issues involved in cloud computing should be properly addressed and a comprehensive plan, in view of the requirement, services offered, utility etc., should be designed before going for it.

In cloud computing library store its data in cloud. The cloud servers are managed by cloud service provider or third party. We do not have our own server to store the data. As we know that with passing of time the size of data grow. Hence space required to store them in cloud server would be more. With larger space requirement the cost will also go up. While availing the cloud services in the beginning many service providers/distributors make very lucrative offer. Usually the library accepts it without analyzing the future needs. But with passing of time when the size of data grows, the cost of cloud services also grow. Hence the overall saving on the expenditure of our in house infrastructure vanishes. Hence a library should choose a cloud service provider very carefully.

Wireless Network Technology

Though there are a lot of developments in wireless network technology, a brief outline of some of recent developments in wireless, mobile, internet and web technologies are listed below.

- a) Bluetooth
- b) 3G

- c) GPRS
- d) VoIP
- e) Semantic Web
- f) Wi-fi

Mobile Phone Services

The Library Can inform through a single SMS on his/her users' mobile phones about any new activities. With dawn of ICT, libraries may have started exploring the feasibility of its products and services. These would support library-to-user, user-to-library and user-to-user through online interactions. It made possible by Global System for Mobile Communication (GSM).

Electronic Security Systems

- a) Biometrics
- b) Electromagnetic (EM)
- c) CCTV
- d) RFID

Conclusion

The modern libraries are using ICT based tools and services for enhancement of their services such as library automation, digital achieves, library 2.0 and mobile phones etc. The use of these technologies is differ in different libraries considering the scope, objectives and funds available and it has some distinguished qualities in every stage of development. There is a symbiotic relationship between the library and ICT, such that any development in ICT accelerates the development of library. In the same vein, any development in the library today can only be through development of ICT. In this modern ear, libraries are totally dependent on ICT based tools and services to fulfil the 'HI-TECH' users need.

References

- Gosavi, Nandkishor, Shinde, Seetal S S and Dhakulkar, Bhagyashree (2011). Use of Cloud Computing in Library and Information Science Field, International Journal of Digital Library Services, 2(3),pp 51-60. ISSN No. 2250-1142. Retrieved from <http://www.ijodls.in/uploads/3/3/0/3/3603729/vol.--july--sep-2012--part.pdf>



- Dayal, Rameshwar (2012). Recent Trends of Using ICT in Modern College Libraries International Journal of Engineering from <http://ijems.org/uploads/5029054700IJEMS.pdf>
- Mahammed Haneef K (2006). Information and Communication technology infrastructure in Special Libraries in Keraka. Annals of Library and Information Studies, 53 Pp31-42 Retrieved from [http://nopr.niscair.res.in/bitstream/123456789/7490/1/ALIS%2053\(1%2031-42\).pdf](http://nopr.niscair.res.in/bitstream/123456789/7490/1/ALIS%2053(1%2031-42).pdf)
- Vollmer, Timothy (2010). There's an app for That! Libraries and Mobile Technology: An Introduction to Public Policy Considerations, ALA office for Information Technology policy Retrieved from <http://www.ala.org/offices/sites/ala/org/offices/files/content/oitp/publications/policysbriefs/mobiledevices.pdf>
- Yernagula, Ramesh and kelkar, P K., Library Consortia; benefits and models of E-journals Consortia. Retrieved from http://www.isical.ac.in/_serial/consortia/CBSOR-11.pdf
- Parvez, Ahmed (2011) Development in Library Science With advent of ICT Based Products and Services: a continuous process, International Journal of Digital Library Services. 1(2). pp 1-9. Retrieved from http://www.ijodls.in/Uploads/3/6/0/3/3603729/file_vol.1_issue_2_2011_part-1.pdf
- Bhangu, Amajeet Kaur (2013). Use of Information and Communication Technology in Academic Libraries, International Journal of Scientific Engineering and Technology., 2 (11). pp 1168-1171. (ISSN: 2277-1581) Retrieved from http://ijset.com/ijset/publication/v2s11/IJSET_2013_1121.pdf
- http://en.wikipedia.org/wiki/Library_Consortium
- Malathy S and Kantha P.(2013). Application of Mobile Technologies to Libraries, DESIDOC Journal of Library and Information Technology, 33(5). Pp 361-366. Retrieved from <http://publications.drdo.gov.in/ojs/index.php/fjlit/article/view/5098>
- Bansode, Sadanand Y. (2007). Library Consortia in India. issues and prospects, TRIMV3(2).



Awareness and Use of Information among Transgender: A Survey

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Abstract

Transgender persons have been part of Indian society for centuries. The transgender community alone in India numbers over 3 million members. This large third gender community faces oppression and discrimination, on the scale of human rights violations, in almost every area of their lives, including "sexual assault, molestation, rape, forced anal and oral sex, gang rape and stripping. To safe guard the transgender communities there are many policy and schemes implemented by the government. Information plays a vital role in growth of every individuals in the society. For an effective operation and decision making information is essential. The present study explores the awareness and use of Information related to government welfare schemes for Transgender. Questionnaire and Interview schedule was used to collect data. The data was collected from sixty five respondents. The study states that there is low level of usage when compare to high level of awareness of Government schemes among transgender. The study suggests remedies to solve information related problems.

Keywords: Transgender, Third Gender, Awareness, Use, Information

Introduction

History

When date backs the transgenders in India in the course of history, they are referred to as hijras 400 years ago. Once, these women earned a good respect, prestigious in the society and culturally significant. In the mid of the 19th century, the power to the British not only had caused the lifestyle of transgenders to become illegitimate, but the supremacy of the British caused the very existence of the marginalized people within Indian culture to become taboo through the Criminal Tribes Act in 1871.1. The upshot of such a treatment pushed the adherents of the particular group of community to be marginalized in the country and remained bigoted.

Transgender in Indian Society

People who lost identity, and respect for the past several years, who were despised and considered less in status when compared to that of Dalits, has now become gradually recognized they worth to safeguard the culture and customs. India that gains its power in pluralization, secularization and cultural diversity is now extended the strength by the Supreme Court, increasingly accessing to the medical care and support to the community as a whole.



Problems Encountered

According to the recent statistics, the population of transgender community has outnumbered to over three million. Such a widespread in the particular community, facing severe repression from all the sides in the lifesexual harassment, molestation, gang rape, emotional ravishment –in the name of gender discrimination and at the rate of human rights violations. When tracing back to the other ways of harassment, it occurs in public men's bathrooms. Transgender are not allowed to use women's restrooms, for they are very vulnerable to sexual assault. Owing to such grievances in public, transgender are not let to reach to their fullest potential and not let to live a life that is secured with the basic needs.

