

A STUDY OF FEMALE SANITARY PRACTICES IN SLUMS OF AHMEDABAD CITY

Dr. DEEPAL JOSHI

Director

Som-Lalit Institute of Business Administration, Ahmedabad, Gujarat

KHUVA YASH, PALIWAL DIVYA, VADHER VIDHI & CHAUDHARY SANJANA

MBA Students

Som-Lalit Institute of Management Studies, Ahmedabad, Gujarat

Abstract

The different stages of a women's life include menstruation, pregnancy and childbirth, menopause and ageing. All the four stages pose unique challenges for women, in the context of access to sanitation. This problem intensifies for women in overcrowded urban areas of India. This issue is overlapping with gender inequalities, as also with religion and caste discrimination. An extensive literature review of this topic revealed that there were no comprehensive studies related to female sanitary practices in urban slums including toilet practices, menstruation practices, childbirth practices and elderly/bedridden women care practices. In this context, a structured questionnaire, encompassing questions related to toilet, menstruation, childbirth and elderly women care, was used to collect data from 200 women in six slum areas of Ahmedabad, the largest city of Gujarat state. Findings of this study point to evident inadequacies in sanitation facilities for women at various stages of life cycle. This study calls for implications for researchers in this field and actions for all stakeholders including government, hospitals and health care workers, NGOs and slum dwellers.

Keywords: *slum, sanitation, toilet, menstruation, childbirth*

Introduction

The four unique thresholds in a women's life in terms of physiological and psychological changes are menstruation, pregnancy and childbirth, menopause and old age. All the four stages pose unique challenges for women, in the context of access to sanitation. This problem intensifies for women in overcrowded urban areas of India (Kulkarni, O'Reilly & Bhat, 2017). An urban sanitation policy in India relies on technical solutions, but it fails to address the issue of access to sanitation for all – especially females. This issue is overlapping with gender inequalities, as also with religion and caste discrimination. In India, menstruation is not treated as a normal physiological process of the body, but is closely linked to psychological, social and religious barriers; mainly because of lack of proper knowledge about menstruation (Deshpande, Patil, Gharai, Patil & Durgawale, 2018). Unavailability of sanitation facilities is one primary reason contributing to lack of hygiene during menstruation, making young girls and women susceptible to diseases.

Urban areas in India account for one-third of the total Indian population; and this will become one-half by 2030. India also accounts for nearly one-fifth of maternal and new-born fatalities worldwide. Given these two statistics, it is very important to check the quality of facilities and care for pregnant and new mothers in poor urban settlements in India. These women need accessible and hygienic sanitation facilities (Agarwal, Singh & Garg, 2007). In India, poor health and lack of health care facilities can be an integral part of ageing population. These challenges deepen for elderly women because of the socioeconomic disadvantages and gender bias faced by them (Balagopal, 2009).

In light of the above discussion, this research uses primary data from women of six slums in Ahmedabad, India to analyse the sanitation facilities related to toilets, menstruation, pregnancy and childbirth and elderly women. This study has implications for policy-makers, hospitals and healthcare facilities, slum-dwellers in urban India and upcoming researchers in the field. The next section of this paper is an extensive literature study,

leading to research questions. It is followed by research methodology, findings and discussion. The research concludes with a discussion of implications of the study.

Literature Review

An extensive study of 100 plus papers on toilet facilities, menstrual, pregnancy and childbirth sanitation and facilities for elderly women in urban slums of India was undertaken. Table 1 provides a summary of the most relevant papers divided into four groups. The first group includes studies related to toilet and sanitation facilities (Joshi, Prasad, Kasav, Segar & Singh, 2013; Kulkarni, et. al., 2017; Chaplin, 2017; Panchang, 2021), the second cluster is about menstrual practices in urban slums (Garg, Sharma & Sahay, 2001; Prajapati & Patel, 2015; Garikipati & Boudot, 2017; Deshpande, et. al., 2018; Kanungo, Chatterjee, Saha, Pan, Chakrabarty & Dutta, 2021; Singh, Chakrabarty, Chandra, Chowdhury & Singh, 2023; Prasad, Dwivedi & Shetye, 2024). The third sub-group relates to childbirth practices in urban slums of India (Agarwal, et. al., 2007; Agarwal, Sethi, Srivastava, Jha & Baqui, 2010; Das, Bapat, More, Chordhekar, Joshi & Osrin, 2010; Devasenapathy, George, Jerath, Singh, Negandhi, Alagh & Zodepy, 2014; Sudhinaraset, Beyeler, Barge & Diamond-Smith, 2016; Shrivastava, Singhal, Joshi, Mishra, Agrawal & Kumar, 2023) and the last cluster relates to care for elderly women in urban slums of India (Balagopal, 2009; Ghosh, Bandopadhyay, Bhattacharya, Misra & Das, 2014; Barua, Borah, Deka & Kakati, 2017; Ghosh & Mukhopadhyay, 2021).

