

Barriers to Accessibility of Differently Abled People in Urban Built Environment – A Policy Overview in Indian Context

Ved Prakash Nayak and Kamal Agrawal

Abstract:- Our built-environment is a complicated result of the geopolitical and socio-economic evolution of society (Basha, 2015). In recent decades, the world is experiencing an urban boom. If we examine in the accessibility elements of the built environment in developing countries, the existing design of different types of buildings may quickly be observed as highly unfit for people with weak and limited capability. These structures are found in a few details with common enablers, such as ramps, railings, guide rails, single toilets, appropriate hallways and corridors, air ventilation and lighting systems, and other essential components (Basha, 2015). According to the World Bank (2017), over one billion people worldwide, or around one-fifth of the global population, may be classified in this demographic slab (Anita, 2018). People with limited-abilities are an important part of our society. This article discusses the numerous physical challenges encountered by them, as well as the present state of response preparedness and intervention in India and throughout the world. The research utilizes a literature-based approach to analyse the several characteristics of the built environment in order to determine their appropriateness for addressing the special needs of the population with limited abilities. The scope has been limited to the opportunities and challenges to accessibility for those people in the built environment of cities.

Keywords:- Differently Abled, Accessibility, Urban, Built Environment.

I. INTRODUCTION

Our urban environments and accompanying infrastructures may both hinder and facilitate access, participation, and inclusion in our society. As a result of special needs, 15% of the world's population experiences a lack of accessibility in built habitats, ranging from highways and housing to public places and spaces. Essential services like sanitation and water, health, education, transportation, and access to information and communication remain inaccessible in the majority of developing nations across the world. These hurdle lead to the exclusion of individuals who are differently-abled, resulting in a disparity in poverty and suffering rates. These drawbacks also runs contrary to the ideals of the sustainable Development goals 2030. People facing any difficulties when using physical functions, performing activities, or participating in them are referred to

as differently-abled (World Disability Report, 2011). It can be problems seeing, hearing, speaking, moving, mental retardation, mental illness, or a combination of these (According to Census of India). There are at least three other members of the family who are indirectly affected by the special needs for every differently abled person. More people will reside in cities as the world's population grows. This means that more people with limited abilities will be expected to work in cities. As cities increase in size, we must consider how they are created and who they serve. People with restricted abilities are in all ages, genders, races, and ethnicities. For far too long, cities have been built without much attention for how physical and social barriers affect individuals with limited abilities. People with limited abilities will feel socially included if cities are built with a barrier-free environment in mind. People with special needs account for 2.21 percent of the overall population in India (census 2011). In developing countries, the number of persons with limited abilities is anticipated to grow by 120 percent over the next 30 years (WHO, 2011). Inclusive planning cannot take place until we consider these populations, which is currently absent in underdeveloped nations. Despite the fact that persons with special needs make up about 2.68 crores of the Indian population, their needs are seldom taken into account while designing physical environments such as buildings, roads, public transit, municipal development, parks and recreational areas, and so on. An accessible built environment may be used as a tool for urban revitalization. People with limited abilities have the same right as everyone else to travel and use public and private infrastructure with dignity and freedom.

The purpose of this research paper is to investigate the idea of accessibility for people with restricted abilities in an urban built environment. The research focuses on examining case-specific examples gleaned from secondary sources. Throughout the process, the effort aims to discover indications that might aid in measuring the accessibility of people with restricted abilities in urban environments. This will aid in understanding the function of accessibility and the many forms of physical barriers encountered by people with limited ability in developing countries, particularly in urban areas. This will result in establishing the different research gaps relating to the accessibility of people with restricted abilities in the urban built environment.

The broad objectives of the essay are as follows:

1. *To identify the barriers to accessibility of the persons with limited abilities.*
2. *To understand the concept of accessibility of built environment.*
3. *To determine the lacuna related to the accessibility of persons with limited abilities in the urban areas.*

This paper mentions the inclusiveness of people with restricted abilities, especially the accessibility provided to them in developing-country urban areas. The study's focus will be on accessibility indicators for physical barriers linked to the accessible urban built environment. The indicators must be identified only via a survey of the literature on current case studies and national standards. It assesses the physical design components and their influence on individuals with restricted ability accessing various constructed structures and services.

