Adapting the TOURQUAL scale for Accessible Tourism: Assessing Service Quality for People with Physical Disabilities

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Abstract

Traditional service-quality frameworks often fail to adequately capture the experiences of people with disabilities in tourism contexts. Although accessibility has been increasingly discussed in tourism research, limited guidance exists on how existing service-quality models can be meaningfully adapted from the perspective of tourists with physical disabilities. This study explores how the TOURQUAL scale can be adapted to better reflect accessibility-related quality perceptions among tourists with physical disabilities in the Brazilian context. Using a qualitative approach, a focus group was conducted with six participants presenting different types of physical disability, enabling an in-depth examination of lived tourism experiences. Data were analysed using Bardin's content analysis and organised using the hierarchical model proposed by Philip and Hazlett, which classifies indicators into pivotal, core, and peripheral attributes. The findings highlight that accessibility-related service quality extends beyond physical infrastructure, encompassing attitudinal, communicational, technical, emotional, and relational dimensions, including indicators related to staff sensitivity and training, accuracy of accessibility information, autonomy-supportive service delivery, maintenance of accessible infrastructure, and trust in service provision. The hierarchical organisation of indicators provides a structured way to prioritise accessibility-related attributes based on their perceived relevance to autonomy, safety, and dignity in tourism experiences. Rather than proposing a universal protocol, this study offers a user-informed and context-sensitive framework that illustrates how service-quality models such as TOURQUAL can be adapted to incorporate accessibility considerations. The results contribute conceptually and methodologically to the literature on accessible tourism, as well as providing practical insights for tourism managers seeking to improve inclusive service quality.

Keywords: TOURQUAL; service quality; accessibility; physical disabilities; content analysis; hierarchical model

1. Introduction

Managing service quality is a vital task for organisations that provide tourism experiences (Song et al., 2025). It is also widely recognised that the frameworks traditionally used to measure service quality (such as SERVQUAL, see Parasuraman et al., 1988) tend to be generic, insofar as they are not designed to evaluate the quality of tourism experiences specifically (Hosany et al., 2022; Mondo et al., 2024). More detailed and precise indicator sets are needed for the tourism context. In response, Mondo (2017, 2020, 2022) developed the TOURQUAL scale, which is tailored specifically to evaluating tourism service quality and has been widely applied in the tourism context (Alves de Medeiros et al., 2025). The TOURQUAL scale has also been adapted and applied to different tourism sub-sectors, such as historic districts (Mondo, 2018a) and events (Mondo et al., 2018a). This scale does, however, have limitations when it comes to evaluating the quality of tourism services from the perspective of people with disabilities (PwDs) (Mondo et al., 2018b; 2024). No indicators are included, for example, to measure the quality of service in relation to the specific access needs of PwDs. As a result, the TOURQUAL scale tends to overlook the needs of PwDs and fails to equip organisations to manage the quality of their service delivery for this group of customers.

Not only is there a strong ethical imperative that PwDs should receive an equitable quality of service, but PwDs also represent a valuable market segment for many tourism businesses. Around 1.3 billion people worldwide have a disability (WHO, 2023). In Brazil, which is the geographical focus of this study, about 14.4 million people have some type of disability,

corresponding to 7.3% of the population (IBGE, 2025). Physical disability is the most prevalent form, followed by visual, hearing, and intellectual disabilities (Rodrigues & Valduga, 2025). Many PwDs travel frequently for tourism purposes. Indeed, past studies have found that the view that incapacity or lack of interest significantly reduce the propensity for PwDs to undertake tourism is a greatly exaggerated one (Gonda, 2024). It has been noted, moreover, that PwDs tend to spend more per trip and are likely to be accompanied by paying travel companions (Rucci & Porto, 2022). Accessibility is also a legal obligation throughout society, including in tourism, as provided by Law No. 13.146/2015 (Brazilian Inclusion Law) and Brazilian Technical Standards (2020).

This study argues that the TOURQUAL scale is not the only tourism service-quality framework that neglects to account for disability access. Ideally, all of them should be adapted to do so. However, currently there is no protocol or guidance for doing this. The purpose of this paper, therefore, is to demonstrate how the TOURQUAL scale, as an example, can best be adapted to include disabled accessibility considerations. This includes, firstly, how best to determine the optimal set of indicators in a particular application context, taking account not only of the special characteristics of tourism but also the relevant disability regulations and laws. In doing so, this paper aims to go beyond the usual focus on operational considerations to consider also the emotional and relational aspects of the tourism experience for customers who have disabilities. Secondly, the paper aims to determine how best to integrate these indicators into the TOURQUAL scale, exploring the possibility of using hierarchical weighting based on their impact on the tourist experience. From a theoretical perspective, emotional and relational dimensions are particularly salient for tourists with physical disabilities because service encounters often involve situations of vulnerability, dependence, and negotiation of autonomy. Studies in accessible tourism and disability research have shown that perceptions of dignity, respect, trust, and empathy significantly shape overall service evaluations, often amplifying or mitigating the impact of physical barriers (Gonda, 2024). For PwDs, service quality is therefore not only assessed through functional performance, but also through how interactions with staff and service systems support autonomy, reduce stigma, and recognise individual agency. Ignoring these dimensions risks underestimating critical experiential factors that influence satisfaction, sense of belonging, and willingness to engage in tourism activities.

Given the wide range of disabilities that exist among PwDs, and the tendency of these to have different implications for the delivery of service quality, this paper will focus on physical disabilities. As noted above, this represents the largest disability group in Brazil. From a theoretical perspective, this study contributes to addressing a gap in the existing service-quality literature by strengthening existing knowledge of the physical accessibility dimension. From a practical perspective, the findings will demonstrate how tourism business owners and managers, as well as public-policy makers, can best adapt their service-quality framework to better account for disabled accessibility considerations. This analytical focus is justified not only by prevalence, but also by the direct and observable interaction between physical disabilities and core tourism service-quality dimensions, particularly those related to access, mobility, infrastructure, safety, and human assistance. Focusing on physical disabilities allows for a more coherent examination of how service-quality indicators operate at the interface between built environments, service processes, and interpersonal interactions, while avoiding conceptual overlap with communicational and cognitive accessibility challenges associated with other disability types. The study does not imply that other disabilities are less important, but rather adopts a scoped approach aligned with the exploratory and framework-adaptation objectives of the research.

2. Literature Review

2.1 Service Quality in Tourism

Service quality can be defined as the evaluation made by the customer during or after the service delivery, which involves the customer comparing what was expected with what was perceived to be experienced (Mondo et al., 2024; Sthapit & Björk, 2020). Studies show that service quality is a key determinant of visitor satisfaction (Song et al., 2025; Xia et al., 2024). It is important, therefore, that service organisations consider the quality of their service provision at all stages of the service 'journey' (Mondo et al., 2024). Evaluating service quality requires, however, that perceived quality can be adequately measured, which requires the use of a service-quality framework. While several generic service-quality frameworks have been developed, including, most notably, SERVQUAL (Parasuraman et al., 1988; Roy et al., 2015), it has long been recognised that the unique characteristics of tourism as a consumption activity require the use of more specific quality indicators (Fick & Brent Ritchie, 1991). The TOURQUAL framework was developed as a direct response to this need. Based on an extensive bibliometric review (Mondo, 2017, 2022, 2024, 2025; Mondo & Fiates, 2017; Mondo et al., 2020; Mondo et al., 2024; de Oliveira Borges et al., 2025) and empirical validation, the TOURQUAL scale is based on 26 indicators grouped into six dimensions: access; environment; safety; experience; technical quality; and the human element (Mondo & Fiates, 2017). TOURQUAL identifies priority service attributes and allows quality enhancement to be made based on empirical evidence (Mondo, 2017). Its creation fills an important gap, as tourism service-quality frameworks previously focused on destinations (Upegui et al., 2024). The TOURQUAL scale was not, however, designed specifically to evaluate the service-quality perceptions of PwDs. There is, therefore, a need to consider how TOURQUAL might best be adapted to enable such perceptions to be measured, evaluated, and acted upon.

