

Exploring Interactions between Commuters with Disabilities and Transport Service Providers

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Abstract

Purpose

The purposes of this study are to explore the interactions between commuters with disabilities and transport services providers and to contribute to a better understanding of transformative service design, ensuring equitable access and the overall well-being of individuals.

Design/methodology/approach

This study collected qualitative data through ethnographic fieldwork and interviews with commuters with disabilities and transport services providers. The data were thematically analysed using NVivo.

Findings

Evidence suggests that there are opportunities for service users to be included in the cocreation of transformative transport service at different stages of a journey: entering service interaction, transitioning through service interaction and exiting service interaction. However, the reluctance of service providers to transform their services was recognised, due to a lack of awareness, interest, regulator demands and financial capabilities.

Theoretical contribution

This study broadens our comprehension of procedures and strategies for engaging consumers experiencing vulnerabilities in transformative service design and pushes the limits of our current understanding to recognise the inherent challenges of unregulated service providers designing transformative services in an unregulated market.

Originality

Previous studies on transformative service designs have focused on regulated service providers, such as healthcare and financial services. This study, however, explores the unregulated transport sector in a developing country and recognises how the intricate nature of informal service provision may jeopardise the prospects of developing a transformative service for consumers experiencing vulnerabilities.

Practical implication

This newfound knowledge is crucial for developing better approaches that cater to the needs of these individuals and further contributes towards developing transformative service initiatives, which are activities that serve people experiencing vulnerabilities and that try to improve their well-being. These include specialised training and social marketing campaigns for service providers in the informal market and new mobility start-ups or social enterprises with the potential to disrupt the informal economy and offer innovative solutions, such as assistive technologies, mobile apps and journey planners that provide exceptional customer service.

Keywords

vulnerability, service environment, well-being, transportation, transformative transport service, Nigeria

Introduction

A growing body of research is investigating marketplace accessibility, consumer disability and vulnerability. They are exposing the precarious experiences of consumers experiencing vulnerability and anticipating that service providers will initiate inclusive service interactions. These stem from such seminal works as Childers and Kaufman-Scarborough (2009), Baker et al. (2001) and Baker et al. (2007) focusing on marketplace accessibility, the role of the family in adapting to the marketplace (Mason and Pavia, 2006; Pavia and Mason, 2012) and insights from the field of disability studies into understanding consumers with disabilities (Beudaert, 2020). Yet despite these advancements in knowledge and contributions, limited understanding and significant gaps in our understanding of marketplace accessibility for people with disabilities (PWDs) are still present.

First, the majority of these studies have focused on the destination and not the journey to the destination. These studies have often explored marketplace accessibilities for people experiencing vulnerability at the point of service interaction, either at the museum or the retail store (Poria et al., 2009; Lehn, 2010; Poria et al., 2011; Navarro et al., 2014; Yu et al., 2015; Celik and Yakut, 2021; Dodds and Palakshappa, 2022; Husemann et al., 2022), without investigating the transportation experiences to these places. Second, disabilities are prevalent in developing countries with inherent challenges with infrastructure, social policy and support (Mogaji and Nguyen, 2021; WHO, 2021). However, previous studies have often focused on and emerged from developed countries with more infrastructure, policies and regulations to support individuals experiencing vulnerability (Baker et al., 2001; 2007; Childers and Kaufman-Scarborough, 2009; Lehn, 2010; Elms and Tinson, 2012; Yu et al., 2015; Higgins, 2020). These studies have not recognised the inherent institutional challenges in many developing countries worldwide, which present a considerable marketplace problem for transport service providers (Ross et al., 2020; Riedel et al., 2022). Third, those limited studies that have examined mobility services for individuals experiencing vulnerability (Lubitow et al., 2017; Echeverri and Salmonson, 2019; Mogaji and Nguyen, 2021) have not explored interactions with transport infrastructures and the service environment, highlighting a gap in our understanding of marketplace accessibility.

Based on this existing gap in knowledge, this study aims to explore the interactions between commuters with disabilities (CWDs) and transport services providers and the challenges and prospects of developing a transformative and inclusive transport service, especially in a developing country with unregulated service providers. To achieve this aim, this study adopts the transformative service research (TSR) framework (Anderson et al., 2013; Azzari and Baker, 2020) and the transformative refugee service experience (TRSE) framework (Boenigk et al., 2021a) as the theoretical underpinning. Furthermore, this study implements a qualitative methodological approach involving ethnographic fieldwork and interviews with CWDs and transport service providers. These strands of data were subsequently triangulated (Farquhar et al., 2021) to gain a holistic understanding of the experiences and coping strategies of CWDs.

Filling this knowledge gap is imperative for many reasons. First, it highlights the inherent challenges of many individuals experiencing vulnerability in developing countries that research has not been fully uncovered. Second, understanding the challenges with transportation services helps gain a holistic insight into how best to improve the journey for numerous individuals experiencing vulnerability. Third, this knowledge contributes to shaping service design, leading to the fulfilment of many Sustainable Development Goals (e.g. 4, 8, 10, 11 and 17), which promise to ensure inclusive and equitable access, reduce inequality within and among countries and make cities and human settlements inclusive, safe, resilient and sustainable (Becker and Jaakkola, 2020; Mogaji and Nguyen, 2021).

This study is contextualised in Lagos in the South West region of Nigeria, Africa, which is significant for some reasons. First, an estimated 25 million PWDs reside in Nigeria, and the number of disabled individuals in Nigeria is greater than the whole population of many countries around the world. Second, Nigeria is a developing country and a low- or middle-income country with inherent challenges with transport infrastructure (Mogaji and Nguyen, 2022). Specifically, Lagos is considered the commercial hub of the country, with challenging transport infrastructure (Mogaji, 2020). It is described as a congested state with social inequality, which can be challenging for abled-bodied individuals (Xiao, 2022), and is dominated by informal self-employed drivers operating in unregulated transport services (Adebowale et al., 2023). Third, the study moves beyond Western, educated, industrialised, religious and democratic (WEIRD) societies with considerable development in transport and technology and social support for those with disabilities, as the vast majority of PWDs live in developing countries with structural and institutional challenges with infrastructure, policy and economies (Mogaji and Nguyen, 2021; World Bank, 2018). The combination of a large number

of CWDs, the growing population in Lagos as a commercial hub in Africa and the vast informal transport network presents the right context for understanding the challenges and opportunities for creating transformative transport services.

