Article

Vol. 6(3), pp. 38-50, November 2025
ISSN: 2026-9153 (Online), 2026-8009(Print)

https://journals.ium.edu.na
DOI: https://doi.org/10.64375/11zjc311

NJMS
NAMIBIA JOURNAL OF MANAGERIAL SCIENCES

Date received: 19 October 2025 Date accepted: 20 November 2025 Date published: 30 November 2025

Managing Inclusivity in the Public Transportation System Through Accessibility and Safety Education for Persons with Disabilities in Windhoek, Namibia

Josua Amukwaya[1], **Lukas Matati Josua**[1], **& John Nyambe**[1]

[1]Department of Higher Education and Lifelong Learning, University of Namibia, Windhoek, Namibia

Author correspondence: ljosua@unam.na

ABSTRACT

The rights of people with disabilities require social inclusion in transportation and mobility. The purpose of this paper is to assess the management inclusivity of the public transport systems for persons with disabilities in the City of Windhoek, Namibia. The paper addresses these objectives: 1) to identify the accessibility and safety measures in the public transportation system of the City of Windhoek for persons with disabilities, and 2) to establish the available educational information on accessibility and safety for persons with disabilities in the City of Windhoek's transportation system. A qualitative approach was employed to explore the management of inclusivity in the public transport system of the City of Windhoek, Namibia. Purposeful and referral-sampling techniques were used to select participants. Purposeful sampling was used to select managers who work in the transportation department in the City of Windhoek. A referral sampling was used to select five persons with disabilities representing various impairments: three disability representatives from the Organisations of Persons with Disabilities, two municipal bus drivers, and two taxi drivers. A sample of 15 people participated in the study. Data was collected using the interview guide and document analysis. Face-to-face interviews were used to source data from the respondents. A content analysis strategy was used to make meaning out of the raw data. The study found that there is a significant gap in public awareness and education regarding transportation accessibility and safety for persons with disability. There is also a lack of access to relevant information, highlighting the need for educational resources tailored to their needs. The study recommends that drivers' training programmes should be enhanced. It is further recommended that the transportation system should improve signage and information. Lastly,

further research is recommended to examine the impact of public awareness campaigns and targeted training programmes for transportation staff.

Keywords: City of Windhoek, Disability inclusion, Manage, Mobility, Public transport

1. INTRODUCTION

The world is now moving towards promoting social inclusion of all people (Sharma, 2023; Mansouri & Lobo, 2016), irrespective of their physical abilities. Social inclusiveness empowers persons with disabilities (PWDs) through investing in human mobility and capital development, thereby enhancing opportunities for meaningful societal participation (Redko 2024; Gupta & Vegelin 2016). Human immobility contributes to social inequality among people. Park et al. (2020) argued that social inclusion could be achieved through targeted public education programmes aimed at dispelling stigma and promoting the understanding of the needs and rights of PWDs in society. Similarly, researchers such as Duri and Luke (2022), Kett et al. (2020), and Cepeda et al. (2018) highlighted that while mobility is considered a fundamental right for all citizens, individuals with disabilities often encounter difficulties accessing transport in many low-income countries (Almoshaogeh et al., 2025; Duri & Luke, 2022; Kett et al., 2020) due to several constraints, such as structural, attitudinal, and psychological.

Several studies assessed the accessibility of public transport systems for persons with disabilities and reduced mobility (Cepeda et al., 2018; Unsworth et al., 2021). A study was embedded in the Public Transport Accessibility Work Programme, a cross-government initiative aligned with these strategies, namely the National Disability Inclusion Strategy (NDIS) and the United Nations Convention on the Rights of People with Disabilities (UNCRPD) (Department of Transport [DoT], 2022). The study encompassed actions and progress reports related to improving transport accessibility infrastructure and services, both in urban and rural settings. Key elements included escalator or lift renewal programmes, accessibility enhancements at train stations, the rollout of wheelchair-accessible public transport fleets, and the implementation of apps to support users with disabilities.

DoT (2022) highlighted significant developments in integrating accessibility features within Ireland's transport systems. By 2022, measures such as upgrades at the train stations, the acquisition of hybrid and electric buses with wheelchair access, and the development of accessible passenger information systems were in place. Furthermore, the DoT prioritised public consultations and collaborations with disability user groups to enhance the management of service inclusivity. Despite these advancements, infrastructure posed challenges, necessitating the ongoing Accessibility Retrofit Programme to address historical inadequacies. The findings underscored the need for continuous improvements, including training for public transport staff and expanded accessibility metrics through equality budgeting. DoT (2022) research emphasised that fostering universal design principles and leveraging innovative technology could significantly reduce mobility barriers and enhance user experiences across public transport networks.