Despite the growing body of research addressing accessibility and inclusion in tourism, a focused review of the literature reveals the absence of consolidated service-quality measurement frameworks developed explicitly from the perspective of tourists with disabilities. Existing studies have predominantly emphasised accessibility audits, infrastructure and facility assessments, and compliance with technical standards (Buhalis & Darcy, 2011; Ferst et al., 2020; Gonda, 2024; Li et al., 2022), as well as analyses of public policies and regulatory frameworks related to accessibility (Lima & Duarte, 2025; Rodrigues & Valduga, 2025). Other contributions focus on destination-level diagnostics or accessibility information schemes rather than user-based service-quality constructs (Eichhorn et al., 2008; Darcy, 2010). Although these studies provide important insights, they rarely operationalise accessibility within validated service-quality models or capture experiential, relational, and attitudinal dimensions from the perspective of people with disabilities (Ferri Sanz et al., 2019; Kalargyrou et al., 2018). This gap suggests that the key challenge lies not in selecting among competing accessibility-oriented quality frameworks, but in adapting established tourism service-quality models to meaningfully incorporate accessibility considerations informed by users' lived experiences.

Considering this gap, the TOURQUAL scale was selected as the analytical foundation for this study based on theoretical and methodological considerations. Unlike generic service-quality models, TOURQUAL was specifically developed for tourism contexts and is grounded in a multidimensional structure that encompasses not only operational and infrastructural aspects, but also experiential, safety-related, and human interaction dimensions (Mondo & Fiates, 2017; Mondo, 2022). Its empirically validated structure and modular design allow for the incorporation of context-specific indicators without compromising conceptual coherence. This flexibility makes TOURQUAL particularly suitable for adaptation to accessibility-related contexts, where service quality is shaped by diverse physical, attitudinal, and communicational factors. While the authors' prior experience with the framework supports its adoption, the

primary rationale for its selection lies in its capacity to be meaningfully adapted to capture user-based perceptions of service quality in tourism settings.

2.2. Disabilities and Accessible Tourism

Although accessibility is a cross-cutting theme in tourism (De Castilho, 2020), the study of accessible tourism is still in the early stages of consolidation (Rodrigues & Valduga, 2025). It is generally accepted, however, that the extent to which tourism is accessible to PwDs depends greatly upon the nature of the disabilities of individual customers. Currently, the concept of a person with a disability adopted by the UN is the one stated in the International Convention on the Rights of Persons with Disabilities (approved by the UN General Assembly in December 2006). This is reproduced in Article 2 of the Brazilian Law No. 13.146/2015, known as the Statute of the Person with Disabilities (Lei Brasileira de Inclusão da Pessoa com Deficiência):

> "A person with a disability is someone who has a long-term physical, mental, intellectual, or sensory impairment which, in interaction with one or more barriers, may hinder their full and effective participation in society on an equal basis with others (Brazil, 2015, Art. 2)."

This definition aligns with the social model of disability, which conceptualises disability not as an individual condition, but as the result of interactions between bodily impairments and socially constructed barriers (Oliver, 2013). From this perspective, limitations experienced by people with disabilities are largely produced by inadequate physical environments, exclusionary service practices, and attitudinal barriers, rather than by impairment itself. In the context of tourism, the social model shifts analytical attention toward architectural design, service processes, communication practices, and interpersonal interactions, highlighting the responsibility of organisations and destinations in enabling or restricting participation. This theoretical lens is particularly relevant for service-quality research, as it reinforces the need to evaluate not only technical compliance, but also how services are structured, delivered, and mediated in ways that support autonomy, dignity, and inclusion. The priority needs of PwDs undertaking tourism activities vary according to their specific disabilities (Rodrigues & Valduga, 2025). People with physical disabilities often require architectural adaptations and auxiliary equipment to enable mobility and comfort (Gonda, 2024). Those with visual and hearing disabilities need communication and information resources, such as audio description, braille, tactile flooring and maps, Brazilian Sign Language (LIBRAS), subtitles, and visual signage (Qiao et al., 2023). In the case of intellectual disabilities, the main barriers are in service and social interaction, with frequent reports of infantilising treatment and underestimation of capabilities (Gonda, 2024).

The field of accessible tourism emerged at the intersection of tourism, accessibility and disability. Over time it has also come to include a concern for access by the elderly, people in socially vulnerable situations, companions, and travellers with children (Rodrigues & Valduga, 2025). Although driven by the demands of PwDs, accessible tourism benefits society by influencing the inclusive planning of tourism activities (Rodrigues & Valduga, 2025). Fontes and Monteiro (2009, p. 61) note that "the relationship between the concepts of accessibility and tourism gives rise to accessible tourism, a broad definition that is not limited only to people with disabilities". In another study, Pita (2009, p. 159) highlights that "accessible tourism occurs when means of transport, destinations, and services offered are available and usable by any visitor". Accessible tourism is, therefore, best understood as a set of structures and practices focused on the experience of a diverse public (Gonda, 2024). The implementation of accessible tourism thus requires the adoption of the concept of universal design, which aims to serve everyone without the need for adaptations (Buhalis & Darcy, 2011). In Brazil, the Statute

of the Person with Disabilities defines universal design as the design of products, environments, and services usable by all, with or without assistive technology (Brazil, 2015). Despite its potential, the tourism sector still shows limited progress in adapting accommodation and services for PwDs (Lima & Duarte, 2025). It is therefore essential that service providers adopt innovative practices that ensure the specific needs of all tourists are met. While universal design provides normative principles for inclusive planning and service provision, it does not, by itself, offer a structured framework for evaluating how such principles are perceived and experienced by users. In this sense, service-quality models such as TOURQUAL complement universal design by enabling systematic assessment of experiential, relational, and operational dimensions of accessibility from the user's perspective.

The need is real and pressing. Adapting service-quality indicators so that they can evaluate accessibility can help the businesses using them to identify and address critical issues related to lack of accessibility; they can also help tourists make informed choices (Mondo et al., 2024). To date, however, few studies have attempted to developed accessibility indicators in the tourism context (Li et al., 2022). This process can only be done with the direct participation of PwDs (Ferri Sanz et al., 2019). It requires the involvement of those who experience (in)accessibility in practice (Tao et al., 2024). In this study, the indicators of the TOURQUAL scale were considered by PwDs, whose views were captured through a focus group. The indicators were also analysed considering the specialised literature and relevant legislation, with emphasis on the Brazilian Law for the Inclusion of Persons with Disabilities (Brazil, 2015), the International Standard ISO 21902 – Accessible Tourism for All (2021), and the studies by Mondo and Fiates (2017) and Mondo et al. (2024). These studies were used to adapt the indicators so that the evaluation criteria align both with legal guidelines and with the real experiences of PwDs.

