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WALKABILITY AND ACCESSIBILITY FOR PEOPLE WITH DISABILITIES IN ETHEKWINI MUNICIPALITY: A QUALITATIVE EXPLORATION OF CHALLENGES AND OPPORTUNITIES

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ABSTRACT

This Paper Explorers the walkability and accessibility challenges faced by people with disabilities (PWD) within the eThekweni Municipality of South Africa. Employing a qualitative research design, key informant interviews were conducted with PWD and municipal management to identify the factors that facilitate or impede walkability. Despite the municipality's investments in accessible infrastructure and public transit, significant barriers persist, particularly in older townships and informal communities. The findings reveal a complex interplay between urban development and persistent accessibility challenges. To address these issues, the study advocates for several policy recommendations, including prioritizing the enhancement of accessible infrastructure, improving public transportation availability, implementing universal design principles, fostering collaboration with disability organizations, and increasing public awareness regarding accessibility needs. By addressing these concerns, the eThekweni Municipality can cultivate a more inclusive and accommodating environment for all residents. This research contributes to the broader discourse on urban planning and disability, promoting a paradigm shift towards inclusive design and equitable access to urban services.

KEY WORDS Accessibility; Inclusive Design; Public Transport; Walkability

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1. INTRODUCTION

Across the globe, over 1 billion people live with disabilities, representing roughly 15% of the world's population. Despite this significant presence, individuals with disabilities (PWD) often face overwhelming barriers that hinder their ability to navigate their environments, engage in community activities, and lead fulfilling lives. In many urban areas, inadequate infrastructure and a lack of accessibility not only isolate PWD but also undermine their dignity and potential, perpetuating cycles of marginalization and exclusion. The reality is stark: when cities fail to prioritize walkability and inclusive design, they deny countless individuals the basic right to participate in society. Walkability is a critical concept in urban planning and public health, significantly affecting individuals' physical activity, social interactions, and overall well-being. As defined by Forsyth (2015), walkability measures how conducive an environment is to walking. For PWD, accessible pedestrian infrastructure can greatly enhance independence, participation, and quality of life (Darcy & Burke, 2018).

This study focuses on the eThekweni Municipality, a diverse metropolitan area in South Africa, characterized by rapid urbanization and unique socio-economic challenges. The urban landscape of eThekweni presents a complex tapestry of neighborhoods that vary significantly in terms of accessibility and infrastructure development. Physical barriers in the built environment—such as the absence of safe road crossings and poorly maintained pathways—have created substantial obstacles for pedestrians, particularly older adults and individuals with disabilities. Greenfield (2017) highlights that poor design choices can lead to limited access, which severely affects daily living. Therefore, the provision of public amenities and thoughtful design of the physical environment are vital for enabling PWD to engage fully in society (Hamraie, 2017).

Walkability is not just a general indicator of health and well-being; it is essential for PWD. Accessible pedestrian areas allow PWD to participate in physical activities, which are crucial for maintaining both physical and mental health (Nahar, 2019). Furthermore, walkable neighborhoods facilitate access to social networks, economic opportunities, and essential services, reducing reliance on private transportation or assistance (Neven & Ectors, 2023). This independence is fundamental to enhancing their dignity, self-esteem, and overall quality of life. Thus, improving walkability in eThekweni holds significant potential benefits. By creating easier access to public transit, retail centers, healthcare facilities, and recreational areas, we can reduce social isolation and promote community engagement (Austin et al., 2019). Enhanced mobility may also lead to increased employment opportunities, further supporting social inclusion and economic empowerment. Moreover, a walkable environment benefits the entire community by promoting physical activity, reducing pollution and traffic congestion, and fostering social cohesion (Baobeid et al., 2021). . Inline with this thinking the research objective of this paper was to identify and analyze the specific barriers and facilitators to walkability encountered by PWD in eThekweni. This will involve examining physical environmental factors (e.g., sidewalk quality, curb cuts), as well as social and attitudinal factors that may influence the mobility experiences of PWD.