1.1 Statement of the Problem

Namibia has developed several Acts and policies, including the National Disability Council Act of 2004, the Road Traffic and Transport Act of 1999, and the Ministry of Works and Transport (2018). These Acts and Policies were supplemented by the Sustainable Urban Transport Master Plan (SUTMP 2012) developed by the City of Windhoek to enhance, among other things, the accessibility and safety of the urban transport system. The City of Windhoek maintained that it addressed these issues while promoting sustainable transport modes to improve mobility for all

Windhoek residents, of whom individuals with disabilities are part. However, there seemed to be a significant absence of information that is accessible to individuals with disabilities. Kaseke (2022) highlighted that transport infrastructures such as buses were not adequately designed for passengers with disabilities, and there was a lack of ramps at bus stops and taxi ranks, hindering the safety of mobility for individuals with disabilities. Studies by Bęczkowska and Zysk (2021), Mwaka et al. (2024), and Kaseke (2022) stressed the lack of information on road safety and timetables at bus stops in accessible formats for all types of commuters, as well as further difficulties faced by individuals with disabilities.

Despite Namibia's efforts to develop several frameworks and regulations towards the well-being of persons with disabilities, (National Disability Council Act of 2004; Road Traffic and Transport Act of 1999; Ministry of Works and Transport (2018), and the capability of the City of Windhoek to develop a Sustainable Urban Transport Master Plan (SUTMP 2018), after careful study of the Master Plan, it appears that it lacks the education component that edifies the public on the access and safety needs for individuals with disabilities in the transportation system of the City of Windhoek. This absence of education for Windhoek residents on the accessibility and safety mobility needs of individuals with disabilities may perpetuate a lack of understanding, support, and inclusive measures, exacerbating their mobility challenges. This not only deters the free movement of individuals with disabilities, but it also defies the purpose of the many frameworks the country has developed. Duri and Luke (2022) advance the international conventions' call for the inclusivity and empowerment of persons with disabilities. The purpose of this study is, therefore, to assess the management of inclusivity of the public transport system of the City of Windhoek, which aims to develop an inclusive model.

1.2 Research Objectives

The study seeks to address the following research objectives:

1) To identify the accessibility and safety measures in the public transportation system of the City of Windhoek for persons with disabilities.

2) To establish the available educational information on accessibility and safety for persons with disabilities in the City of Windhoek's transportation system.

2. LITERATURE REVIEW

2.1 Theoretical framework

According to Mensah (2020), a theoretical framework is a foundational structure that helps shape the study's design, analysis, and interpretation. It provides a lens through which researchers can understand and explore the complexities of their chosen subject. Therefore, this study is grounded in the theory of intersectionality developed by Crenshaw (1989). Intersectionality is a framework that recognises the interconnected nature of various social identities and how these identities intersect to shape an individual's experiences and opportunities. Crenshaw (1989) argued that individuals do not experience oppression or privilege based on a single identity but rather through the intersection of multiple identities, such as race, gender, disability, and class.

In the context of this research, the theory of intersectionality is relevant as it recognises that individuals with disabilities do not experience barriers to accessibility and safety in isolation. Rather, their experiences are shaped by the intersection of their disability with other identities such as gender and socioeconomic status. This framework allowed for a more comprehensive understanding of the challenges faced by individuals with disabilities in accessing and using the transportation system in the City of Windhoek.

By applying the theory of intersectionality, this research acknowledged that individuals with disabilities might face unique barriers and challenges shaped by their specific intersectional identities. For example, a person with a disability who is also a woman might face additional barriers due to gender-based discrimination. This theoretical framework allowed for a better analysis of the experiences of individuals with disabilities and stressed the need for managing the inclusive and intersectional approaches to accessibility and safety education in the transportation system.

2.2 Perceptions towards wheelchairs

A study by Gebresselassie (2022) that was conducted in the United States explored the experiences, perceptions, and preferences of wheelchair users concerning transportation services through Uber and Lyft. The research unveiled patterns in service satisfaction, accessibility concerns, and the socio-demographic factors influencing the use of transportation network companies. The study found that while more than 50% of participants expressed satisfaction with the services, nearly 40% of the motorised wheelchair users experienced service denial. Additionally, they also face significant disadvantages due to the limited availability of wheelchair-accessible vehicles (WAVs).

The study highlighted systemic issues, such as inadequate driver training, lack of WAVs, and inconsistent service reliability, which perpetuate accessibility challenges for wheelchair users. Gebresselassie's (2022) study also stressed the disparity in experiences based on wheelchair type, with motorised wheelchair users encountering longer wait times and greater service denial compared to manual wheelchair users. Notably, nearly half of non-users still perceived Uber and Lyft as viable transportation options, demonstrating the potential for improvement in service design. Persons with disabilities underscored the importance of sensitivity and technical training for drivers, citing discriminatory practices and insufficient knowledge about accommodating wheelchair users as significant barriers. Gebresselassie (2022) concluded that addressing these challenges requires comprehensive policy and practical interventions, including enhanced WAV availability, driver training programmes, and the enforcement of anti-discrimination measures.