Table 1 Summary of Literature Review (LR)

Sr. No.	Reference of Paper	Methodology	Findings
1.1 LR based on toilet and sanitation practices papers of urban slums			
1	Joshi, et. al., 2013	Pilot cross-sectional study of four slums during July 2013 in New Delhi, India.	Study suggests immediate measures for functional sanitation practices
2	Kulkarni, et. al., 2017	Used focus group discussions (FGDs) from October 2013 to May 2014 in Jaipur and Pune, India	The findings highlight the relationship between sanitation & gender inequality
3	Chaplin, 2017	Qualitative and quantitative research methods	The physical health and mental stability of women in urban slums
1.2 LR based on papers of menstrual practices in urban slums			
4	Panchang, 2021	Study from July to October 2017 primarily settlements in Pune, Maharashtra.	are negatively impacted by poor sanitation. Slum residents and municipal authorities are marked by conflict over control of water and sanitation, toilets at home suggest upward mobility but residents fear eviction when constructing toilets
5	Garg, et. al., 2001	Qualitative research design conducted in an urban slum in Delhi	Limited knowledge, inadequate facilities, taboos, and school absenteeism affect menstrual hygiene and mental well-being
6	Prajapati & Patel, 2015	Structured questionnaire for 88 adolescent girls at Anganwadi of Urban Health Training Centres (UTHCs)	Teenage girls maintained basic cleanliness, but poor education and superstitions hindered proper practices
7	Garikipati & Boudot, 2017	Questionnaire for 150 women and young adolescent girls aged between 15-49 years across Hyderabad	Sanitary pad use in slums has risen, but 57% prefer reusable pads, highlighting a gap in policies favouring disposables
8	Deshpande, et. al., 2018	A cross-sectional study of girls living in the urban slum area of Aagashivnagar, Karad, Maharashtra – respondents between 10 to 19 years of age	The mean menarche age was 13.13 years, with most girls unaware of menstruation, lacking hygiene knowledge, and facing poor sanitation and living conditions
9	Kanungo, et. al., 2021	Cross-sectional survey of Kolkata slums	Only 6% of slum households had continuous water; women spent 20 minutes fetching it, and street food posed hygiene risks
10	Singh, et. al., 2023	Cross-sectional survey design of 54,561 urban women aged 15–24 years across India	Wealthier regions adopt hygienic menstrual methods more, with socio-economic factors influencing sanitary product use
11	Prasad, et. al., 2024	Cross-sectional study of 417 adolescent girls in slums of Jaipur, Rajasthan	Myths affect girls, with only 48.7% having accurate knowledge, showing the need for better education
1.3 LR based on Papers of Childbirth Practices in Urban Slums			
12	Agarwal, et.	Cross-sectional and	70% of women

	al., 2007	mixed-method survey among women aged 15–49 in urban slums using structured interviews and focus groups.	received antenatal care, home deliveries common practice				expenses, restricted access in remote regions, lack of attention to needs of older women, unavailability of gender-conscious healthcare are a few to name
13	Agarwal, et. al., 2010	Cross-sectional study of 312 mothers aged 15–49 in Indore slums, using multi-stage sampling and structured questionnaires	Low Levels of Preparedness, Limited Awareness of Danger Signs, Socio-Demographic Influence were barriers to Maternal Healthcare	19	Ghosh, et. al., 2014	Cross-sectional descriptive study of 120 elderly at Bardhaman, West Bengal	Poor living conditions, chronic illnesses, and lack of family support significantly reduce QoL. Social isolation, mental health issues, limited healthcare access, and environmental factors like pollution worsen the situation
14	Das, et. al., 2010	Prospective observational study in 48 Mumbai slum communities covering 280,000 people. Data collected via key informant surveillance, with 10,754 births documented over two years, 16% occurring at home	16% of deliveries were home births, influenced by socioeconomic factors, illiteracy, and poor living conditions. Home births were cheaper but riskier, with cultural norms and logistical barriers contributing to their prevalence	20	Barua, et. al., 2017	Cross-sectional study of 125 elderly in Jorhat, Assam	Morbidity Patterns, Health-Seeking Behaviour, Barriers Identified like financial issues and lack of awareness
15	Devasenapathy, et. al., 2014	Cross-sectional survey using quantitative and qualitative methods	Among 824 women, 53% had home births due to apprehension of going to hospitals, comfort of home, and lack of childcare support, with multiparity, low literacy	21	Ghosh & Mukhopadhyay, 2021	Review of articles published between November 2009 and November 2019	Challenges of Aging in Slums Health, Gender Disparities, Lack of elderly-specific focus in slum development programs
16	Sudhinaraset, et. al., 2016	Semi-structured interview, group discussion	Delivery location influenced by finances, access, culture; public facilities lack quality, private ones unaffordable. Barriers include family decisions, fear, overcrowding, limited awareness. ASHA workers, government programs promote institutional deliveries.				
17	Shrivastava, et. al., 2023	11 studies from January 2011 to May 2022 were analysed	Socioeconomic, cultural, and healthcare system challenges limit access to antenatal care for women in urban slums				
1.4 LR based on Papers of Care for Elderly Women in Urban Slums							
18	Balogopal, 2009	Interview focus group, analysis of state national level policies, secondary data analysis	There are several obstacles in accessing healthcare for the poor and especially for poor elderly women – high				