II. LITERATURE REVIEW

A basic evaluation of the built environment in India, including major cities, reveals that the present statuses of many building types are woefully inadequate for accommodating individuals with weak and restricted abilities. These structures lack common facilitation features such as ramps, support balustrades, guiding rails, private restrooms, appropriate aisles and hallways, ventilation and lighting aid devices, and other required ingredients. This flaw may be found in many of the designed structures and places for healthcare, education, social welfare, commercial areas, housing projects, and other purposes. (Basha, 2015).

One of the most important factors of a country's progress is its infrastructure. The infrastructure will be sufficiently developed to anticipate the benefits for all sectors of the public, including older citizens, individuals with concealed/transitory illnesses, families with young children, pregnant women, and those with restricted skills (PwDs). The majority of people with restricted abilities in India are capable of doing profitable employment, but their opportunities are limited owing to numerous barriers to accessibility. An individual in a wheelchair, for example, is unlikely to search for work. This is an indirect effect of limited ability, generally owing to a physically uncomfortable condition, as well as being out of reach of transportation, lacking pathways, or staircases rather than slopes. Thus, physical barriers to accessibility are structural impediments in the natural and built environments that prohibit or stop an individual with limited ability from reaching a certain area or service. The movement pattern in an urban region is severely constrained by this type.

Rights and government policies-

1. *International Year of Differently abled Person* - The United Nations declared 1981 to be the International Year of Disabled Persons (IYDP). From 1981 through 1992, the United Nations declared a "Decade of Differently Abled People." It necessitated an approach centred on equalising opportunities, rehabilitation, and the avoidance of people with limited abilities.

The drafting of the World Program of Action Concerning Differently Abled Persons, adopted by the UN General Assembly in December 1982, was a key result of the International Year of Differently Abled Persons. This is also acknowledged in the Preamble of the Convention on the Rights of Persons with Disabilities (Global disability news portal, 2017). Since 1992, the United Nations has designated December 3 as International Day of Persons with Limited Abilities.

2. *The Convention on the Rights of Persons with Disabilities* - In terms of human rights and basic freedoms, the Convention on the Rights of Persons with Disabilities (CRPD) (United Nations, 2006) expressly acknowledges the equality of all persons with restricted abilities, including those with physical, mental, intellectual, or sensory impairments. Article 9 of the Convention on the Rights of Persons with Limited Abilities outlines the right to access buildings, the physical environment, transportation, and information and communication services. Article 30 recognises their right to participate in cultural life, recreation, leisure, and sport. The Convention emphasises that people with limited abilities should be able to live freely and actively participate in all aspects of life. To that end, States Parties shall take necessary steps to ensure that people with restricted abilities have access to the physical environment, transportation, information and communications technology, and other public facilities and services. Accessibility may be divided into three categories. 1. physical ease of access 2. Availability of services 3. Communication and information accessibility.

3. *The Indian Laws and Policies for differently abled* - 1981 was recognised as the International Year of People with Disabilities. The same year, India enacted a Constitution mandating equal treatment for all people. With this objective in mind, a working group was created, and the proposal of the Differently Abled Persons (Security and Rehabilitation) Bill, 1981, was submitted.

India signed the Proclamation of Equality and Full Participation of People with Limited Abilities in the Asian and Pacific Region in 1992, which was quickly followed by the Proclamation of Equality and Full Participation of People with Limited Abilities in the Asian and Pacific Region in 1992. Because of India's involvement in the declaration, the Parliament was able to adopt legislation in favour of persons with disabilities.

As a result, India enacted the Persons with Disabilities (Equal Opportunities, Protection of Rights, and Full Participation) Act 1995, igniting a national debate on legislation for differently abled people .

The PWD Act benefited a wide variety of people in India and made a thorough statement against the stigma of limited ability (Bagenstos 2004). Though the Act had a laudable purpose and was effective in improving people's views about persons with disabilities, it fell short of spreading awareness across all parts of society.