To achieve this objective, the paper will be structured as follows: First, a comprehensive literature review will examine existing research on the relationship between walkability, urban design, and the experiences of PWD, highlighting key challenges and successful interventions. Next, the methodology section will outline the approach used to assess walkability in the eThekweni Municipality, including data collection methods and analysis techniques. Following this, the results will present the findings of the assessment, illustrating specific barriers and opportunities identified within the

urban landscape. Subsequently, the discussion will contextualize these findings within broader theoretical frameworks and policy implications, considering how they can inform strategies for enhancing accessibility in urban environments. Finally, the paper will conclude with practical recommendations and a call to action aimed at stakeholders, emphasizing the necessity of collaborative efforts to promote inclusive walkability for PWD in eThekweni and beyond.

2. LITERATURE STUDY

A growing awareness of the need for inclusive urban environments has led to a considerable increase in attention to the nexus of walkability, disability, and urban planning in recent years. This study of the literature looks at the corpus of research on these linked ideas, with an emphasis on how they are used in the South African context.

According to Forsyth (2015), walkability is the degree to which the built environment promotes and facilitates walking, taking into account elements like density, land use diversification, and streetscape design. But walkability has always been viewed from the standpoint of the physically fit, frequently ignoring the particular difficulties experienced by those with impairments (Kirchner et al., 2008). According to Oliver et al. (2012), the social model of disability offers an essential theoretical framework for comprehending the connection between disability and the built environment. According to this approach, societal restrictions and exclusionary behaviours are what cause disability rather than being a natural characteristic of the individual. Within the framework of urban planning, this viewpoint emphasises the necessity of tackling environmental elements that impede the involvement and mobility of people with disabilities (Shakespeare, 2006).

The concepts of universal design, as presented by Steinfeld & Maizel (2012), provide an additional strategy for developing inclusive urban

environments. These guidelines promote surroundings that, to the maximum extent feasible, may be used by everyone without the need for special design or adaption. Urban planning that incorporates universal design principles may improve walkability for people with a range of needs and abilities (Lid & Solvang, 2016). Urban planning policies that aim to improve public health have been influenced by the concept of active living, which encourages physical activity as part of everyday routines (Sallis et al., 2006). But according to research by Rimmer et al. (2004), there are a number of obstacles that prevent people with disabilities from leading active lives, such as inaccessible built environments and a lack of suitable infrastructure.

A complex link is revealed when walkability and disability interact. According to studies, environmental impediments frequently result in decreased levels of community mobility and involvement for people with disabilities (Rosenberg et al., 2013). According to Kirchner et al. (2008), these obstacles may consist of badly kept sidewalks, a lack of curb cuts, insufficient street illumination, and inaccessible public transportation. Relatively little study has been done on walkability and disability in South Africa. However, research by Visagie et al. (2017) and Maart et al. (2007) shows how difficult it is for people with disabilities to navigate South African cities. Historical patterns of spatial segregation and unequal growth frequently make these problems worse (Turok, 2001).

More consideration of disability in the design and execution of walkability projects is called for in the recent work by Osman et al. (2023), which highlights the need for more inclusive urban planning approaches in South African cities. The adoption of the New Urban Agenda during the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in 2016 (United Nations, 2017) demonstrates how this is in line with global trends towards more comprehensive approaches to urban accessibility.

2.1. Barriers to Walkability for Persons Living with Disabilities

Despite being important for public health and urban development, the concept of walkability frequently falls short of meeting the varied demands of people with disabilities. This section looks at the various reasons why this demographic finds it difficult to walk, classifying them as physical barriers, behavioural and policy-related.

2.1.1. PHYSICAL BARRIERS

For those with impairments, the most obvious and palpable obstacles to walking are physical barriers. Wheelchair users and those with mobility impairments face serious obstacles due to uneven pavements, a prevalent problem in many urban locations. According to Rimmer et al. (2017), people with physical disabilities cited poor pavement conditions as one of the main environmental barriers that hindered their capacity to independently navigate urban settings.

Another important physical impediment is the absence of curb cuts or poorly built curb ramps. Wheelchair users and people with vision impairments are more likely to be involved in accidents when curb cuts are absent, as Thapar et al. (2004) showed. They found that in order to improve accessibility in urban planning, universal design principles are crucial.