3. Method

The method adopted in this study can best be characterised as applied research. The methodology is descriptive and inductive, using a qualitative approach and based on an interpretivist paradigm (Bouncken et al., 2025). Moreover, the research is based on the interpretation of perceived phenomena through a case study. The development of the study was divided into two main stages. The first consisted of a bibliographic review on the themes of tourism, accessibility, inclusion, and service quality in tourism, as well as service quality related to the TOURQUAL framework. The second stage employed a focus group to analyse indicators of service quality from the perspective of people with physical disabilities.

3.1 Data Collection Procedure

Participants were selected using a non-probabilistic convenience sample, in which the researcher selects the sample units to which they have easiest access. The selected participants took part in a focus group, which has the advantages of being flexible and having high face validity (Engel et al., 2020). Six participants were selected and are anonymously referred to as Participants 1 to 6, as shown in Table 1.

Table 1

The focus on people with physical disabilities in this study is justified for several reasons. First, it is the most prevalent type of disability in Brazil according to IBGE (2023), making it representative within the universe of people with disabilities. In addition, the barriers faced by people with physical disabilities in tourism contexts are largely associated with infrastructure, mobility, and interaction with facilities (Kalargyrou et al., 2018), which allows for a direct evaluation of TOURQUAL indicators related to aspects such as access, comfort, signage, and

service. Another relevant point is that, despite the existence of laws and regulations governing physical accessibility (such as the Brazilian Inclusion Law and ISO 21902), their application remains limited and often inadequate (Rodrigues & Valduga, 2025). By giving voice to this specific group of consumers, the study enables an in-depth analysis of the effectiveness of the existing indicators, suggesting necessary adjustments from the perspective of those who experience access difficulties in practice. The focus group lasted 100 minutes and was conducted via Google Meet. The participants reported being frequent tourists with extensive travel experience. They use various modes of transport, several types of accommodation, and had travelled to both national and international destinations. The focus group was guided by a semi-structured protocol designed to elicit participants' experiences and evaluations of tourism services. Prompts focused on perceived barriers and facilitators during tourism experiences, evaluation of existing TOURQUAL indicators, identification of missing accessibility-related indicators, and discussion of which elements were considered essential, important, or complementary for autonomy, safety, and dignity while travelling.

Although the number of participants (n = 6) may appear limited, it is consistent with the exploratory and in-depth qualitative design adopted in this study. The focus group was intentionally composed to prioritise depth of discussion and experiential richness rather than statistical representation, which is appropriate for research aimed at refining conceptual frameworks and adapting service-quality indicators. Participants were selected based on their lived experience as tourists with physical disabilities, and the inclusion of diverse types of physical impairments contributed to analytical variability within a focused research scope. During data analysis, recurrent themes, shared experiences, and convergent interpretations emerged across participants, indicating that theoretical saturation was reached in relation to the study's objectives. Given the specificity of the phenomenon under investigation and the hard-to-reach nature of the population, the sample size was considered sufficient to support the qualitative insights generated and the proposed adaptation of the TOURQUAL framework. In addition, saturation was identified when successive contributions no longer introduced new indicators or substantially novel interpretations, and when discussions increasingly converged around the same accessibility priorities across participants. Moreover, the use of convenience sampling reflects the exploratory and qualitative nature of the study and the hard-to-reach characteristics of the target population; however, it also implies that the findings are not intended to be statistically generalisable, but rather analytically informative within the studied context.

3.2 Data Analysis

Data analysis was conducted through Bardin's (2011) content analysis framework: a widely adopted method in qualitative research aimed at extracting meaning from textual data through systematic procedures. The analysis followed Bardin's three classic stages: (1) pre-analysis, (2) material exploration, and (3) treatment of results, inference, and interpretation. In the pre-analysis phase, the audio recording of the focus group was fully transcribed and carefully read to familiarise the researchers with the material. At this stage, the research objectives were reaffirmed, theoretical constructs revisited, and an initial categorisation scheme was drafted based on the TOURQUAL dimensions and the literature on accessibility in tourism (Gonda, 2024; Rodrigues & Valduga, 2025). During the material exploration phase, a coding framework was developed combining deductive and inductive strategies. Deductively, codes were structured around the TOURQUAL dimensions (access, environment, safety, experience, technical quality, and the human element) and accessibility dimensions (architectural, communicational, attitudinal, etc.). Inductively, emerging patterns, recurring themes, and user expressions were used to refine and expand the codes. The unit of analysis was the thematic statement, allowing both literal and interpretative extraction of meanings. Coding was

conducted manually by two researchers, and discrepancies were discussed until consensus was reached. In the third phase, a hierarchical classification of the indicators was applied based on Philip and Hazlett's (1997) model, which distinguishes between pivotal, core, and peripheral attributes. This framework was used to assess the perceived weight and centrality of each indicator, as expressed by the participants. Pivotal indicators were those mentioned with high frequency and strong emotional emphasis, often described as indispensable. Core indicators were considered valuable but not strictly necessary for basic access. Peripheral indicators were seen as enhancing the experience but not determinant of participation. The hierarchical structure was derived inductively from participants' narratives and was subsequently validated through an internal consensus meeting among the authors and reviewed by an external expert in accessible tourism.

The classification of indicators into pivotal, core, and peripheral categories followed a structured qualitative logic rather than a purely intuitive process. Three analytical criteria guided this classification: (i) frequency of mention across participants' narratives, (ii) intensity of emphasis, including emotional weight and expressions of indispensability, and (iii) perceived centrality of the indicator to the feasibility, autonomy, and safety of the tourism experience. Indicators repeatedly described as essential or non-negotiable were classified as pivotal, those enhancing quality but not preventing participation were classified as core, and those contributing to comfort or enrichment without determining access were considered peripheral. Coding and classification were conducted by two researchers independently, and divergences were discussed until consensus was reached. Disagreements typically related to borderline cases between core and peripheral indicators and were resolved through re-examination of excerpts and alignment with the hierarchical logic proposed by Philip and Hazlett (1997). As the study adopted a focus group design, differing views naturally emerged during the discussions; participants were encouraged to openly debate their perspectives and collectively reflect on the relative importance of each indicator, leading to a consensual categorisation of indicators (pivotal, core, or peripheral) through group deliberation.

