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A qualitative study of access to sanitation amongst low-income working women in Bangalore, India

Divya Rajaraman, Sandra M. Travasso and S. Jody Heymann

ABSTRACT

In India, access to sanitation amongst the urban poor remains low, and women are worse affected than men. Little is known about barriers to sanitation at the workplace, a location where working adults spend close to half of their waking hours. To explore access to sanitation facilities at the workplace amongst poor urban women, semi-structured interviews were conducted with 48 women working in low-income jobs in Bangalore. Access to sanitation varied by occupation group, with construction workers and domestic workers being the worst affected, and factory workers and street vendors better off. Consequences of inadequate access to sanitation included shame and fear related to urination and defecation in open areas, holding back the urge to urinate or defecate, walking significant distances during working hours to use a latrine, inability to maintain adequate menstrual hygiene at work, loss of pay as a result of missing work during menstruation and resentment towards employers who did not provide access to latrines. The findings reveal significant shortcomings in access to sanitation at the workplace for poor urban women. Extending legislation and improving the implementation of current regulation would improve access to sanitation at the workplace, as would increasing the coverage of public toilets.

Key words | India, low-income women, sanitation, working conditions

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INTRODUCTION

Sanitation was recognized as a human right within the International Covenant on Economic, Social and Cultural Rights in 2010, and is considered to be derived from the right to an adequate standard of living (de Albuquerque & Roaf 2012). Access to sanitation and hygiene facilities is important for dignity and essential for individual, community and environmental health. Poor sanitation can contribute to the spread of diseases such as diarrhoea, cholera, typhoid, hepatitis and parasitic infections through the contamination of soil and water sources and vector transmission (Mara *et al.* 2010). Lack of access to sanitation facilities can also lead to detrimental individual health behaviours: for example, reducing consumption of water or holding back the urge to urinate may increase the risk of urinary tract infections (Nygaard & Linder 1997), just as reducing the frequency of defecation can cause chronic constipation and associated health problems. For adolescent girls and women, inadequate sanitation is associated with poor menstrual hygiene, which may increase the risk for pelvic inflammatory disease and reproductive tract infections (Wateraid 2009). Additionally, inadequate systems of disposal for pads and cloths to absorb menstrual blood can clog up sanitation systems and contribute to an insanitary environment (Kjellén *et al.* 2012).

Sanitation is a pressing concern in relation to rapid urbanization in low-income countries (Sclar *et al.* 2005; Riley *et al.* 2007; Water and Sanitation Program 2009). In India, a country with almost 377 million urban residents, almost a quarter of who live in slums (Ministry of Housing & Poverty Alleviation 2008; Registrar General and Census Commissioner 2011), only 52% of urban dwellers are using improved sanitation facilities, and approximately 18% are open defecators (WHO & UNICEF 2008). Amongst the

doi: 10.2166/washdev.2013.114

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urban poor, women are less likely to have access to or utilize communal and public toilet facilities (Biran *et al*. 2011; Transparent Chennai 2011). Sanitation is also closely tied to historic social and economic inequalities; not only have the lowest castes faced significant occupational hazards as human waste scavengers, but within a traditional caste system, lower caste groups are prohibited from accessing facilities (including toilets) that are used by members of higher castes (Burra *et al*. 2003).

In recognition of the need to improve sanitation in cities and towns, the strategic priorities of the Indian government's National Urban Sanitation Policy (2010) include ensuring city-wide sanitation plans, provision of adequate infrastructure, increasing the supply of public toilets through continued construction and maintenance of communal latrine facilities, and increasing demand for household ownership of latrines (Ministry of Urban Development 2010). While these plans take account of access to sanitation in homes and public places, the policy does not consider access to sanitation at workplaces, despite the fact that working adults spend approximately half their waking hours at work. There has been little systematic investigation of access to sanitation at workplaces in India or elsewhere.