Wayland et al. (2023) conducted a qualitative study in Australia to explore the experiences of young adults with disabilities concerning interpersonal discrimination while using public transport. The study, carried out in New South Wales (NSW) and Victoria, focused on the nature, frequency, and impact of such discriminatory acts. Researchers interviewed 26 participants, encompassing diverse impairments, and examined their lived experiences using a narrative approach. This study revealed various forms of discrimination, including challenges in accessing priority seating, verbal abuse from the public and transport staff, and instances of unwanted physical assistance. Notably, participants with less visible disabilities faced skepticism about their disability status, while those with more visible disabilities were subject to intrusive or unhelpful interventions. These discriminatory acts negatively impacted the participants' mental health, social connectedness, and willingness to use public transport. For example, a participant with a degenerative condition adjusted her travel times to avoid conflict, while a wheelchair user participant recounted frequent refusals by train drivers to provide mandatory assistance. These findings underscore the pressing need for societal, policy, and infrastructural changes to address barriers faced by individuals with disabilities in public transportation.

The study highlighted the broader implications of discriminatory practices on the social and economic participation of young adults with disabilities. Wayland et al. (2023) observed that such negative experiences often led participants to modify their behaviour, such as avoiding travel during peak hours or altering their use of public transport altogether. The study also noted gaps in the awareness and training of transport staff and the general public about the diverse needs of

individuals with disabilities. The lack of understanding and systemic support reinforced feelings of exclusion and heightened anxiety among participants. For instance, a participant managing multiple disabilities shared that frequent verbal and physical harassment made public transport a distressing experience. The researchers concluded that addressing these issues requires legislative reforms, public awareness campaigns, and targeted initiatives to enhance the management of inclusivity in public transport systems. These steps are vital to ensuring equal opportunities for individuals with disabilities to participate fully in society.

Chruzik et al. (2023) conducted a study in Poland focusing on the accessibility of integrated transport hubs for individuals with disabilities. The research aimed to evaluate the current state of transportation infrastructure and propose solutions for the management of inclusivity. The study highlighted that in Poland, more than 3 million individuals possess legal proof of disability, with an estimated total population of persons with disabilities ranging from 4 to 7 million. A key finding was the insufficient consideration of accessibility needs during the planning and operation of transport hubs. The research emphasised the necessity of universal design principles to create infrastructure usable by all individuals, regardless of disability.

Specific barriers identified included inadequate tactile guidance systems, the unavailability of ramps, and a lack of proper signage. The authors recommended adopting tools for collecting data about the needs of people with disabilities and suggested regular audits to adapt existing infrastructure to these needs. The study also pointed out the critical role of aggregated knowledge in enhancing transportation accessibility. It stressed the importance of developing a systematic understanding of the requirements of individuals with disabilities, which could guide policymakers and transport system managers. The findings revealed that technological solutions, such as GPS-based systems and crowdsourcing platforms, could significantly aid in mapping and addressing accessibility challenges. The researchers concluded that while there is increasing awareness of the importance of universal design, significant gaps remain in its application within Poland’s transportation system. Addressing these gaps requires a collaborative approach involving stakeholders, continuous data collection, and the use of advanced technological tools to ensure that infrastructure evolves to meet the changing needs of its users.

Mogaji et al. (2022) conducted a study in Nigeria, one of the largest developing countries in Africa, to examine the transport and mobility decisions of consumers with disabilities (CWDs). This research aimed to understand how individuals with disabilities navigate transportation systems while managing their limited resources, using the Conservation of Resources (COR) theory as a theoretical framework. Thirty-two participants with varying disabilities, including physical, hearing, and visual impairments, were interviewed. The study explored key factors influencing mobility decisions, including ability, accessibility, availability, affordability, and reliability. Participants highlighted how environmental, social, and infrastructural challenges affected their access to safe, affordable, and reliable transportation. For instance, inaccessible public transportation, lack of infrastructure like ramps or tactile features, and high costs of custom-built vehicles were significant barriers. The study proposed a conceptual framework for understanding CWDs' transport decisions and emphasised the role of social policies and inclusive infrastructure in enhancing their mobility.