Government Acts (Legal Rights)

On April 15 2014, in response to the looming threat facing the Indian transgender community, the Supreme Court of India gripped the decision that India would bring the option for a third gender in all the records and official documentations. The ruling also extended its provision in treating the hijra community as socially and educationally backward classes of citizens, which for that reason, entitled hijras to the other possible various reservations in institutions like educational institutions and public appointments.

Welfare Schemes

The dramatic change at the Indian state level of governance is more vibrant. In India, different states have been framed with some operative rules to aid the concern of transgender in all the fields like education, ration cards, financial assistance, self-employment etc. The contemporaneous study has made a successful attempt to examine the awareness and the use of such government welfare schemes among transgenders.

Need for the Study

Knowledge acquiring on the particular subject plays an important role in the enhancement of every individuals in society. Transgender that is considered as third gender in society should be given meticulous importance in knowing whether information

regarding govt. welfare schemes reaches everyone respectively. Therefore, this study has made the positive attempt to identify the awareness and use of Information among transgender.

Review of Literature

2.1 Jean Sawyer (2015) evaluated the(a) educational background, experience, and confidence among speech-language pathologists in providing services to transgender individuals and (b) awareness of transgender speech services among the lesbian, gay, bisexual, and transgender population. Two anonymous surveys were sent to practicing speech-language pathologists and transgender participants in Illinois; 228 speech-language pathologists and 88 transgender participants responded. A majority of speech-language pathologists indicated that providing services to transgendered individuals was within their scope of practice but felt improperly prepared to provide assessment and treatment. Almost half of the transgender individuals were unaware of speech and language services to address their needs during transition.

2.2 Corina Schulze (2017) said that sexual victimization of sexual minorities enrolled in college is not a topic that has been well researched. The present study examines the awareness that college minority students have of services they can access in the event they experience sexual violence. The results indicate that many students are unaware of specific services that they can access if they are sexually victimized. Disclosing an incident of sexual violence, or being the recipient of a disclosure of sexual violence, is related to knowledge of aftercare services. Non-White students demonstrate less awareness of services than White students, indicating that these students may not receive aftercare in the event of sexual victimization because they do not have the knowledge of which services are available.

2.3 Amrita Gupta(2016) conducted a study to understand reported morbidities, treatment seeking behaviour including health expenditure among TGs in a slum in Mumbai, India. Using mixed methods (survey and in-depth interviews), in addition to background characteristics, information on morbidity, healthcare seeking behaviour, dietary patterns and substance abuse was obtained from

110 TGs. About 61 per cent TGs reported common illnesses in the last six months and about 41 per cent reported chronic illness in the last one year. Among those who reported such illness, a very few availed government health services. About 53 per cent and 61 per cent reportedly consumed alcohol and tobacco respectively at the time of interview which is way above that of the general population in India. Further, over 80 per cent of TG do not have any savings for emergency illness and only 16 per cent have some knowledge about government health insurance. Poor utilisation of government health services and lack of awareness of government health insurance impose a heavy economic burden on TGs who are already vulnerable due to the stigma around their gender identity.

Research Methodology

Statement of the Problem

The statement of the problem is “Awareness and Use of Information among Transgender: A Survey”

Objectives

To identify the level of awareness and level of use of information related to government welfare schemes among transgender.

To identify statistical relation between the awareness and select demographic variables.

To identify statistical relation between the use and select demographic variables.

To provide suggestions related to the use of government welfare schemes.

Formulation of Hypotheses

The following hypotheses are identified for the present study.

- I. There is a significant association between the variable education and awareness on free registered land provision.
- II. There is a significant association between the variable education and use of ration card provision.
- III. There is a significant association between the variable working status and awareness on free health insurance
- IV. There is a significant association between the variable working status and use of free sex re-assignment surgery in selected government hospitals.

V. There is a significant association between the variable identity card and awareness on ration card provision.

VI. There is a significant association between the variable identity card and use of free health insurance.

Sample Size

The total number of respondents covered in the study area is 65. Transgender in Trichy are the subject of the study. The study adopts census method.

Sources of Data

The source of data for this study is the primary source that the respondents themselves. The secondary sources used are the review literature.

Tools of the Data Collection

A questionnaire is considered as the heart of the survey operation. A questionnaire method and interview method were adopted for the study. After knowing the availability of transgender to conduct the study, the researcher also explained to them the nature and purpose of the study. 65 questionnaires were distributed and completed questionnaires were collected from the respondents. 65 were found to be satisfactory and hence the rate of response 100%.

Scoring Pattern

A three point scale has been developed to study the Awareness and Use of Information among Transgender. Using the scale the level of awareness and use of government welfare schemes.

Statistical Tools Used

The researcher used Rstudio 3.5.0 for statistical analysis.

Statistical Analysis

The statistical procedure adopted for the analysis of data is

Chi- Square

Limitations of the Study

The present study on “Awareness and Use of Information among Transgender; A Survey” had concentrated only on the Transgender living in the Tiruchirappalli.



Analysis

Frequency distribution-Demographic variables

Category	Values	n	Percentage
Religion	Hinduism	39	60
	Christianity	17	26
	Islam	9	14
Education	Less than 10th	24	37
	12th	10	15
	College	31	48
Working status	Yes	37	57
	No	28	43
Identity card	Yes	38	58
	No	27	42
Health issues	Yes	6	09
	No	59	91

Frequency distribution- Research variables

Category	Values	n	Percentage
Individual grants for education awareness	Highly aware	21	32
	Moderately aware	12	19
	Not at all aware	32	49
Individual grants for education use	Highly used	05	08
	Moderately used	07	11
	Not at all used	53	81
Allotment of seats in government Engineering, Arts and Science Colleges awareness	Highly aware	22	34
	Moderately aware	09	14
	Not at all aware	34	52
Allotment of seats in government Engineering, Arts and Science Colleges use	Highly used	07	11
	Moderately used	04	06
	Not all used	54	83
Free health insurance awareness	Highly aware	42	65
	Moderately aware	09	14
	Not at all aware	14	21
Free health insurance use	Highly used	21	32
	Moderately used	10	16
	Not at all used	34	52
Free sex reassignment surgery awareness	Highly aware	50	77
	Moderately aware	05	08
	Not at all aware	10	15
Free sex reassignment surgery use	Highly used	23	35
	Moderately used	05	08
	Not at all used	37	57