To enhance the methodological rigour, the study applied investigator triangulation: two researchers independently coding the data, and expert validation, which involved a specialist reviewing the final classification of indicators. This process aimed to strengthen both the face validity and reliability of the findings, as recommended in qualitative research design (Bouncken et al., 2025). This analytical strategy not only allowed for the identification of critical quality indicators from the perspective of PwDs but also facilitated the adaptation of the TOURQUAL model into a hierarchical framework aligned with inclusive tourism principles. The resulting model provides a structured and evidence-based foundation for assessing and managing service quality in tourist attractions for people with physical disabilities. The expert validation process involved review of the preliminary classification of indicators by an external specialist with recognised professional and academic expertise in tourism management and accessible tourism. The specialist has extensive experience in teaching, consultancy, project coordination, and professional engagement related to accessible tourism, inclusion, and service quality, with a substantial record of academic publications, technical reports, and participation in national and international events. The expert was invited to assess the conceptual coherence, practical plausibility, and alignment of the hierarchical classification with established accessibility principles and experiential realities. Feedback from this process resulted in minor refinements to the positioning of specific indicators, especially in borderline cases between core and peripheral classifications, and improvements in the clarity of indicator descriptions, without altering the overall structure or theoretical logic of the classification. Although the empirical data collection relied on a single focus group, the study adopted multiple forms of analytical triangulation to enhance methodological rigour. In addition to investigator triangulation during the coding and interpretation phases, the analysis

was systematically confronted with established academic literature on accessible tourism and service quality, as well as with relevant legal and technical frameworks, including accessibility regulations and international standards. This combination of data sources allowed the findings to be interpreted beyond a single empirical lens, reinforcing their credibility and contextual validity. The study is therefore positioned as an exploratory and user-informed contribution aimed at refining an existing framework, rather than at producing a definitive or fully validated model.

4. Results and Discussion

The quotations presented in this section were selected to illustrate recurring patterns identified during the coding process and do not represent isolated or anecdotal accounts. Based on the objective of this study and the analysis of the focus group, the TOURQUAL indicators were re-organised into a three-level hierarchical structure – pivotal, core, and peripheral – according to the relevance attributed by people with physical disabilities. To enhance clarity and emphasise the contributions of the study, Table 2 presents a comparative representation of the original TOURQUAL indicators based on empirical evidence. The adapted model integrates accessibility dimensions – such as architectural, instrumental, attitudinal, communicational, and methodological – that were recurrently identified as decisive by participants during the focus group discussions. Table 2 should be interpreted as an analytical synthesis derived from the empirical reorganisation of TOURQUAL indicators based on participants' perspectives, rather than as a new or fully developed theoretical framework.

Table 2

This adapted classification provides a blueprint for managing accessible tourism. Pivotal indicators are those whose absence may prevent the tourist experience from occurring altogether. Core indicators enhance satisfaction and foster inclusion but can be negotiated in certain contexts. Peripheral indicators enrich the visit but are not essential for accessibility. This hierarchical logic responds to the principle that accessibility is not only about removing physical barriers but also about ensuring autonomy, dignity, and effective participation in tourism (Ferst et al., 2020).

4.1 Pivotal Indicators

Pivotal indicators are those that participants unanimously identified as non-negotiable for a viable and dignified tourism experience. The first and most immediate challenge reported was accessibility of location and transportation. Inaccessible sidewalks, lack of adapted parking, and the absence of inclusive public or private transportation were frequently cited. As one participant noted, "Getting there is already the hardest part" (P1). Even when tourism structures are accessible, transportation options to get to them are often not, undermining the quality of experience from the outset (Wang et al., 2021). Access to adapted toilets and bathrooms was also prioritised, not only for functional reasons but for preserving personal autonomy. Participants reported difficulties with features such as pedal-operated bins, inadequate shower chairs, unreachable mirrors and sinks, and poorly placed grab bars. One respondent mentioned, "Toilets need to be functional and ensure independence" (P3), while another stated, "I cannot turn on the tap without something to support myself" (P5). As Moura et al. (2017) note, accessibility in restrooms is not limited to structural availability, but also includes usability and autonomy.

Within the human element, the importance of attentive, informed, and respectful service was widely emphasised. Several participants recounted moments of embarrassment due to untrained staff or lack of basic knowledge on how to assist. One stated: "People try to help

without understanding what we actually need. They grab my arm to 'help,' but that actually hinders me" (P6). In contrast, when professionals treat people with respect and empathy, practicing active listening, this is perceived as a positive aspect, as one participant stated: "That's what was nice. He first listened to what my needs were, what my preferences were ... That's it … if there were more people with that kind of sensitivity to listen, right?" (P5). Others recalled having to explain their limitations and still being misunderstood: "They talk to the person with me, as if I could not speak" (P2). These cases underscore the urgent need for attitudinal and communicational accessibility, reinforcing findings by Duarte and Mora (2023) and Gonda (2024), which highlight service staff behaviour as a key factor in inclusiveness.

The issue of technical knowledge was also emphasised. Participants reported situations where staff were unable to operate lifts or equipment, affecting safety and efficiency. One stated: "The driver struggled to get the bus lift working" (P4). In this context, trust was described as fundamental to the tourism experience. PwDs need confidence in the tourism provider's ability to meet their needs. "Those providing the service need to really know it, because the user knows what they need" (P3). These accounts echo research by Kalargyrou et al. (2018), who advocate for comprehensive training and empowerment of service providers. Accuracy of information regarding accessibility was also considered pivotal. Several participants shared experiences where information provided online or by staff was incomplete, outdated, or misleading. As one participant stated: "They say it's accessible, but when you arrive, there are stairs" (P3). Another reinforced this by saying: "They say there's an adapted bathroom, but it's just a toilet with a grab bar and you can't even get the wheelchair in" (P4). Inaccurate information can lead to feelings of frustration and insecurity: "We always have to call first, because you can't trust what's on the website" (P6). These examples underscore how poor communication about accessibility creates not only physical barriers but also emotional and logistical burdens, particularly for those who need to plan every detail in advance (Duarte & Mora, 2023). Finally, participants placed internal signage, infrastructure maintenance, and physical safety among the most essential elements. Signage indicating accessible paths, toilets, or ramps was often missing or hidden, reducing autonomy. One stated: "A lift platform is a great solution, but no one knows it's there" (P1). Likewise, the lack of regular maintenance caused frustration: "More frustrating than not having it is finding out it doesn't work" (P3). These issues contribute to feelings of vulnerability, particularly when improvisation is used in place of safe, inclusive infrastructure.

4.2 Core Indicators

Core indicators are elements that, although not strictly essential, considerably enhance the quality and inclusiveness of the tourism experience. In this study, participants identified indicators such as ease of purchase, comfort, entertainment, technology, and service capacity as highly influential in determining satisfaction and autonomy. Ease of purchase was often compromised by inaccessible booking platforms and the absence of clear, specific information about adapted rooms or services. Participants reported needing to call service providers to explain their conditions in detail: a process that compromises autonomy and privacy. One stated: "On the platforms, I cannot book an accessible room; I have to call and explain everything" (P1). Some studies suggest that insufficient and misleading accessibility information remains a major barrier, often generating expectations that do not match reality (Darcy, 2010; Kalargyrou et al., 2018). From an analytical perspective, these findings resonate with the literature on the digital divide and technological accessibility, which highlights how digital interfaces often reproduce exclusionary design assumptions (Darcy, 2010; Buhalis & Michopoulou, 2011). For tourists with physical disabilities, inaccessible booking systems, poorly designed interfaces, and the absence of clear accessibility information undermine autonomy and shift the burden of adaptation onto the user. This reinforces the idea that digital

accessibility is not merely a technical feature, but a core component of perceived service quality, particularly in pre-consumption stages of the tourism journey.