The findings of Mogaji et al. (2022) further revealed that CWDs face emotional and financial challenges when making transport decisions, often leading to social exclusion. Many participants reported relying on informal arrangements, such as hiring private drivers or using personal modified vehicles, to meet their mobility needs. These arrangements, however, are often costly and unsustainable. The study also identified the psychological stress caused by societal attitudes, unreliable service providers, and poorly designed transport services. Mogaji et al. recommended inclusive policy measures, improved transport infrastructure, and better training for service

providers to address these barriers. They also advocated for the integration of assistive technologies and the promotion of social enterprises to provide accessible, affordable, and reliable transport solutions for CWDs in Nigeria. By applying the COR theory, the study provided critical insights into the unique challenges faced by CWDs and practical strategies to improve their transportation experiences.

Frye (2024) conducted a study on disability-inclusive public transport, focusing on low-income countries in Africa and Asia. The research aimed to address barriers faced by persons with disabilities (PWDs) in accessing public transport and proposed actionable steps to improve the management of inclusivity. The study highlighted the critical role of accessible transport in enabling access to education, employment, and healthcare, thereby breaking cycles of poverty and dependence among PWDs. Findings revealed that PWDs encounter multiple challenges, including poorly maintained pedestrian infrastructure, inaccessible vehicles, and discriminatory attitudes from transport staff and fellow passengers. Moreover, the lack of inclusive policies and monitoring mechanisms often results in public transport systems that fail to meet the needs of PWDs. Furthermore, Frye (2024) emphasised that many accessibility improvements, such as installing ramps, reducing steps, and implementing tactile surfaces, are low-cost and sustainable, yet they remain underutilised.

The study further advocated for the integration of Universal Design principles in transport planning, emphasising that inclusive systems benefit all users, not just PWDs. Engagement with PWDs and their organisations was identified as a cornerstone for designing effective solutions. The report stressed the importance of training transport personnel to understand and accommodate diverse mobility needs, ensuring that inclusive measures are practical and effective. Additionally, the research called for stronger enforcement of accessibility standards through legislation and monitoring systems. Frye (2024) concluded that while technical solutions are essential, attitudinal shifts among policymakers, operators, and the public are equally critical for creating transport systems that truly cater to everyone. These findings provide valuable insights for policymakers and stakeholders aiming to create inclusive, sustainable transport systems in developing regions such as Namibia.

Lindsay (2020) conducted a study in South Africa (SA) on the experience of youth with disabilities when making use of public transport, which stressed the importance of achieving universal access to transportation and ensuring safety for individuals with disabilities, highlighting that public awareness requires collaboration, education, and concerted efforts from various stakeholders. Duri and Luke (2022) similarly claimed that the lack of public awareness regarding the importance of accessible and safe transportation services for individuals with disabilities has significant consequences, limiting mobility, independence, and social participation and resulting in increased economic burdens for PWDs.

Several studies revealed that persons with disabilities (PWDs) need an inclusive public transport system to ensure their full and equal participation in society (Neven & Ectors, 2023; Duri & Luke, 2022; Bezyak et al., 2020). Accessible information empowers PWDs to travel independently and confidently, promoting their mobility and autonomy. This includes clear signage, audio-visual announcements, and real-time updates, which help PWDs navigate routes, schedules, and service changes effectively. By providing accessible information, public transport systems could reduce barriers, enhance safety, and improve the overall travel experience for PWDs. This fostered the management of inclusivity and equality, enabling PWDs to access education, employment, healthcare, and social opportunities on an equal basis with others.

In addition, Duri and Luke (2022) further highlighted that transport information includes accessibility features and general transport information. Methods of provision include direct

communication, selecting information from public sources, and interactive platforms. Design issues related to user requirements and modes of delivery include redundancy of information, visual, audible, and tactile information, and staff training. Different disabilities have specific needs, such as physical access for physical disabilities and information in different formats for sensory disabilities.

Park and Chowdhury (2018) explain that a public transport journey comprises various components that form the journey chain, such as obtaining transport information, walking to the bus stop or train station, boarding the vehicle, traveling in it, disembarking, and walking to the final destination. Individuals with disabilities often begin by planning their trips to circumvent unexpected challenges, which necessitates access to transport information (Park & Chowdhury, 2018). Regardless of one's physical abilities, the journey chain should be straightforward, and every segment should be accessible. Transport barriers arise from numerous factors, including vehicle design, transport infrastructure, the built environment, public transport services, and the attitudes of drivers and fellow passengers (Amin et al. 2021).

Kaseke (2022) conducted a qualitative study in Windhoek, Namibia, to explore and describe the lived experiences of individuals with acquired physical disabilities. The research adopted a phenomenological design, utilising semi-structured interviews with nine participants to understand the challenges and adaptations they experienced. Among the themes identified, access to transport emerged as a critical aspect of their daily lives. Participants expressed challenges in mobility, noting that public transportation systems in Windhoek are often inaccessible to individuals with physical disabilities. They highlighted the lack of infrastructure to accommodate their needs, such as ramps or accessible public vehicles, which restricted their ability to move freely within the community. These barriers severely limited their participation in employment, healthcare, and social activities, thereby exacerbating their feelings of exclusion and dependence on others.

