

QUALITATIVE INSIGHTS INTO THE CONSTRAINTS OF SANITATION: A CASE OF JAIPUR, RAJASTHAN

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The study presents the situation of sanitation and use of latrines in rural areas and urban slums of Jaipur, Rajasthan. The practice of open defecation as a consequence of lack of availability and use of latrines is explored using the narratives of women living in five different urban slums and rural areas in Jaipur. Thematic analysis was undertaken on twelve women respondents using a self designed qualitative schedule with open ended questions. Results indicated difference in the nature of constraints experienced and perceived by the rural population and urban slum dwellers. Former group suggested the problems of water availability as a major constraint restricting the overall sanitation infrastructure and use of latrines, which has resulted in the practice of open defecation. On the other hand, the urban slum dwellers experience lack of physical space and problem of illegal construction of bastis which has led to greater use of public latrines and also resulted in open defecation. Lack of stakeholder support from the government, regulatory bodies and the media is expressed by the urban slum dwellers.

Keywords: constraints, latrine, open defecation, urban slums, villages

INTRODUCTION

Women have known to play a pivotal role in taking charge of domestic responsibilities in most households, with specific reference to Indian villages and rural areas. Women and young girls not only invest significant amount of time in bringing water to their respective households (Kateja 2016), they also remain most vulnerable to diseases and infections on account of improper sanitation associated with scarcity of water. Women have been identified to make accurate estimations about water consumption and display improved water conservation in terms of their attention and practices (Fan et al 2014).

Previous studies have indicated that the responsibility of fetching water, storage and management and its subsequent use remains responsibility of women (Das 2011; Joshi et al 2014). Women in Rajasthan and areas of dry and arid topography have been known to bring water from large distances. Improper sanitation and lack of safe sanitation has been associated with the practice of open defecation, particularly among women and girls (O'Reilly 2016). Open defecation poses several health risk for women, including risk of abuse, sexual violence, voyeurism and harassment (Abrar 2015; O'Reilly 2016; Jha 2016; Mara 2017). Therefore, the importance of providing safe sanitation and toilets for women has been emphasised by UN Water on World Toilet Day.

In addition to these, diarrhoea, malnutrition, bacterial growth and several other diseases such as typhoid, malaria and cholera have been linked with unsafe sanitation and unclean drinking water (Jamie-Bartram et al 2005; Bartram and Cairncross 2010; Mara 2017). Therefore, it is of critical significance for researchers to explore the inter-linkages between quality of drinking water and exposure to ineffective sanitation. An association of this kind would be helpful in understanding several water borne diseases and vulnerability of population. The report submitted by the Population Foundation of India (UN India Water Development Report, 2012) indicated that water pollution, at both ground level and surface level, is most prominently affected by the discharge of untreated

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sewage. The sewerage treatment capacity is extremely low in most states of India. Only 18.5% of households in slum areas have access to piped water supply in sharp contrast to non slum areas with a whopping 62.2% who have the access. Tyagi et al 2006 indicated that the economic impact of inadequate pipe water costs about \$397 million, approximately INR 18 billion while the cost of fetching water is INR 56 billion, affecting the lives of a vast segment of Indian population.

Disparities in regions, locations and geographical boundaries have led to drastic differences in the health, well-being and safety of people divided by the boundaries and socio-economic status. The report brings forth the challenges of fast paced urbanization while the rural population continues to migrate to urbanized pockets in prospects of better employment opportunities. Poverty, deprivation and limited economic resources coupled with limited space in urban areas have fostered the problem of water contamination, environmental degradation and release of solid wastes.

Financial constraints are additionally responsible for halting the process of sanitation development, particularly in isolated pockets, among marginalised groups and slums. With respect to the emphasis on need of investments to be made in water and sanitation sector, the private and government bodies should become strong advocates of this human need (Jamie-Bartram et al 2005). While with reference to the state of Rajasthan, several researchers in the past have explored issues pertaining to water shortage and sanitation. Lack of financial resources and expenditure, improper sanitation policy on part of the government, acute shortage of water and skewed gender dynamics disfavours women are some constraints which have been associated with construction and use of latrines (Reddy 1999; Reddy 2010; O'Reilly and Louis 2014; Khanna and Das 2016).

In this paper, constraints limiting the structural and functional developments in sanitation are explored with specific reference to Jaipur, through the obtained narrative responses from the women of the city.