Short stay home in crisis awareness	Highly aware	21	32
	Moderately aware	09	14
	Not at all aware	35	54
Short stay home in crisis use	Highly used	02	03
	Moderately used	06	09
	Not at all used	57	88
Free registered land ownership awareness	Highly aware	35	54
	Moderately aware	05	08
	Not at all aware	25	38
Free registered land ownership use	Highly used	10	15
	Moderately used	02	03
	Not at all used	53	82
Grants entrepreneurship awareness	Highly aware	27	42
	Moderately aware	14	21
	Not at all aware	24	37
Grants entrepreneurship use	Highly used	08	12
	Moderately used	07	11
	Not at all used	50	77
Vocational training awareness	Highly aware	42	65
	Moderately aware	07	11
	Not at all aware	16	24
Vocational training use	Highly used	06	09
	Moderately used	13	20
	Not at all used	46	71
Training to form self-help group awareness	Highly aware	39	60
	Moderately aware	10	15
	Not at all aware	16	25
Training to form self-help group use	Highly used	13	20
	Moderately used	11	17
	Not at all used	41	63
Ration card provision awareness	Highly aware	52	80
	Moderately aware	06	09
	Not at all aware	07	11
Ration card provision use	Highly used	26	40
	Moderately used	06	09
	Not at all used	33	51

Findings, Suggestions and Conclusion

Overall awareness of information regarding Government Welfare Scheme among Transgender is high.

Overall use of information regarding Government Welfare Scheme among Transgender is low.

Demographic Findings

1. It is observed that majority of the respondents are Hindus (60%).
2. The analysis on educational status reveals that less than half of the respondents have College education (48%).



3. Regarding working status more than half of the respondents are working (57%).
4. More than half of the respondents have Identity card (58%).
5. Health issues reveals that high majority of the respondents have problem (91%).

Research Findings

It is identified that nearly half of the respondents (49%) are not at all aware of the availability of individual educational grants and high majority of the respondents (81%) have not used the scheme at all.

It is observed that more than half of the respondents (52%) are not at all aware of the availability of allotment of seats in government educational institution and high majority of the respondents (83%) have not used at all.

Majority of the respondents (65%) are highly aware of the availability of free health insurance and more than half of the respondents (52%) have not used at all.

It is observed that majority of the respondents (77%) are highly aware of the availability of free sex re-assignment surgery and more than half of the respondents (57%) have not used at all.

It is identified that majority of the respondents (65%) are highly aware of the availability of vocational training and majority of the respondents (71%) have not used the scheme at all.

Majority of the respondents (60%) are highly aware of the availability of training to form self-help group and majority of the respondents (63%) have not used the scheme at all.

It is identified that high majority of the respondents (80%) are highly aware of the availability of ration card provision and more than half of the respondents (51%) have not use the scheme at all.

Findings of the Hypothesis

Chi square analysis reveals that there is a significant association among education and awareness of free land ownership at 0.03775 level. Hence the hypothesis is accepted.

There is a significant association between education and use of ration card provision using chi square test at the level of 0.0305. Hence the hypothesis is accepted.

Chi square analysis reveals that there is a significant association among working status and awareness of free health insurance at 0.0009 level. Hence the hypothesis is accepted.

There is a significant association between working status and use of free sex re-assignment surgery in selected government hospitals at the level of 0.0082. Hence the hypothesis is accepted.

Chi square analysis reveals that there is a significant association among identity card and use of free health insurance at 0.0337 level. Hence the hypothesis is accepted.

There is a significant association between identity card and awareness of ration card provision at the level of 0.0329. Hence the hypothesis is accepted.

Suggestions

1. There needs to be an unscathed forum for transgender from government side.
2. The transgenders are to be called for training programmes in ICT and employability skills.
3. The media should come forward to inform the various government schemes to transgender and express the needs and problems faced by them.
4. Whatsapp, Twitter and Facebook groups be formed among transgender to bring awareness on the different beneficial schemes of the government and private sectors.

Conclusion

All transgenders are human beings. In 20th century, five basic survival needs of human beings were Oxygen, Water, Food, Shelter and Sleep but in the 21st century the additional basic survival need of human beings is information. Information plays a significant role in growth of every individual in the society. There are many policy and welfare schemes implemented by the government for transgender. The government should eradicate the stigma, discrimination, human rights violation and also design a pathway to reach information regarding welfare schemes for the betterment of transgender community. If all this are brought in their day to day life, it would enhance the overall growth of transgender community in India.

References

- Rebecca Johnson (2017). "Embracing the third gender in India". *Kaleidoscope Journal*, 6(2), 49-53.
- M. Michelraj (2015). "Historical evolution of transgender community in India". *Asian Review of Social Sciences*, 4(1), 17-19.
- Sincy Wilson & Hashim Kabeer (2017). "Transgender rights protection in India- An analysis". *Arts & Education International Research Journal*, 4(2), 18-21.
- Anitha Chettiar (2015). "Problems faced by hijras(Male to Female transgenders) in Mumbai with reference to their health and harassment by the police". *International Journal of Social Science and Humanity*, 5(9), 752-759.
- Jean Sawyer, Jamie L. Perry & Ashley Dobbins-Scaramelli (2015). "A Survey of the awareness of speech services among transgender and transsexual individuals and speech –language pathologists". *International journal of transgenderism*, 15(3-4), 146-163.
- Corina Schulze & Wendy Perkins (2017). "Awareness of sexual violence services among LGBTQ-identified College Students". *Journal of School violence*, 16(2), 148-159.
- Amrita Gupta & Muthusamy Sivakami (2016). "Health and healthcare seeking behaviour among transgender in Mumbai: Beyond the paradigm of HIV/AIDS". *Social Science Spectrum*, 2(1), 63-79.
- Venkatesan Chakrapani (2012). "The Case of Tamil Nadu Transgender Welfare Board: Insight for Developing Practical Models of Social Protection Programmes for Transgender People in India".



Use Pattern of E-Resources among Postgraduate Management Students in Periyar University, Salem

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Abstract

This study aims to identify the Use Pattern of E-Resources among Management Students in Periyar University, Salem. A total number of 220 questionnaires were distributed among the Management students in Periyar University. Out of the total 220 Respondents Selected for the study, 108 Respondents are from distributed to the first year Management Students, 112 respondents from second year Management Students Collect the Questionnaire. E-Resources were basically available in the remote areas. the Study recommended the development in the access services with high Internet Speed and Subscription to more E-Resources is available in the Periyar University Central Library. This studies mostly the preferences of E-resources among the Students. It suggests for the development in the access facilities with high speed Internet Connections and subscription to more E-resources by the Managements students in Periyar University
Keywords: Use of E-Resources, Types of E-Resources, Features of E-Resources.