The findings emphasised that accessible transport is crucial for promoting the independence of persons with Disabilities. Participants frequently relied on private taxis, which were costly and often not well-equipped to accommodate their needs. Public transport systems, such as municipal buses, were largely inaccessible due to structural barriers and inadequate policies prioritising the management of inclusivity. This inaccessibility not only posed physical challenges but also created financial burdens, as participants often paid more for transportation or depended on family and friends for mobility. In their studies, Kaseke (2022) and Hotor (2024) concluded that significant improvements in transport infrastructure and policy are needed to ensure equitable access for persons with disabilities. Recommendations included implementing inclusive transport designs, raising public awareness about the mobility needs of individuals with disabilities, and enhancing government investment in accessible transportation systems.

3. RESEARCH METHODOLOGY

This paper adopted a qualitative approach to have an in-depth understanding of human experiences and social phenomena. This approach is effective in generating rich, detailed data that can reveal insights into the subjective experiences and contextual factors shaping individual behaviors and institutional practices (Lim 2025; Bryman 2016). Purposive and referral sampling techniques were used to identify the research participants. The former was used to intentionally select participants based on specific criteria, such as expertise or lived experiences related to urban mobility and accessibility for Persons with Disabilities. In this case, City of Windhoek officials with at least five years of experience in the City of Windhoek (COW) transportation department were chosen for their in-depth understanding of transportation policies and practices. Referral sampling, also known as snowball sampling, was employed to identify additional

participants through recommendations provided by initial respondents. The final sample comprised 15 participants: three officials from the COW transportation department, five individuals with disabilities representing various impairments, three representatives from organisations of persons with disabilities (OPDs), two municipal bus drivers, and two taxi drivers. Semi-structured interviews were guided by an interview protocol developed in line with the research questions. Document analysis was conducted using a structured checklist that is designed to extract relevant information from official documents and reports.

The data was collected through face-to-face, one-on-one interviews, which were scheduled with participants following the permissions. These interviews explored accessibility and safety concerns within the City of Windhoek's transportation system, the educational information promoting accessibility and safety, and recommendations for developing educational guidelines. The interview process was semi-structured, allowing for open-ended questions that encouraged participants to share their experiences and insights in depth. Additionally, the researcher employed a referral system to identify and include individuals with disabilities who could provide diverse and valuable perspectives. This systematic and inclusive approach facilitated the collection of comprehensive data. The study further utilised content analysis as the primary strategy for analysing qualitative data. Content analysis, as emphasised by Nieuwenhuis (in Maree 2016), is particularly effective for examining narrative-related data, enabling the researcher to interpret and organise text-based information.

Ethical Considerations

An ethical clearance certificate (WKC0058) was obtained from the University of Namibia's Decentralised Ethics Committee, which is a formal approval to conduct the study. Additionally, permission letters were secured from the University of Namibia's Center for Research Services and other relevant institutions, including the City of Windhoek and organisations of persons with disabilities, authorising access to municipal employees, official documents, and other necessary resources. Informed consent was obtained from each participant before data collection, with consent forms outlining the study's purpose, the voluntary nature of participation, and the rights of participants to withdraw at any point without consequences. The consent forms also specified the date and time of the interviews to ensure transparency and convenience for participants.

Confidentiality, anonymity, and the protection of participants' well-being were paramount throughout the research. The personal details of participants were anonymised, and the confidentiality of their responses was rigorously maintained. Participants were at liberty to leave the interview without any penalty. To ensure the accuracy and integrity of the data, participants were invited to review their transcribed responses and confirm their validity. Special care was taken to safeguard participants from any potential risks or harm during the study, prioritising their comfort and security. Data were securely stored on a password-protected laptop and backed up in a physical hard copy, which was stored in a secure location. In compliance with research ethics protocols, the data will be retained securely for five years following the study's completion, after which it will be safely disposed of to protect participant information.

4. ANALYSIS AND RESULTS

4.1 Available accessibility and safety measures

The accessibility and safety measures in Windhoek's transportation system reflect a mix of progress and persistent challenges in accommodating persons with disabilities (PWDs). Notable advancements include the introduction of low-floor buses, designated wheelchair spaces, and mechanisms like ramps and bus-lowering features to facilitate easier boarding for wheelchair users. However, these measures are inconsistently implemented across the fleet, and

maintenance issues often render them unreliable. Additionally, critical safety features such as wheelchair harnesses, audible signals, and tactile paving are either insufficient or completely absent, limiting the system's inclusivity for visually and hearing-impaired individuals. To amplify this point, Participant OPD Representative 1 highlighted as follows: "*There are not enough provisions for securing wheelchair users while they are in transit*".