Walkability problems are made worse by inaccessible public transport systems. According to Lubin & Deka (2012), people with disabilities are less able to participate in community activities and obtain necessary services when they are unable to use public transportation, which effectively decreases their walking radius. Their study emphasises the necessity of integrated transportation planning that takes into account every aspect of the trip, from the starting point to the end point, including connection in the "last mile".

2.1.2. ATTITUDINAL BARRIERS

Attitude barriers have a substantial impact on the walkability experience of individuals with disabilities, although being less obvious than physical barriers. Social interactions and urban surroundings are still shaped by discrimination and stigma. A qualitative study by Hammel et al. (2008) found that unfavourable social perceptions frequently deter people with disabilities from participating in community mobility, hence decreasing their perception of a walkable environment. Inaccessible environments are perpetuated in part because of a lack of knowledge among urban planners, legislators, and the general public about the different requirements of people with disabilities. According to Bromley et al. (2007), this ignorance frequently leads to well-meaning but insufficient solutions that fall short of meeting all accessibility needs.

2.1.3. POLICY AND REGULATORY BARRIERS

For all individuals, including those with disabilities, walkable environments are shaped in large part by the policy landscape. Still impeding development are, however, insufficient building codes and lax enforcement of current accessibility laws. After conducting a thorough analysis of building rules across several nations, Imrie & Kumar (1998) came to the conclusion that many of the current standards fall short of meeting the unique demands of people with disabilities and frequently place more emphasis on minimum compliance than ideal accessibility.

Moreover, enforcing accessibility requirements continues to be a major difficulty. When Evcil (2009) looked at how accessibility laws were applied in Turkey, she discovered that even though there were extensive requirements, there was a lot of non-compliance with urban development projects because of weak enforcement. The gap between the formation of policies and their successful implementation is a problem that many

nations throughout the world face, and this study emphasises it.

A lack of coordinated attempts to increase walkability is frequently caused by the fragmentation of policies across several governmental departments and levels. Urban planning, transportation, health, and social services sectors should work together to address accessibility and walkability as cross-cutting issues (Lawlor et al., 2006).

The obstacles that prevent people with disabilities from being able to walk are numerous and intricately linked. Inadequate regulatory frameworks, enduring hurdles in attitudes, and physical impediments in the built environment all work together to create urban environments that are frequently inhospitable and inaccessible. A multimodal strategy that incorporates awareness campaigns, strong policy execution, and universal design principles is needed to overcome these obstacles. Future studies should concentrate on creating all-encompassing plans that may successfully address these interrelated issues, encouraging genuinely inclusive and walkable urban settings for all residents, regardless of their ability.

2.2. Facilitators of Walkability for Persons Living with Disabilities

Encouraging walkability for people with disabilities necessitates a multimodal strategy that takes into account supportive policies, design principles, and physical infrastructure. This section examines important enablers that can dramatically improve urban areas' walkability for people with a range of abilities.

2.2.1. ACCESSIBLE INFRASTRUCTURE

Accessible and well-maintained infrastructure is the cornerstone of places that are walkable for people with disabilities. In this case, pavements are quite important. Aghaabbasi et al. (2017) carried out a thorough analysis

of pavement design factors, highlighting the significance of gradient, width, and surface quality in promoting wheelchair users' and those with vision impairments' mobility. Their research showed that smooth, non-slip surfaces, sidewalks with a minimum width of 1.8 metres, and gradients no higher than 1:20 greatly increased accessibility.

Curb cuts and ramps are equally important parts of infrastructure that is accessible. Crowdsourced data was used in a study by Froehlich et al. (2019) to map and evaluate curb ramp quality in urban locations. Their results emphasised how crucial well-thought-out curb ramps are to improving wheelchair users' mobility and independence. The investigators recommended the use of smart city technology to keep an eye on and repair these vital infrastructure components.

An additional important component of accessible infrastructure is pedestrian crossings. A thorough methodology for assessing pedestrian crossing accessibility was created by Asadi-Shekari et al. (2013), taking into account elements including audible signals, tactile guidance systems, and timing of the signals. Their study made clear how important it is to use multimodal design strategies when creating spaces for people with different kinds of disability.