This study makes a significant theoretical contribution to the investigation of marketplace accessibility, consumer culture and disabilities by broadening our comprehension of procedures and strategies for engaging consumers experiencing vulnerabilities in transformative service design (Anderson et al., 2013; Azzari and Baker, 2020). It pushes the limits of our current understanding to recognise unregulated service providers in an unregulated market. This newfound knowledge is crucial for developing better approaches that cater to the needs of these individuals and further contributes towards developing transformative service initiatives (TSIs), which are activities that serve people experiencing vulnerabilities and that try to improve their well-being (Boenigk et al., 2021b). These contributions will interest researchers, policymakers, charitable organisations supporting CWDs, transport service managers and prospective investors exploring transformative transport services.

Literature review

Marketplace accessibility for consumers experiencing vulnerability.

The physical context of services, including accessibility, cleanliness and aesthetics, is critical for consuming services (Chua et al., 2015) and affects value co-creation – incorporating service users in the co-creation of transformative service (Weaver et al., 2022), which influences customer satisfaction and, eventually, customer citizenship behaviour (Al Halbusi et al., 2020). Ha and Jang (2012) reported that physical environment aspects, such as the layout and design of interiors, significantly influence perceived service quality. However, studies have shown that many physical spaces for service interactions are not conducive and accessible for many individuals experiencing vulnerability (Yu et al., 2015; Celik and Yakut, 2021; Dodds and Palakshappa, 2022). While service providers may argue that their service provision caters to the majority of people, the growing number of individuals experiencing vulnerability has further necessitated the need for an accessible marketplace (Navarro et al., 2014; Yu et al., 2015; Higgins, 2020).

This growing expectation for marketplace accessibility includes the need to address various forms of disabilities, either visible or hidden (Baker et al., 2001; Beudart et al., 2017). While studies have examined the experiences of those with physical disabilities, such as visual impairment (Baker et al., 2001; 2006; Falchetti et al., 2016) and other physical disabilities

(Navarro et al., 2014; Nau et al., 2016; Echeverri and Salmonson, 2019), it is becoming imperative for service providers to consider invisible/hidden disabilities in evaluating access to their marketplace. Beudart et al. (2017) examined how consumers with hidden auditory disorders engage with the service environment. Interviews with their study's participants revealed that these individuals develop coping strategies, such as delegating shopping to relatives, as they feel excluded within the marketplace. Muñoz-Mazón et al. (2021) also provided insights into another hidden disability by examining the coping strategies of individuals with coeliac disease and non-coeliac gluten sensitivity. They highlighted the decision-making process before engaging with a service provider. These studies emphasised how consumers with disabilities take responsibility for service interactions. From a co-creation perspective, where services users are involved in service design, Abney et al. (2017) examined the experiences of hearing and deaf employees as they cope with the restaurant setting and consider those experiences as a service environment uniqueness.

While several studies have investigated marketplace accessibility, engagement with transportation services has received relatively scant attention. As mentioned in the introduction, accessibility to the marketplace is not just about the destination but also the journey. Many studies have examined accessibility for consumers with disabilities as they access different service environments. These studies include insights into access to museums (Poria et al., 2009; Lehn, 2010; Husemann et al., 2022), retail stores (Yu et al., 2015; Celik and Yakut, 2021; Dodds and Palakshappa, 2022), restaurants (de Faria et al., 2012) and hotels (Navarro et al., 2014; Poria et al., 2011). These previous studies on marketplace accessibility have recognised the obstacles and difficulties for individuals experiencing vulnerability at the point of service interaction. Since PWDs are less likely to drive or own a car than the non-disabled, they often rely on public transportation infrastructures (Kwon and Akar, 2022; Mogaji et al., 2022). This concern is further reiterated by the informants from Yu et al.'s (2015) study on retail design for visually impaired customers, where all participants reported that mobility was the biggest challenge they faced. The retail store's design was less important than their daily struggle to move around. Retail stores may have ramps, but if there is no accessible transport from their houses, these individuals experiencing vulnerability will find it difficult to access such marketplaces. Consequently, this paper aims to contribute to the emerging research by highlighting the experiences, needs and challenges of consumers with disabilities within various service contexts (Rosenbaum et al., 2017).

Accessible public transportation

CWDs experience numerous challenges, such as physical and social barriers to accessing public transportation services (Mogaji and Nguyen, 2021). Physical barriers mainly encompass design challenges in the physical context of the services due to inadequacies in the public transit system, such as the poor design and maintenance of pedestrian facilities, uneven surfaces, narrow pavements, a lack of vehicle ramps and a lack of handrails on stairs (Low et al., 2020). Social barriers were also raised by the United Nations Commission on Human Rights, which cited the need for good service and positive attitudes of people towards enhancing accessibility for individuals experiencing vulnerability. Therefore, eliminating physical and social barriers is critical for improving accessibility for CWDs.

Lubitow et al. (2017) analysed the issue of exclusion and vulnerability in public transit. They capitalised on the general observation that the inequitable distribution of transit systems generates safety and environmental risks. The risks potentially worsen the pre-existing inequities and eventually affect access to public transportation for individuals experiencing vulnerability. According to Lubitow et al. (2017), many transit-dependent riders have cited exclusion from public transportation systems due to physical and social barriers. Most public transportation agencies use various cost-cutting strategies, including raising ticket fares, cutting services and minimising investments in auxiliary amenities, such as shelter, to reduce their debt loads. These austerity measures marginalise CWDs, since the available transit infrastructures are only meant to be used by the typical rider (McKenzie, 2013). Increased urbanisation and development in cities also displace many low-income residents in areas without adequate transit amenities. These economic trends, alongside planning dynamics, affect CWDs by displacing them from the reach of core transportation amenities, yet they are the most dependent on these services (Bates, 2017). As a result, CWDs are exposed to even higher risks, since they are forced to use transportation facilities lacking amenities, such as shelter and lighting.