The qualitative study reported in this paper contributes to filling this gap. The study focuses on low-income women, a demographic group seriously affected by inadequate access to sanitation in urban areas. While the labour force participation rate of women is lower than that of men, the number of working women in India is rapidly growing with urbanization and globalization. At the last count, 14.68% of all women were working in full-time employment, while 10.99% were working in 'marginal' employment (National Institute of Public Cooperation and Child Development 2010). The objective of this study was to document access to sanitation and hygiene (soap and water) facilities at workplaces amongst low-income urban women, in order to identify areas for further research and potential policy implications. The study is set in Bangalore, the fifth most populous city in India, with approximately 9.6 million inhabitants and a decadal growth rate of 46.7% (Registrar General and Census Commissioner 2011).

METHODS

Sample and recruitment

Data for this study were gathered as part of a project to document the working conditions of low-income women. In addition to access to sanitation at the workplace, the project also explored issues such as health-care seeking, breastfeeding, and child-care; consequently, the study sample included only reproductive age women. The most common occupations amongst this demographic were identified through visits to five slums in different parts of the city, where a rapid survey of households was conducted to assess employment patterns of residents. The information from this survey was corroborated through five key informant interviews conducted with staff of NGOs working in the areas of women's issues, health or community development, who were asked to describe the most common occupations amongst their female clientele. Construction work, domestic work, fruit and vegetable market work, and garment factory work were selected for inclusion in the study. While incense rolling was also a common occupation, this was not included in the study because women who are involved in this activity typically work short and flexible hours at home.

The four occupation groups included in our study represent a range of working conditions in the formal and informal sectors, with different working hours, standards of employment, and benefits, as summarized in Table 1. Women working in paid domestic work may have greater flexibility in timing, but often work part-time in multiple homes and need to balance the demands of several employers, while receiving minimal labour protection. Street vendors may work independently, in partnership, or as daily wage labour in markets. While they may have greater flexibility in setting their working times, they are not guaranteed a minimum monthly income. Construction is a high growth sector, providing employment to a large number of rural immigrants to cities. It is regulated by the Building and Other Construction Workers' Act (Government of India 1996). Finally, the garment industry is a high growth industry employing mostly women, and regulated by the Factories Act (Government of India 1948). While wages are considered low, the workers may be more likely to

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Table 1 | Characteristics of selected occupation groups

	Construction work	Domestic work	Fruit and vegetable street vendors	Garment factory work
Employer	Employer in formal economy	Employer in informal economy	Self-employed or employer in informal economy	Employer in formal economy
Work hours	Variable, usually day time	Part time/full time, usually day time	Variable, usually from late morning to late evening	Usually 40 hour work week, with overtime for evening and weekend work
Pay	Daily wage	Usually monthly	Based on revenue for stall owners Daily wage for labourers	Monthly
Leave	No paid leave for daily wage labour	Depends on employer	No paid leave	Paid leave and sick leave (legal requirements)
Labour protection	Regulated by Building and Other Construction Workers' Act (Government of India 1996)	Minimal: nine out of 35 states have included domestic workers in the minimum wage regulations, but not enforced	None	Regulated by the Factories Act and export oriented companies may have to meet purchaser labour standards
Growth of sector	High growth	Stable	Stable	High growth
Barriers to entry	None	None	High for ownership of a stall in established neighbourhoods (tends to be inherited) Police approval (may require lump sum or regular payment) in new neighbourhoods None for wage labour	Some factories require primary or secondary education

receive labour protection because of unionization and export-imposed standards for labour.

A total of 48 women participated in the study: 12 construction workers, 12 domestic workers, 12 street vendors, and 12 garment factory workers. We sought to maximize the range of working conditions and experiences across the four occupation groups by including several workplaces and residential locations across the city. Participants were recruited by quota (based on occupation), both directly from workplaces (at two construction sites, four fruit and vegetable markets, outside three garment factories) as well as from their residences (22 medium to large slums across Bangalore).