The comfort dimension was associated with the adequacy of furniture and spatial layout. Participants reported difficulties in restaurants and hotels due to narrow passages, poorly arranged tables, or the height of counters. Shower chairs were another recurrent issue, particularly when generic models failed to meet specific physical needs. One mentioned: "At buffets, I cannot reach the food, and that makes me feel embarrassed" (P4). In addition, entertainment and variety of activities were valued but inconsistently implemented. While some attractions offered adapted experiences, these were often limited to a few rides or exhibitions. One mentioned: "There are not many adapted options – just one or two accessible rides in the parks" (P4). Moreover, some participants criticised vague or improvisational approaches: "Attractions that say we will find a way to make the experience comfortable and safe" (P4). This reflects the need for formal inclusion strategies, rather than ad hoc solutions (Kastenholz et al., 2015). Moreover, delays in service delivery were another core concern, often caused by unprepared staff or malfunctioning equipment. These situations led to embarrassment and frustration, particularly when PwDs were treated as secondary customers. This is highlighted by the following quotes: "Being left waiting because I use a wheelchair was extremely embarrassing" (P3); "The bus had a lift, but the driver really struggled to get it working. It delayed us by about 15 minutes until he finally managed to make it work." (P4); and "I think beyond the waiting, it's also about lack of preparation, right? I felt very embarrassed on a flight I took because it took so long for me to receive my equipment, and they wouldn't open the doors for anyone to disembark. We were stuck there for over half an hour, and everyone was standing, upset. So, I felt like I was the one holding up the flight, you know?" (P3). Although the delay affected all users, participants emphasised that its impact on disabled travellers is amplified due to the emotional and logistical burden.

Service capacity was discussed not only in terms of infrastructure but also in ethical and operational dimensions. The increase in demand for accessible tourism has not been matched by a proportional expansion of offerings. Participants reported situations where accessible rooms or transport services were occupied by non-disabled guests, causing what one participant described as an "overbooking of accessibility". This is highlighted by the following quotes: "[…] the space reserved for people with disabilities was full, so they had to find another place for me, luckily, it was a large venue. But now, those spaces are starting to become insufficient, so there's a real need to reassess those numbers. Things like parking spots, theatre seating, these are usually defined by regulation, and that's it, people only comply with the bare minimum. It's rare for anyone to go beyond what the law required, and that minimum is already proving to be insufficient." (P1). The notion of an "overbooking of accessibility" emerging from the participants' narratives reveals an important managerial dilemma. While accessible resources are designed to ensure equity, their unjustified use by non-disabled guests reflects both weak enforcement and a lack of organisational awareness. Managing accessibility therefore requires not only infrastructure provision, but also governance mechanisms, staff training, and clear communication strategies that protect access without stigmatising users. This finding suggests that inclusive management practices must balance non-discrimination with the safeguarding of accessibility rights, an issue that remains underexplored in tourism management literature. Finally, technology was perceived to be a powerful enabler for accessible tourism, but its effectiveness was compromised by poor implementation and lack of maintenance. Participants noted frequent issues with broken or hidden equipment such as elevators and digital interfaces. One participant emphasised, "Technology is one of the most important things. It must always be up to date, especially in terms of maintenance. We often find broken equipment" (P3). Technology was recognised not only for facilitating physical access (e.g., through platforms and lifts), but also for enabling communication and autonomy

during the travel experience: "Technology helps a lot, but it's useless if there's no signage or if people with disabilities are not allowed to use it on their own" (P1). These reflections highlight the need to integrate technological solutions that are both visible and usable without intermediaries, reinforcing the dimensions of instrumental and communicational accessibility (Gonda, 2024).

4.3 Peripheral Indicators

Peripheral indicators were considered as complementary elements that add value to the tourism experience but do not compromise its feasibility when absent (Philip & Hazlett, 1997). These include aspects such as aesthetics, learning opportunities, ambient conditions, price fairness, and cleanliness. While relevant to overall satisfaction, participants agreed that these indicators cannot compensate for a lack of essential accessibility features. The aesthetic dimension, for example, was appreciated, but only insofar as it did not interfere with functionality. Several participants emphasised that visual appeal becomes irrelevant in the face of inaccessibility. This is emphasised by the following quote: "A beautiful place makes no difference if I cannot access it" (P4). In some cases, decorative elements created barriers, such as sinks obstructed by marble facades that prevent wheelchair users from accessing them. This illustrates that poorly applied aesthetics may reinforce exclusion (Moura et al., 2017).

Although participants did not identify temperature and acoustics as direct barriers to accessibility, they acknowledged their relevance to overall comfort and well-being. As one noted, "… temperature may be uncomfortable sometimes, but it's not something that directly affects accessibility" (P1). Furthermore, while temperature and acoustics may not directly impede physical access, they may influence the user's emotional and sensory experience, especially for individuals with heightened sensitivity (Qiao et al., 2024). The experiences of wheelchair users are known to be deeply shaped by both physical and emotional pain, setting them apart from other tourists (Qiao et al., 2024). In addition, price fairness emerged as a concern, especially given the reduced availability of accessible options in different price ranges. One stated: "Accessible rooms are always the most expensive, and that limits our options" (P1). Participants criticised the financial burden that accessible services often entail, pointing to the need for more inclusive pricing policies, a problem also identified by Kastenholz et al. (2015). Moreover, cleanliness, although traditionally regarded as a pillar of service quality (Mondo et al., 2024), was emphasised in comparison to functionality and safety. Accessible restrooms were frequently described as unhygienic, with reports of "urine on the floor," "overflowing trash bins," and lack of basic hygiene items such as soap and toilet paper (P2). One participant noted that "… it feels like the accessible bathroom is always the least taken care of" (P3). This issue is of importance to many wheelchair users who have incontinence issues and must frequently address their personal hygiene (Qiao et al., 2024). Furthermore, the learning indicator, which typically refers to the educational value for the tourist (Mondo et al., 2024), was not prioritised by participants in this study. Instead, they emphasised the need for staff learning and professional qualifications as a more urgent concern. As one participant pointed out "I've been to places where they said they hired an accessibility expert, but there were basic mistakes, things even a beginner wouldn't do" (P1). This underscores the lack of qualified professionals and highlights the consequences of poorly implemented accessibility measures.

Participants also noted that lack of information and poor communication often discourage participation. As one explained: "Sometimes I don't participate by choice, but other times it's because I didn't get the right information. Once, I wanted to do a zipline activity, but only after calling I learned there were 320 steps to access it" (P3). In this case, the absence of accurate and accessible information resulted in her exclusion from the activity, even though the activity itself might have been feasible under different circumstances. Other peripheral aspects, such as

evasion (choosing not to visit due to perceived inaccessibility), as well as opening hours and weather conditions, received limited attention or indirect mention. Participants suggested that misinformation was often more impactful than climate or schedules. For example, one stated: "Lack of information and incorrect information are the main reasons I believe lead to evasion" (P3). The classification of aesthetics as a peripheral indicator has important implications for the "Environment" dimension of the original TOURQUAL scale. While environmental aesthetics traditionally play a central role in tourism experience design, the findings suggest that, from the perspective of tourists with physical disabilities, functionality, safety, and usability take precedence when resources are constrained. This does not diminish the relevance of environmental quality but reframes it as secondary to inclusive functionality. For tourism managers, this highlights the need to prioritise investments that enhance access and autonomy before allocating resources to aesthetic enhancement, particularly in contexts of limited budgets.

4.4. Hierarchical Structure

The hierarchical structure of the indicators, as shown in the adapted TOURQUAL pyramid (Figure 1), was determined according to the frequency, intensity, and perceived centrality of each indicator according to the participants' narratives.