4. *Rights of Persons with Disabilities Act 2016* – This Act improves on the PWD Act of 1995. The 1995 Act stated that the state's commitment to offer these facilities is subject to appropriate fiscal resources to cover the costs of making these facilities accessible to people with disabilities. The Disabilities Act, 2016, on the other hand, contains no such provision. Section 45 of the Act, on the other hand, sets a time limit of five years from the date of notice of the regulations for making existing infrastructure and premises accessible, and this provision is not subject to any need of economic resources. *The government has been charged by the Disabilities Act of 2016 with providing a non-discriminatory environment of accessibility for those with limited abilities.* This is to ensure that they have equal opportunity and full involvement in all parts of life, including social, economic, political, and cultural activities, as other citizens. In consultation with the Chief Commissioner, the Central Government has been authorised, under Section 40 of the Disabilities Act, 2016, to formulate rules on standards of access to infrastructure, transport, information and communication, including appropriate technologies, etc. in urban and rural areas. Section 41¹ of the Mandates the government to take appropriate measures to provide facilities for people with restricted abilities at bus stops, railway stations, and airports that meet accessibility requirements. Section 42² also requires the state to give access to information and communication technologies. The Disability Act 2016, as shown, is designed to provide a barrier-free environment and tackles the non-discrimination issue of transport and the built environment.

5. *Accessible India Campaign (2015)* –

Or Suganya Bharat Abhiyan is a programme that is established in order to help the country's differently-abled people. The application includes an index that may be used to assess the barrier free design of buildings and human resource policies. On December 3, 2015, the International Day of People with Disabilities, the flagship programme was inaugurated. The project is also in accordance with Article 9 of the (United Nations Convention on the Rights of Persons with Disabilities), to which India has been a signatory since 2007. The campaign's goal is to make at least 50% of government buildings differently abled friendly in each state capital and central capital, as well as 25% of government public transportation vehicles barrier free for differently abled people. Further growth will also be envisaged with greater objectives in the following years. improving the overall environment and giving equal chances to the differently abled population. A website has also been created where individuals may share their thoughts on the accessibility of any building. The international airports in the country and railway stations which come under A1, A and B categories are to be made fully barrier free for differently abled people.

6. *Indian Standards and guidelines* – The three key Indian standards such as the “*Harmonised Guidelines and Space Standards for Barrier-Free Built Environment for persons with Disability and Elderly Persons*” (2016) *National Building Code* (2016), and *Manual Barrier Free Environment*, The Office of the Chief Commissioner for

People with Disabilities (2002) establishes rules and space requirements to ensure equal access to public buildings, streets, buses, bus stops, and railway stations. However, these rules exist in isolation and do not link to one another in order to incorporate individuals with restricted abilities as part of a more complete urban strategy.

1Section 41. (1) The appropriate government shall take suitable measures to provide—(a) facilities for persons with limited abilities at bus stops, railway stations, and airports conforming to the accessibility standards relating to parking spaces, toilets, ticketing counters, and ticketing machines; (b) access to all modes of transport that conform the design standards, including retrofitting old modes of transport, wherever technically feasible and safe for persons with limited abilities, economically viable and without entailing major structural changes in design; and (c) accessible roads to address mobility necessary for persons with limited abilities. (2) The appropriate government shall develop schemes programmes to promote the personal mobility of persons with limited abilities at affordable cost to provide for—(a) incentives and concessions; (b) retrofitting of vehicles; and (c) personal mobility assistance.

2Section 42. The appropriate government shall take measures to ensure that—(i) all contents available in audio, print, and electronic media are in accessible format; (ii) persons with limited abilities have access to electronic media by providing audio description, sign language interpretation and close captioning; and (iii) electronic goods and equipment which are meant for everyday use are available in universal design.

7. *Case Discussion* –

Rozana Basha (2015) worked to identify barriers arising from the bad planning and the resulting accessibility issues experienced by differently abled people in local area level for the districts of Prishtina and Prizren, Kosovo. Using primary survey and mapping the spatial characteristics of accessibility, she arrived at the general recommendations to be considered while planning inclusive public spaces. She identified some physical barriers to accessibility in both districts like the unsuitable sidewalks for persons with wheelchairs, the presence of electric poles in middle of the narrow sidewalks, rough and steep pavement surfaces, absence of curb ramps at intersections or crossings, the inappropriate height of push buttons at traffic signals, the lesser wide islands between the traffic belts, lack of tactile surfaces and strips, etc.