Data collection and analysis

The data collection involved a short socio-economic questionnaire and a voice recorded interview of about an hour's duration. The procedures were explained to the participants, and information sheets were available for participants who were literate. All participants signed or initialled an informed consent form. A small cash honorarium was given to participants to compensate them for their time, as some of them took time off work to be interviewed. The research protocol received ethical approval from the institutional review board of the St John's Medical College, Bangalore, India.

Interviews were conducted by a qualitative researcher in Kannada, the local language, at the time and place that was most convenient to the participant. For confidentiality and comfort, a private location was sought for the interview; however, a few street vendors preferred to be interviewed at their work place, while others wanted to be interviewed at locations in and around their homes, even at times when others could hear the conversation. The interview was open-ended, addressing a range of issues affecting the lives of low-income working women, including working conditions, and sanitation facilities at the workplace. Two

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phases of data collection were conducted, between August and November 2011, and December 2011 and January 2012. While all participants were asked about access to sanitation at the workplace and home, the theme of workplace sanitation was explored further in the second set of interviews ($n = 24$), to understand barriers and limitations in accessing sanitation at the workplace, access to water and soap for hand-washing after going to the toilet, and experience of menstruation while working.

Interviews were translated and transcribed in English, and were subsequently coded thematically, using NVivo qualitative data analysis software (QSR International 2010). Aliases have been assigned to all participants to maintain confidentiality.

RESULTS

Socio-economic characteristics

Key socio-economic characteristics for the different occupation groups are summarized in Table 2. Construction workers had the lowest household income and education levels and the least household assets. Access to sanitation at home was worst amongst construction workers; half of the women from this group were open defecators at home. In contrast, there were very few open defecators in the other occupation groups, and over half of women in other occupation groups had access to an individual or shared latrine at home. While there were not marked socio-economic differences between domestic workers, factory workers and street vendors, factory workers were generally better off, with higher monthly household income and education levels, and a shorter average distance to travel to work.

Access to sanitation at the workplace

Overall, 23 out of 48 women did not have access to a toilet at work. Access to sanitation varied substantially by occupation group. Construction workers had the least access to a latrine at work (0 out of 12). Although seven out of 12 domestic workers said they had a toilet at their workplace, only two had used it. Eight out of 12 street vendors had

Table 2 | Socio-economic indicators and access to sanitation for different occupations

	Domestic workers ($n = 12$)	Factory workers ($n = 12$)	Street vendors ($n = 12$)	Construction workers ($n = 12$)
Monthly HH Income[a] (USD)	50–200	35–225	55–185	35–185
Housing[a]				
Own house	6	6	4	5
Rented house	5	5	8	7
Education				
No education	4	3	5	7
Primary	7	6	7	4
Secondary and above	1	3	0	1
Cell phone ownership	7	10	10	7
Television ownership	9	8	11	3
Latrine access home				
Bush/Field	1	2	1	6
Individual	2	3	6	3
Shared	5	6	4	1
Community	4	1	1	1
Distance to work (km): Average (range)	3.1 (1–10)	1.8 (1–4)	5.5 (0.5–15)	13.5 (0.5–40)
Latrine access work	7	10	8	0

[a]There were two missing values for household income and housing.

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access to paid toilets at their workplace. Nine out of 12 factory workers had free access to a latrine at work throughout the working day.

Underlying determinants of access to sanitation at the workplace were employer practices (construction workers, domestic workers and factory workers), location of the workplace (construction workers and domestic workers), provision and cost of public services (construction workers and street vendors), and availability of water (factory workers). The findings are presented within these themes and the reported consequences of inadequate sanitation are summarized at the end of the section.