The lack of clear safety protocols and emergency measures tailored to PWDs exacerbates these issues, leaving many feeling unsafe and dependent on others for support. One PWD stated that "*the resources provided focus on general road safety, but they are more reactive than proactive and don't specifically address the needs of persons with disabilities*". Addressing these gaps requires consistent implementation and maintenance of accessibility features alongside the integration of comprehensive safety measures that cater to the diverse needs of PWDs, ensuring they can navigate the transportation system with dignity and independence.

4.2 Educational information on accessibility and safety for persons with disabilities

The availability of educational information for persons with disabilities in the City of Windhoek's transportation system remains insufficient. The PWDs have expressed it as follows: PWDs 3 "*I see it rarely happening, and we do not hold awareness campaigns targeting this special group.*" While PWDs 2 said: "*We need to include PWDs in our awareness campaigns for no one to be left behind*".

While some materials exist, they are rarely available in accessible formats such as braille, large print, or audio. PWD1 expressed this, "*To be honest, I have never come across such educational information, such as bus timetables in various accessible formats for PWDs, but I think there might be*". Again, Participant PWD2 stated that "*The only thing I saw that was sharing awareness by the city of Windhoek was the time of Covid-19*". Additionally, public awareness campaigns targeting PWDs are infrequent and do not adequately address their specific needs. Bus Driver 1 expressed, "*We need awareness campaigns targeting Persons with Disabilities*. This lack of accessible information leaves many PWDs unaware of safety measures, bus schedules, or accessibility features, limiting their ability to use public transportation independently and confidently. To strengthen this area, it is essential to develop comprehensive and inclusive educational resources tailored to the needs of PWDs. These materials should be widely disseminated in various formats and made readily available at bus stops, online, and through disability advocacy organisations.

4.3 Social barriers hindering transport accessibility for PWDs

The analysis of societal barriers affecting access to public transportation for PWDs in Windhoek highlights deeply rooted challenges that extend beyond physical infrastructure. Negative societal attitudes, lack of understanding about disabilities, and the stigmatisation of PWDs contribute significantly to their exclusion from public transportation. PWD 3 said, "*I feel that discrimination is still there... people will utter words or give a certain stare, which is offensive*".

Drivers and other transport operators often lack the training and awareness needed to support PWDs effectively, further perpetuating these barriers. Expressing this gap, PWD1 accentuated that "*Bus drivers need awareness on how to work with people with disability... because sometimes I think they don't even have family members with disabilities*". Addressing this requires a cultural shift driven by consistent disability-awareness campaigns and comprehensive training for all stakeholders involved in the public transportation system. By fostering a culture of managing inclusivity and understanding, societal barriers that hinder PWDs' access to transportation can be gradually dismantled.

4.4 Implementation guidelines to improve access and safety measures for PWDs

The content recommended for guidelines to raise awareness about accessibility and safety among PWDs reflects a structured approach to addressing the challenges identified. City Official 3 stated, "*The newly procured buses are equipped with ramps and a bending functionality that lowers the bus closer to the ground. These features make it easier for wheelchair users to board and enhance their independence*".

These guidelines emphasise the importance of universal design principles, including the provision of ramps, tactile paving, and auditory signals, as well as policies ensuring priority seating and wheelchair-accessible spaces. Additionally, the guidelines highlight the need for ongoing disability-awareness training for transport operators and the inclusion of emergency protocols tailored to PWDs. These measures should be implemented alongside consistent enforcement mechanisms to ensure that accessibility features and safety protocols are upheld across the public transportation system.

The document analysis revealed gaps in existing policies and regulations governing public transportation for PWDs in Windhoek. While some policies reference accessibility, they lack the specificity and enforcement mechanisms needed to bring about meaningful change. Furthermore, there is little evidence of alignment with international standards, such as the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD). To address these shortcomings, existing policies should be reviewed and updated to incorporate detailed provisions for PWD accessibility and safety. This process should involve active participation from PWDs and their representative organisations to ensure that the policies address their lived experiences and challenges. While progress has been made in enhancing accessibility and safety for persons with disabilities in Windhoek's public transportation system, significant gaps remain. Addressing these challenges requires improving access to educational resources, dismantling societal barriers, implementing comprehensive guidelines, and revising existing policies. By taking a holistic approach, the City of Windhoek can ensure equitable access to public transportation for all citizens, fostering a more inclusive and accessible society.