Shevlin et al. (2004) stated that In his study, students with restricted abilities said that classroom adjustments and modifications were insufficient in higher education environments. There were occasions when students just refused to make the required accommodations, whether it was additional time on an exam or arranging for a scribe in class. Differently abled students thought that colleagues' ignorance/inexperience made it difficult to obtain the support they needed and made them less ready to reveal their condition in some instances. The student replies

showed the necessity to alter university infrastructure and facilities in order to make them easier to utilize for students with special needs.

Harihara Prakash(2018) who has undertaken access audits of various public places, such as bus stand, railway station, schools, and temples, to identify the inaccessibility and help in promoting universal design, articulates that our daily movements are greatly affected by the built environment, examples like absence of ramps in a foot over bridge, inaccessible sidewalks, slippery floors, and unused bicycle lanes hinder people from using them. Developing countries like India still requires much efforts to make their built environment accessible to all. Many of the built structures can be made accessible by making small changes in structures. For example, a ramp close to a staircase, railings on the sides of the staircase and non-slippery floors will enable both differently abled and normal elderly people to easy access. Reduction and removal of Physical and Attitudinal barriers is the need of the hour for access and inclusion of the persons with limited abilities and promotes their participation in the activities and functions of a society.

Divya Subramanian and Arnab Jana (2018) on examining the accessibility of urban recreational open spaces for the elderly people in the three major Indian cities, found positive impact of facilities such as paved walkways benches, toilets, safety, free entry and shades, together with universal design factors such as universal access, handrails & ramps, mappings & sites and urban design elements. In turn this attraction catalyses a rise in the number of older users of open space. Presence of paved trails is a crucial feature for easier movement of elderly people, which might result in dangerous and hard maneuvers across unprocessed surfaces. Most of the open places had paved footpaths. But, Only 6 out of 51 recreational open spaces examined had availability of readable maps and signs with conveniently built handrails & ramps. For the elderly people features like the usage of shading devices, safety personnel, paved walking routes, maps and signs along with ramps and handrails, while non-elderly users had a greater attraction on aspects like free entry fees, the toilet presence, the tactile pathway and wheelchair friendly entry.

J. Bezyak, S. Sabella and R. Gattis (2017) have discovered several sorts of physical and mental impediments in public transport and complementary transport services for those with restricted abilities. They found several barriers to physical accessibility such as unusable steep ramps that restrict differently abled person from boarding, the lack of safe wheelchair areas for these individuals and the lack of public transit level boarding, etc. Their findings discusses alteration in built environment and behavior for differently abled people and complementing para-transit services who utilize public transport.

III. FINDINGS AND CONCLUSION

One out of every 12 households in India has one person with a limited ability which accounts for 26.8 million people according to a World Bank report. The state, however, as well as the country's private building activities is not deliberative of the differently abled. While the speed at which differently abled-friendly infrastructure is implemented is sluggish, Indian policymakers are taking measures to adopt these building methodologies. The revised National Building Code (NBC 2016) makes the buildings obligatory to make them differently abled-friendly. To make urban planning more inclusive, the updated NBC addresses the aspects in making buildings more accessible for differently abled persons. However, Madhurendra Sharma, a Supreme Court lawyer, feels that the biggest challenge with the National Building code is its proper implementation; as he mentioned that the code is voluntary in nature and it is up to the states, to incorporate it in their building bylaws thus making it difficult to implement. This suggests the phenomenon of lack of ignorance towards the subject matter. The NBC though voluntary must be followed throughout the states in order to have inclusive planning. On the contrary, there is a lack of sensitivity observed across the design institutions and even the authorities in charge. The authorities have a rather lenient approach towards the approval of buildings and lack of monitoring on site. A strict approval system and changes in the system and design guidelines together may bring out the change required to make the built fabric more accessible.

The Legislation on the Rights of Individuals with Disabilities, 2016 has sought to resolve the problems that people with special needs face in general. The Act explicitly tackles concerns such as access to public and private facilities, public utilities, workplaces, religious and recreational spaces and infrastructure.

One of the provisions of the Disability Act, passed in Parliament in 2016, set a deadline to provide barrier-free entry to buildings and transit networks and the Accessible India Campaign is taking measures to improve the same. But more than two years after the program started, according to the Department of Empowerment for Disability (DEPwD), just 3 percent of the buildings are made accessible. As suggested in the PWD Act and the UNCRPD, many agencies had laid down standards and norms for design of barrier free spaces, viz. Central Public Works Department (CPWD) Guidelines, National Building Code and Manual by the Chief Commissioner for Persons with disabilities, and Ministry of Social Justice & Empowerment (MSJE). On the contrary, the ground reality seems otherwise, with lack of implementation of the Act across major cities.