Echeverri and Salmonson (2019) also provided insights into consumer vulnerability using transport services provided by the municipal government. Their study was contextualised in Sweden and explored service interactions within a controlled environment. A special form of transport did not exempt the consumers from developing coping strategies as they dealt with the service interaction. The researchers recognised commodification as a concern for individuals experiencing vulnerability, as their self-worth was being questioned, and service

providers doubted their abilities. This idea of commodification aligns with what Baker et al. (2001) described as ‘infantilising a person’ and the rude look of other service users during social interactions as identified in the psycho-emotional model of disability (Reeve, 2002; 2004). These issues illustrate the experiences of consumers within the marketplace.

Mogaji and Nguyen (2021) examined CWDs’ levels of satisfaction with transportation services from a developing country perspective. They examined how satisfied consumers were with their transport service providers. The participants acknowledged that insufficient transport infrastructure affected their mood, and they became emotional. Mogaji and Nguyen (2021) recognised that infrastructure plays a crucial role in the level of life satisfaction of CWDs and called for further studies to better explore the service provision context. This call from Mogaji and Nguyen (2021) and Dunnett et al. (2016) for a better understanding of how individuals experiencing vulnerability interact with the marketplace is addressed in this present study. Though these scholars (Lubitow et al., 2017; Echeverri and Salmonson, 2019; Mogaji and Nguyen, 2021) made an initial attempt to explore mobility services, they did not examine the impact of transport service provision on the experience of CWDs, which presents a considerable marketplace problem for transport service providers (Ross et al., 2020; Riedel et al., 2022).

Theoretical framework

The study’s aim to explore the experiences and coping strategies of CWDs is underpinned by the TSR framework (Anderson et al., 2013; Azzari and Baker, 2020) and the TRSE framework (Boenigk et al., 2021). These theoretical approaches are important for understanding the holistic experience of individuals experiencing vulnerability and how they engage with transport service provisions. TSR explores the prospect of developing insights that enhance individuals’ well-being, while TRSE focuses on navigating the challenges faced throughout a refugee’s service journey, which is relevant to this study on engagement with transport services. Importantly, this study adopts the extended social model of disability (Shakespeare, 2004; Oliver and Barnes, 2013) by recognising that an individual is disabled due to the disabling barriers they face in society and putting the responsibility on transport services providers to remove barriers and ensure inclusive access for consumers experiencing vulnerability (Mogaji and Nguyen, 2022; Mogaji et al., 2023).

TSR includes tenets that service design greatly impacts people’s well-being (Anderson and Ostrom, 2015). TSR is defined as ‘the integration of consumer and service research that centers

on creating uplifting changes and improvements in the well-being of consumer entities: individuals (consumers and employees), communities, and the ecosystem' (Anderson et al., 2011, p. 3). TSR entails integrating consumer and service research with a major focus on creating developmental changes and enhancements in the customers' and employees' wellbeing (Anderson et al., 2011). This theoretical approach has been adopted across many service designs, such as healthcare (Sweeney et al., 2015; Anderson et al., 2018; Davey and Grönroos, 2019; Patrício et al., 2020), the mental health service context (Sharma et al., 2017), financial services (Sweeney et al., 2015; Brügggen et al., 2017; Soetan et al., 2020; Meshram and Venkatraman, 2022), commercial senior living services (Feng et al., 2019), refugee services (Boenigk et al., 2021) and charity organisations (Mulder et al., 2015). Table 1 presents a summary of selected research on TSR. Significant gaps in our knowledge still exist, which presents the theoretical motivation for this study.

___Table 1 about here___

First, most of these studies have focused on regulated service provision, where organisations are often expected by law to improve their service delivery and co-create transformational value and well-being with their service users (Parsons et al, 2021), service providers engaging with their service users by inviting feedback to understand pain points and improve service delivery, creating positive changes that enhance consumer wellbeing. (Anderson et al., 2013; Rosenbaum, 2015). From financial services to healthcare and charity organisations, these services are expected to take considerable effort to co-create with their customers, unlike many unregulated services where the business owners might not have the motivation, financial capabilities or regulatory requirements to improve their services. Second, while TSR researchers have called for the co-creation of services to enhance well-being (Guo et al., 2013; Sweeney et al., 2015) and Fisk et al. (2019) have called for transformative collaboration, there is limited understanding of the co-creating relationship between CWDs and transport services providers, especially in informal and unregulated services being provided in a developing country. While Blocker and Barrios (2015) recognised the action-oriented and participatory approach to service design, the practicalities and underlying business models are still unexplored, as multiple actors are required to develop such services (Finsterwalder et al., 2017), but they may not be motivated or stipulated to redesign their services. Third, TSR research has received more attention from developed countries focusing on their healthcare services, charitable activities and how to support charities. Compared with the amount of interest from developing countries and the billions of impoverished people at the bottom of the pyramid (Fisk et al., 2016), it is

imperative to expand TSR to understand the inherent challenges of consumers in developing countries and to explore how services can be developed to enhance their general well-being.

Specifically, TSR is considered in a unique context in this present study, which is the exploration of the service encounter and interactions between consumers experiencing vulnerability (consumer entities) and unregulated informal service providers (service entities) in a developing country struggling with inherent structural challenges (macro environment). To address these interactions and the journey to overall well-being, the TRSE framework is adopted to understand the experiences of these stakeholders at different stages of service interactions. Though the TRSE framework emerged from studies on the experiences of refugees, it has drawn on marketing, sociology, transformative service and consumer research literature to provide insights into how to navigate the challenges faced throughout a refugee's service journey. The framework includes three service journey phases, which are entry, transition and exit, and these align with the typical journey cycle of public transportation (Soltani et al., 2012; Low et al., 2020). In the framework, the entry phase considers when the individual begins with the decision to flee their country of origin. Integrating this into our transport study highlights the journey-planning stage, which is when the individual decides to go out and explore the available transport options. The transition phase of the TRSE framework involves the experience of vulnerability as multiple touchpoints of survival. This also applies to the CWD travelling through various modes of transportation while engaging with service providers and other users. The exit phase reflects the refugees' experiences in their destination countries. This is integrated into our transport study as the experience of the CWD as they alight from the mode of transport and bring the service encounter to an end.