METHOD

The objective of the present study is to explore and assess the nature of constraints experienced by the rural population and urban slum dwellers in Jaipur city of Rajasthan with reference to the present situation of sanitation. To meet the objectives of the study, twelve women respondents were interviewed using a self designed open ended qualitative interview schedule. Five belonged to rural areas in the proximity of Jaipur city while the remaining seven were living in urban slums. The areas under investigation included Bhagwatpura Village, Hirnoda Village, Koli slum (MNIT Campus), Kathputli Nagar, Valmiki Nagar and Jawahar Nagar.

Bhagwatpura and Hirnoda villages are located within the Phulera Tehsil of Jaipur. The following table reveals some discrepancies in their literacy, population distribution across gender and number of households.

Table 1: Profile of the Rural Areas Under Perusal of the Study

Villages	Literacy rate	Total population	Households
Bhagwatpura	66.79 % (81.50% males and 51.81% females)	1,854 (938 males and 916 females)	280
Hirnoda	73.56% (86.14% males and 60.28% females)	6,229 (3,186 males and 3,043 females)	1,107

Source: Census Population Data 2015

Based on data indicated in Table 1, it is obvious that the literacy rate in Hirnoda village is lower compared to Bhagwatpura village, despite proximity in location and geography. Further, the gender wise distribution of literacy rates reveal that males report favourable literacy levels compared to their female counterparts in both the rural settings, however, the differences were larger for Bhagwatpura village. Therefore, despite the observation that Bhagwatpura village has better standing with respect to literacy levels, only the men benefit in terms of acquiring education. In addition to the data on literacy, Table 1 also provides information on the total population of the two locations. Hirnoda is inhabited by more than four times the individuals residing in Bhagwatpura village, while in both the rural settings, the number of men outnumber the number of female counterparts. With reference to the urban slums, the Koli slum (MNIT Campus), Kathputli Nagar, Valmiki Nagar and Jawahar Nagar remain similar in terms of nature of sanitation, infrastructural bottlenecks, insanitary habits of inhabitants and density of population.

The present study employs the technique of *Thematic Network Analysis* which involves the extraction of themes at various levels of hierarchy, in terms of the power dominance and wholeness; as depicted by Attride-Stirling (2001) in the following order:

Basic Themes: The provide patterns based on textual data which is derived from first hand transcripts of verbatim responses from the respondents.

Global Themes: The eventual outcome of identifying patterns at the basic themes leads to the development of global themes. They are the “*principal metaphors in the data as a whole which summarize and make sense of clusters of lower-order themes abstracted from and supported by the data*” Attride-Stirling (2001).

The findings of this study need not be generalized since it is a qualitative inquiry which intends to explore and present the lived realities of the women in discrete parts of Jaipur city.

RESULTS

The results from the study are presented in table 2. Global themes which emerged from the basic themes on the basis of narratives of the respondents are discussed in the next section.

Global Theme: Psycho-social constraints (Habit, past experience and role of social models)	
Basic Themes <ul style="list-style-type: none"> • Inexperience in using latrine for defecation • Perceived comfort and habit in open defecation • Continuation of practice of open defecation since previous times • Role of parents and education in shaping the behavior of children towards sanitation 	
Global Theme: Lack of stakeholder support	
Basic Themes <ul style="list-style-type: none"> • No visit by government officials • Lack of involvement of NGO's and social enterprises towards educating people about importance of sanitation and hygiene • Nonexistent governing body (lack of regulatory body) • Lack of support from neighbourhood and public departments • Issue of illegal construction 	