Employer practices

Most factory workers reported that they had access to employer-provided latrines with water and soap that were in an acceptable condition. Only two factory workers said that they were not consistently allowed to use the toilet during working hours. One study participant reported that she was limited to using the toilet during tea and lunch breaks, while another mentioned that there was an inconsistent water supply and the toilets were only opened when water was available:

> **'Latha:** we would go to the toilet even without water, so they lock it.
> **Interviewer:** so what do you do when you have to go?
> **Latha:** we don't go. We just sit and work.
> **Interviewer:** the whole day?
> **Latha:** we go whenever they open. When there is water they open it, so we go that time and then again they close.'
> **(Latha, Factory Worker)**

While domestic workers were often responsible for cleaning the toilets in the homes in which they worked, only two domestic workers reported having used a toilet at their workplace. As most domestic workers would have been of a lower caste than their employers, it is likely that not using the toilet in homes where they worked was linked to traditional social hierarchies which prohibit members of lower castes from sharing the facilities of members of higher castes, including kitchens, toilets and temples. These hierarchies appeared to be reflected in employers' refusal to allow their domestic workers to access the latrine, or in their own reluctance to ask:

> 'No, they will not allow it. If I need to go to the toilet, then I ask permission. Then I will go back to my home, afterwards again I have to get back to work. They won't allow me to use their toilet…They feel uncomfortable with that.'
> (*Lavanya, Domestic Worker*)
> 'They would allow it, but we ourselves feel bad about asking it. It's shameful for us in fact.'
> (*Meena, Domestic Worker*)

In most cases, domestic workers appeared to be resigned to a situation that they perceived as inevitable given economic hierarchies and caste-based proscriptions, even if they felt resentment about it:

> 'They pay us, so we can't question them, but we still have some anger as they have the toilet inside. They don't eat meat, we eat meat, so they don't like us to use their toilet. Even we don't like to use it.'
> (*Radhika, Domestic Worker*)

As no construction workers had guaranteed access to a toilet while at the work, it was evident that their employers felt no obligation to provide this facility. Although construction workers appeared to be resigned to the fact that their employers could or would not guarantee them access to sanitation, they expressed dissatisfaction with this situation, as well as shame:

> 'We feel, look how difficult this job is, we have to go and sit there [in a field to relieve ourselves]'
> (*Lingeshwari, Construction Worker*)
> 'We do feel shy in going [to the toilet] outside, being women. What kind of a country is this, everywhere there are people [to watch us].'
> (*Chandani, Construction Worker*)

Location

Because of the nature of their job, construction workers frequently changed the location of their work, and could only access a latrine if the construction site happened to have a

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latrine, was close to a public latrine facility, or a local resident allowed them to use their toilet:

> '[At our workplace] there is no facility as such, we go in search of toilet and bathroom, but we have to pay for the public toilets at our work place. We go to different places so we ask people and find out where it is.'
> (*Aleyamma, Construction Worker*)

In some cases, construction workers would ask people living in the neighbourhood if they could use their latrines; if the residents refused, and a paid community latrine was not a choice either because of distance or cost, they used an open defecation area – often, the construction site on which they were working:

> 'At the work place…? We will go near the bush or near the tree.'
> (*Gowri, Construction Worker*)
> 'Yes, we go outside, we don't have toilets. If we find any toilets nearby we go there, otherwise we just go to the open area or even behind a bush.'
> (*Iravati, Construction Worker*)

Unlike many construction workers who travelled significant distances to work, most domestic workers in the study worked in locations within walking distance of their residence (an average of 3 km or half an hour's walk from their workplace), and spent only a few hours in each house. They had breaks during the day or came home after a half day, and could use the latrine at their homes at those times.

Provision and cost of public facilities

While construction workers could use public toilets if there were any near their construction site, none reported using the public facilities regularly – both because of distance and cost. Most street vendors (8 out of 12) had access to municipal community toilets at the marketplaces, at a cost of 1–4 Indian Rupees (0.02–0.08 USD) per use. A couple of street vendors complained about having to pay the fees for using the facilities, and one woman spoke of cost as a real barrier, relating how the attendants would not let her use the facility and were very rude if she could not pay the full fee.

> 'For one time usage we have to pay 4 rupees for the toilet. Every time you go, you have to pay 4 rupees. Even to fill water we have to go inside so they ask us for money. Sometimes, even when I don't have change if I pay 3 rupees they will use very bad words. They don't allow us to enter inside.'
> (*Sita, Street Vendor*)

The communal toilet facilities were single sex, and the street vendors found the state of the facilities to be acceptable. They said that the facilities had an adequate water supply, and a place to wash hands; however, none of the public/community latrines were reported to have soap.

