Sarma, J. 2016.
Accessibility to the built environment in Delhi, India: understanding the experience of disablement through the intersectionality paradigm.
Knowledge Management for Development Journal 11(2): 104-121
http://journal.km4dev.org/

Accessibility to the built environment in Delhi, India: understanding the experience of disablement through the intersectionality paradigm

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Accessibility of the built environment plays a significant role in the lives of persons with disabilities, as lack of accessibility results in exclusion from mainstream society. This paper aims to highlight the barriers faced by women with locomotor disabilities to access the built environment in the Delhi-National Capital Region (NCR) of India. Building upon the author's M. Phil research, the paper engages with aspects of the lives of study participants that have hindered their access to the built environment. In-depth interviews with 12 women with different locomotor disabilities were conducted and the transcripts were analysed using the intersectionality paradigm. The analysis highlights problems faced by the women while accessing education, employment, healthcare and public transportation. These problems include negative attitudes of society which restrict the women's mobility outside their homes. The findings demonstrate that accessibility of the built environment is determined by a myriad of factors which encompass components elaborated by the International Classification of Functioning, Disability and Health (ICF) including health condition, personal factors and environmental factors. The paper discusses these findings in light of the Accessible India Campaign, recently introduced by the Government of India.

Keywords: accessibility; built environment; women with locomotor disabilities; intersectionality paradigm; cities; India

Introduction

Disability is a complex concept to define for it has been understood and interpreted differently across time and space (Ghosh 2012). One of the reasons for this is that disabilities are heterogeneous, and the very experience of disablement varies depending upon the social location of the individual. Different conceptual models of disability have been put forward over the years in order to represent different socio-cultural assumptions made about disability and persons with disabilities, along with the ways they have been subjected to various forms of discrimination and stigmatization across different stages of human development (Ghosh, 2012). The two most important models of disability, according to Mike Oliver (1990), are the individual and social models, both of which originated in ‘developed’ countries in the West. The important tenets of the individual model are: firstly, the ‘problem’ of disability is located within the individual, and secondly, the assumed cause of this problem is functional or psychological limitations of the individual (Ibid). Medical understandings of disability are considered the most important aspect of this model, and are used to explain physical, sensory or cognitive disabilities in terms of medical etiology, and to stress the causal relationship of the origins and outcomes of various types of disabilities (Ghosh 2012). The model has been critiqued for putting undue stress on clinical diagnosis which provides only a partial and inhibiting view of the lives of persons with disabilities (Brisenden 1986).

In contrast, the social model of disability rejects the tenets listed above and locates the ‘problem’ of disability within society (Oliver 1990). This model has been inspired by the Union of Physically Impaired against Segregation (UPIAS), which in its manifesto entitled *Fundamental Principles of Disability* (1976) made a clear distinction between physical ‘impairment’ and ‘disability’. Physical impairment was defined as:

> …lacking part or all of a limb, or having a defective limb, organ or mechanism of the body,’ while disability was defined as ‘the disadvantage or restriction of activity caused by a contemporary social organization which takes little or no account of people who have physical impairments and thus excludes them from participation in the mainstream of social activities (UPIAS 1976: 3-4).

Building on this understanding, the social model shifts the focus away from physical, sensory or cognitive impairments of the individual to their inclusion in society. According to Oliver (1990), the cause of the problems faced by persons with disabilities is rooted, not in their individual impairments, but in the failure of the society to adequately account for the diverse needs of all people in social organization. Even though this model has been appreciated for its ‘revolutionary’ potential (Crow 1996), since the 1990s, it has been critiqued by several disability scholars for leaving out the impairment aspect of disability (see Crow 1996; Morris 2001; Wendell 2001; Shakespeare & Watson 2002). According to Shakespeare and Watson (2002), people are disabled both by social barriers and by their bodies. For this reason, they called for a social theory of disability that recognizes multiple dimensions, including bodily, psychological, cultural, social and political.