TRSE is a new framework that is gaining traction. It has been used in exploring creating hospitable service systems for refugees during a pandemic (Finsterwalder et al., 2021), developing public relations strategies for shaping service ecosystems for social change (Fehrer et al., 2022) and exploring service exclusion practices against customers experiencing vulnerabilities (Ng et al., 2022). Though no study has used it to explore the concept of CWDs and transport services, it is considered appropriate for this study and will make a significant contribution to the ongoing discussion around TSR and TRSE. To summarise, the goal of this study is to understand, through the TRSE framework, how consumers experience the creation of transformative and inclusive services and their journey towards them. The focus is on the interactions that occur during the service interaction, as well as the dyadic relationship and tensions between service entities (service providers) and consumer entities (consumers

experiencing vulnerabilities). The study also explores the willingness, motivation and capabilities of both entities to create ongoing and lasting change.

Methodology

Research design

This research was contextualised in Lagos, Nigeria, around experiences on public transport, especially danfo buses. These small yellow paratransit buses, often derived from retrofitted Volkswagen vans, are the most popular public transport vehicles in the state. Each can accommodate around fourteen to eighteen commuters and can be very uncomfortable when the passengers are packed together. These buses are unregulated, with no designated routes or route numbers, and they are operated by informal self-employed owners or drivers who have to make returns back for the owners of the buses after a day's trip (see Xiao, 2022, for more information on danfo buses in Lagos). A qualitative research methodology was adopted to address this study's research question (Kaur et al 2022, Farinloye et al, 2019). This approach was considered suitable for understanding the lived experience of CWDs. Previous studies, as seen in Table 1, have adopted this methodology to explore the experiences of individuals experiencing vulnerability (Davey & Grönroos, 2019; Sharma et al., 2017; Meshram & Venkatraman, 2022). Similar to Echeverri and Salomonson (2019) and Ford et al. (2016), qualitative data were collected through ethnographic fieldwork and interviews with CWDs and transport services providers. These strands of data were subsequently triangulated (Farquhar et al., 2021) to gain a holistic understanding of the CWDs' experience with the transport services. No specific reason influenced the data collection date; it was simply the most suitable time to start the project. However, this is acknowledged as a potential limitation and is subsequently discussed in the conclusion. Figure 1 presents a graphical overview of the research and Appendix 1 presents a detailed overview of the different phases of data collection.

Figure 1 about here

Data collection

Ethnographic fieldwork

Qualitative data were collected over five weeks of ethnographic fieldwork in different locations in Lagos, Nigeria. The fieldwork involved observing how commuters, especially CWDs, used transport facilities, their engagement with the staff and infrastructure and the existing infrastructure for transport service provision. As Hairon et al. (2017, p. 82) noted, this was an 'intimate, intensive, and prolonged fieldwork', which also allowed 'direct contact with

individuals and engaged in the processes of learning' (Mackinnon et al., 2002, p. 305). In addition, fieldwork granted the opportunity to ask clarification questions, record different activities and take photographs of the lived experience of commuters on the roads of Lagos. Ultimately, these various engagements led to an 'emerging pattern of dynamic behaviour' (Macpherson and Holt, 2007, p. 186) subsequently reported in the findings section. Selected participants (from the interviews) were contacted about the observation study and asked to travel around the city with the research team to gain a better understanding of their experiences with the transport services providers. They were briefed about the scope and expectations. Seven people showed interest (* is next to the participant code in Table 2). They were buddied up with research assistants (RAs) to ensure participation and build trust. To ease the interactions and align with the cultural norms of the city, we adopted a same-gender buddying system. Following a methodological approach similar to Echeverri and Salomonson (2019), the participants were observed for two weeks between July 2022 and August 2022 at the agreed times and locations, as suggested by the participants using public transport. Both the RAs and CWDs explored the transport network of Lagos to see how the CWDs made use of the transport infrastructure, including getting to a bus stop, boarding a bus and engaging with service operators and other customers. The RAs acted as peripheral members to observe the various interactions with the service environment. The researchers had marginal involvement and did not offer any assistance or personal opinions that could influence the participants' engagement with the service environment and the physical context of the service provision; instead, the researchers had conversations with the participants and clarified their observations (Echeverri and Salomonson, 2019; Ford et al., 2016). The researchers recorded voice notes, took photographs (not of the participants, as their dignity and anonymity needed to be ensured), observed the service environment and the participants, and engaged in different conversations.

Interviews

Semi-structured interviews were conducted with the CWDs. Following the approach of Mogaji and Nguyen (2021), the sample requirement was organised through a charity organisation working with PWDs. Twenty-three individuals volunteered to participate in the research. The participants were predominantly male ($n = 13$, 56.5%), employed ($n = 9$, 39.1%) and had a physical disability ($n = 10$, 43.5%). Further sample demographics are presented in Table 2. The interviews were conducted face to face at different locations selected as convenient by the participants, including their houses and offices, a coffee shop and the charity's office. We had

to use locations that were convenient and selected by the participants. We also had to use the charity's office to obtain support for sign language for those with hearing and speech impairments and braille for those with visual impairments. The interviews were recorded after receiving informed consent from the participants (see Appendix 2 for the interview protocol).