Figure 1

The adoption of this structure facilitates the identification of intervention priorities for quality management in accessible tourist attractions, based on the perspective of their guests. This aligns with the recommendations of Máté (2021), who advocates for participatory and context-sensitive approaches to accessibility in tourism, and with the reflections of Duarte and Mora (2023), who point out that accessibility must be co-constructed with the users themselves. The findings reinforce the arguments of Gonda (2024), who states that accessible tourism cannot be limited to architectural adequacy. In addition, the emphasis given by participants to emotional and relational dimensions of the service (e.g., attention, empathy, technical knowledge) reiterates the need to integrate humanised care as a core component of inclusive tourism experiences. The prominence of indicators related to trust and safety supports the idea that perceived quality among disabled tourists is significantly affected by psychological and social dimensions, echoing Engel et al. (2020). Thus, the adapted TOURQUAL model does not merely replicate traditional quality assessments but re-signifies them from an inclusive standpoint. Overall, strong convergence was observed regarding pivotal indicators, while greater variation emerged in core and peripheral attributes, which was addressed through comparative interpretation of participants' narratives. The classification of indicators as pivotal, core, or peripheral reflects the perspectives of tourists with physical disabilities within the studied context and should not be assumed to apply uniformly across other disability types or tourism settings. The findings should be interpreted within the Brazilian context in which the study was conducted and are not intended to represent universal principles, but rather analytically transferable insights that may inform accessible tourism research and practice in comparable contexts.

5. Conclusions and implications

5.1 Conclusions

The purpose of this study was to explore how tourism service-quality frameworks can best be adapted to include the experiences of PwDs. While the importance of this has often been recognised in the literature, previous studies have failed to identify what might be considered best practice in doing so. Nor have previous studies explored the range of indicators that might

be needed, nor considered the merits of taking a hierarchical approach to incorporating them into the existing framework. This study chose the TOURQUAL model to explore these issues and examined its application in the case of Brazil. The study examined general tourism, rather than a specific segment or niche form (such as heritage tourism or ecotourism). The findings highlight the importance of going further than to incorporate dimensions relating to operations and infrastructure, to include indicators focused on attitudinal, communicational, instrumental, methodological, natural, and programmatic elements of the service experience provided. While the results in this paper are specific to TOURQUAL, this provides an important signal to those service-quality frameworks that will, in time, also begin to embrace considerations around disabled accessibility. In short, the inclusion of a few indicators relating to infrastructure and facilities is unlikely to result in a framework that can provide an effective evaluation of the service-quality perceptions of PwDs. The needs of PwDs have to be assessed in situ, so that the framework can be adapted and applied effectively to each case. A method for doing so was trialled in this paper, and it was found to be insightful and effective. Although grounded in a specific national and cultural context, the study contributes to the international discussion on accessible tourism by illustrating how user-informed prioritisation can inform the adaptation of service-quality frameworks, while acknowledging that further research across different contexts is required. Within this scope, the findings reflect the perspectives of tourists with physical disabilities in the Brazilian context and should not be interpreted as generalisable to accessible tourism as a whole or to other disability groups.

The study also explores the merits arranging such indicators into three hierarchical levels (pivotal, core, and peripheral). The paper finds that this is essential to provide a necessary understanding of which elements are essential, desirable, or complementary in the construction of accessible tourism experiences. This layered structure advances previous TOURQUAL applications (Mondo & Fiates, 2017; Mondo, 2022; Mondo et al., 2024) by incorporating user-based validation and prioritisation grounded in real-world barriers and facilitators. Among the pivotal indicators, elements such as adapted infrastructure, accessible toilets, adequate signage, and qualified staff were considered non-negotiable for access, safety, and autonomy. These align with previous studies demonstrating that basic physical and operational conditions are not simply amenities, but prerequisites for participation (Buhalis & Darcy, 2011; Gonda, 2024). Participants' testimonies revealed frequent mismatches between what is advertised and what is offered, cases of broken elevators, blocked accessible counters, and misleading information. These findings reinforce that unreliable communication and lack of maintenance are major obstacles to autonomy and dignity, corroborating Buhalis and Darcy's (2011) claim that informational inconsistency is one of the most frequent complaints among disabled travellers.

Core indicators, such as staff training, adapted transportation, and assistive technologies, were shown to be crucial for qualifying the experience, though not as critical as those in the pivotal tier. The need for properly qualified personnel was especially emphasised by participants. These concerns align with Gonda (2024) and Duarte and Mora (2023), who argue that inclusive tourism depends not only on infrastructure but also on culturally competent and empathetic service delivery. This emphasises the importance of attitudinal accessibility. When professionals demonstrate respect and active listening, it fosters a sense of belonging and agency (Gonda, 2024). Peripheral indicators, such as aesthetics, educational interpretation, and extra services, were less prioritised by participants. For instance, the learning indicator, typically associated with the educational value of tourist attractions (Mondo, 2014; Mondo et al., 2024), was reinterpreted in this context. Rather than focusing on personal education, respondents stressed the need for learning by service providers. This re-signification reveals a tension between mainstream tourism priorities and the urgent, practical needs of marginalised publics. The inclusion of technology was recognised as a potential enabler but criticised for being inconsistently maintained or poorly designed with respect to autonomy. This reinforces

the recent work of Domínguez Vila et al. (2024), which emphasises the centrality of technological accessibility in tourism. Participants reported frequent experiences with malfunctioning or hard-to-use devices, indicating that the mere presence of accessible technology is insufficient if it does not promote independent use and is not supported by proper maintenance.

While environmental factors such as temperature and acoustics were noted, they were not seen as direct barriers to accessibility. However, literature acknowledges that certain physiological conditions associated with physical disabilities, such as spinal cord injuries, can be aggravated by extreme weather or noise (Qiao et al., 2024), suggesting a gap between user awareness and latent physical discomfort. Cleanliness, particularly in accessible restrooms, was also frequently mentioned. Although traditionally a core service-quality criterion, in this context hygiene was framed as a sign of social neglect. Overflowing bins, lack of toilet paper, and urine-soaked floors were described not merely as operational failures, but as indicators of unequal treatment. This point was also raised by Eichhorn et al. (2008). The study also brings to light the social and logistical consequences of poor planning and communication. The lack of reliable information leads to evasion or exclusion from experiences that could otherwise be accessible. Participants described incidents where inaccurate or missing information led them to cancel plans, illustrating how informational barriers translate into social isolation. In summary, the discussion reveals that accessibility considerations cannot be reduced to operational aspects such wheelchair ramps or adapted restrooms. It requires a systemic set of factors to be addressed that includes communication, professional training, maintenance, technology, and attitudinal shifts. The study therefore affirms the necessity of reframing quality in tourism to explicitly incorporate accessibility as a dynamic, user-informed, and multi-dimensional construct.

5.2 Theoretical Implications

This study offers theoretical contributions to the fields of service quality and accessible tourism by empirically adapting the TOURQUAL framework to the perspective of tourists with physical disabilities. Rather than reconceptualising TOURQUAL, the study preserves its core multidimensional structure and extends its analytical applicability through a user-informed and context-sensitive refinement. The contribution lies in demonstrating how an established tourism service-quality model can be meaningfully adapted to incorporate accessibility-related priorities without compromising its conceptual coherence.