The definition of disability espoused by the International Classification of Functioning, Disability and Health (ICF) conceptually attempts to synthesize the medical and social models of disability in order to provide a coherent view of disability, known as the bio-psycho-social model (WHO 2001), which tries to overcome the limitations of both the models cited above. The basic idea of the ICF is that the difficulties faced by persons with disabilities are created by interactions between individual-specific factors, including health condition(s), as well as environmental factors; these difficulties include activity limitations and participation restrictions (WHO 2001). The ICF aims to establish a common language for describing disability and functioning in order to improve communication between different users (such as health workers, researchers, policy makers and the public, including persons with disabilities) and to permit comparison of data on disability across different countries, healthcare disciplines, services and time (WHO 2001). Although the ICF is gaining precedence internationally, methods used to measure disability prevalence still vary across countries. The World Report on Disability (2011), using data from World Health Survey and Global Burden of Diseases, both of which use very different approaches and assumptions, estimated the global prevalence of disability among the adult population (15 years and above) as 15.6 per cent and 19.4 per cent respectively. It also found that most developing countries report much lower disability prevalence rates than developed countries. This is because many developing countries collect data on a narrow set of individual-specific health impairments that generate lower disability prevalence estimates than those based on the ICF (WHO and World Bank 2011). For this reason, the Indian population census of 2011 estimated the prevalence of disability to be 2.21 per cent of the total population, even though alternate estimates using broader definitions suggest a higher incidence of 4-8 per cent (World Bank 2007).

Accessibility is recognized as an environmental factor in contemporary understandings of disability based on the ICF. ‘Accessibility’ is defined as the opportunity for an individual at any given location to take part in a particular activity or a set of activities (Jonas 1981, as cited in Kerbler 2012). Accessibility to the built environment means that buildings and places are designed and managed to be safe, healthy, convenient and enjoyable for all members of society (Kerbler 2012). Inaccessibility to the built environment includes inaccessible housing, transport, buildings and public spaces. Inaccessibility to the built environment plays a significant role in the exclusion of persons with disabilities from mainstream society (Barnes & Mercer 2003). This form of exclusion has been termed ‘institutional discrimination’ (Ibid). Disability activism to address this and other forms of institutional discrimination focuses on the removal of socially created barriers to participation by persons with disabilities in mainstream society.

In India, accessibility to public spaces is considered a right for persons with disabilities with the enactment of the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995. The law mandates barrier-free access in all public spaces and public transportation systems. Despite this, the country faces major challenges in implementation of the Act due to a multitude of factors, including poor institutional coordination and enforcement mechanisms, and a lack of awareness regarding the needs of persons with disabilities (World Bank 2007). As a result, the physical environment is largely inaccessible and inconvenient for persons with disabilities (Ghai 2002). Addressing this has been one of the major struggles of the disability rights movement in the country (Ghai 2003). Yet the movement has not been able to reach the masses as it is dominated by an elite and educated group of disabled male activists, and their concerns do not resonate with the majority of persons with disabilities by virtue of their class, caste, gender and rural-urban residence (Ibid).

The Government of India has very recently introduced the Accessible India Campaign to create awareness about accessibility issues in the country. The campaign has three important components: (a) built environment accessibility; (b) transport system accessibility; and (c) information and communication system accessibility (www.disabilityaffairs.gov.in). Through this campaign, the government has brought the access issues faced by persons with disabilities to the forefront, in order to enable their full participation in society.

In the context of these developments, this paper attempts to improve understanding of accessibility of the built environment from the perspective of women with locomotor disabilities[1] belonging to low and middle income backgrounds in India, the majority of whom live in poverty. Since the early 2000s, a number of studies in the Indian context have highlighted the vulnerabilities faced by women with disabilities as a result of their gender, disability and social class (see Ghai 2002; Ghai 2003; Addlakha 2007; Klasing 2007; Daruwala et al 2013; Ghosh 2013), but no study has so far highlighted the interaction of barriers present in the built environment with individual-specific health impairments and personal factors that restrict their life opportunities.