2.3. Inclusive Design

In order to build environments that are accessible to all users, the idea of inclusive design—more specifically, universal design principles—has received a lot of support in recent years. The seven principles of universal design were outlined by Steinfeld & Maisel (2012). These include low physical effort, equitable usage, flexibility in use, visible information; easy and intuitive use, tolerance for error, and size and space for approach and use. These guidelines provide designers of urban environments a thorough foundation for creating environments that meet the various demands of people with disabilities.

A crucial element in improving walkability is the incorporation of sensory factors in design. Studying the idea of sensory urbanism, Degen & Rose (2012) emphasised how vital it is to take into account a variety of sensory experiences while designing an urban space. They found that paying attention to tactile surfaces, auditory settings, and visual clues could greatly enhance those with sensory impairments' ability to navigate and maintain spatial awareness.

2.4. Supportive Policies and Programs

For people with disabilities to live in truly walkable surroundings, regulations and programmes must be put in place. In this case, accessible travel choices are essential. A study on how accessible public transport affects the mobility of people with impairments in Norway was carried out by Bjerkan et al. (2013). According to their findings, people with disabilities were much more ready to participate in community activities and felt that a larger region was reachable when accessible buses and trains were available.

Pedestrian safety initiatives are a crucial element of policies that are helpful. Hashim et al. (2014) investigated how well-suited different pedestrian safety initiatives were for people with disabilities. Their study demonstrated the value of assistive technology adoption, traffic calming strategies, and education campaigns in lowering accident rates and raising the perception of safety in metropolitan areas among people with disabilities. The potential for improving walkability has been demonstrated by the incorporation of technology into urban planning and management. A smartphone-based approach for mapping accessibility elements in urban environments was developed by Saha et al. (2019). Their method showed how mobile technologies and crowd sourced data can be used to quickly detect and fix accessibility problems, making cities more accessible to people with impairments.

Improving walkability for people with disabilities necessitates an all-encompassing strategy that includes inclusive design ideas, accessible infrastructure, and supportive legislation. The physical basis of walkable settings consists of accessible pedestrian crossings, well-designed curb cuts and ramps, and well-maintained sidewalks. Urban planning that incorporates universal design principles and takes sensory factors into account can further enhance the usability of environments for people with varying abilities. Ultimately, encouraging policies and programs—such as those pertaining to pedestrian safety and accessible transportation—are essential in fostering an atmosphere that promotes walking and community involvement.

3. METHODS

This study uses a qualitative research design to investigate PWDs' views and perspectives to walkability in metropolitan settings. The utilisation of a qualitative technique is especially appropriate for this inquiry since it facilitates a thorough examination of the intricate and diverse aspects of disability perceptions concerning urban mobility (Creswell & Poth, 2016). With its focus on comprehending lived experiences and subjective meanings, qualitative research offers a lens through which to look at the obstacles to and enablers of walkability for people with disabilities. The argument made by Hammel et al. (2008) that qualitative approaches are crucial for documenting the variety of disability experiences and the underlying factors that affect involvement in community life further supports the appropriateness of a qualitative approach for this study. Furthermore, qualitative research enables the investigation of the lived experiences of disability in urban settings, as noted by Imrie (2012), offering revelations that quantitative methods can miss.

In this study, key informant interviews (KIIs) are the main technique used to collect data. According to Groce et al. (2011), KIIs are especially helpful in

disability research because they make it possible to collect rich, detailed data from people who have personal experience with the problems being studied. The tenets of emancipatory disability research, which emphasise the value of elevating PWDs' voices and perspectives in studies that affect them, are well-aligned with this methodology (Barnes, 2006). As a result, two interview formats are used in the study: key informant interviews with municipal administrators and individual respondent interviews with PWDs. This dual approach makes it possible to thoroughly examine the problem from the viewpoints of those who are responsible for urban planning as well as those who have been directly affected by walkability issues.

Nine PWDs were chosen to participate in one-on-one interviews. According to Guest et al. (2006), who discovered that saturation frequently happens during the first twelve interviews in homogeneous groups, this sample size is in line with recommendations for qualitative investigations aiming for theoretical saturation. Because the social model of disability emphasises the significance of understanding disability from the perspective of people who experience it, it is imperative that PWDs be selected as respondents (Oliver et al., 2012).