Transport services providers were also interviewed to gain insights into their service provision strategies. The operators were interviewed at their terminals (see Appendix 3). Among the 128 prospective participants approached over three weeks in different locations, 81 people agreed to a short interview. The sample demographics are presented in Table 3. The participants were predominantly male ($n = 76, 93.9\%$), which is a usual occurrence, as the city's transportation business is male-dominated (see Kamau and Mitullah, 2022, for the experiences of women in informal public transport enterprises). They were asked questions about the facilities, infrastructure and service delivery for CWDs. As the drivers were often in a rush to carry on with their business, did not want to miss their slots and were not previously prepared for the interviews, the interview duration was a huge consideration. Therefore, the questions were brief to elicit their understanding of CWDs' requirements, infrastructure and service provision strategies. The interviews lasted from 13 to 27 minutes, with an average duration of 17 minutes. The conversations were audio-recorded, and short answers were collected via a survey on a tablet.

Data analysis

Upon completion of the fieldwork and interviews with the CWDs and transport service operators, all collected data, including the anonymised interview transcripts, fieldwork diaries and photographs that were saved in a shared drive, were exported into NVivo, a qualitative data analysis software, and subsequently thematically analysed using Braun and Clarke's (2006) six phases of analysis. The first author carried out the data analysis. This process involved familiarisation with and immersion in the data, such as reading interview transcripts and field notes and examining photos/videos. This phase was followed by generating themes (child nodes) that highlighted the challenges and opportunities that emerged from the participants' transcripts and direct observations. These child nodes were subsequently evaluated and merged to form parent nodes. A deductive thematic analysis approach, where the data are structured to align with a theoretical underpinning (Braun and Clarke, 2006), was adopted with regard to the parent nodes. Similar to Higgins (2020), the parent nodes belonged to the three themes from the TRSE framework (Boenigk et al., 2021), our theoretical underpinning, to evaluate the

service journey phases: *entering service interaction*, *transitioning through service interaction* and *exiting service interaction*. The child nodes (sub-themes) were structured around those themes. After a detailed analysis and discussion with colleagues about the sub-themes and which key themes they best aligned with, the analysis concluded with the alignment with the three themes from the TRSE framework.

Data credibility

We obtained ethical approval from the university of the second author. We adhered to ethical procedures to ensure the study's credibility. The participants were informed that the interviews would be recorded, the data collected would be solely used for academic purposes and their details would not be shared. We believe that the triangulation of the various data from these different phases has added to the study's credibility, as Karjaluoto et al. (2015) highlighted that triangulation ensures research credibility. A member check, which allowed the participants from the semi-structured interviews to read the interview transcripts and confirm them as tangible expressions, was also carried out (Merriam and Tisdell, 2015). Though four participants declined to read it, we at least provided them with the option. Those who read it (including in braille) and interpreted the version in sign language agreed with our transcription and did not change anything. The clustered themes presented in Table 4 to exhibit the different stages of data analysis were also used to improve the trustworthiness and traceability of the study (Mogaji and Nguyen 2021).

Findings

The study's aim is to explore the interactions between CWDs and transport services providers to gain insights into the co-creation of service provision. The analyses of the plethora of qualitative data identified relevant themes under the different stages of the journey and aligned them with the TRSE framework journey phases (Boenigk et al., 2021): 1) entering service interaction, 2) transitioning through service interaction and 3) exiting service interaction. Evidence suggests that there are opportunities for service users to be included in the co-creation of transformative transport service at different stages of a journey. The subsequent section discusses these themes and relevant quotes from the participants and includes images from the fieldwork to bolster each theme.

Entering service interaction

Here, we recognise the experience of the consumers before they start their interactions with the service providers. The consumers shared their experiences and expectations as they planned for their journeys. Often, they dreaded the lack of structure in the transport service provisions, which made them feel unorganised, and they could not plan appropriately. Seven commuters noted that they were often depressed and suffered from mental health problems. They highlighted their struggle at the start of the day because they were unsure how the day would unfold. The participants noted that there were no fixed times for the buses and that they had to rely on what was available when they arrived at their stop. Seven participants mentioned the need for a journey planner and a mobile app to help them plan their journey. One of the participants [P11] said: *Imagine if I can plan my journey on an app, knows how many minutes it will take me to walk to the bus stop and know the time the bus will get there, my life would be very easy.* When we put this idea to the transport service providers, it did not interest them much. One of the drivers said: *You are making everything these days about technology, I am not ready for that, I just want to get on with my work.* Regarding these drivers who are not keen or interested in developing these technologies for the consumers, it is imperative to recognise that they are informal and self-employed drivers and that such technologies may not be their priority even though CWDs would very much appreciate them.

Entering the mode of transportation was considered the start of the service encounter and presented a major concern for the participants, especially those who required wheelchairs to access buses where there were no ramps – often, the passenger had to be carried (See Appendix 4). It was not unusual to see some service providers who were unwilling to engage with CWDs. This was also observed during the ethnographic study when the buses would not stop for passengers on wheelchairs even though there were visible empty spaces in the buses. The CWDs worried about getting on and obtaining a space on the bus for wheelchair use. They believed that it was the bus operators' responsibility to ensure their spaces were protected and available when needed. When the drivers were asked about the quality of their service, they agreed that the busy nature of their service contributed to their inability to serve the commuters' needs. One of the self-employed drivers said: *We need to meet our target, and attending to some customers will delay my operations.* Another said: *I am not wicked, but I am doing my business, and stopping for them (commuters on wheelchairs) will delay me.* While these drivers noted that the business was the priority and that they did not want to waste time, they did not seem to be providing the service anticipated by their customers.

Fast-paced Lagos also presented a contextual factor that influenced the experiences of CWDs as they embarked on their journeys. Despite being Nigeria's smallest state by area, Lagos is highly dense and is home to an estimated 24 million people (Mogaji, 2021). With a poor road network and a growing number of cars, it is not surprising to see cars and buses, along with pedestrians, rushing to use the insufficient transport infrastructure. Some commuters (n = 17) shared their experiences of running after buses even with their disabilities, and drivers often did not seem to care. The CWDs shared their concerns about feeling incompetent when exploring transport services in the city. They asserted that they should not have to struggle to fit in but recognised the inherent challenges of transportation in the city. One of the participants [P18] said: *I know that moving around in Lagos can be very difficult, even for those who are not disabled, but I think the drivers can show more understanding and be patient.* The drivers and conductors (see Appendix 5) were also found to contribute to the CWDs' feelings of incompetence and often suggested that CWDs cannot meet the fast-paced demands of Lagos transportation. For example, one self-employed driver said: *They [CWDs] should know they are in Lagos, and things are not always slow.* A conductor declared: *You get to know them [CWDs] on a particular route, and I try to tell my boss [the driver] to wait and slow down, but it's always a fact that we don't have time to waste.* This lack of awareness about the needs of commuters and the service providers' lack of empathy further exacerbated the vulnerability of the CWDs.