First, the study advances service-quality theory by empirically illustrating that accessibility functions as a multidimensional qualifier of perceived quality within tourism experiences. While architectural accessibility remains foundational, the hierarchical prioritisation of indicators reveals that attitudinal, communicational, methodological, and instrumental dimensions play equally critical roles in shaping perceptions of quality among tourists with physical disabilities. This finding reinforces theoretical arguments that inclusive tourism cannot be reduced to technical compliance alone but must be understood as an integrated service system in which human interaction, information transparency, and operational preparedness are central components of perceived quality. Second, the study contributes to accessible tourism theory by extending the TOURQUAL framework to explicitly reflect the lived experiences of people with physical disabilities. Rather than proposing a new theoretical model, the study demonstrates how accessibility considerations can be embedded within an existing service-quality structure through empirical adaptation. By aligning TOURQUAL indicators with principles of universal design and user-centred accessibility, the study strengthens the theoretical bridge between service-quality research and accessibility scholarship, responding to calls for frameworks that move beyond generic or infrastructure-focused assessments (Ferri Sanz et al., 2019).

Third, the research contributes at the interface between theory and method by illustrating how established qualitative techniques can be systematically applied to adapt service-quality frameworks to specific user groups. The use of a focus group enabled the exploration of experiential nuances that are often overlooked in standardised measurement models, while the systematic coding, hierarchical classification, and expert-informed validation ensured analytical rigour. This approach supports participatory and interpretivist perspectives in service-quality theory, highlighting the value of user voices in refining conceptual models for inclusive contexts. Finally, the findings inform broader theoretical discussions on symbolic exclusion and experiential inequality in tourism by illustrating how indicators commonly classified as core or peripheral – such as aesthetics, cleanliness, learning opportunities, and communication practices – may shape emotional responses and perceptions of dignity among tourists with physical disabilities. Rather than redefining these constructs, the study highlights how such indicators can acquire relevance within accessibility-focused contexts, even when basic physical access is ensured. These insights suggest that service-quality frameworks applied to inclusive tourism should consider not only functional aspects of access, but also the social and experiential dimensions that influence participation, autonomy, and perceived respect.

5.3 Managerial Implications

The findings of this study offer practical guidance for improving accessibility in tourism, with implications for both service providers and consumers. The adapted TOURQUAL model enables managers to better understand the needs of tourists with physical disabilities by identifying which service indicators are pivotal, core, or peripheral. Rather than viewing accessibility as a regulatory obligation, this model promotes a strategic approach to inclusion, starting with investments in adapted infrastructure, trained staff, accurate information, and functional technologies. Improving attitudinal accessibility through staff training is critical, as emotional and relational aspects – such as respect and autonomy – strongly influence perceived quality. Additionally, accessible services benefit broader audiences, especially considering that most tourists with disabilities travel accompanied. From the consumer perspective, this study affirms the importance of being heard and having real needs reflected in service design. The participatory process strengthens autonomy and helps reduce uncertainty by demanding transparent and reliable accessibility information. Beyond physical access, travellers value empathy, personalisation, and the opportunity to experience tourism with dignity. The TOURQUAL accessibility framework gives consumers a reference to assess service quality and inclusion more critically and assertively. Based on the hierarchical prioritisation of indicators identified in this study, three concrete managerial actions emerge for tourism service providers seeking to improve accessibility for people with physical disabilities. First, managers should ensure the consistent functionality and maintenance of pivotal indicators, particularly adapted infrastructure, accessible restrooms, reliable signage, and accurate accessibility information, as failures in these elements directly compromise autonomy, safety, and participation. Second, organisations should prioritise continuous staff training focused on attitudinal accessibility, emphasising respect, active listening, and support that promotes independence rather than over-assistance or infantilisation. Third, service providers should adopt transparent and detailed communication practices across all customer touchpoints, clearly informing both the availability and limitations of accessible resources prior to consumption. Together, these actions translate accessibility from a formal requirement into a strategic dimension of service quality grounded in dignity, trust, and experiential equity.

5.4 Limitations and Future Research

While this study provides exploratory and user-informed insights into the adaptation of service-quality indicators for accessible tourism, several limitations must be acknowledged, as they directly affect the interpretation, scope, and transferability of the findings. First, the small sample size, inherent to the qualitative and exploratory design, limits full generalisability. Although the focus group enabled in-depth discussion and theoretical saturation within the specific analytical scope of the study, the findings should be interpreted as analytically transferable rather than universally applicable. Accordingly, the proposed hierarchical classification of indicators is indicative and context specific. Second, the study focused exclusively on tourists with physical disabilities. While this focus allowed for analytical depth and conceptual coherence, it excludes other disability types (e.g., visual, hearing, or intellectual disabilities) and does not address issues of intersectionality, such as the interaction between disability and age, gender, or socioeconomic conditions. These intersecting factors may substantially influence accessibility needs and service-quality perceptions and represent an important direction for future research.

Third, the research was conducted within the Brazilian context, and cultural, institutional, and infrastructural characteristics may have shaped participants' perceptions and prioritisation of indicators. As a result, caution is required when transferring the findings to other geographic or cultural settings with different regulatory environments or social attitudes toward disability. Fourth, the study relied on a single qualitative method – a focus group – which limits methodological triangulation. In addition, the exclusively qualitative approach does not allow for quantitative validation of the adapted indicators, nor for empirical testing of the dimensional structure, weighting, or practical performance of the proposed framework. Future studies should therefore employ mixed method designs and statistical techniques to assess the robustness and scalability of the adapted model (Coudounaris et al., 2017). Finally, the use of convenience sampling introduces potential selection bias, as participants were recruited based on accessibility and prior travel experience. This may have influenced the salience of certain indicators and further constrains the transferability of the results (Sthapit et al., 2024). Consequently, the findings should be interpreted as exploratory and indicative, providing analytical insights rather than generalisable conclusions. Future research should build on these findings by expanding sample size and diversity, incorporating multiple disability groups, and conducting applied testing in real tourism settings. Comparative analyses between the adapted TOURQUAL framework and existing accessibility assessment tools, as well as investigations into potential trade-offs between service-quality indicators (such as cost, capacity, and quality) and practical challenges of implementation across different tourism contexts, would contribute to refining and validating the framework beyond the exploratory scope of the present study.