<ul style="list-style-type: none"> • Complete denial of access to information about cleanliness and health • No media involvement in promoting positive social change • Apathetic attitude of the government towards the poor • Complete isolation of low socio economic groups from government's attention • Dissatisfaction due to absence of stakeholder support • Skewed health and livelihood prioritization for the slum dwellers
Global Theme: Economic constraints
Basic Themes <ul style="list-style-type: none"> • Perceived economic burden • Lack of sustainable support from government • Failure to cope with economic demands • Perceived discrimination between the privileged and under privileged • Engagement in informal sector ensuring no social security • Struggle for the basic needs • Complete absence of hygiene practices (hand washing) • Cleanliness perceived as luxury, not essential to basic living • Deprived of basic amenities such as water and food
Global Theme: Lack of physical space and proper sewerage mechanism
<ul style="list-style-type: none"> • Limitation of physical space • Problem of open drainage • Improper sewerage system and seasonal complications • Large number of members sharing the facility • Lack of proper waste disposal mechanism • Barrier to existing efforts aimed at improving sanitation • Lack of proper infrastructure and technical know how
Global Theme: Lack of political will
<ul style="list-style-type: none"> • Sense of helplessness among respondents • Apathy and disinterest regarding matters related with sanitation and basic human rights • Lack of seriousness on part of government • Unpleasant past experiences • Suffering and discomfort • Poor infrastructural investments
Global Theme: Water scarcity
<ul style="list-style-type: none"> • Difficulty posed in everyday life due to twin problem of water scarcity and contaminated water • Water perceived as quintessential resource • Lack of groundwater resources • Dependence on tanker for daily needs • Fast consumption of water due to flushing and frequent cleaning • Stereotypes associated with latrine construction • Lack of systematic sewerage mechanism

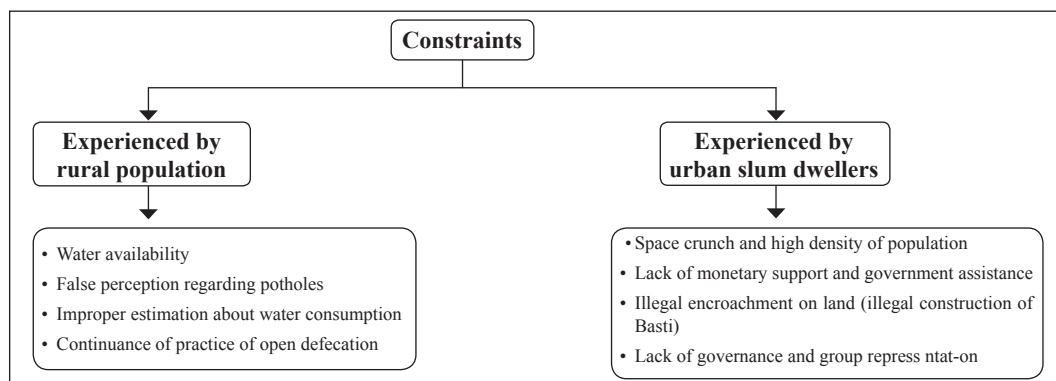
Table 2: Summary of themes derived from the narratives of respondents (N=12)

Diagram 1: Classification of constraints limiting the construction, availability and use of latrines by the respondents

With respect to the constraints experienced by the respondents of the study, living in both rural areas and urban slums, diagram 1 provides a systematic classification of problems and challenges which restrict the use of latrines. The diagram provides an insight into the factors which restrict the construction, availability and the eventual use of safer sanitation medium i.e. latrine. The rural population and urban slums are affected by distinct and different set of factors.

Constraints of water availability and issues related with consumption

Misconceptions about structural and functional uses of latrines has been analysed during the focus group discussions in the field difference respondents has been expressed their views related to different constraints, some of which are discussed below :

“If cleanliness and hygiene aren’t maintained we are vulnerable to diseases and infections. My husband is also ill, he has fever due to mosquitoes and lack of cleanliness and. It’s been three days and his fever hasn’t subsided. It is definitely related with water since we do not have safe tap water and have to get refill after every 15 days. Sometimes worms also infect the water. Therefore, they make us even more sick. We consume water directly without any treatment.”(respondent aged 20 years, Bhagwatpura village)

“My husband brings two buckets of water from other people living in the basti. We use even a single mug of water with great caution as water is very precious for us.”(respondent aged 29 years, Kathputli nagar)

“The potholes fill fast as we don’t have a sewerage line so we have to create space. If it fills up fast, we have to go out. It is shameful to use others defecation area. Bowel movements cannot be stopped. I sometimes send my sons outside to defecate as the potholes may fill up fast to make sure that the latrine is reserved exclusively for women.”(Respondent aged 23, Jawahar Nagar slum)

“Some people despite having latrine go out to defecate because they are mentally weak. They think that going out to defecate will not fill up the pothole fast. They have dirty mentality. Financial constraints are also reasons why people do not have latrines.”(Respondent aged 38, Koli Slum, MNIT campus)

“Some people go out to defecate due to free will and also that more water is required for flushing or pit fills fast. These are reasons why people still defecate in the open despite having latrine in the

house as tanker is consumed fast. Water is necessary for maintaining cleanliness of the house and latrine.”(Respondent Indira, Bhawatpura village).