The aim of this paper is to fill this gap. The paper builds upon the author's M. Phil study of women with locomotor disabilities residing in the peripheries of Delhi-National Capital Region (NCR) in India, the fieldwork for which was carried out between October-December 2013. The broad objective of the study was to understand the lived experiences of these women by focusing on their health impairment, psychosocial health, the social environment and access to healthcare and other services.

Method

The study was conducted by the author with 12 women with locomotor disabilities who were contacted with the help of five organizations that are working in the disability sector in Delhi-NCR. Out of these women, seven lived in poverty. The health conditions related to the women's disabilities include: poliomyelitis (5), road traffic accidents resulting in spinal cord injury in one women and right lower limb injury in another (2), bone tuberculosis (1), farming accident resulting in amputation of right lower limb (1), fall from height resulting in spinal cord injury (1) and electrocution resulting in amputation of right upper limb and contracture deformity of the left upper limb (1). The health condition related to disability for one woman was unknown (1). The ages of the women ranged from 21-50 years. Eight of the women acquired their disabilities in childhood, below the age of 10; the rest acquired their disabilities in adulthood.

The study used qualitative research methods to explore and understand the meaning of being disabled for these women. Narrative interviews were conducted to understand their lived experiences. This method is used to encourage and stimulate the research participants to tell the researcher / interviewer something about important life events and the social context in which these events occurred (Muylaert et al. 2014). The themes that were covered during the interviews include: physical health; psychosocial health; relationship with family members (both natal and marital); relationship with husbands; difficulties in raising children; access to healthcare at the time of injury / illness which led to their disability; difficulties in accessing public spaces; social prejudice; education; employment; and poverty. All the participants were asked to sign an informed consent form for participating in the study. The interviews typically lasted between forty-five to ninety minutes, and were conducted either at one of the organizations which recruited them to participate in the study, or in their homes; whichever was more convenient for them. The interviews were conducted in Hindi, and were later translated and transcribed into English by the author.

The transcribed interviews provided rich material which was then analyzed manually as per the themes cited above. The intersectionality paradigm was used for analyzing the data because it is rooted in people's lived experiences and aims to support the social inclusion of previously marginalized and excluded populations (Hankivsky & Cormier 2009). It resists essentializing any single theme or category of analysis, and is attentive to time, place, location and historical specificity (Hankivsky et al. 2010). The intersectionality paradigm is appropriate for this study because it does not give primacy to any one factor while attempting to understand lack of access to the built environment, but gives equal emphasis to what is experienced at multiple 'axes of oppression' (ibid), and thus offers better potential insights into the multiple barriers and problems faced by the women.

Key findings

The findings of the study are presented below under different sub-headings that highlight that accessibility of the built environment is multifaceted, and intersects with various other aspects of the lives of the study participants. The sub-headings include quotes from the interviews presented in the words of the participants. Pseudonyms have been used to protect their identities.

Education

Education plays a very important role in shaping the lives of persons with disabilities, as appropriate education helps in reducing the negative impact of physical limitations on their futures (Pal 2011). The National Sample Survey (2003) suggests that as many as 59 per cent of literate persons with disabilities have not studied beyond primary school (cited in Klasing 2007). Geographical, physical, social and attitudinal barriers are some of the factors that exclude a vast number of persons with disabilities from education in India (Klasing 2007). In this study, only four participants were highly educated (graduate and above). These women studied at inclusive schools which fostered in them a positive self-image as they interacted with other children with disabilities; pursued education with adequate support from their teachers; and were later employed in the same schools as teachers or school social workers. However, not all the women were able to pursue education beyond a basic level due to different barriers. The experience of one of the participants, Bindu, illustrates some of the barriers these women face.

Bindu was infected by the polio virus, which paralyzed her lower limbs when she was about nine or ten months old. She uses crutches for her mobility. After the death of her father, responsibility for Bindu and her two sisters fell to her mother. Bindu's mother was of the opinion that she should get her daughters married at a young age in order to protect the 'honour' of the family. Like her non-disabled sisters, Bindu also got married at a young age. By that time, she had completed her primary education. According to Bindu, it was easier for her to attend the primary school as it was just across the street, and someone would always find time to drop her at school. But the middle school was far away from her home and there was no one to take her. Her mother paid more attention to her marriage than getting her to school. After her marriage, citing her difficulty in walking with the aid of crutches, Bindu's husband did not allow her to go to school.