Water

Two factory workers mentioned that they could not use the toilet throughout the working day because of an inconsistent water supply. In one case (reported above), the employers restricted use of the toilet to times that water was available. In another factory, the women held back the urge to use the toilet:

> 'There is a water problem in the toilet. That is a bit of a problem, so many of the women won't go to the toilet often.'
> (*Bhanu, Factory Worker*)

Consequences of inadequate sanitation at the workplace

Because construction workers most often did not have access to latrines at or near their workplaces, they commonly used open defecation sites during working hours. This was associated with concerns about personal safety, and the danger of being bitten by insects or snakes. Consequently, some female construction workers would not relieve themselves unless they had company:

> '…if there is no bathroom, then we go to the open field along with another female, we would not go alone.'
> (*Lingeshwari, Construction Worker*)

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One of the challenges women spoke about was the shame of relieving themselves in the presence of men, which resulted in holding back the urge to urinate or defecate:

'**Aandal:** We hesitate to go outside, men will be standing there, we come back if they are standing.
Interviewer: Have you ever controlled yourself because you had to go [to the toilet] outside?
Aandal: Yes, when men are standing there.'
(*Aandal, Construction Worker*)
'Men will be roaming there near the empty space, we can't do anything.'
(*Rajeshwari, Construction Worker*)
'Men will be walking beside us, it's difficult to go.'
(*Nandini, Construction Worker*)

Across occupation groups, women who did not have access to a toilet spoke about holding back the urge to urinate and defecate. Domestic workers who went home during the working day solely to use the toilet mentioned that this could make their working day longer.

A major challenge for women who did not have access to a latrine at their worksite was maintaining menstrual hygiene. They were constrained in their ability to change sanitary pads or cloths, clean themselves, wash their menstrual cloths, and dispose of used sanitary pads and menstrual cloths. While some women spoke of the discomfort of not being able to change their pads/cloths all day, others would walk up to 4 km to go home during the day to change their pads/cloth, or even skip work (with loss of pay) on days of heavy menstrual flow.

Because construction workers had the least access to sanitation facilities, they were the worst affected during their menstrual periods. However, domestic workers also spoke about difficulties associated with having to go home to change their pads or cloths, a direct consequence of not being able to use the latrine at their place of work. One street vendor spoke about the embarrassment of having to wash her menstrual cloths in public as the public toilets did not have adequate washing facilities, while another mentioned that she stayed home for the first 2 days of her period since she would face too many difficulties in maintaining adequate menstrual hygiene at work.

Some examples are given below:

'**Interviewer:** do you have any [toilet/bathroom] facilities at your work place?
Rajeshwari: Nothing. We can't change in the open space, so I don't take cloth to the work-place, I come back home and change
Interviewer: if you are at far from home?
Rajeshwari: Then I will change there itself, or if I get my period while at work, I pick up some piece of cloth which has fallen on the ground and use it – I manage somehow.'
(*Rajeshwari, Construction Worker*)

'**Interviewer:** How do you change the [menstrual] cloth?
Chandani: We change it at home only.
Interviewer: Do you change it at your workplace?
Chandani: No, we cannot change it there, we wait until the evening when we come back.
Interviewer: How do you feel about that?
Chandani: We feel very uncomfortable, because the body becomes dirty. What will others think, it would have been better if we had stayed at home itself.'
(*Chandani, Construction Worker*)

'Interviewer: What do you do during your [menstrual] period time?
Parvati: I will not come during periods.
Interviewer: Why, what do you feel is the problem?
Parvati: Because we will not be able to clean properly then. After it is complete, then I come back.
Interviewer: How long will you take leave then?
Parvati: For 2 days. They [employers] will not say anything, but they will only pay me for the days I work.'
(*Parvati, Street Vendor*)