Introduction

The Electronic Resources are playing the most significant role in the area of education to give better services and simple access. Due to the explosion of information and knowledge, the e-resources have become more powerful tools that allow users to search the information more successfully and efficient. Electronic resources and services refer to contain variety of electronic and digital sources of information available to teachers and learners within an academic context. The Electronic Resources contain Online databases, sources of web pages, Electronic journal Articles-mail messages, e-News paper, government publication E-theses ,E-Dissertations, Articles publication, CDs/DVDs, and such materials in electronic format available in the internet. More kinds of Documents in digital formats those are available to library users through the computer based retrieval system. The growth of online materials during the last decade required the discussion of an electronic description that appears to take longer to access than the print, and may not be as easy to use. Now-a-days, libraries are access the same electronic information in multiple ways. Libraries are providing electronic access to a wide variety of e-resources, including indexes-journals, e-book, full text of articles, back files and web resources available in libraries.

The major change was absorbed over past few decades in the production of huge quantity of e-resources both online and offline and their inclusion in libraries. The term of electronic library refers to the information accessibility through electronic sources like the internet. The libraries assumed the role of educators and teaching users to find and evaluate for use information. The users are expected to develop information literacy skills. These skills would enable to users to make efficient and effective use of information sources. The present paper attempts to study the Use of E- resources among Managements students in Periyar University.

Meaning of Electronic Resources

Online information resources including bibliography database, e-books, online full text journal, articles, search engines for full text collection, digital data collection was coined as “Electronic resources”

Features of E-Resources

E-Collections are very useful to all institutions and individuals to get instant, relevant, comprehensive information at doorsteps. Some of the major features of e-collections are listed below:

- Easily copied, stored and disseminated
- Easy to revise, manipulate and merge
- Less bulky than paper
- Speedy delivery
- Add value to services
- The e-collections save user’s time
- Promote Interaction with remote users
- On-line users tracking

Review of Literature

Priyadharshini, Janakiraman, and Subramanian (2015) this article describes that awareness, access and use of E-resources available in the Agricultural College and Research Institute, Madurai. The usages of electronic journals and electronic books have been increased rapidly. The study focused on the use of different types of electronic information resources, awareness of users, access and use of digital resources freely available by the Post Graduate Students, Ph.D. Scholars and Faculty Members. This study evaluates the role of the Internet in access of e-resources through different search engines (e.g.

Google, AltaVista, Msn, Yahoo, etc.), and offline databases in CD/DVD formats that can be accessed without the help of internet. Survey method of data collection followed. Data mainly collected using a pre-structured interview schedule. 137 copies of the questionnaire were distributed and 117 filled in copies of the questionnaire were received. It has been found that all Ph.D. scholars and Faculty members were using mainly e-resources.

Chandran (2013) has “explore that aims to the use and user perception of electronic resources in Siva Institute of Frontier Technology, India. A total number of 123 users were taken into account for the study through a questionnaire-based survey method. A well-structured questionnaire was designed and distributed to the selected 200 students and staff members. 123 copies of the questionnaires were returned dully filled in and the overall response rate was 61.50 percent. The questionnaire contained both open- and close-ended questions. The collected data were classified, analyzed, and tabulated by using simple statistical methods. This study covers the impact of electronic resources on students and faculty in their academic pursuit”.

Prabakaran (2013) explained that the use of Electronic resources among faculty members of Engineering Colleges in Cuddalore District. The study was analyzed that using

E-resources by institution wise respondents and sex wise distribution of respondents. Most of the respondent’s access search engines are Google and preferable format for getting information are both print and electronic version. He suggested that necessary training services are to be provided to the users, so the library conducts the efficient training programmes on how to use E-resources.

Kamble (2011) studied the use of e-resources accessed by software engineers in TCS library 45% of respondents are using the Internet every day, 42% respondents are using e-books, 37% of respondents are using e-journals and 19% of respondents are using online database. 43% respondents used e-resources for searching the information for their project purpose. 35% respondents acquired skills of e-resources from library e-mail notification. 25% of them learned to search and use e-resources with the help of library induction. 40% of the respondents



preferred Google search engine followed by 25% of the respondents who used Yahoo. 46% of the respondents felt that e-resource helped them with easier and faster access to information. 29% of the respondents found that access to wide range of information is an advantage of using e-resources.

Sharma, S (2009)⁸ has “examining that online resources among the teachers and research scholars. This Concept of this study is to examine dependency of the teachers and research scholars on e-resources, the perceived impact of the e-resources on their academic efficiency and problems faced by them while using the e-resources. 67.64% of research scholars of the faculty of science and 69.23% of research scholars of engineering use e-journals for research work whereas 35.29% of sciences use e-journals to update knowledge and 23.70% of engineering use these for study. The speed of access and the relieve of accessibility of information cause

the users to use electronic resources more frequently 49% of respondents are marginally satisfied with online services provided by the library”.

Objectives of the Study

- To identify frequency of usage E-resources
- To identify the purpose of E-resources
- To know the level of satisfaction on E-resources.

Periyar University Library

In 1997, Periyar University Library was launched. 78,595 volumes of textbook and reference books on different subjects are offered in Periyar University Library. In this library 190 National and International journals and 15 leading Newspapers are subscribed. The library is following the open access system and provides its service to meet the requirements of students, research scholars and professors of Periyar University.

Table 1 Digital Library Collections

S. No.	Collections	Total
1	Books	78,595
2	Journals and Magazines	190
3	Back Volumes	3418
4	Theses and Dissertations	2661
5	CDs/DVDs & Audio Cassettes	2455
6	Reports	971
7	News Papers	15
8	ERIC Database	01
9	EBSCO Database	01
10	SRELS Journal of Information Management	
- Online Archive (Volume:1-48, (1964-2011))	01	

Methodology

There are 7 schools and 24 Departments available at Periyar University. The questions were framed in such a manner that it could be easier for the Management Students to answer each question in the quickest possible time. A total number of 220 questionnaires were distributed among the management students in Periyar University. Out of the total 220 respondents selected for the study, 108 respondents are distributed to the first year Management Students, 112

respondents from second year management students collected the questionnaire. Only 190 questionnaires are received in my Study. Accordingly, a structured questionnaire was prepared observance in mind the basic objectives of the study.

Analysis of Data

This analysis is based on the data collection through questionnaire from Management Students of the Periyar University

Table 2 Frequency of using Electronic Resources

S. No.	Usage of E-Resources	No. of respondents	%
01	Daily	94	49.48
02	Twice a Week	48	25.26
03	Once a week	28	14.74
04	Once in a Month	20	10.52
	Total	190	100

Table 2 describes the Frequency of using Electronic Resources, among the 190 respondents, of which 94 (49.48%) respondents are E-Resources used for daily. In this study, 48 (25.26%) respondents

are using weekly once, 28 (14.74%) respondents use twice a week, and 20 (10.52%) respondents use the E-Resources once in a month. Hence the majority of the respondents used the E-Resources for daily.