In rural areas, the respondents revealed that issues of water availability from nearby tanks as well as the cost associated with it were the major constraints in using water for flushing purposes. Also, they were not fully competent in estimating the volume of water required in flushing. Moreover, they had false perception about potholes filling up fast in the latrines. Such misperceptions and inaccurate understanding of structural and functional uses of latrines were identified as constraints experienced by the rural population.

Lack of Governance and Regulatory Control over illegal construction

“There is no financial constraint here as people have the money but the authorities do not allow us to bring construction material inside the area.”(Respondent aged 30 years, Koli Slum, MNIT Campus Jaipur)

“..but the college authorities do not allow construction material inside. We have a temporary latrine which is causing a lot of problems. When I lived in Pilani, there were proper tiles. But this is a basti which is different.”(Respondent aged 38 years, Koli Slum, MNIT Campus, Jaipur)

The urban slum dwellers had occupied lands without obtaining legitimized legal permission from the concerned authorities. Under such conditions, it is difficult for them to procure construction material from outside and construct latrines. Shockingly, despite having access to material comforts and everyday facilities, urban slum dwellers are unable to meet their most basic sanitation needs, putting the safety and health of women and girls at risk.

Lack of Stakeholder Support

“No government official or NGO has ever informed us, at the village level about safety measures or hygiene practices associated with water. Even if somebody might have visited, they have never approached my household. But they should visit and inform us relevant and correct habits.”(Respondent aged 24 years, Bhagwatpura)

“You are the first to have visited this area to discuss sanitation and hygiene. So far nobody has come here. Maybe they visited only the outer parts of the basti but never came inside.”(Respondent aged 29 years, Kathputli Nagar)

“Many people visit the area and discuss situation but do not take matters seriously. There was a movement for the creation of BPL cards for the benefit of all but no relief. Out of four families, only one has a BPL card. Despite filling up of many forms, no proper investigation has been carried out. I do not have BPL card. My daughter in law has BPL card. We have raised complaints but no progress has been reported. There was public demonstration as well for BPL cards, several meetings have been organized. We only raise our voice which ends up in sore throat. In the meanwhile, news was that the government is constructing gutter hence the locals were asked to fill forms and deposit money and taps would be installed. We deposited the forms but no help. Taps exist but there is no water. We have tolerated a lot.”(Respondent aged 65 years, Kathputli Nagar)

Lack of stakeholder support in the form of support from the government, regulatory bodies and media was perceived as a major constraint by the urban slum dwelling population. Further, high density of population, lack of supporting infrastructure and lack of financial assistance towards construction of latrines inside the house are common problems experienced by the urban slum dwellers. While rural areas have the governance emanating from *Panchayat* system, urban slums

lack proper governance and group representation. This has led to the lack of community, networking and solidarity among the urban slum dwellers.

Lack of Political will and Economic Constraints

“Some representatives / officials visit the area and discuss matters related with cleanliness and hygiene but do nothing. We only take the responsibility.” (Respondent aged 40 years, Valmiki Nagar)

“Despite government medical support, physicians prescribe medicines from outside and we have to buy them from outside in case of need. We have to take many rounds or take loan for medical expenses. It disturbs our household expenditure and even monthly ration. People of my age find it all the more challenging. What to do?” (referring to problem of open drainage which becomes serious during rainy season) – (Respondent aged 65 years, Kathputli slum)

“Government is not trying to help us. Nobody comes to help from the side of the government. We have been forcefully asked to leave this place too! We fold our belongings and move to another place of open defecation. Nobody listens to the voices of the poor. Politicians only care about the votes. What help and support can they offer to the poor? I have been living here for the last 35 years but nobody helped me.” (Respondent aged 60 years, Kathputli slum)