Hence, There is a significant need to draw out the three recommendations into an extensive easy reference document. To wrap up what has been said above, the study aims to call attention to the fact that the barriers to accessibility for the people with disabilities are not just limited to the attitudinal and emotional factors but they are primarily developing in the form of physical barriers too.

Physical barrier directly targets the accessibility opportunities of such people in urban areas which indirectly is against the right of persons with restricted abilities. If they are provided with accessible built environment, there will be more favorable opportunities to attain the current planning goals of inclusiveness in the developing countries.

REFERENCES

- [1]. Harmonised Guidelines and Space Standards for Barrier-Free Built Environment for persons with Disability and Elderly Persons', Ministry of Urban Development, Govt. of India, February 2016
- [2]. World Health Organization and World Bank. World Report on Disability. Manila: World Health Organization, 2011.
- [3]. United Nations. Disability and Development Report: Realizing the Sustainable Development Goals by, for and with persons with disabilities New York: United Nations, 2018.
- [4]. Ministry of Law and Justice, Government of India. The rights of persons with disabilities Act, 2016. New Delhi: Government of India; 2016.
- [5]. Basha R., "Disability and Public Space – Case Studies of Prishtina and Prizren", International Journal of Contemporary Architecture "The New ARCH", vol. 2, no. 3, pp. 54-66, 2015
- [6]. S. Anita, "RPWD Act, 2016: Fostering a Disability-friendly Workplace in Indian Organizations", Indian journal of Industrial Relations, vol. 53, no. 4, pp. 591-603, April 2018
- [7]. P. Ashok, K.P. Ashok, "The Legal Rights of the Disabled in India: A Review", Anweshan: Journal of Education, vol.-vii, no. 2, March 2018
- [8]. Harihara Prakash, "Health and Built Environment: Promoting Accessibility to the Persons with Disabilities" Indian Journal of Physical Therapy and Research | Volume 1 | Issue 1 | January-June 2019
- [9]. J. Thomas, S. Alka, S. Rajesh, "Strength and weakness of the guidelines of Rights of Persons with Disabilities Act, 2016 (dated January 5, 2018): With respect to the persons with neurodevelopmental disorders", Indian Journal of Psychiatry, vol. 60, no. 3, pp. 261 -264, July-September 2018
- [10]. Poulomee Datta, Santoshi Halder, Joy Talukdar and Tania Aspland "Barriers and Enablers to Inclusion of University Students with Disabilities in India and Australia": Inclusion, Equity and Access for Individuals with Disabilities Insights from Educators across World (2019)
- [11]. Shevlin, M., Kenny, M., & McNeela, E. (2004). Participation in Higher Education for Students with Disabilities: An Irish Perspective. Disability & Society, 15–30, 2019
- [12]. Shrimoyee Bhattacharya, Sonali Anusree Patro, Sujaya Rathi, "Creating Inclusive Cities: A Review of Indicators for Measuring Sustainability for Urban Infrastructure in India" : National Institute of Urban Affairs (NIUA) SAGE Publications 2016
- [13]. Rakhi Dandona, Anamika Pandey, Sibin George, G. Anil Kumar, Lalit Dandon "India's disability estimates: Limitations and way forward" : PLOS ONE, September 2016
- [14]. Subramanian D, Jana A, Assessing urban recreational open spaces for the elderly: A case of three Indian cities, Urban Forestry and amp; Urban Greening (2018),
- [15]. North Carolina Office on Disability and Health, 2004. Removing Barriers: Planning Meetings That Are Accessible To All Participants. Chapel Hill Univ. North Carolina, FPG Child Dev. Institute, NCOHD
- [16]. Bezyak, J., Sabella, S.A., & Gattis, R. (2017). Public Transportation: An Investigation of Barriers for People With Disabilities. Journal of Disability Policy Studies, 28, 52 - 60.
- [17]. Rachna Khare, Abir Mullick, G.R., 2011. Universal Design India Principles @ 2011; a Collaborative Process of Developing Design Principles.