

Water And Sanitation For The Poor: Case Study Of Three Slums In Delhi**Deepika Kandpal**

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(9716087168, deepikak2391@gmail.com)**Abstract**

Rapid urbanisation has increased pressure on the infrastructural facilities in the cities, especially in the low-income urban informal settlements in all parts of the world. The Millennium Development Goals¹ called for halving the proportion of people without access to water and sanitation by 2015. But India is yet to accomplish the goal for the indicators of sanitation. This paper presents results from a field survey conducted in the three slums in Delhi in the year 2014, examining the existing water and sanitation facilities and its demand by the urban households. Using semi-structured interviews and focused group discussions (FDGs), this qualitative study brings out the structural, financial and cultural dimensions to sanitation adoption and usage. We found that the non-existence of sewer lines and poor provision and maintenance of community sanitation facility were the major concerns of slum dwellers. The construction of private sanitation facility in slums has exacerbated their unhygienic status, instead of improvement. Therefore, we advocate the improvement in supply and maintenance of Community Toilet Complexes (CTCs) and shift to environment friendly methods of feces disposal as the solutions to urban sanitation obstacles. The findings can assist the authorities and policymakers for sanitation intervention in urban slums.

Keywords: Environment, Community toilets, Sanitation, Toilet access, Urban, Water.

Introduction

The urban population in India has experienced a swift rise in the past decade. According to a UN Report (2007)², around two-fifth of the country's population is expected to be concentrated in urban areas by the year 2030. Slum formation emerges as a by-product of rural-urban migration when accompanied by limited job creation and inadequate infrastructure. Despite the economic growth and boost in infrastructural development, the suffering of the slum dwellers has not declined in the recent years. NSSO 69th Survey Report (2012)³ on key indicators of drinking water, sanitation, hygiene, and housing conditions indicates that although there has been some improvement in living conditions across the country, the problem of open defecation still remains widespread. Around ninety percent of urban houses had access to latrines in 2012, contrary to only forty percentage in rural India. Nevertheless, because of its dense nature, the health implications of open defecation are more severe in urban India.

In a resolution passed by the UN General Assembly in July 2010, water and sanitation have been recognized as human rights essential for full enjoyment of life. Sanitation is linked with many other

¹<http://www.undp.org/content/undp/en/home/mdgoverview.html>

²<https://www.unfpa.org/publications/state-world-population-2007>

³ NSS 69th Round Report No. KI(69/1.2)

important aspects like child health, diseased environment, privacy, dignity, gender disparity in education, poverty and economic development. Open-defecation is not only a source of diseases but has also been found to be a key predictor of childhood stunting in India (Spears, 2013; Spears et al., 2013; Lozano et al., 2012; Boschi-Pinto et al., 2008). The consequences of insufficient basic services are more crucial for the security and educational attainment of women. In the absence of household connections, they need to travel long distances to fetch water. Moreover, defecating in the open increases vulnerability to harassment and sexual violence. Furthermore, a strong association has been found between access to sanitation facilities and school attendance. Adukia (2017) demonstrates that access to latrines in school resulted in a 5.3% reduction in drop-outs among students. The results are even stronger for female candidates. The paucity of adequate sanitation facilities in India has been found to contribute to the loss of approximately 6.4% of its GDP in 2006 (World Bank Report, 2011). The main factors behind the considerable economic loss are sanitation-related mortality and morbidity, loss of productivity as a result of illness, and revenue from tourism.

India launched Swachh Bharat Mission in 2014 to accomplish an Open Defecation Free India by 2019. With the construction of 11 crore household toilets across 35 States and UTs, the Prime Minister declared rural India as Open Defecation Free in October 2019. However, environmental, health and security repercussions caused by inadequate sanitation practices cannot be solved by building toilets alone. Moreover, the target is yet to be achieved for urban India. The informal settlements in the country are spread across all the states/UTs except Manipur, Daman and Diu, Dadra and Nagar Haveli and Lakshadweep. According to the Census 2011, the slum population accounts for around 5% of the total population and 17% of the total urban population of the country. Although tap water is the major source of drinking water for the majority (around 70%) of these households, one-eighth of these still need to travel more than 100 meters to fetch drinking water. The situation is more dismal in terms of sanitation as around 20% households still continue to defecate in the open.