> … I left school because I got absorbed with my marriage… After marriage, [name of husband] did not allow me to go to school. He said, "I will not let her go. She will face difficulty in coming and going."[Primary school] was just across the road, but after that [for middle school] I had to go to the colony. He said she will find difficulty… At that time, I did not have any anyone to help me board the bus in order to go to school. It was difficult for me to go there. Due to this reason I left school. (Bindu, 36, polio-related disability).

This narrative shows that a multitude of factors hindered Bindu's access to education, including her health condition and impairment, personal factors and the environment. Specifically, these barriers and factors include the death of her father, the attitude of her mother who considered marriage more important for her daughters than education, the geographical distance from her home to the middle school, her paralysis and use of crutches for mobility, and the way buses are designed which necessitates she have someone to help her board, and her husband's attitude which restricted her from attending school. Bindu's lack of education, however, did not appear to have an adverse effect on her life as her husband has been very caring, and she was able to open a cosmetic shop in her home with the support of the disability organization in her area. This was not the case for several other women who regretted their lack of education which restricted their employment opportunities and pushed them further into poverty.

Employment opportunities

Unemployment rates vary across different time periods and between different countries, but they are generally higher than the national average amongst persons with disabilities (Barnes & Mercer 2003). Persons with disabilities are also more likely to find employment in low-skilled, poorly paid and less secure jobs rather than professional or managerial roles where there are more opportunities for higher income, job security and promotion (Ibid). According to the 2001 Census, as many as 46 per cent of persons with disabilities in both rural and urban areas of India were without work (Chaudhuri 2006). This is in spite of the fact that 3 percent of vacancies in identified jobs in government and the public sector in India are reserved for persons with locomotor, visual or speech and hearing disabilities, after the enactment of the Persons with Disabilities Act, 1995 (Klasing 2007). In 2002, the proportion of persons with disabilities in regular employment was only 1.8 per cent and 7.3 percent in rural and urban areas respectively (Zutshi 2004). Low levels of education, physical inaccessibility of many workplaces (like difficulty in reaching the workplace, stairs, inaccessible toilets and narrow doors), as well as the perception that persons with disabilities are inefficient or unproductive, act as major constraints that restrict employment opportunities for a vast majority of Indians with disabilities (Ibid). This study confirms these patterns among the women interviewed. The following experience of Maya illustrates some of the many contributing factors:

Maya lives with her husband and three children. She left school when she was in the sixth grade, as she was not much interested in studies. After her marriage, during her second pregnancy, Maya developed abdomen tuberculosis. Due to lack of appropriate care and medication, she later experienced a recurrence of tuberculosis in her bones, as a result of which she has not been able to walk for over 12 years. Maya's husband works as a cook, but he spends much of his meager income on alcohol. In order to supplement the family income, Maya sells envelopes to local shops at the lowest price possible because she has not been able to negotiate a better price with the shopkeepers. Maya now regrets her decision to abandon her studies in her adolescence, as she thinks that education would have ensured a better future for herself and her children. Although the local disability organization organizes vocational training programmes every now and then, Maya is unable to attend. She uses a wheelchair for mobility, but the condition of the narrow lanes in her slum, with open drains, makes it impossible for her to leave her home without assistance.

> I make envelopes in the home and sell them… I make envelopes thinking I will get at least 10-12 rupees. That also gets over at home. I am not able to save. Sometimes I need to bring this and that for the home. It all gets over at home. Sometimes I feel that I will not make envelopes. But if I do not make it then there are difficulties at home. That is why I start working again… These girls [her daughter and niece] go to the nearby shops. They sell it there… For Re. 1 I sell 12 envelopes… The rate is very less… Paper is very expensive. It comes for Rs. 20… I buy the paper to make the envelopes. I need to get the flour also. It is all my hard work. One rupee is very less but I think what else can I do sitting at home? … I make [the envelopes] at home, and [the money] gets over at home. What is the benefit? I get 20-30 rupees that gets over in the home. What happens in one rupee? Nothing! Expenses have increased so much. Rice comes for 35 rupees per kilo. Flour is also very expensive. If you add all of these things, 1 rupee is very less. But the shopkeepers show a lot of tantrums. They say if you have to give for one rupee than you can give or else leave. (Maya, 36, bone TB).