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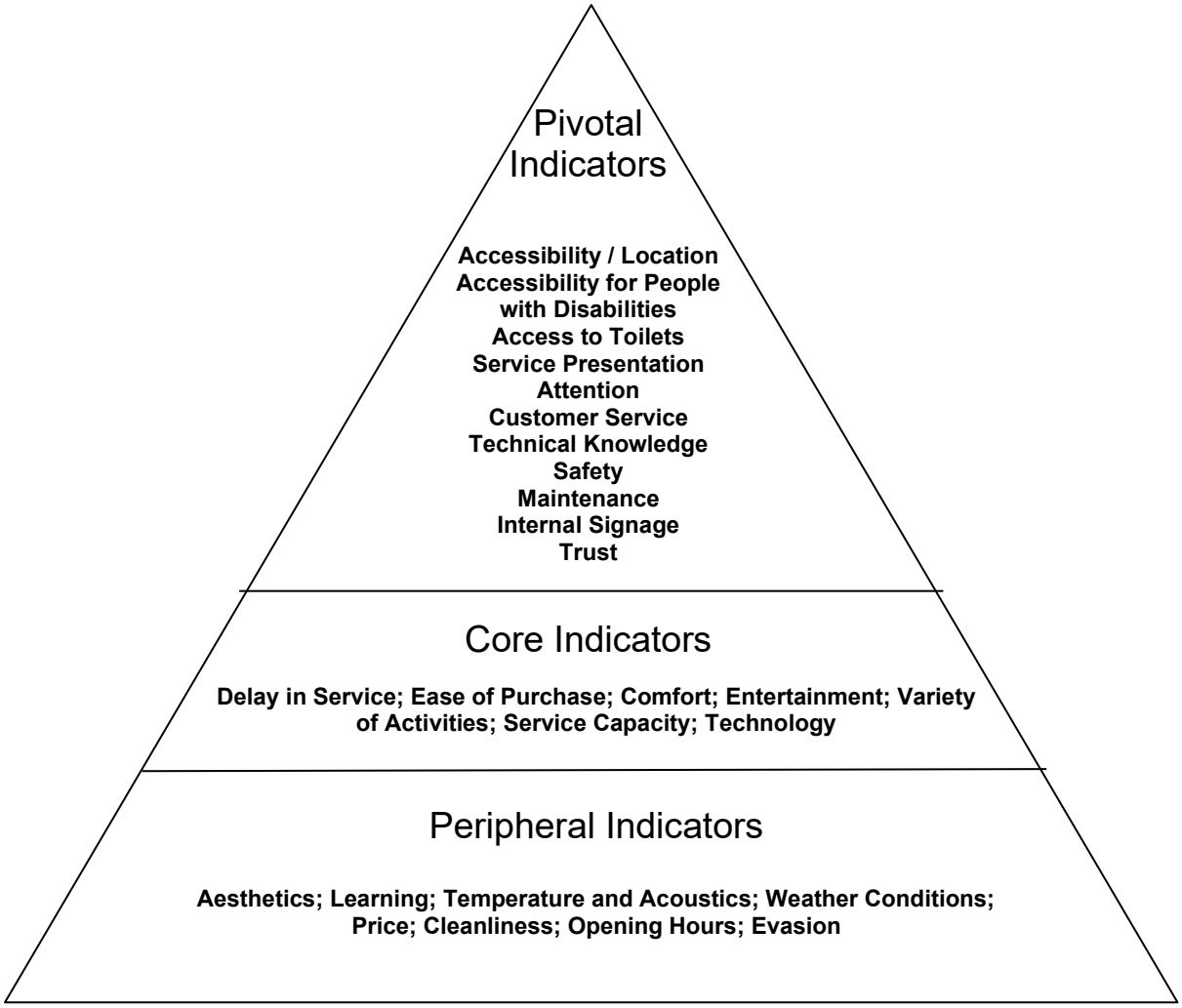

Figure 1. Hierarchical Structure of TOURQUAL Indicators Adapted for Consumers with Physical Disabilities

Table 1. Study Participants

Participant	**Type of physical disability**
Participant 1	Paraplegia
Participant 2	Tetraplegia
Participant 3	Poliomyelitis
Participant 4	Muscular dystrophy
Participant 5	Dwarfism
Participant 6	Myelitis

Table 2. Original TOURQUAL Indicators vs. Adaptations for People with Physical Disabilities

Original TOURQUAL Indicator	**Adapted Indicator**	**Proposed Adjustment Based on Results**	**Accessibility Dimension**	**Hierarchical Level**
Accessibility to the attraction	Accessibility to surrounding areas and adapted transportation	Include accessible sidewalks, ramps, and parking; ensure adapted public/private transport infrastructure	Architectural	Pivotal
Accessibility for people with disabilities	Functional adaptation to different physical conditions	Go beyond generic standards; include diverse mobility equipment and adjustable structures	Architectural	Pivotal
Availability of adapted restrooms	Fully functional and safe adapted restrooms	Ensure size, grab bars, height of sinks, and hygiene; avoid shared or misused accessible spaces	Architectural	Pivotal
Internal signage	Clear, contrasting, and tactile signage	Add braille, pictograms, and positioning at adequate heights	Communicational	Pivotal
Service presentation	Honest and specific accessibility information	Detail accessible features and limitations transparently in all media	Communicational	Pivotal
Customer service	Attentive and respectful service	Prioritise attitudinal training; avoid infantilization and third-party mediation	Attitudinal	Pivotal
Staff attention	Staff sensitivity and active support	Encourage proactive support without dependence; listen to individual needs	Attitudinal	Pivotal

Technical knowledge	Accessibility-oriented staff training	Implement mandatory training covering physical, communicational, and instrumental aspects	Methodological	Pivotal
Trust	User autonomy and credibility in service delivery	Empower the visitor; avoid constant mediation by companions	Attitudinal	Pivotal
Safety	Perception of safe and reliable spaces	Maintain infrastructure; avoid slippery surfaces, dark areas, or broken equipment	Architectural	Pivotal
Maintenance	Regular verification of accessible facilities	Establish maintenance protocols specific to accessibility features	Programmatic	Pivotal
Delay in service	Delay in Service – slow or unresponsive service due to disability	Train staff to prioritise support for PwDs and reduce response time in queues or transport assistance.	Attitudinal / Methodological	Core
Ease of purchase	Accessible and inclusive purchase process	Improve online and physical interfaces; ensure readability and ease of navigation	Communicational	Core
Comfort	Functional comfort adapted to different needs	Include accessible furniture, adaptable seating, and movement space	Architectural	Core
Entertainment	Inclusive and adapted entertainment options	Offer alternative formats and ensure full access to activities	Instrumental	Core

Variety of activities	Inclusive programming	Diversify accessible experiences across age groups and mobility levels.	Architectural/Attitudinal/ Instrumental	Core
Service capacity	Inclusion management in high-demand situations	Avoid allocation of accessible rooms to non-disabled people; guarantee availability	Programmatic/ Instrumental	Core
Technology	Accessible digital platforms and assistive technologies	Adapt websites, apps, check-in kiosks; ensure compatibility with screen readers and voice commands	Instrumental	Core
Aesthetics	Accessible aesthetic without compromising functionality	Design with universal access in mind; avoid barriers hidden in decoration	Architectural	Peripheral
Learning	Optional educational content	Recognise learning as secondary to accessibility; prioritise staff education first.	Methodological	Peripheral
Temperature and acoustics / Weather conditions	Ambient conditions (climate, noise, weather)	Monitor extreme climate and acoustic discomfort, but without compromising accessibility priorities.	Architectural	Peripheral
Evasion	Avoidance due to lack of information	Ensure clear, accessible, and honest communication to prevent disengagement by PwDs.	Communicational	Peripheral

Opening hours	Operational times of accessible resources	Align service hours with availability of accessible infrastructure (e.g., accessible ticket counters).	Instrumental	Peripheral
Cleanliness	Hygiene of adapted spaces	Monitor frequently the cleanliness of restrooms, ramps, and assistive equipment	Architectural	Peripheral
Price	Fair and inclusive pricing	Ensure accessible rooms and services do not cost more than standard options	Programmatic	Peripheral