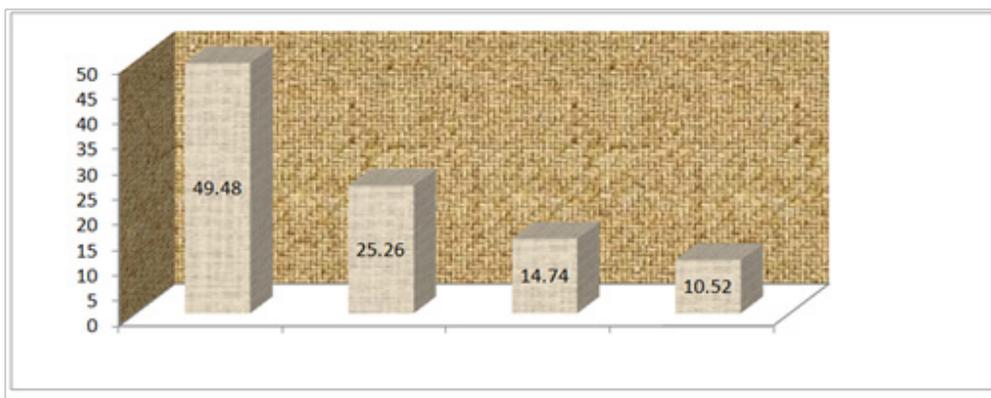


Figure: 1 Frequency of using Electronic Resources

Table 3 Uses of various Types of e-Resources

S. No	Various of E-resources	No. of respondents	%
01	E-Journals	72	37.90
02	E-Magazines	06	3.15
04	E-Maps	10	5.26
05	E-Books	64	33.70
06	E-Thesis	08	4.21
07	E-Newspaper	18	9.47
08	E-Research Report	12	6.31
	Total	60	100

Sources: Primary Data

Table 3 describes that ,the use of the E-resources in 72 (37.90%) of respondents are for E-Journals, 10 (5.26%) of respondents use the E-maps, 64 (37.70%) of respondents use the E-Books, 6(3.15%)

respondents are use the E-Magazines, 8 (4.21%) of respondents use the E-Thesis, 18(9.47%) of respondents use the E-Newspaper, 12 (6.31%) of respondents are using the E-Research Report.

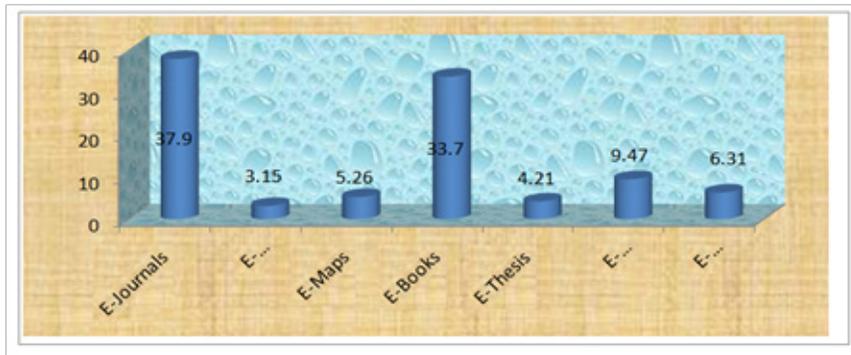


Figure 2 Uses of various Types of e-Resources

Table 4 Purpose and value of E-Resources

S. No.	Purpose of E-Resources	No. of respondents	%
01	Study For Examination	84	44.21
02	For Knowledge Development	31	16.31
03	Keep Update in Subject field	46	24.21
04	For Communication	29	15.26
Total		190	100

Sources: Primary Data

Table 4 indicates that, the Purpose of E-Resources, 84(44.21%) of respondents use e-resources for the Study for Examination, followed by 31(16.31%) of respondents used for Knowledge Development, 46(24.21%) of respondents are used

it for Keep Update in Subject field and 29(15.26%) of respondents used for preparation of paper publication. Therefore majority of the respondents belong to the study for examination.

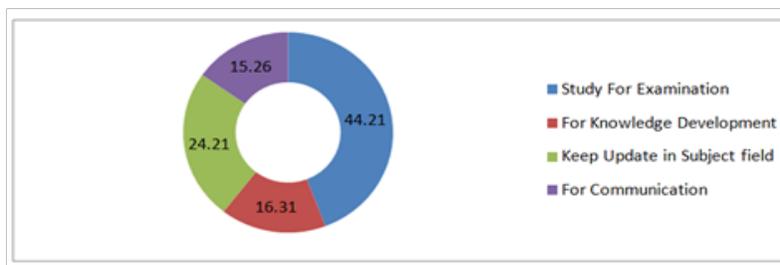


Figure 3 Purpose and value of E-Resources

Table 5 Level of Satisfaction used E-Resource

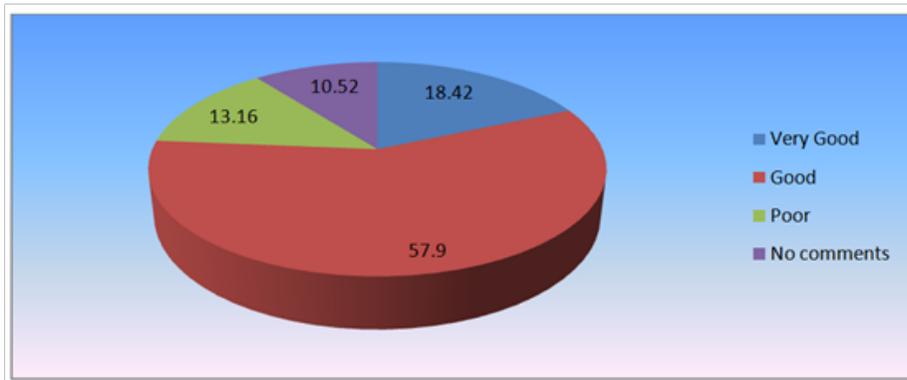
S. No	Satisfaction Level	No. of Respondents	%
1	Very Good	35	18.42
2	Good	110	57.90
4	Poor	25	13.16
5	No comments	20	10.52
Total		190	100

Source: Primary Data

Table 5 shows that out of 190 respondents, 35 respondents (18.42%) report that University Central Library Internet Services are very good. This is followed by 110 respondents (57.90%) whose report is good. In this study, 20 Respondents (10.52%) have

not expressed any Comments and 25 respondents (13.16%) report that University Internet Services are Poor. Therefore the majority of the respondents (57.90%) report that University Internet services are good.