Maya's narrative shows the different factors that have hindered her employment opportunities. This includes her decision to discontinue education in her adolescence, her health condition and related activity limitations, and use of a wheelchair for mobility and the narrow lanes of the slum where she lives that make it difficult for her to pursue vocational training and look for alternative jobs with better remuneration. In such a situation, when her husband spent his meager income on alcohol, it pushed the family deeper into poverty as has been well documented in other studies (see Samarasinghe 2009). As a result Maya had no other option but to earn a meager sum of money by selling envelopes under exploitative conditions.

Healthcare

Health is a very important dimension of a person's life. Access to timely and appropriate healthcare is of vital importance to persons with health conditions as it has the potential to prevent their health condition from developing into a disability, or to minimize the impact of their condition on the individual's functioning (Klasing 2007). Existing studies on persons with disabilities have also shown that they often develop secondary health conditions and are at greater risk of developing chronic illnesses (Reichard et al. 2011; Horner-Johnson et al. 2013). In spite of this, they have poorer access to health care (Pharr 2013). In the developing world, disability, poverty and health are intricately related, leading to a vicious cycle (DEOC 2009). In India, the health of persons with disabilities is a neglected issue, despite the fact that they utilize public health services more than their non-disabled counterparts (Ibid). The following experiences of Sarita and Pooja are indicative of this issue, and serve to highlight many of the problems that the women in the study faced in accessing healthcare:

Sarita was pregnant with her second child, when she fell from an auto-rickshaw and damaged her spinal cord. After the accident she complained to her husband about excruciating back pain, but he was unconcerned thinking that the backache was related to her pregnancy. After the delivery of her son, when the pain did not subside, she finally consulted a doctor. The doctor told her that the accident had damaged her spinal cord, and due to the delay in seeking treatment, her spinal cord had swollen, making her condition irreversible. The doctor advised her to come to the hospital for physiotherapy to relieve her pain. Sarita's husband did not accompany her on these visits, but gave her money for conveyance. He also resorted to physical and verbal violence after episodes of drinking, cursing her for her disability. Due to such conditions in her home, Sarita stopped going to the hospital for physiotherapy. As a consequence of this, she cannot bend down for a long time and has to depend on her children for helping her in the household chores.

> No [my husband] did not [come along]. He used to tell me that you go. He gave me the money for the auto-rickshaw fare. So I used to take the auto-rickshaw… He just never [came along]. My mother-in-law is old. She told me that if I were okay then I would have taken you to the hospital… [The doctors] saw that I was coming alone all the time. They asked me why I do not get anybody along. They asked me to bring somebody along. Most of the time, they spoke in English, which I did not understand. Nobody went along with me… After that I got tired of seeking treatment. So I just left it. When there is someone

> along with you, you feel a kind of support to go. Alone, what all I would have done? That is why I just left [seeking treatment]. (Sarita, 36, road traffic accident).

Pooja was pushed by a monkey from the roof of her home in a village in Uttar Pradesh about nine months before the interview. The accident resulted in the most severe kind of spinal cord injury affecting her high-cervical nerves (C1-C4) and resulted in paralysis of her arms, hands, trunk and legs. Her condition is clinically referred to as quadriplegia. After the accident, Pooja began living with her natal family in a slum in Delhi as her husband was unable to take care of her due to his busy work schedule. She goes out of her home only for her checkups at the hospital. As her narrative suggests, it is very difficult to take her out and it requires the assistance of four people to carry her. The lanes of the slum are very narrow to use a stretcher, and using a wheelchair is not an option due to the nature of her injury which makes it difficult for Pooja to sit.