5. DISCUSSION

To attain social inclusion of all people, this study reveals that PWDs and their representative organisations must be actively engaged in all stages of transportation planning, policy-making, and service delivery. The study seems to suggest that the Council of the City of Windhoek should establish a Disability Advisory Committee to ensure that the voices of PWDs are represented in decision-making processes. Regular consultations, workshops, and focus groups should be held to gather input and address concerns. Feedback mechanisms, such as surveys and online portals, should be established to capture ongoing input from PWDs and integrate their suggestions into future planning.

Collaboration with stakeholders is essential for building and managing an inclusive transportation system. Therefore, the City of Windhoek should form strategic partnerships with disability advocacy organisations, local businesses, and educational institutions to co-develop initiatives. Additionally, engaging with international bodies and municipalities that have implemented successful management of the inclusive transportation models will facilitate the exchange of best practices and innovative solutions. The Department of International Relations should spearhead these collaborations, ensuring knowledge-sharing and technical support are optimised.

5.1 Implications for Theory

The study has identified some implications for theory, such as the integration of the principle of universal transport planning, which emphasises the inclusivity of PWDs as a central element. Again, the driver training and disability awareness should be designed to highlight the role of human interaction in accessibility. The information and communication, such as signage, digital tools, and other communication formats on transport accessibility, should be incorporated.

5.2 Implications for Management, Policy, and Practice

The study has these implications for management, policy, and practice. For instance, there should be a robust monitoring and evaluation framework should be established to assess the implementation of accessibility measures. Secondly, an equitable decision-making process should be promoted, which should include the voice of PWDs and their representative organisations must be actively engaged in all stages of transportation planning, policy-making, and service delivery. Lastly, there is a need for a strategic partnership with the stakeholders that aims to promote knowledge-sharing and technical support.

5.3 Implications for Future Research

Through future empirical studies, there is also a need to evaluate the accessibility features that enhance inclusivity for persons with disabilities in public transport. Furthermore, another study should be conducted to strengthen public awareness to improve public understanding of disability rights.

6. CONCLUSION

The study concluded with themes that shed light on the challenges and progress made in the public transportation system for persons with disabilities (PWDs) in the City of Windhoek. The City's Department of Transportation and Urban Development, through transport infrastructure modifications, should take the lead in implementing universal design, collaborating with disability advocacy organisations to ensure the designs meet the needs of persons with disabilities (PWDs). Also, the City of Windhoek should allocate resources to expand its fleet of accessible buses. Partnerships with transportation operators should be established, and incentives introduced to encourage private operators to include accessible vehicles in their services. Again, a comprehensive training programme for drivers and transport staff should be implemented to ensure the safety and comfort of PWDs. These programmes must be mandatory for all new drivers and include regular refresher courses to maintain high standards.

The City of Windhoek must also prioritise the enhancement of transportation signage and information at bus stops, taxi ranks, and transit hubs, ensuring it is in accessible formats such as braille, large print, and audio. Digital tools, such as mobile apps and websites compatible with screen readers, should be developed to provide real-time information on routes, schedules, and accessibility features. Public awareness campaigns must be launched to foster the management of inclusive attitudes and behaviours. The content should focus on the rights and needs of PWDs in public transportation, aiming to eliminate stigma and promote empathy among citizens. Outreach efforts should include workshops, social media campaigns, and community events to ensure widespread engagement. The monitoring and evaluation framework should be established to assess the implementation of accessibility measures. The City of Windhoek should appoint a dedicated Accessibility Task Force, comprising representatives from municipal authorities, disability organisations, and transport operators.

7. REFERENCES

Almoshaogeh, M., Jamal, A., Ahmed, T., Alharbi, F., Iqbal, M., Haider, H., & Alinizzi, M. (2025). A review on disability-inclusive public transportation: current barriers and prospects. *IEEE Access*.

Amin, S. A., Razak, M. A. & Akhir, N. M. (2021). Access to transportation: The experiences of women with physical disabilities. *International Journal of Academic Research in Business and Social Sciences, 11*(6), pp.883–890.

Bęczkowska, S. A. & Zysk, Z. (2021). Safety of people with special needs in public transport. *Sustainability, 13*(19), p.10733.

Bezyak, J. L., Sabella, S., Hammel, J., McDonald, K., Jones, R. A., & Barton, D. (2020). Community participation and public transportation barriers experienced by people with disabilities. *Disability and rehabilitation, 42*(23), pp.3275-3283.

Bryman, A. (2016). *Social Research Methods*. 5th ed. Oxford University Press.

Cepeda, E. P., Galilea, P., & Raveau, S. (2018). How much do we value improvements in the accessibility to public transport for people with reduced mobility or disability? *Research in Transportation Economics, 69*, pp.445–452.