DISCUSSION

A United Nations Human Rights Council Report recognized that working men and women need access to a toilet at or near their workplace (Human Rights Council 2007). However, there has been little systematic documentation in India or elsewhere of how employers and public services can facilitate or constrain access to sanitation during working hours. In this study of low-income working women in Bangalore, India, almost half (23 out of 48) of the

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participants reported not having access to a toilet at their workplace. This number is likely to be an underestimate as several domestic workers who said they had access to a toilet at their workplace had in fact never used it. Consequences of inadequate access to sanitation included fear and shame related to using open defecation areas, holding back the urge to urinate or defecate, walking significant distances during the work day to use a toilet at home, inability to maintain menstrual hygiene, and loss of pay due to missing work during menstruation.

Access to sanitation during working hours varied significantly by occupation. Employer practices with regard to increasing access to sanitation were variable and employers' role in realizing the right to sanitation could potentially be strengthened through extending legislation and improving implementation of current regulation. Domestic workers in India receive little labour protection (Neetha & Palriwala 2011), and there is currently no legislation requiring employers to provide domestic workers access to a latrine. A Government of India task force on domestic Workers' rights (2011) recommended that residential associations should construct shared facilities in each neighbourhood (Director General Labour Welfare 2011). However, this is not binding, and does not address sanitation for those working in areas without residential associations.

The 'Factories Act (1948),' and the 'Building and other construction workers (regulation of employment and conditions of service) Act (1996)' mandate employers in India to provide either clean separate toilets for men and women, or clean lockable single toilet rooms. It is therefore striking that implementation appeared to be high in garment factories, and non-existent in construction sites. The relatively high access to sanitation in factories may be due to strong monitoring, the fact that maintaining hygiene and productivity within a factory setting requires toilets, or that labour legislation has been particularly well implemented in export driven factories as a result of domestic activism (Roychowdhury 2005) and global consumer movements that have resulted in monitoring to ensure that international labour standards are being followed (Elliott & Freeman 2003). Further research to explore access to sanitation in factories producing for domestic markets across different sectors will be important for assessing wider implementation of this aspect of the Factories Act. Monitoring of building companies' enforcement of sanitation regulations should also be undertaken in order to strengthen implementation. Even if building contractors are not able to provide access to a latrine onsite, they could potentially cover constructions workers' costs for using public latrines, as utilization was low amongst this occupation group.

In contrast, many street vendors were frequent users of public toilets during working hours. However, one-third of the street vendors in the study still did not have access to a toilet at their workplace, indicating uneven coverage of public facilities, even at marketplaces. The cost of the public toilets was also cited as a barrier by a few street vendors.

While the study reported in this paper has a small sample size, is limited to women and selected occupation groups, and only provides suggestive data on the important question of how caste may affect access to sanitation at the workplace, it provides some important insights into challenges faced by low-income working women in urban areas in accessing sanitation. The findings indicate that a substantial number of low income working women do not have consistent access to a latrine during working hours. This is bound to have negative consequences for individual health, environmental hygiene, and human dignity.

Potential policy implications of the findings include: (1) extension of current legislation to mandate that all on-site employers provide access to sanitation (thereby including domestic workers); (2) stronger monitoring of compliance to existing labour policies with regard to sanitation and enforcement of penalties; (3) greater advocacy for access to sanitation at the workplace as part of the dialogue on the right to sanitation; (4) continued advocacy for sanitation as part of labour rights movements; and, (5) expanded coverage of public toilet facilities for women, with investigation of options for reducing cost barriers. Additionally, further research to quantify access to sanitation for working men and women across sector, employment cadre, and social group will be critical for identifying good practices that can be widely adopted, and focussing efforts on the greatest gaps to be addressed.

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ACKNOWLEDGEMENTS

We would like to thank Anita Lobo for managing the entire data collection process with good humour, enthusiasm and compassion, and all the study participants for generously sharing their stories with us. The study was funded by the Indo-Canadian Shastri Institute.

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First received 5 October 2012; accepted in revised form 11 March 2013. Available online 6 May 2013

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