Figure 4 Level of Satisfaction used E-Resource



Findings

The Majority of 94(49.48%) respondents are used the E-Resources for daily.

Majority of (37.90%) respondents are using for E-Journals.

Majority of 84(44.21%) respondents are using study for examination

Nearly 35(18.42%) of the respondents are Very Good and 110(57.90%) respondents are satisfied with the E-resources.

Suggestions

The following recommendations are complete for the Uses of E-Resources among Management student in Periyar University.

Highly speeds Wi-Fi University grounds needs to be industrial by Central Library in Periyar University.

Experienced Faculty should be appointed to provide the expert guidance to users about e-resources

The speed of Internet requirements to be improved for speedy access to the accessible E-Resources.

Conclusion

Now-a-days, the E-resources are available plenty in many forms and formats. The web based e-resources can provide learners with access to information any time anywhere and any place in any format. The E-resources offer many advantages to the Management students. The Library resources are mostly helpful for students in the Periyar University. They used more internet sources and their major challenge was lack of time. They were also averagely

satisfied with the library services. It is suggested that more orientation programmes need to be organized to educate the users on the availability of both print and E-Resources.

References

Chandran, Velmurugan. (2013) "Use and user perception of electronic information resources: A case study of Siva Institute of Frontier Technology, India." *Chinese Librarianship: An International Electronic Journal* 36

Kamble, V.T. (2011) "Usage of E-Resources among Software Engineers in TCS: A Study". *PEARL - A Journal of Library and Information Science*, vol.3, no.4, pp.51-54.

Prabakaran, T. (2013) "Use of E-Resources among Faculty Members of Engineering Colleges in Cuddalore District: A Study". *Journal of Advances in Library and Information Science*, vol. 2, no.2, pp.71-75.

Priyadarshini, R., Jankiraman, A., & Subramanian, N. (2015). "Awareness in Usages of E-Resources among users at Agriculture College and Research Institute, Madurai: A case study". *European Academic Research*, vol.2, no. 11, pp.14816-14823.

Sharma, C. (2009). "Use and impact of e-resources at Guru Gobind Singh Indraprastha University (India): A case study". *Electronic Journal of Academic Special Librarianship*, vol. 10, no.1, pp. 1-8.



Quantitative Study of the Research Publications of Alagappa University, Karaikudi, India

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Abstract

The study was measured the research performance of the faculties in Alagappa University during 2008-2018. The highest publications published as Journal articles 1562 (96%) of the publications. highest productivity contributed 164 (10.07%) of the publications by Department of Biotechnology, Government of India. Top ranked author was Pandian SK contributed 129 (7.92%) of the publications. Material Science area produced more productivity 25.26% of the publication out of 1627. 3.92 % of the publications were contributed by the Central Electro Chemical Research Institute and University of Madras with Alagappa University.

Keywords: Scientometrics, quantitative analysis, County, Institutions, author, citations

Introduction

Scientometrics defines that quantitative features and characteristics of science and scientific research. It focuses placed on investigations in which the developments and mechanism of science are studied by statistical mathematical methods. The journal publishes original studies, short communications, preliminary reports, review papers, letters to the editor and book reviews on Scientometrics. Due to its fully interdisciplinary character, the journal is indispensable to research workers and research administrators. It provides valuable assistance to librarians and Documentalists in central scientific agencies, ministries, research institutes and laboratories. Data from scientific publications show that the world's scientific hierarchy has remained remarkably stable over the past decade, with the postindustrial nations of the United States, Europe, and Japan continuing to dominate in many fields². A similar trend is witnessed in the research performance of the Indian engineering and technological institutes of India. Some of these Indian institutes are very prestigious and make it to the list of top universities in the world. Very few institutes among the major Indian engineering and technological institutes, account for most of the research output of the country.¹

Review of Literature

To quantify the national contribution to world efforts, and identify areas of relative strengths and weaknesses. The data explores the models out the trend of growth in the output of Indian chemical research to world as a whole and in sub-fields of chemical science. These details have been discussed by using the activity index. It also estimates the contribution of different institutions and sub-specialties in chemical sciences.² Emerging technology such as nanotechnology provides a level playing field as even advanced OECD economies are developing competency in this technology. From 2001 onwards, Government of India has given special attention to this area. The study explains bibliometric and other innovation indicators (standards, products/processes developed), the present state of development of nanotechnology research and innovation in India. These findings are discussed in the context of China's activity in this field.³

The study determines the papers published in domestic or foreign periodicals and they were selected for analysis and evaluation of the distribution of publications and citations, for the numerical characterization of research performance in China. The findings indicate that 17,687 papers covered by the Source Indexes of the SCI in the period 1990–1992 had received 7944 citations in the year 1993 and that the mean citation rate is 0.45. The number of cited papers is 4491 and the proportion of cited papers to the total is 0.25.⁴

RGR was found to be fluctuating trend during the study period. Dt was found to be increased and decreased trend in this study. Degree of collaboration and its' mean value is found to be 0.963. The top three institutions with Alagappa University are Central Electro Chemical Research Institute, National Cheng King University, and Anna University.⁵ A total of 2360 articles were downloaded from Pubmed database using the search term "Swine". The research questions pertaining to publication frequency, country, and institution productivity and collaborative were proposed and answered. Analysis shows that majority of the scientists preferred to publish research papers in multiple authorship. It also analyses the characteristics of most productive institutions, languages and journals.⁶

The highest number of papers was published above thousand during the years 2009 to 2011. It is observed RGR has been increased and decreased from 2005 (0.113) to 2011 (0.057). On the other view of doubling time (D t) has a fluctuating trend from 2005 (6.132).⁷

Alagappa University

The University Accredited with 'A+' Grade by National Assessment and Accreditation Council (NAAC). The university campuses with 440 acre green and lush campus houses all the academic activities. This University has emerged from the galaxy of institutions initially founded by the great philanthropist and educationist Dr. RM. Alagappa Chettiar.

The University was brought into existence by a Special Act of the Government of Tamil Nadu in May 1985 with the objective of frontier research, development and dissemination of knowledge. Alagappa University is recognized by the University Grants Commission (UGC) of India. The University has 34 Departments, 7 Centres and 2 Constituent Colleges on its campus. 40 Affiliated Colleges located in the districts of Sivaganga and Ramanathapuram are part of the University. There was established a Alagappa University Model College of Arts and Science are located in Kilakkarai and Paramakudi respectively.