Transitioning through service interaction

Those who are able to obtain public transport enter a different phase as they explore their interactions with the transport services in Lagos. Many of the participants shared their experiences regarding the state of the buses, the seats, the spaces and general cleanliness, which aligned with tangibility, one of the five service quality dimensions of SERVQUAL (Parasurman et al., 1989; Erkan, 2019). Technology was also an emerging theme for the consumers during service interaction, and there was a demand for assistive technology to enhance their travel experience. One participant said:

I wish there was a call button to call the attention of the bus conductor (the driver's assistant who calls the stops and collects the money). I am unable to talk to him, and it can be embarrassing for me. I wish there was something that shows the bus stops. These are important technologies, but you can't find them here. - P19, Male, 36–45, Speech impairment

When asked about the idea of providing audio-visual announcements in their buses in order to be inclusive with their services, participants The service providers said they were not aware of

them. 94.8% of these service providers (n=76) could not fathom the idea of such a provision. One said: *We have had conductors shouting the bus stops for many years, how do you want that to change now?* The driver concluded by saying: *Not possible*. Limited awareness of inclusive service design and assistive technologies was evident. For instance, when asked about the steps on their buses, they felt they were unnecessary. The drivers acknowledged that their services were not inclusive but noted that this was often not their fault, as business needs dictated what they could do. One of the self-employed drivers said: *You want me to install a step and create larger seats, but who pays for that? Even maintaining this bus for those who are able is still a struggle*. Another driver reiterated the point: *I want to do it, make the bus look OK, but I don't have the money. Things are expensive, and my customers are still managing them like that*. Here, we see the drivers explaining the economics behind their decisions. They believed that the space for a wheelchair could be used to carry more commuters who would pay and thus chose not to improve their service environment.

This idea about space was a recurring theme, especially for those with physical disabilities who needed dedicated spaces for their wheelchairs. They complained that able-bodied people often used the spaces and that the driver or conductors did not ask them to move. However, the passengers recognised that the service providers operating the bus rapid transit (BRT) were more supportive and accessible. The BRT is a regulated mass transit system employing dedicated lanes, bigger buses and access ramps. However, BRT buses are few and unavailable across the states apart from some selected corridors (See Appendix 6). The majority of the sector is served by private individuals who own the buses. One of the visually impaired participants [P4] shared her experience on the BRT: *I use the BRT regularly, and I think they have good service because they have a regular bus stop, and they often wait at that place for you to come in*. This level of satisfaction seemed to be associated with the BRT's regulated services, but it was not the experience of the majority of the participants who often relied on buses run by informal drivers, which were unregulated. Poor customer service, as experienced through engagement with the staff, especially the bus conductors, was considered another challenge during the service interaction. One passenger shared her experience:

The bus conductors and drivers can be very rude. They lack empathy and any human feeling. They can shout at you, pull you down if you are struggling to get down or they will treat you like you are nobody. This is because they know you don't have a choice. - **P7, Female, 26–35, Hearing**

The CWDs shared their experiences of engaging with the staff during service provisions. They noted how conductors ignored their requests to board or alight and identified a lack of patience, especially from self-employed informal operators who were often in a rush. We asked the transport services providers about these instances, and while they shared the passengers' concerns, one of the drivers protested: *You can't blame these conductors, they are always like that, they need to be rough, this is Lagos*. One of the conductors said: *We are doing our job, we don't mean to harm anyone, we have to deliver* [they do not own the buses, so they need to make enough money for the bus owners at the end of the day]. However, another driver agreed with the call for more training. He said: *Thank you for sharing these instances, I am aware it's happening, and we need to train ourselves to be more caring*. The significance of engaging CWDs in the co-creation of services to enhance their well-being cannot be overstated. Their involvement enables service providers to gain insights into the impact of their service delivery. However, realising this objective necessitates providing education and training for service providers. It is crucial to recognise that some drivers may be hesitant to adopt this approach, perceiving it as an extra burden.

The high cost of travel is another concern for many CWDs as they move around the city. Reports suggest that the residents of Lagos spend 40% of their income on transit (Harman and McDonough, 2021), while in the UK, that typically accounts for about 13% (Inequality in Transport, 2023). The CWDs shared that there were days when they had to pay extra to be able to use public transport. Many of them complained about the unfair pricing structure and highlighted that sometimes it made them want to stay at home. One participant shared his experience.

I am not very rich. I struggle like everyone in Lagos. I don't get any benefits or support from the government, and you see these danfo trying to collect extra money from me because they are waiting for me to get on the bus. I have had to argue this. Many people argue my case with the conductor, and sometimes they agree, but sometimes they tell me to come down. This can be very painful and unfair. **P11, Male, 18-25, Mobility/physical**

Even though this was observed and corroborated during the ethnographic fieldwork when a passenger in a wheelchair was asked to pay extra, the drivers denied these claims when they were asked. They stated they only charged people who were obese extra money because they took up extra space or charged more when it was raining. One driver explained: *We need to make money, and we can charge extra if there are situations that are not allowing us to make our money*. This scenario revealed that transport service providers may be more focused on financial gains and profitability than on the welfare of their customers. Additionally, it raised

concerns about unregulated transport service providers who have the ability to raise their fares arbitrarily. Notably, this issue was not reported with regard to the BRT.