Purposive sampling, a method frequently used in qualitative research to locate and choose cases with a wealth of information pertaining to the phenomena of interest, was the sampling strategy used to choose PWD respondents (Palinkas et al., 2015). By using this method, it is ensured that participants possess the necessary expertise and understanding to offer insightful comments on the difficulties with walkability that PWDs encounter in urban settings. Two municipal managers were chosen for the key informant interviews. Considering the policy and planning views on urban walkability for people with disabilities requires engaging municipal managers as essential informants. This methodology facilitates the examination of any disparities between policy objectives and the actual

experiences of persons with disabilities, an essential field of inquiry in the field of disability studies (Lid & Solvang, 2016). Triangulation of data sources is made possible by the employment of informants who are both PWD respondents and municipal managers, which increases the validity and thoroughness of the results (Triangulation, 2014). A more comprehensive knowledge of the intricate interactions between social attitudes, individual experiences, and legislative frameworks that influence urban walkability for people with disabilities is made possible by this multi-perspective approach.

Semi-structured interviewing was used to ensure consistency between interviews and provide room for exploration of emerging themes (Kallio et al., 2016). Because it enables participants to express their experiences in their own words while still addressing important research questions, this method is very helpful in disability research. Consequently, the research methodology is well-suited to investigate the complex aspects of walkability for people with disabilities in urban areas because of its qualitative approach, use of KII, and deliberate sampling of both PWDs and municipal managers. This approach promises to produce rich data that can guide inclusive urban planning and policy-making, in addition to being in line with best practices in disability research.

4. EMERGING FINDINGS

An insightful analysis of the responses gathered from interviewees regarding the walkability of eThekweni Municipality for individuals living with disabilities sheds light on both the progress made and the challenges that remain. Various stakeholders, including municipal managers and people with disabilities, shared their perspectives, highlighting key areas where accessibility has been prioritized and where further improvements are needed.

Manager EL emphasized the progress made in certain urban areas

within eThekweni, stating, "We've seen neighborhoods benefit from infrastructure specifically designed to be accessible. Well-maintained sidewalks and pedestrian crossings with accessible traffic lights make a significant difference." He also noted the advantages of public transport, saying, "The Go Durban bus routes are a game-changer, allowing individuals with disabilities to navigate the city more freely." One of the standout features of the municipality is the Durban promenade, which Manager EL described as "flat and open, making it easily navigable for all, whether you're walking, in a wheelchair, or on a scooter."

Senior Manager CN echoed these sentiments, highlighting the importance of robust infrastructure. He stated, "It's essential for urban areas to have strong accessibility features in place. The Go Durban system is designed with inclusivity in mind, and we ensure that new buildings comply with the National Building Regulations for accessibility." Voices from the community also brought valuable insights into ongoing challenges.

SM, a person living with a disability, pointed out that while the eThekweni municipality provides accessible Sukuma buses, he remarked, "Their limited operational hours and coverage can really hinder access for many of us." He acknowledged some progress, noting, "Hospitals have made strides with ramps and accessible toilets, but there's still a lot of work to do, especially in terms of supporting individuals with varying disabilities." He also highlighted a gap in education, stating, "The University of KwaZulu-Natal is generally accessible, but they lack essential assistive devices in libraries that could help students like me."

Further input came from VM, who noted, "While there are sidewalks throughout the municipality, their narrow width can restrict ease of movement for those using mobility aids. We definitely need wider pavements to accommodate everyone comfortably." Senior Social

Worker KP introduced an interesting angle by discussing recreational facilities, stating, "The gym equipment available near the beachfront shows promise for individuals with disabilities, but its effectiveness depends heavily on the users' specific conditions. We really need more universally designed facilities that cater to a broader range of needs." The overall perspective reveals a multifaceted approach taken by the eThekweni Municipality to encourage walkability among individuals with disabilities. Key strategies include significant investments in infrastructure development, which feature accessible traffic signals, pedestrian crossings, and well-designed sidewalks. The introduction of ramp-equipped Go Durban buses reflects a commitment to improving public transport accessibility, while the Durban promenade stands as a model of both inclusivity and design excellence.