During the interview process, it was observed that the rural population reveals lesser dissatisfaction and grievances against the public governance although the issue of open defecation, lack of infrastructure and medical facilities is comparatively more challenged in rural compared the urban locations. The eventual response among the urban slum dwelling population is of helplessness. It further reflects that they have either learned to adjust in conditions of pathetic sanitation or are struggling to strike a balance within their limited economic means earned through engagement in the informal sector of the Indian economy (*“I don’t like to interact with most people here. I live here in compulsion as I had never lived in such bad conditions. I and my husband attended school but have to live in this basti. I repent living here. My father tells me it was in my destiny.” As narrated by respondent aged in Kathputli slum*)

In the rural village setups, the problem of open defecation exists but has not disturbed the ecological balance of the environment due to existence of farm lands and acres of land available for cultivation and raising livestock. The situation in urban areas is grim to the extent that in the heart of Jaipur city, the problem of open defecation has roots deeper than surface issues. It is associated with the mindset, stereotypes and uninformed vision about safe sanitation. It is imperative to highlight that most efforts by the government have gotten wasted because without improper behavioural intervention, the overall execution, use and practice of public latrines and urinals is under threat.

Psycho-social Constraints

“My mother in law also likes to go out to defecate as she has never used a latrine and does not like it. We are educated and understand the implications of open defecation hence we use latrine but she does not. She is habitual of open defecation since previous times when latrines were not constructed. There are many people who defecate in open despite having latrine, mainly among elderly due to continuance of this habit since decades.” (Respondent aged 20 years, Bhagwatpura village)

“There are some public urinals and latrines but people are used to going in the open. They like it. Those who had used it earlier have spoiled the space which could be one reason why nobody wants to use them.” (Respondent aged 29 years, Kathputli nagar)

What is pertinent from the responses is the disturbing fact that even in the light of sanitation drives and huge public investments towards ensuring sanitation for all, open defecation is not only rampant but also a habit among many. Parents, social agents of change and education have been

observed to play a quintessential role in promoting behavioral modification in children to use safer sanitation medium. However, from the verbatim it is evident that the practice of open defecation has been a habit since years. Another constraint which inhibits the use of latrines is inexperience, bias about latrine potholes, consumption of water and lack of proper sewerage mechanism. The mere existence of a latrine does not ensure its usage. The eventual use of a latrine depends upon – (i) willingness; (ii) behavioral modification and pro-social models; (iii) sufficient information about structural features functional utility of latrines and; (iv) construction of proper drainage and sewerage.

Lack of Physical Space and Improper Sewerage Mechanism

“The problem of gutter is serious here. Space is a constraint and dirty/contaminated water needs to be drained properly (referring to the problem of open drainage). There is no sewerage system here and it is causing many health ailments. In rainy season, water enters the houses of the area and leads to many health problems. That water needs to be regularly thrown outside.”(Respondent aged 65 years, Kathputli slum)

CONCLUSIONS

Sanitation in Jaipur city is deeply crippled due to issues related with shortage of water and its associated irrational beliefs regarding the consumption of water. Rigidity in habit and inflexible thinking prevents individuals from moving towards safer sanitation from the deplorable state of open defecation. The media, government and social enterprises have failed in reaching the bottommost section of the urban slum population, leaving the inhabitants isolated and neglected. Lack of social security and economic standards also prevent individuals from opting to construct and use latrines. The experience of crowding, high density of population and limited space deteriorates the existing situation of defecation. Sewerage mechanism remains challenged and problem of open drains is a reality for lower socio economic section of the population.

The nature of constraints experienced and perceived by the rural population and urban slum dwellers are mutually exclusive from each other. These differences are attributable to issues related with the access and availability of water in rural areas while urban slum dwellers struggle with lack of stakeholder support and constraints of physical space and illegal construction. On the whole, it is relevant to highlight that sanitation remains a deprived reality for women living in scattered parts of Jaipur city.

Based on the findings of the study, specific suggestions are offered. First, at the level of government planning departments, public welfare units and state run regulatory bodies, it is of immediate need to consider the ground realities and basic needs of urban slum dwellers. This section of the city based population is living under the experience of high density of population, medical needs and illegal constructions. Therefore, the government is urged to consider them as an urgent priority. Second, with reference to the needs of sanitation and problems of open defecation in rural areas, it is noteworthy to indicate that issue of water access and availability is or primary concern. Hence, water management acquires greater significance in rural areas. Efforts in these directions are likely to go a long way in improving the overall standard and infrastructure of sanitation in both rural areas and urban slums in Jaipur.

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