Exiting service interaction

For many CWDs reaching their destinations, calling the attention of the bus conductors and drivers could be a struggle. These participants were often worried about the bus conductors' lack of patience. This lack of patience was also observed during the ethnographic study and the observations with the participants. The participants were told to descend quickly, and the drivers did not bring their buses to a complete stop. The participants noted that they were concerned about their physical health and well-being when using transport services, especially when alighting from their chosen mode of transportation. All the visually impaired participants (n = 4) and most physically challenged participants (n = 8, 80%) reported that they had been injured or involved in an accident. Such incidents could be embarrassing and further exacerbate the internalised oppression of not fitting into a fast-paced and rushing society. These health and safety concerns were visible during the ethnographic fieldwork, such as inadequate entrances and exits on the buses (see Appendix 4 and 9), the buses not properly stopping, the pedestrian ramps for wheelchair users being too steep and not easy to use (see Appendix 7) and visually impaired CWDs trying to navigate poorly designed built environments (see Appendix 8). The BRT (employed) drivers seemed to have a different perspective. One of the female drivers said:

I try to try to treat disabled commuters safely to avoid any form of accident. I know the road is bad, and things can be better, but I am a human and a professional. I won't say it's because I am a woman. I think we can all be more caring.

The participants also shared their strategies for dealing with inconsiderate service providers as they tried to alight and end the service interaction. Some would give a note to the conductor, while others would speak louder to attract the conductor's attention even though they knew that they would get angry. Six people said they had to use a common bus stop, with one sharing her experience:

*I now have to follow the bus to one of the bigger stops where I know they (driver and conductor) will stop to take some passengers. I do this because they don't like stopping at my bus stop – always grumbling that I am making them lose customers at that bigger bus stop. It can be very frustrating, but I just let it go. **P15, Male, 26–35, Vision***

The fact that the consumers adjusted how they ended their interactions with the service providers, despite the inconvenience, underscored their desire for a positive outcome. This situation brings to the forefront some inherent shortcomings in the service providers' approach.

There appeared to be a lack of empathy and understanding from the providers, which can lead to an inadequate and non-inclusive design and result in negative experiences for some consumers. The primary focus of the service providers seemed to be on increasing their customer bases and maximising profits rather than providing quality service that is accessible and accommodating for all customers. This lack of consideration for the needs of diverse customers can be a major barrier to customer satisfaction and may result in a loss of trust and loyalty from customers. However, this might not be the case here, as the service providers seemed to be assured that they will always have customers irrespective of their service quality.

Discussion

This study recognised that while accessibility to the destination during a service interaction is important, it is imperative to explore the journey. Previous studies have examined marketplace accessibility by focusing on retail stores, museums or hotels, but this present study expands the existing knowledge by exploring the journey and interactions with transport service providers, specifically for public transportation in a developing country. This study extends previous notable studies on transportation for consumers experiencing vulnerability. Mogaji and Nguyen (2021) focused on travel satisfaction, and we developed this knowledge by further highlighting the physical infrastructure, interactions and service quality that impacts the experiences of CWDs. Similarly, while Echeverri and Salmonson (2019) examined the service interaction between CWDs and a mobility service company provided by the municipal government in a controlled environment, we extended the study to understand the consumer and social interactions outside a controlled and regulated provider. We also extended the insights reported by Lubitow et al. (2017) beyond Portland, Oregon, in the United States, to Lagos, Nigeria, an emerging economy, by highlighting its inherent challenges with infrastructure.

Importantly, we extended the boundary of our understanding of TSR by recognising the inherent challenges with regard to informal service providers in a developing country cocreating transformative service design. Though Soetan et al. (2021) and Meshram and Venkatraman (2022) also adopted the TSR framework and focused on a developing country, their service context was different, as they focused on financial services. Likewise, Bianchi (2021) adopted TSR and focused on a developing country, but they focused on an internet service provider, which is a regulated service provider that is more inclined to make changes. By contrast, in our study, we noted the reluctance of the transport service providers to transform their services, due to a lack of awareness, interest and financial capability. We found enormous

opportunities for inclusive service design and solving marketplace problems for consumers experiencing vulnerability (Becker and Jaakkola, 2020; Johns and Davey, 2021), but we posit this will require policy changes and TSIs (Boenigk et al., 2021b). Importantly, our study provided theoretical insights beyond the well-researched WEIRD countries by recognising the inherent challenges of many emerging countries (Mogaji, 2020) and highlighting the struggles of many consumers around the world who do not have access to an inclusive transport system to access the marketplace. Figure 2 presents a theoretical summary of the key findings of the study.

Figure 2 about here

Theoretical contributions

Our study contributes to the call for research on TSR put forward by Anderson et al. (2010; 2013) and Ostrom et al. (2010), which highlights the need for service research to enhance the well-being of consumers through value co-creation. However, we have gone beyond this call by focusing on the unregulated service sector, where co-creation with consumers may have been assumed to be easier (Mulder et al., 2015; Barnes et al., 2021; Boenigk et al., 2021). Instead, our study has shed light on the inherent challenges faced by service providers in the informal markets of developing and low-income countries to take responsibility for improving their services and enhancing the well-being of their consumers (Mogaji et al, 2023; Mogaji & Uzondo, 2023). Our findings challenge the prevailing belief in TSR that service providers are motivated to design transformative services (Sweeney et al., 2015; Davey and Grönroos, 2019; Patrício et al., 2020). In the unregulated service sectors, service providers lack the financial incentive and desire to improve their services, as they know that they can still attract customers despite the poor quality of their offerings. This insight contradicts the expectation in TSR that service providers should take responsibility for designing transformative services. Our study has provided a critical perspective on TSR by highlighting the complexities of value cocreation in the unregulated service sectors. By doing so, we contribute to the ongoing debate on how to enhance the well-being of consumers in developing and low-income countries (Fisk et al., 2016; Dean and Indrianti, 2020; Meshram and Venkatraman, 2022).