Objectives of the Study

To analyse the Year-wise publications of the Alagappa University

To observe the Document-wise publications of the researchers

To identify the Country wise Collaboration of the Research

To find the top ranked authors with quantum of papers

To examine the Institutions wise ranking of the publications

To observe Year wise citations of the publications of Alagappa University

Methodology

The study analysed to identify the publications contributed by the faculty members in Alagappa

University. The records were retrieved from Web of Science database during 2008-2018. The data complete productivity of the Alagappa University downloaded from the database, however, the data as on available when study was begun in the year 2018. The study to examine the year-wise growth, Top ranked author, documents –wise distribution and year-wise Citations etc. allayed for the study.

Analysis and Interpretations

Year-wise distribution of the productivity

Data Presented from Table 1, The highest publication productivity brought out by the Alagappa University researchers 240 (14.75%) of the publications in the year 2017. It is followed by 236 (14.50%) of the publications obtained in the Year 2016. It is described that in the year 2011 and 2012 same productivity was 151 (9.28%) of the publications, similarly 62 (3.81%) of the publications were published in both year 2008 and 2009 (Fig.1)

Table 1 Year-wise distribution of the productivity

Year	No.of output	%
2008	62	3.81
2009	62	3.81
2010	99	6.08
2011	151	9.28
2012	151	9.28
2013	176	10.81
2014	176	10.81
2015	203	12.47
2016	236	14.50
2017	240	14.75
2018	71	4.36
Total	1627	

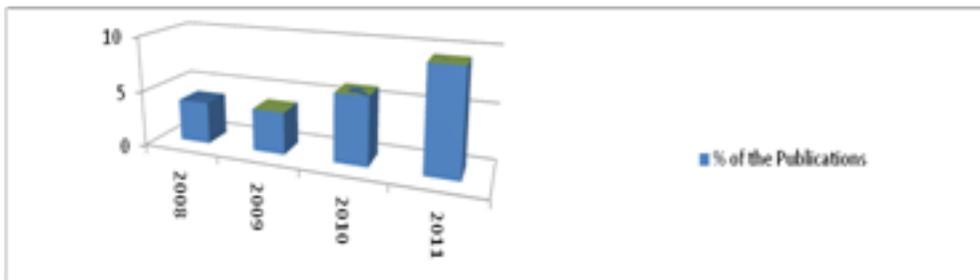


Fig. 1 Year-wise distribution of the publications

Table 2 Document-wise publications

Type of document	No.of Publications	% of the Publications
Article	1562	96.0
Review	32	1.96
Conference Papers	27	1.65
Meeting	19	1.16
Correction	8	0.49
Editorial Materials	2	0.12

Book Chapter	1	0.06
Letter Retracted	1	0.06

Document-wise publications

Table 2 presents, the documents wise publications of the Alagappa University researchers during 2008-2018. It shows the highest publications published as Journal articles 1562 (96%) of the publications. It followed by Reviews contained 32 (1.96%) of the Publications. The study reflects that Book Chapter and Letter Retracted 1 (0.006%) of the publications (Fig.2)

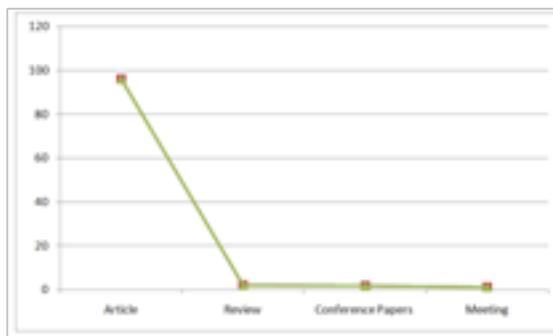


Fig. 2- Document-wise publications

Institution-wise distribution of the publications

Table 3 shows, the Institutions wise productivity of the publications during 2008-2018. It is observed highest productivity contributed 164 (10.07%) of the publications by Department of Biotechnology,

Government of India. It followed by less than that DBT 0.8% of the publications by UGC. CSR and DST were contributed same productivity 4.24% of the publications out of 1627.

Table 3 Institution-wise distribution of the publications

Rank	Institutions	No.of Publications	% of the Publications
1	Department of Biotechnology Government of India	164	10.07
2	UGC	148	9.09
3	CSIR	69	4.24
4	DST	69	4.24
5	Alagappa University	18	1.10
6	Deanship of Scientific Research at King Saud University	16	0.98
7	ICMR	14	0.86
8	National Natural Science Foundation of China	14	0.86

Table 4 Top ranked authors

Rank	Name of the authors	No. of Publications	% of the Publications
1	Pandian SK	129	7.92
2	Sanjeeviraja C	125	7.68
3	Ravi G	95	5.83
4	Vaseeharan B	92	5.65
5	Mahalingam T	81	4.97



6	Manisankar P	81	4.97
7	Singh SK	67	4.11
8	Rajendran S	62	3.81
10	Balamurugan K	50	3.07
11	Kalaigan GP	50	3.07
12	Sekar C	50	3.07
13	Jeyakanthan J	41	2.51
14	Sundrarajan M	39	2.39
15	Srinivasan P	37	2.27
16	Thambidurai S	37	2.27
17	Stalin T	34	2.08
18	Ramesh M	33	2.02
19	Ravikumar S	32	1.96
20	Sivakumar R	32	1.96

Top Ranked Authors

Table 1 presented, the research publications output contributed by the authors of the Alagappa University. The top ranked author was Pandian SK contributed 129 (7.92%) of the publications. It followed by Sanjeeviraja C was

contributed 125 (7.68%) of the publications. The study found that 99.75 % of the publications shared below 100. 54.21 % of the publications shared above 50. Further, It could be found 45.78 % of the publications joint together published below 50.

Table 5 Countries-wise distribution of the Publications

S.No.	Name of the Country	No.of Publications	% of the Publications
1	India	1627	100
2	South Korea	127	7.80
3	Japan	66	4.05
4	Taiwan	51	3.13
5	Italy	48	2.95
6	Saudi Arabia	39	2.39
7	Peoples R China	29	1.78
8	Singapore	28	1.72
9	USA	26	1.59
10	Germany	18	1.10
11	Iran	16	0.98
12	Mexico	12	0.73
13	Portugal	11	0.67
14	Malaysia	10	0.61

Countries-wise distribution of the Publications

Table 5 described the country wise publications of the Alagappa University researchers during 2008-2018. It is observed that majority of the publications collaborated with India South Korea contributed 127 (7.80%) of the Publications among the top

ranked country among listed. Japan and Tiwan were contributed 4.05 and 3013 % of the publications in the study. Moreover 85% of the publications shared rest of the authors involved various researches undertaken below 50 papers in Alagappa University.