> It is very difficult to take me out… (Pooja, 28, fall from height) [because her home is] very far from the main road. We do not use the wheelchair in the lane. We take her in a blanket, and we have a small charpoy. Four people carry her in the blanket, and wherever there is empty space, we put her down in the charpoy [to take some rest]. Then we take her again. (Pooja’s sister).

The above narratives show some of the problems faced by women with locomotor disabilities in accessing healthcare in India. In the case of Sarita, it was found that the attitude of her family members, especially her husband made her feel so dejected that she discontinued her treatment. This decision had an irreversible impact upon her spinal injury, with the result that she cannot bend down for long. The marital status of the women at the time of the onset of their health impairments was found to have a negative impact on their relationships with their husbands, often leading to neglect and domestic violence. In the case of Pooja also, her husband was not around for her treatment. It was her natal family who made all the efforts to make treatment accessible for her. But the built environment combined with the nature of her impairment aggravated her difficulties in accessing healthcare. These narratives show that different kinds of barriers restrict persons with disabilities’ access to healthcare.

Public transport

Public transport is an important means of travel for many people. Inaccessible public transport which has been designed only with able-bodied people in mind, plays a major role in impeding participation by persons with disabilities in many aspects of community life (Barnes & Mercer 2003). In India, persons with disabilities who have a disability certificate stating they are more than 40 per cent impaired are eligible to receive concessions for bus and train fares. In spite of this, the women who participated in the study revealed their difficulties in accessing public transport. The following experiences of Gauri and Sarah capture this problem.

Gauri was infected by the polio virus at the age of three or four years, which paralyzed her lower limbs. As a result of her disability, Gauri uses a wheelchair for her mobility. As a wheelchair user, accessibility of public transport is a challenge, either because of the attitude of many bus drivers and conductors or because of the design of the buses which are not wheelchair-user friendly. Because of this, Gauri spends a lot of money for her conveyance by auto-rickshaw which is several times the price of a bus fare.

> … like, you would travel by bus, I need to pay triple of that in conveyance [but almost five times]. For instance, if you are going by bus for Rs. 10, then I will have to take an auto for Rs. 50. That is it. I need to take an auto-rickshaw… Sitting in the bus is not comfortable for us to think about travelling by it. Even when the government has made provisions, the ones who drive the bus do not have any empathy for us. (Gauri, 21, polio related disability).

Sarah was infected by the polio virus when she was about nine months old. Over the years she has had several surgeries to restore her mobility, but most have been unsuccessful. She now uses calipers and elbow crutches for her mobility. Sarah works as a school teacher, and uses the school bus for conveyance. She does not use public buses for travelling due to the condition of the roads, which make it difficult for her to navigate through the traffic to board the bus. In overcrowded streets, she fears falling down even with the slightest push.

> I do not travel by buses. I had travelled once or twice and I faced a lot of trouble then. I faced problem in getting into the bus, or the bus would not stop for me, or the bus would stop at a different place. For instance, I want to get down at point A, while the bus would stop at Point B, and there would be so much traffic at the back side. Due to these reasons, I do not travel by buses… (Sarah, 32, polio induced disability).

The above narratives indicate that merely providing travel concessions to persons with disabilities is inadequate to remove other barriers to accessibility of public transport. Equal attention needs to be paid in addressing the attitudinal barriers of public transport personnel, the design of the buses, as well as the condition of the roads in order to enable persons with disabilities to move outside their homes with greater ease.

Internalization of negative attitudes and restriction of mobility

In addition to the physical barriers elaborated above, persons with disabilities also have to deal with negative attitudes towards disability from the wider society. Such attitudes can not only result in social discrimination, prejudice and even violence towards persons with disabilities, but can also have a detrimental effect on their self-esteem and participation in social life (WHO and the World Bank 2011). As a result, many persons with disabilities avoid going to places and moving out of their homes (Ibid). This result was observed among some participants in this study, as exemplified by Radha's experience recounted below.