Literature review summary of table 1 suggests two specific gaps in research in the area of sanitation practices of women in urban slums in India. Firstly, there are several studies focusing on one of the four elements of female sanitation needs in urban slums – toilet practices, menstruation practices, pregnancy and child birth and care for elderly women. There is not a single comprehensive study focussed on all these four aspects.

Secondly, there are studies of slums in Indian metros such as Mumbai, Delhi, Kolkata and other tier 1 and tier 2 cities such as Jaipur, Indore, Pune, Hyderabad etc. However, there is no specific Ahmedabad based study on this topic. Ahmedabad is the largest city of Gujarat and a significant industrial and economic hub of India. It has been selected to be developed as a Smart City under Government of India's Smart Cities Mission and is also declared as UNESCO (United Nations Educational, Scientific and Cultural Organisation) World Heritage City (Joshi, Jaiswal & Mahto, 2025). It has a population of 90,00,000 plus people at a growth rate of 2.35%. There

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are 400 plus slum areas in Ahmedabad according to the Ahmedabad slum atlas (Ahmedabad Slum Atlas, 2014) compiled by Mahila Housing Trust (MHT), CEPT University and Ahmedabad Municipal Corporation (AMC). Given these two clear research gaps, this research tries to address the following research question.

- What are the sanitation practices regarding toilet usage, menstruation, childbirth and elderly women in slums of Ahmedabad city?

Research Methodology

Almost 20% of the total population of Ahmedabad city lives in slums (Patel, 2016 based on census 2011), with a sex ratio of 851 females for 1000 males. This means that approximately 8,00,000 women would be residing in slums of Ahmedabad city. Hence, it is significant to study about their sanitation practices. A structured questionnaire was framed as the instrument for data collection. Questionnaire contents were framed using Agarwal et. al., (2007), Balagopal (2009), Kulkarni et. al., (2017) and Deshpande et. al., (2018). A total of 200 women were studied from six slums of Ahmedabad city namely Gulbai Tekra, Yogeshwar Nagar, Gupta Nagar, Ambica Nagar Na Chapra, Baldev Nagar and Khodiyar Nagar. As the topic was sensitive in nature, convenience sampling was used and female researchers approached the female respondents for data collection. Findings of the study and discussion are included in the next section.

Findings and Discussion

Table 2 provides demographic details of the respondents

Table 2 Demographic Details of Respondents.

Criteria	Category	Percentage
Age (years)	< 18	18%
	18-30	53.5%
	31-45	22%
	>45	6.5%
Education	Primary	63.5%
	Secondary / Higher Secondary	26.5%
	Graduate	8.5%
	Masters	1.5%
Type of Work	Construction Labour	27%

	Household Maid	23%
	Teaching	4%
	Others	46%
Family Monthly Income (Rs.)	>30,000	88%
	30,000 – 50,000	10%
	>50,000 – 80,000	1.5%
	>80,000	0.5%
Family Size	Single	1%
	2	2%
	3-4	55.5%
	5-6	30.5%
	>6	11%

Table 3 provides analysis of toilet practices of the females respondents of this study

Table 3 Toilet Practices of Female Respondents of the Study

Criteria	Category	Percentage
House has toilet facility	Yes	79.5%
	No	20.5%
Every house in slum has toilet	Yes	63.5%
	No	36.5%
Face hurdles in using toilets (% of total respondents for each hurdle)	Lack of cleanliness	45.5%
	Lack of privacy	42%
	Safety concern	25%
	Accessibility issue	16.5%
	Others	6.5%
AMC cleans public toilets in slums	Yes, always	24.5%
	Sometimes	44%
	No, never	31.5%
Water availability in toilets	Yes	67%
	No	10%
	Sometimes	23%

Table 4 summarises the menstrual practices of females from slums in Ahmedabad.