Table 6 Subject-wise distribution

S.No.	Name of the Subject	No.of Publications	% of the Publications
1	Material Science	411	25.26
2	Chemistry	401	24.64
3	Physics	339	20.83
4	Biochemistry Molecular Biology	185	11.37
5	Electrochemistry	144	8.85
6	Engineering	139	8.54
7	Science Technology Other Topics	107	6.57
8	Biotechnology Applied Microbiology	97	5.96
9	Pharmacology Pharmacy	88	5.40
10	Biophysics	87	5.34
11	Polymer Science	87	5.34
12	Immunology	70	4.30
13	Marine Freshwater Biology	57	3.50
14	Metallurgy Metallurgical Engineering	40	2.45
15	Plant Sciences	40	2.45
16	Spectroscopy	38	2.33
17	Cell Biology	37	2.27
17	Mathematics	35	2.15
18	Computer Science	34	2.08

Subject-wise distribution

Table 6 observed that Subject wise distribution of the publications from Alagappa University. Material Science area produced more productivity 25.26% of the publication out of 1627. It followed by 24.64% of the publications achieved by the researchers

from Physics. Biochemistry shows 20.83% of the publications which considered to be third ranked subject. Further the study deals with rest of the fourteen subjects brought out below 10 percent of the publications.

Table 7 Institutions –wise distribution of the publications

S.No.	Name of the Institution	No.of Publications	% of the Publications
1	Alagappa Univ	1621	99.63
2	Cent Electrochem Res Inst	64	3.93
3	Univ Madras	64	3.93
4	Bharathidasan Univ	58	3.56
5	Madurai Kamaraj Univ	55	3.38
6	Anna Univ	45	2.76
7	Annamalai Univ	36	2.21
8	Csir	36	2.21
9	Shizuoka Univ	35	2.15
10	Ajou Univ	33	2.02
11	King Saud Univ	32	1.96



12	Univ Pisa	31	1.90
13	Bharathiar Univ	27	1.65
14	Alagappa Chettiar Coll Engn Technol	26	1.59
15	Thiruvalluvar Univ	25	1.53
16	Kalasalingam Univ	23	1.41
17	Srm Univ	23	1.41
17	Dongguk Univ	23	1.41
18	Karunya Univ	22	1.35
19	Sree Sevugan Annamalai Coll	21	1.29
20	Nanyang Technol Univ	21	1.29
21	Periyar Univ	21	1.29
22	Sastra Univ	21	1.29
23	Vit Univ	21	1.29
24	Pusan Natl Univ	20	1.22

Institutions –wise distribution of the publications
Table 7 presents the researchers Collaborated with other institutions from the study could be observed during the period. 3.92 % of the publications were contributed by the Central Electro Chemical Research Institute and University of Madras with Alagappa

University. It is observed that Bharathidasan University and Madurai Kamaraj University were contributed above 50 publications 3.56 and 3.38 % of the publications respectively. Further, 85.2% of the publications were brought out the publications below 50.

Table 8 Year-wise Citations of the Publications

Year	No.of Citations	.% of the Citations
2008	6	0.041
2009	67	0.46
2010	248	1.70
2011	473	3.25
2012	783	5.38
2013	1191	8.18
2014	1682	11.55
2015	2195	15.08
2016	3084	21.19
2017	3684	25.31
2018	1138	7.82
Total	14551	

Year-wise Citations of the Publications

Table 8 observed, Citations received the impact the publications according to quality of the research. It is found that total Citations of 14551 received by the Alagappa University. The highest Citations covered totally 3684 out of 240 publications in 2017. It followed by 3084 (21.19%) of the Citations

received by the researchers of Alagappa university. 2195 (15.08%), 1682(11.55%), 1191(8.18%) of the Citations received in the years 2015,2014 and 2013. Further, the study found that only 0.50% of the citations scored below 100 citations in the year 2008 and 2009.

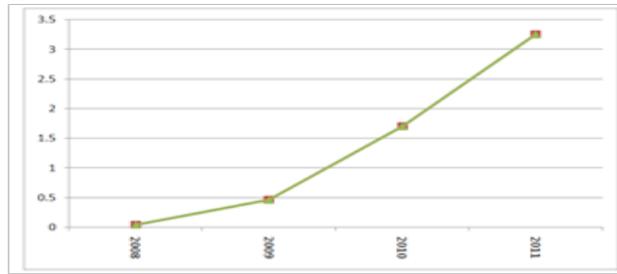


Table 9 Cumulative Citations count

h-Index throughout period	Average Citations per-year	Time cited	Without self citations
44	8.94	14551	12254

Cumulative Citations count

Table 9 presented Citations count on the impact of publications were contributed by the Alagappa University. It is observed h-index 44 out of 1627 publication throughout the period of study. There were analysed the Average Citations per year was 8.94, Total Citations of 14551 over eleven years for 1627 publications contributed by the researchers. Out of 14551 Citations 12254 emerged as without self-Citations during 2008-2018.

Conclusion

The study was undertaken about the research productivity of the Alagappa University during 2008-2018. The analysis made the Year- wise distributions of the Research Publications of the Alagappa University, the result of the study is the highest publications published as Journal articles 1562 (96%) of the publications. It is observed highest productivity contributed 164 (10.07%) of the publications by Department of Biotechnology, Government of India. The top ranked author was Pandian SK contributed 129 (7.92%) of the publications. The Alagappa University researchers include the faculty members, Research Scholars and research fellow of the various projects funded by various agencies. They have taken much interest bring out good research in term of thrust area of in the current perspectives of individual research potential. The science researchers are dominant factors bringing more value of projects from Biological Sciences and Physical Science.

References

Prathap, G. & Gupta, B.M. (2009). Ranking of Indian engineering and technological institutes for their research performance during 1999–2008. *Current Science*, 97(3).

S.J.D. Varaprasad & D.B. Ramesh. (2011). Activity and Growth of Chemical Research in India during 1987-2007. *DESIDOC Journal of Library & Information Technology*, 31(5), 387-394

Sujit Bhattacharya and Shilpa, (2011). Mapping Nanotechnology Research and Innovation in India, *DESIDOC Journal of Library & Information Technology*, 31(5), 349-358.

ZhangHaiqi, ZhangYuhua. (1997). Scientometric study on research performance in China. *Information Processing & Management*, 33(1), 81-89.

Baskaran, C. (2013). Research productivity of Alagappa University during 1999-2011: A Bibliometric study, *DESIDOC Journal of Library & Information Technology*, 33(3), 236-242.

Baskaran, C & Sivakami, N. (2014) Swine influenza research output: A Bibliometric Analysis. *SRELS Journal of Information Management*, 51(1),13-20

Baskaran, C. (2012). Research Productivity of Graph Theory during 2004-2011: A Bibliometric Study.*SRELS Journal of Information Management*, 49 (6),683-691.