Radha met with an accident about 12 years before the interview. The accident fractured her right leg. Due to lack of timely treatment, the injured leg is shorter than the other. She has to use crutches for her mobility and cannot walk fast. From her narrative, it is clear that she has internalized negative attitudes of society towards her disability and has restricted her mobility out of concern that her slow pace will inconvenience others.

> … sometimes I feel that because of me others are facing difficulty, then I stay behind at home. Others can walk fast, but I cannot [walk fast]. Because of this I stay behind. If I have to go out for work, and it is far than also I face difficulty in walking. If I take an auto, still I need to walk. The auto would stop somewhere, and I will have to walk ahead, which is difficult for me. So I usually stay behind. (Radha, 50, road traffic accident).

Not all of the women who participated in the study sought to cut themselves off from society. Given a choice, most wanted to take part in social gatherings. Inaccessibility of public places made these women feel excluded from social life. Quotes from Maya and Prema highlight this finding. Maya's life story has been elaborated previously. Prema acquired her disability when she was infected by the polio virus at the age of one or two months. Her limbs are paralyzed below her waist, which necessitates using a wheelchair for her mobility. Prema lives with her family in an urban village that has uneven roads that are full of potholes. Due to this, Prema restricts her mobility to within her home.

> I do feel sorry. For instance, if everyone is going somewhere, to a wedding or a function or anywhere, where the people from the neighborhood are going, and I am not able to go, then I feel sad. Now if in our festival Teej, everyone goes from the lane, at that time I feel sorry that only I am not able to go, rest all the people are going. If I were able to walk, I would have also been able to go. This is what I feel. I feel sad… (Maya, 36, bone tuberculosis).

> I feel if only I were like others. In the occasion of KarvaChauth everyone walks up to the terrace, they wear good saris, do their shopping, I feel that if my legs were better I too would have gone for shopping. But it does not help. So I do not think. I feel different. But there is no solution to that (Prema, 30, polio induced disability).

Both Maya and Prema felt sad about being excluded from social gatherings. They were not able to participate in these gatherings due to the poor condition of the roads in their respective neighborhoods, which curbed their independence and increased their dependence on family members. It is interesting to note that both Maya and Prema referred to their inability to participate in festivals that are celebrated by married women to pray for the wellness and long lives of their husbands. In such situations, these women seemed to forget about the physical and verbal violence and other forms of distress they suffered due to their husbands, and only lamented their impairments that denied them the joy and privilege of participating in such gatherings.

Discussion and conclusion

Accessibility of the built environment is a prerequisite for the inclusion of persons with disabilities in society. According to the World Report on Disability (2011), for accessibility initiatives to succeed, they should be based on sound evidence and take into account ‘external constraints’ such as affordability of the initiative, competing priorities, availability of technology and knowledge, and cultural differences. According to this report, the initial efforts to foster accessibility should aim at building a ‘culture of accessibility’ and focus on removing basic environmental barriers by constructing ramps, providing information in plain language and making announcements of each stop in public transit. Once the concept of accessibility gets embedded and as more resources become available, standards can then be raised to achieve a higher level of universal design, that is, the ability to accommodate all people, including persons with disabilities. The report further mentions that once the physical barriers to accessibility have been removed, negative attitudes may still persist, but can be overcome through education and awareness-raising (WHO and the World Bank 2011).

In India, as mentioned earlier in the paper, provisions on access were made in the Persons with Disabilities Act, 1995. These provisions include, (a) “special measures” to adapt rail, bus, aircraft and vessels for easy access by persons with disabilities, and adaptation of toilets, waiting rooms, etc.; (b) adaptation of traffic signals, pavements etc. to permit use of built environment for persons with disabilities; (c) provision of ramps, Braille and auditory signage etc. to permit use of public buildings and health and rehabilitation institutions, (d) provision for research on modifications in office and factories to promote access (The World Bank 2007). This Act, therefore, focuses on enabling accessibility to the built environment, among other things, by taking into consideration the specific impairments or difficulties experienced by people with a range of disabilities, including locomotor disabilities.