However, persistent issues challenge this progress, particularly in older townships and informal settlements where infrastructure is often inadequate. As SM pointed out, "In older areas, we face serious issues with infrastructure. Encroachments by hawkers on sidewalks force us onto roadways, which raises safety concerns." To address these issues holistically, comprehensive strategies and policies must be implemented to better meet the diverse needs of people with disabilities across all areas of eThekweni. This entails not only ensuring that accessible public transport is available throughout the municipality but also constructing more inclusive recreational spaces and educational environments. As VM stated, "We need to bridge the gaps in accessibility and provide equitable opportunities for all residents, fostering a more inclusive and walkable community for everyone."

4.1. Discussion

The synthesis of the results points to a complex interplay of progress and persistent challenges in eThekweni Municipality's efforts to promote

walkability and accessibility for individuals with disabilities. Even while the municipality has made progress in creating walkable neighbourhoods, accessible public transportation, and infrastructure, there are numerous challenges to overcome, especially in rural, older township, and informal settlement regions. These results are consistent with a larger body of research on the relationship between urban planning and disability, which highlights the significance of inclusive design and fair access to urban services (e.g. Imrie & Hall, 2003; Gleeson, 1999).

One step in the right direction towards fostering inclusiveness is the municipality's emphasis on developing urban infrastructure, such as visible traffic signals, pedestrian crossings, and sidewalks. But the absence of comparable infrastructure in older townships and informal settlements emphasises the need for more equal resource allocation and an integrated urban planning strategy that takes into account the requirements of all inhabitants, irrespective of location or socioeconomic class. This is in line with the universal design principles, which support the creation of environments that can be used by individuals with all kinds of impairments and capability (Persson et al., 2015).

The municipality's dedication to enhancing accessible public transport for individuals with disabilities is seen in the launch of Go Durban buses that have been modified with ramps for wheelchair accessibility. For those who depend on public transit for their daily mobility needs, these buses' restricted operation in some locations and strict adherence to schedules provide difficulties. This emphasises how crucial it is to increase the availability and frequency of accessible public transport options in order to guarantee fair access for everyone. This is corroborated by research by Neven et al., (2015), which highlights the necessity of adaptable and demand-responsive transport services for those with disabilities.

The promenade in Durban is an example of inclusive urban design since it was created to be a place that is accessible to everybody. People of all abilities have access to social interaction and recreational activities in this setting because of its open spaces, level surfaces, and incorporation of accessible amenities. This is consistent with studies on the psychological and social advantages of accessible public places for those with impairments (de Duren et al, 2021). But the absence of comparable accessible areas in other areas of the city emphasises how universal design principles must be more widely embraced in urban design and development.

It is notable that the municipality is working to make streets more walkable by adding bike lanes and pedestrian zones. These initiatives help to create a more sustainable and healthy urban environment. People with disabilities find it difficult to walk in the inner city and Central Business District (CBD) due to the growing number of hawkers and unofficial enterprises that encroach on sidewalks, putting their safety at danger. This demonstrates the necessity of tighter enforcement of laws and the creation of substitutes that strike a balance between the interests of unofficial enterprises and pedestrian rights, especially those of people with disabilities.

The results of the interviews with disabled people show a lack of knowledge and involvement in public health and land use planning decision-making processes. Due to a lack of representation, policies and programmes may be created that fail to sufficiently address the needs of those with disabilities, hence fostering inequality and exclusion. Persson et al., (2015) highlights the need to include individuals with disabilities in the planning phase to guarantee that their viewpoints and requirements are considered.

Lastly, there are still a lot of challenges to overcome even though eThekweni Municipality has made strides in encouraging walkability and accessibility for those with disabilities. To actually

build an inclusive environment where individuals of all abilities may thrive, a more holistic and balanced approach to public health, transportation, and urban planning is required. To achieve this, a dedication to universal design principles, fair resource distribution, and meaningful involvement of those with disabilities in decision-making processes are needed. By resolving these issues, eThekweni Municipality has the potential to lead the way in inclusive urban development both inside and outside of South Africa.

5. CONCLUSION

The study sheds light on the various obstacles and challenges that eThekweni Municipality faces in increasing walkability and accessibility for people with disabilities. Physical, infrastructural, and socio-political hurdles that obstruct PWDs' mobility and access to necessary services are all part of the complex terrain that the KIs revealed. These obstacles include a lack of inclusive design in public areas, insufficient walkways, and inaccessible public transit. The results also emphasise how PWD are marginalised in decision-making processes, which keeps them from reaping the benefits of urban development.