Chruzik, K., Uchroński, P., & Krzyżewska, I. (2023). Analysis of the concept of an accessibility map for people with disabilities for the integrated transfer hub. *Prace Naukowe Politechniki Warszawskiej. Transport*, *137*. https://doi.org/10.5604/01.3001.0053.9743

Crenshaw, K. (1989). Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics. *University of Chicago Legal Forum, 1989*, Article 8.

Department of Transport. (2022). *Accessibility Work Programme updates: 01 March to 25 May 2022*. https://assets.gov.ie/227731/bbefe7b2-c5c0-4717-8680-b1994b6902f6.pdf

Duri, B. & Luke, R. (2022). Transport barriers encountered by people with disability in Africa: An overview. *Journal of Transport and Supply Chain Management, 16*, p.826.

Frye, A. (2024). *Disability inclusive public transport: Practical steps to making public transport disability inclusive*.

Gebresselassie, M. (2022). Wheelchair users' perspective on transportation service hailed through Uber and Lyft apps. *Transportation Research Record, 1*(1), pp.1–14. https://doi.org/10.1177/03611981221140369

Government of Namibia. (1999). *Road Traffic and Transport Act 22 of 1999*. Republic of Namibia.

Gupta, J. & Vegelin, C. (2016). Sustainable development goals and inclusive development. *International Environmental Agreements: Politics, Law and Economics*, 16, pp.433–448.

Hotor, D. (2024). *Accessibility and Use of Public Transport Services by Persons with Disabilities (PWDS) in Ghana*, [Unpublished master's thesis]. University of Ghana.

Kaseke, T. H. (2022). *Lived experiences of persons with acquired physical disability living in Windhoek, Namibia* [Doctoral dissertation, Stellenbosch University].

Kett, M., Cole, E. &Turner, J. (2020). Disability, mobility and transport in low-and middle-income countries: a thematic review. *Sustainability, 12*(2), p.589.

Lim, W. M. (2025). What is qualitative research? An overview and guidelines. *Australasian Marketing Journal, 33(*2), pp.199-229.

Lindsay, S. (2020). Accessible and inclusive transportation for youth with disabilities: Exploring innovative solutions. *Disability and Rehabilitation, 42*(8), pp.1131–1140.

Mansouri, F., & Lobo, M. (2016). Introduction: social inclusion: exploring the concept. In *Migration, Citizenship and Intercultural Relations* (pp. 1-10). Routledge.

Mensah, R. O. (2020). Discourses on conceptual and theoretical frameworks in research: Meaning and implications for researchers. *Journal of African Interdisciplinary Studies, 4*(5), pp.53–64.

Ministry of Works and Transport. (2018). *2018 Namibian Transport Policy*. Government of Namibia.

Mogaji, E., Bosah, G., & Nguyen, N. P. (2023). Transport and mobility decisions of consumers with disabilities. *Journal of Consumer Behaviour, 22*(2), 422-438.

Mwaka, C. R., Best, K. L., Cunningham, C., Gagnon, M., & Routhier, F. (2024). Barriers and facilitators of public transport use among people with disabilities: a scoping review. *Frontiers in Rehabilitation Sciences, 4*, p.1336514.

Neven, A. & Ectors, W. (2023). “I am dependent on others to get there”: Mobility barriers and solutions for societal participation by persons with disabilities. *Travel behaviour and society, 30*, pp.302-311.

Nieuwenhuis, J. (2016). Analyzing Qualitative Data. In K. Maree (Ed.), *First Steps in Research*. (2nd ed.). Van Schaik.

Park, J. & Chowdhury, S. (2018). Investigating the barriers in a typical journey by public transport users with disabilities. *Journal of Transport & Health, 10*, pp.361–368.

Park, J., Chowdhury, S. & Wilson, D. (2020). Gap between policymakers’ priorities and users’ needs in planning for accessible public transit system. *Journal of Transportation Engineering, Part A: Systems, 146*(4), p.04020020.

Redko, K. (2024). Enabling economic empowerment: social enterprise's role in harnessing the potential of individuals with disabilities. *Věda a perspektivy, 2*(33), 26-36.

Sharma, R. (2023). Promoting social inclusion through social policies. *Capacity Building and Youth Empowerment, 76*, 617.

United Nations. (2018). *United Nations Disability Inclusion Strategy [UNDIS]*. https://www.un.org/en/content/disabilitystrategy/

Unsworth, C., So, M. H., Chua, J., Gudimetla, P., & Naweed, A. (2021). A systematic review of public transport accessibility for people using mobility devices. *Disability and rehabilitation, 43*(16), 2253-2267.

Wayland, S., Newland, J., Gill-Atkinson, L., Vaughan, C., Emerson, E., & Llewellyn, G. (2022). I had every right to be there: discriminatory acts towards young people with disabilities on public transport. *Disability and Society, 37*(2). https://doi.org/10.1080/09687599.2020.1822784