Despite these provisions, this study has shown that the built environment largely remains inaccessible for many women with locomotor disabilities in the country. The study highlighted barriers faced by women with locomotor disabilities from low and middle income backgrounds while accessing the built environment in Delhi-NCR, India. It found that the intersection of a number of factors have created barriers for these women, which in turn have limited their access to education, employment, healthcare and public transportation. Factors that have been identified as barriers in the study include the nature and degree of the impairment, gender, social class and lack of family support, including lack of support from the women's husbands. These barriers intersected with the already existing infrastructural and attitudinal barriers to create unique forms of exclusion from mainstream society for many of the women. In addition to restricting the women's mobility, the various barriers identified also had a deep impact on the women's mental health, as several women were found to have internalized negative social attitudes about their impairments, which in turn caused them to self-impose restrictions on their mobility by refusing to go out. Although for a few women, such restrictions were viewed in positive terms, as saving them from the agony of interacting with people who have negative attitudes about their disability, for others it was a matter of deep sorrow that they were not able to participate in the social life of their community.

This study, therefore, has revealed that accessibility of the built environment is multifaceted and encompasses components identified by the ICF, including health condition, personal factors and the environment. It is restricted not only by the failure of authorities to adapt the built environment as per the needs of persons with locomotor disabilities, like the women included in the study, but also due to a range of individual-specific personal factors that are often neglected when considering the design of the built environment and the access needs of people with diverse disabilities.

India is a signatory to the United Nations Convention on the Rights of Persons with Disabilities (UNRPD). Article 9 casts obligations on States Parties to ensure that persons with disabilities have access to the following areas: information, transportation, physical environment, communication technology and accessibility to services as well as emergency services. In line with this Convention, the Government of India, Department of Empowerment of Persons with

Disabilities and the Ministry of Social Justice and Empowerment launched the ‘Accessible India Campaign’ (*Sugamya Bharat Abhiyan*) on 3rd December, 2015 (the International Day of Persons with Disabilities). The campaign is also in line with the Persons with Disabilities Act under sections 44, 45 and 46 which provides for non-discrimination in transport, roads and the built environment respectively (www.disabilityaffairs.gov.in). According to the campaign website:

> It is the vision of the Government to have an inclusive society in which equal opportunities and access is provided for the growth and development of PwDs [persons with disabilities] to lead productive, safe and dignified lives. In furtherance of the vision of the Department, it is imperative to launch a Nationwide Awareness Campaign towards achieving universal accessibility for all citizens including PwDs in creating an enabling and barrier-free environment.

The campaign has been launched “for achieving universal accessibility that will enable persons with disabilities to gain access for equal opportunity and live independently and participate fully in all aspects of life in an inclusive society”. It aims to make the overall environment more inclusive for persons with disabilities, by enhancing accessibility of built environment, transport system and information and communication system in India (www.disabilityaffairs.gov.in). This demonstrates that the Government of India has prioritized accessibility issues faced by persons with disabilities in the country. Although this is a positive sign, what can be deduced from the campaign website is that it primarily focuses on the environment and health impairments of persons with disabilities, without taking into consideration the inter-linkage of these with the personal factors that are also responsible for hindering access, as was highlighted by the study.

In order to develop standards on accessibility that are meaningful for persons with disabilities, it is imperative that their voices are heard to improve understanding of their lived experiences and needs. Additionally, systematic evidence-based approach to accessibility standards is needed for better results (WHO & World Bank 2011). In the future, more qualitative studies need to be undertaken in this area with a bigger sample size in order to comprehensively understand the factors that facilitate or hinder accessibility to the built environment by different groups of persons with disabilities with different backgrounds in different contexts. It is only after such an effort is made that we can expect sound policies to improve access for persons with disabilities.

Notes

The term ‘locomotor disability’ has been used in the study to refer to ‘a person’s inability to execute distinctive activities associated with moving, both personally and objects, from place to place, and such disability resulting from the afflictions of musculoskeletal and, or nervous system’ (Kundu, 2000: 213). Even though this term has a medical / impairment leaning vis-à-vis other terms like mobility limitations / mobility restrictions, this term has been used as it is used more commonly in India to refer to such forms of disabilities.

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