The interviews also found a number of possibilities and enablers to improve eThekweni's walkability. The Go Durban buses and the Durban promenade are examples of accessible infrastructure that the municipality has invested in, showing a dedication to fostering an inclusive community. Furthermore, there are encouraging opportunities for change due to the rising awareness of disability rights and the expanding lobbying activities of disability organisations. Policymakers and practitioners can learn a lot from the participants' suggestions for improvement, which include offering more accessible transit alternatives, putting universal design principles into practice, and actively incorporating PWD in planning processes.

The study's conclusions have a big impact on practice and policy. They highlight the

need for a paradigm change in urban development and design, moving away from an approach that primarily targets physically fit people and towards one that is more inclusive and takes into account the varied requirements of all citizens. A dedication to universal design principles is necessary for this, since they promote the creation of settings that are useable by individuals with a variety of skills and limitations (Imrie & Luck, 2014). The results further emphasise how critical it is to include PWD in decision-making procedures in order to guarantee that their needs and viewpoints are fairly represented (Löve et al., 2017).

5.1. Recommendations

To promote inclusive walkability in eThekweni, effective strategies must be adopted that address the needs of all residents, particularly persons with disabilities (PWDs). Here's an expert explanation of the proposed strategies:

5.1.1. INVEST IN ACCESSIBLE INFRASTRUCTURE:

- The foundation of walkability lies in well-designed infrastructure. This involves: Construction and Maintenance: Ensuring that sidewalks are not only built but also regularly maintained to prevent hazards like cracks or blockages. Curb ramps should be integrated at intersections to facilitate smooth transitions from street to sidewalk.
- Accessible Pedestrian Crossings: Implementing tactile paving for the visually impaired and timing pedestrian signals to allow sufficient time for safe crossing can significantly enhance accessibility.
- Public Spaces: Parks, plazas, and other public areas should be designed with features such as benches, shaded areas, and accessible paths that cater to users with varying mobility levels.

5.1.2. EXPAND ACCESSIBLE PUBLIC TRANSPORTATION OPTIONS:

- Transportation is a critical component for enhancing walkability. Key considerations include: Inclusive Public Transport Systems: Ensure that buses, taxis, and ride-sharing services are equipped with features such as low floors, dedicated spaces for wheelchairs, and audible announcements.
- Scheduling and Coordination: Public transport services should be scheduled in a way that considers peak times for PWDs, ensuring that they have reliable access to transportation when needed.

5.1.3. IMPLEMENT UNIVERSAL DESIGN PRINCIPLES:

- Adopting universal design principles means creating spaces that are inherently accessible to everyone. This includes:
Early Integration:
- Involve PWD advocates in the planning process for public spaces to identify their specific needs right from the beginning.
Flexible Features:

5.1.4. ENGAGE WITH DISABILITY ORGANIZATIONS AND ADVOCATES:

Collaboration with grassroots organizations is crucial for:

- Identifying Barriers: Direct feedback from PWDs about their experiences and challenges can help planners understand real-world obstacles.
- Developing Tailored Solutions: Co-creation of solutions ensures that interventions are practical and truly meet the needs of the

community.

5.1.5. RAISE AWARENESS AND EDUCATE THE PUBLIC

Community education plays a vital role in promoting an inclusive culture:

- Awareness Campaigns: Launch initiatives to inform the public about disability rights and the importance of inclusive design. This will help foster empathy and encourage community support for inclusive policies.
- Training for City Staff: Provide training for urban planners, architects, and city staff to ensure they understand the principles of inclusive design and the importance of accessibility.

By adopting these strategies, eThekweni Municipality can work towards creating a more equitable environment where all individuals, including those with disabilities, can navigate and participate fully in society. Such inclusive walkability not only enhances the quality of life for PWDs but also benefits the entire community by promoting interaction, reducing isolation, and fostering a culture of inclusivity. Implementing these recommendations requires commitment from policymakers and urban planners to prioritize accessibility in all future developments, making eThekweni a model for inclusive urban design.

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