Our investigation into the interactions between individuals experiencing vulnerability and transport service providers has highlighted the difficulties that exist in achieving transformative collaboration. These findings contribute to the emerging field of TSIs (Boenigk et al., 2021b), which recognises the potential for groups, individuals or companies to develop initiatives

aimed at enhancing consumer well-being. However, our study has also underscored the need for stakeholders beyond transport service providers to act, educate and collaborate in improving transport services (Nguyen and Mogaji, 2023a). We have recognised that there are opportunities for other stakeholders to play a more active role in supporting consumers experiencing vulnerabilities and improving the quality of transport services (Davey and Grönroos, 2019; Patrício et al., 2020; Sharma et al., 2017). Our study presents a critical perspective on the challenges of achieving transformative collaboration in the context of transport services. By highlighting the need for multi-stakeholder engagement and collaboration, we contribute to the ongoing discourse on how to enhance the well-being of individuals experiencing vulnerability in the transport sector (Mogaji and Nguyen, 2022; Mogaji et al., 2023).

Our study makes a significant contribution to a growing movement within the service research community, which seeks to address the issue of impoverished populations across the world and their access to essential services from various sources, such as corporations, governments, communities and non-governmental organisations (Reynoso et al., 2015; Dean and Indrianti, 2020). Our summary, presented in Table 1, has revealed a significant gap in the previous studies on TSR and consumers experiencing vulnerability, which primarily focused on developed countries with robust social service infrastructures. This approach provided limited insight into the experiences of the billions of consumers at the base of the pyramid in many developing countries worldwide (Fisk et al., 2016; Dean and Indrianti, 2020; Meshram and Venkatraman, 2022). Specifically, we provided deeper insight into TSR by exploring the intersectionality between transport services, consumers with experiencing vulnerabilities and the developing country context. Appendix 10 graphically illustrates the positioning of our work, moving beyond understanding consumers experiencing vulnerability in developing countries (Soetan et al., 2021; Bianchi, 2021, Meshram and Venkatraman, 2022), transport services for consumers experiencing vulnerability (Lubitow et al., 2017; Echeverri and Salmonson, 2019) and transport services in developing countries (Mogaji et al, 2021, Ngoc et al, 2017). Our study addresses the precarious situation of these consumers experiencing vulnerability in many developing countries, beyond just transportation and the implications for evaluating other essential services, such as healthcare (Sweeney et al., 2015; Anderson et al., 2018), financial (Soetan et al., 2021; Dzogbenuku et al., 2022; Meshram and Venkatraman, 2022) and educational services (Sharma et al., 2022; Nguyen, 2023). This critical perspective underscores the need for service providers to consider the unique challenges and experiences of base-of-the-

pyramid consumers and prioritise their well-being in service design and delivery. Importantly, our study contributes to the ongoing debate on how to improve access to essential services for individuals experiencing vulnerability across the world by highlighting the need for inclusive TSR that considers the unique needs and experiences of consumers at the base of the pyramid.

Managerial implications

Most public transport in many developing countries is run as an informal economy, with individuals owning buses, cars and motorcycles to provide transportation services (Mogaji et al., 2021; Xiao, 2022). These individuals may not be aware of or cannot tolerate or meet the service needs of CWDs. Therefore, it is imperative to educate these informal service providers. While previous studies have called for staff training (Baker, 2006; Yu et al., 2015; Nau et al., 2016; Higgins, 2020), it is important to recognise the context in which this training is to be conducted and who is responsible. These drivers and service providers are not employees of a company. They operate in an unregulated industry and informal economy, and they may not be forced or mandated to attend training, so many are not inclined to seek formal training. Thus, this calls for a different approach, which may involve social marketing campaigns and market storms (Soetan et al., 2021) wherein awareness is taken to parks, and videos about drivers' lack of patience and public presentations and leaflets are shared to sensitise drivers and service providers. As Adeola et al. (2021) called for a different strategy for marketing financially to consumers experiencing vulnerability in Nigeria, a different training approach is needed for these drivers. This training can be a government initiative, a corporate social responsibility programme of a company or a charity organisation's project. With such programmes, informal service providers can learn and understand the plight of commuters and improve their service provision.

Our study highlights managerial implications for TSIs (Boenigk et al., 2021b). A TSI may be a new mobility start-up with the potential to disrupt the informal economy and offer more inclusive service. In addition, social enterprises that recognise the challenges faced by individuals experiencing vulnerability may also step forward with innovative solutions, such as assistive technologies, mobile apps and journey planners that provide exceptional customer service. These socially conscious businesses can improve access to the marketplace and cater to the growing demand of PWDs who wish to explore it. However, it is crucial for these companies to align with the 3A (awareness, alignment and access) framework proposed by Boenigk et al. (2021) when working on TSI projects. The framework emphasises the need for

companies to cultivate awareness and understanding of the challenges faced by individuals experiencing vulnerability, align their strategies and services with their needs and ensure that access to their services is unrestricted. Adherence to the 3A framework can help TSIs deliver accessible, inclusive and customer-centric service that caters to the needs of all consumers, including those experiencing vulnerability.

Conclusion

In conclusion, we reflect on Kabadayi and Tsiotsou's (2022) Triple-A framework for serving humanity with service research. We have presented *authentic research* by exploring the journey and not just the destination for CWDs. We have *advanced knowledge* by highlighting the inherent challenges of creating transformative services with informal service providers in an emerging economy and provided *applicable insights* through the potential of TSIs, such as mobility start-ups and social enterprises, to disrupt the informal sector and offer transformative and inclusive service. By virtue of this reflection, we can provide significant theoretical and managerial implications relevant to service design. Despite these achievements, we acknowledge that this is exploratory research; therefore, the results need to be considered in light of its limitations. First, our study has solely focused on interactions between service providers and CWDs, and we have not considered wider sociocultural structures while exploring this service provision. This limitation presents an agenda for future research to understand the role of other consumers, transport infrastructures beyond the control of the service providers and government policies in shaping transformative transport service design. Second, our study is contextualised in Nigeria. Though it is one of the largest developing countries in the world, the findings may not be generalisable, and future research can explore the experiences of CWDs in other countries. Third, we acknowledge that the ethnographic data were collected at a particular time of the year, and it is possible that the insights would be different at another time/season of the year. Future studies can collect quantitative and qualitative data at different times to gain a better understanding of consumer experiences.

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