Table 4 Menstrual Practices of Females from Slums of Ahmedabad

Criteria	Category	Percentage
Type of menstrual hygiene product used	Sanitary Pads	50.5%
	Cloth	43.5%
	Tampons	2%

	Menstrual Cups	4%
Are menstrual hygiene products affordable?	Not affordable	18.5%
	Somewhat affordable	49.5%
	Affordable	32%
Frequency of change of menstrual hygiene products	Once in 12 hours	13%
	Every 6-8 hours	49%
	Every 4-5 hours	38%
Wash and reuse any menstrual hygiene products from last cycle	Yes	60%
	No	40%
Disposal of menstrual hygiene products	Toilet	9%
	Trash Bin	74%
	Open Area	14%
	Others	3%
Explanation of Menstrual Hygiene Provided	Yes	77%
	No	23%

Table 5 shows the responses of women from slums in Ahmedabad regarding child birth practices.

Table 5 Childbirth Practices of Women from Slums in Ahmedabad

Criteria	Category	Percentage
Childbirth at hospital	Yes	69%
	No	31%
Faced problems in reaching hospital during childbirth	Yes	34%
	No	39%
	Not Applicable	27%
Main reason for choosing home births	Cultural Preferences	14%
	Financial Constraints	37.5%
	Lack of Trust	21%
	Others	27.5%
Effect of lack of sanitation facilities on postnatal care of mothers and	Increases risk of postpartum infections	30%
	Hinders access to medical services at doorstep	15%

newborns in slums	Contributes to poor maternal and child health outcomes in long run	14%
	None of the above	41%

Table 6 analyses sanitation facilities for elderly sick / bed-ridden women in slums of Ahmedabad.

Table 6 Sanitation and Care Facilities for Elderly Sick/Bed-ridden Women in Slums of Ahmedabad

Criteria	Category	Percentage
Any elderly bed-ridden females in household	Yes	60%
	No	40%
Main sanitation and health challenges of elderly bed-ridden women	Limited access to medical services	22.5%
	Lack of financial resources for healthcare	32%
	Social isolation and lack of support	13.5%
	Others	32%
	No bed-ridden women	41%
Assistance received from whom	Neighbours	6%
	Spouse	1.5%
	Children	6%
	Other Ladies of Family	5.5%
In the last criteria, total is 60% because other 40% do not have any bed-ridden elderly female in the household.		

Discussion

With approximately 35% women denying availability of toilets and continuous access to water (table 3), more than 40% women using cloth during menstrual cycles (table 4), 30% women opting for home births (table 5) and more than 50% respondents suggesting lack of medical and financial resources to support elderly women in slums, sanitation practices for females in slums of Ahmedabad have a long walk to the destination. Actions need to be taken by various stakeholders in this context. Governments need to focus on clean, safe and accessible sanitation facilities in slums. Awareness about hygiene, menstruation, childbirths at hospitals should be provided by governments in tandem with NGOs. Use of affordable sanitary napkins and its

proper disposal needs to be promoted. Awareness about the importance of sanitation at all stages of female life should be created among men and boys in slums. Slum dwellers should also focus on cleanliness and hygienic practices, girls and women should go for regular health check-ups and consider their health as a priority. Girls should get education to change the gender disparity, more prevalent in low education and low income groups. Women focusing on their health and well-being will be better off even in their old age.

This research has used a small sample size, limiting the generalisability of findings. Given the sensitive and personal nature of topic, female respondents were hesitant to provide complete information. Varying levels of literacy also posed a challenge in this study. Future research on this subject can focus on comparing different cities, states or nations in terms of female sanitary practices. Data collection using focus group discussions or in-depth interviews can generate more relevant information on this topic. The implementation and success of government schemes and social welfare measures for women in urban slums can be studied. The most effective ways of educating women about use of toilets, menstruation, childbirth and elderly women care in urban slums can be a subject of future research.

Conclusion

This study on female sanitary practices in the slums of Ahmedabad highlights important challenges faced by women in urban slums. The research findings uncover gaps in access to sanitary facilities, health and cleanliness management. These shortcomings have far-reaching consequences for the health, dignity, and socio-economic status of women living in slums. Addressing these issues requires a thorough and versatile approach. Government, NGOs, hospitals and health care workers, slum dwellers will need to ensure targeted interventions to bridge the sanitary inequities faced by women in urban slums at different stages of life cycle.

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