It is staggering to note that the situation of the urban informal region in the capital city is no different from the rest of the country. Delhi slums are home to a population of about 30 lakhs living with poor access to basic amenities of water and sanitation. There is a growing need to assess the quality of infrastructure available to slum residents. With this backdrop, the present paper aims to outline the access to water and sanitation facilities, concerns arising out of the inadequacies in these infrastructure and the attitudes of the slum dwellers towards the issue of open-defecation vis-a-vis usage of communal toilets. The results of this study are important for researchers and policymakers for urban planning and inclusive development.

Methodology

According to the statistics provided by the Delhi Urban Shelter Improvement Board (DUSIB), there are 672 slums/ JJ colonies spread across eleven revenue districts in Delhi. These informal settlements are built on land owned by the state, central or local government bodies such as DUSIB, Municipal Corporation of Delhi (MCD), Delhi Development Authority (DDA), Flood Control Department, Railways, Public Works Development (PWD), Central Public Works Development, Gram Sabha, Land and Development Office, Cantonment Board, Forest Department, Air Force and New Delhi Municipal Council. The present qualitative study was conducted in 2014 in the following three slums in Delhi: Nehru Camp (East Delhi), Ravidas Camp (East Delhi) and PattharwalaBagh (North Delhi). These slums were selected based on purposive sampling technique. From each slum, a sample of twenty respondents was chosen using the two-stage sampling technique. In the first stage, households were chosen as primary units using simple random sampling. From each selected house, an adult individual, preferably the head of the household was

interviewed. The open-ended interview technique was applied to allow for in-depth information on the plight of the slum-dwellers. The official statistics suggest that there were 283, 603 and 177 jhuggies in PattharwalaBagh Camp E Block, Nehru Camp and Ravidas Camp respectively at the time of the survey. We collected a sample of 30 residents from each slum for the semi-structured interviews. We also interviewed slum leaders, people with political relations and the manager(s) of CTCs. Besides, focussed group discussions were conducted with the slum residents to acquire an overview of their issues. The results of this paper are based on the combination of semi-structured household interviews and practical field observation.

Results

(a) Location

Nehru Camp and Ravidas Camp are situated in Patparganj area in East Delhi. Nehru Camp is located on one side of the National Highway-24 in Patparganj. According to the focussed group discussions, the houses in this camp are situated on lands owned by three authorities- MCD, DDA and PWD. Ravidas Camp is a small slum colony located near Mother dairy plant in Patparganj constructed on DDA land. PattharwalaBagh is a large slum in the Wazirpur area, situated in the Northwest district of Delhi, on land owned by the Flood Control Department. The discussions with the residents suggested that there are around 1000 jhuggies in Nehru Camp and PattharwalaBagh, and approximately 200 in Ravidas Camp.

(b) Water Supply

The survey suggests that neither water connection, nor water tanks were available in any of the three slums. Respondents reported collecting water through a Delhi Jal Board pipeline passing through the slum. The households were using this water through shared, or private connection within their jhuggies. As a result, inspite of the absence of the provision of water by the government, the interviewers were quite satisfied with the availability and quality of water. Nonetheless, with no pipeline passing through their area, the residents on MCD land in Nehru Camp faced difficulty in fetching water. To avert long queues at the water source nearby, few of them collected water from their neighbours living on DDA land.

(c) Sanitation

Although water was accessible by some means, the situation was found to be appalling for sanitation facilities. Being illegally occupied land, the government has not laid down the sewer lines. At the time of the interview, CTCs were found in Ravidas and Pattharwala camp. Their use was quite prevalent in these two slums among all the respondents who lacked a personal facility. The residents of Ravidas camp were content with the cleanliness maintained at the community toilets. Through personal observation, it was observed that the female toilets were clean, airy and well lit, with 10 toilets, separate cubicles for bathing, and courtyards with taps and dustbins. The water connection was provided only in the courtyard instead of the individual toilet cabins.

It was revealed in the group discussion that five CTCs were available at Pattharwala camp. Some respondents reported that some of the CTCs and a few toilets within the facilities often remained dysfunctional. Due to limited facilities, the respondents complained about the time wasted while waiting in the long queues during morning hours. The consequences were severe for daily wage earners, pregnant women, children and old- aged people. Respondents were hesitant to reveal about defecating in open fields. One of the respondents, Sri Pal, initially claimed that all the eight members in his house use the community toilets. On further questioning, he admitted that his sons prefer open fields than using unhygienic CTCs. One of the respondent said, "The latrines are stinky

and clogged with excrement, aggravating the insanitary condition of our slums”. Moreover, two interviewees from very low-income households expressed high user fees as a reason for not using latrines. The per-time user fees were reported to be Rs. 2 for men and Rs. 1 for women. Other respondents reported of defecating in open only when these toilet complexes were closed. It was revealed through the group discussion that CTCs were not used by children because of being located away from home.

Out of the three slums, the sanitation situation was the worst in Nehru Camp. With no community facility, a majority of the respondents reported of defecating on the open field across the highway. It was observed that the shared latrine facilities were constructed by people living on the DDA and PWD lands. This is because the big drain beneath the DDA and PWD lands enabled them to flush the feces directly into the open drains. Residents of the jhuggies built on MCD land reported their inability to construct the facility as there was no way of fecal management for these houses. Some of them, therefore, constructed a shared facility on DDA land by pooling funds. It was disturbing to note that these slum dwellers often faced injuries during road accidents while trying to reach the open fields. One of the survey households faced a serious financial setback after the head of the household met an accident while crossing the highway to reach open fields.

The female respondents considered open defecation a compromise on their dignity and safety. Questions were asked regarding the willingness to pay for a personal facility. All the respondents in these three slums expressed the desire to construct personal latrines. However, they were constrained by the lack of affordability and the absence of sewer lines. We observed that the issue of unaffordability was resolved at many places by sharing the financial responsibility of building and maintaining, and usage of toilets among a few households. This reflects the willingness to use toilets even though it entails cost. But, the practice of sharing toilet was adopted only on lands located near a drain (used for dumping the feces). The lack of sewer pipelines was found to restrict the households not located near the drain from building any sanitation facility. Traditional pit latrines were also constructed by many slum dwellers.

Conclusion

Our findings reveal that the slum dwellers did not lack access to water due to the presence of alternative facilities. Slum residents are deprived of development and prone to illness and safety risks primarily due to the lack of sanitation facilities. Discussions regarding the willingness to pay and use these facilities implied that space and financial constraints, and the absence of sewer lines are the significant causes of their inability to build toilets. Slum residents are essentially unaware of the health benefits of using hygienic practices. Notwithstanding, the interviewees in our sample revealed the inclination to build and practice safe sanitation practice for the sake of convenience, privacy and women’s dignity.

Discussion

Water and sanitation are prominent in determining social and health outcomes. The deficiency of these facilities hampers the development of human capital. This contributes to the possibility of poverty trap among low-income households. Although these poor households attempt to solve this concern by adopting a shared-latrine approach, its consequences are dire. As the sewerage facilities are non-existent, the excreta from these toilets are flushed to open drain, thereby contaminating the water bodies. Therefore, the illegal construction of latrine facilities by the slum-dwellers poses a serious threat to the environment. The negative externality of these individual decisions is overlooked due to the significant benefit of convenience by having a facility close to the dwelling. Further, sharing the cost and usage of toilets rarely comes with the sharing of maintenance

responsibilities. More emphasis should, therefore, also be placed on behavioral change, focusing on the proper usage and cleanliness of the facilities and hygiene education practices.

The current preponderance of traditional pit latrines used by the majority of the urban slum dwellers is not a sustainable solution. These facilities fill up quickly due to small volumetric capacity for most pits, a high number of users, and are not easily or regularly emptied. As a result of the steady increase in the population of the slum dwellers coupled with the construction of unplanned structures, the space available for constructing new traditional pit latrines is continually diminishing. To this end, I recommend the shift towards alternative low-cost sustainable options, such as pour-flush facilities. The contents within the pits of these facilities can be easily removed after they have become full, enabling the latrine to be re-used without the need for the construction of a new pit and superstructure in such densely populated areas.

The Millennium Development Goal report findings, combined with this survey, indicates that the growth of this country is not doing much for the improvement of the poor, who are still struggling for basic amenities. The Millennium Development Goal can be achieved in the true sense by making political commitments, scaling up the effectiveness of interventions, placing adequate monitoring mechanisms and creating awareness about right hygiene practices along with sanitation interventions.

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