

ACCESSIBILITY OF MUSEUMS AND ARCHAEOLOGICAL SITES FOR DISABLED VISITORS: PERSPECTIVES OF SITE STAFF IN IZMIR CITY CENTER

Acessibilidade de museus e sítios arqueológicos para visitantes com deficiência: perspectivas dos funcionários de sites no centro de Izmir

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ABSTRACT

The growing interest in accessible tourism highlights the importance of ensuring that cultural destinations, including museums and archaeological sites, are accessible to individuals with physical disabilities. This study examines the accessibility of such sites in Izmir, Turkey, with the aim of identifying existing barriers and providing recommendations for improvement. Using a mixed-methods approach, the research combines a quantitative evaluation based on the Turkish Standards Institute (TSE) accessibility criteria with qualitative data collected through semi-structured interviews with relevant authorities. The findings reveal that while positive steps have been taken toward accessibility based on the principle of equality, gaps remain in physical adjustments, accessible services, staff training, and practices including inadequate entrances, steps, insufficient or out of order disability-specific facilities, etc. The research contributes to the limited body of knowledge on the accessibility of cultural tourism sites in Turkey and offers practical recommendations for improving accessibility, fostering greater inclusivity in the tourism sector.

KEYWORDS

Disabled Tourism; Accessible Tourism; Izmir; Museum; Archeological Sites.

RESUMO

O crescente interesse pelo turismo acessível destaca a importância de garantir que destinos culturais, incluindo museus e sítios arqueológicos, sejam acessíveis para pessoas com deficiência física. Este estudo examina a acessibilidade desses locais em Izmir, Turquia, com o objetivo de identificar barreiras existentes e oferecer recomendações para melhorias. Foi adotada uma abordagem de métodos mistos, combinando uma avaliação quantitativa com base nos critérios de acessibilidade do Instituto de Normas da Turquia (TSE) e dados qualitativos coletados por meio de entrevistas semiestruturadas com as autoridades competentes. Os resultados revelam que, embora tenha havido avanços significativos em direção à acessibilidade com base no princípio da igualdade, ainda existem lacunas em ajustes físicos, serviços acessíveis, treinamento de pessoal e práticas operacionais. Essas lacunas incluem entradas inadequadas, degraus e instalações específicas para deficientes insuficientes ou com defeito. A pesquisa contribui para o limitado corpo de conhecimento sobre a acessibilidade de locais culturais turísticos na Turquia.

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e oferece recomendações práticas para melhorar a acessibilidade, promovendo maior inclusão no setor de turismo.

PALAVRAS-CHAVE

Turismo para Deficientes; Turismo Acessível; Izmir; Museus; Sítios Arqueológicos.

INTRODUCTION

Interest in the concept of accessibility in tourism destinations is growing at both academic and sectoral levels. The World Tourism Organization (UNWTO) supports this development by advocating that tourism businesses, products, and services be accessible to everyone, positioning accessibility as a central component of responsible and sustainable tourism policies (UNWTO, 2024). Accessible tourism encompasses the physical environment, transportation, information, and communication services, enabling individuals with temporary or permanent special access needs to enjoy their vacations without encountering barriers (ENAT, 2024). Globally, approximately 16% of the population, or 1.3 billion people, are identified as disabled (WHO, 2024). In Turkey, the number of individuals with at least one disability represents 6.9% of the total population, with nearly 5 million registered in the National Disability Data System (Ministry of Family and Social Services, 2023). Furthermore, the increasing number of potential disabled individuals with financial and physical capabilities (WTO, 2020) makes accessible tourism a social necessity, simultaneously expanding the market size and enhancing the profits and competitive strength of tourism businesses catering to this group (Çavlak and Çavlak, 2019). However, the Turkish tourism sector is considered insufficiently prepared to meet the needs of the disabled customer market, with studies suggesting that addressing these shortcomings could enable the sector to gain a greater share of this market (Öztürk, Yaylı and Yeşiltaş, 2008; Türk, Erdoğan and Çalışkan, 2022).

Numerous studies have been conducted in the field of accessible tourism, examining various aspects of the experiences, expectations, motivations, and travel constraints of disabled individuals (Toker and Kaçmaz, 2015; Gillovic et al., 2021; Qiao et al., 2023; Akıncı and Sönmez, 2015; Moura and Devile, 2022; Çizel and Çizel, 2014; Eusébio et al., 2023). Others focusing on the physical accessibility of tourism products (Yeşilyurt, Kırlar, and Lale, 2014; Santana and Santana, 2020; Kırlar, 2022) and the perspectives of tourism professionals on the market (Onay and Aksu, 2023) have approached the accessibility from a supply-side. However, research on supply-related factors is relatively scarce, with more focus on demand-side perspectives, such

as visitor expectations, often using tools like interviews (Groulx, 2024). Moreover, physical accessibility has primarily been explored within the context of accommodation establishments (Kırlar, 2013; Ketboğa, 2016; Yıldız, 2017; Kırlar, 2022), the number of studies addressing the accessibility of museums and archaeological sites is relatively limited. Very few studies have used accessibility standards to collect objective data that assesses accessibility as it relates to the supply of physical infrastructure in culture-based tourism (Kruczek et al., 2023; Espinosa and Bonmatí, 2013). Accessibility research for culture-based tourism have explored accessibility assessment standards for one-single site (Chunga, Toribio and Pasciuto, 2014), one destination (Naniopoulos and Tsalis, 2015 ; Kruczek et al., 2023), only one type of disability (Yeşilyurt, Kırlar, and Lale, 2014) or multiple disability groups (Erkan, 2023) using qualitative (Lam, Chan and Peters, 2020) or quantitative methods (Kruczek et al., 2023). Şen, Çelikyetim, and Bilici (2014) investigated the accessibility of UNESCO-protected cultural assets and museums in Turkey for disabled tourists, noting that arrangements for individuals with disabilities are still at a preliminary level although museums and archaeological sites are significant socio-cultural attractions in tourism destinations (Akoğlu Kozak and Bahçe, 2009). In fact, in 2022, nearly 18 million visitors frequented museums and archaeological sites managed by the Ministry of Culture and Tourism, accounting for 38.8% of total visitors, generating over 1 billion Turkish Lira in revenue (TUIK, 2024). This study examines the physical accessibility of museums and archaeological sites in İzmir, Turkey, with the aim of identifying current challenges faced by individuals with physical disabilities and exploring opportunities to promote inclusive cultural tourism. By adopting a mixed-methods approach, the research addresses a gap in the evaluation of supply-side infrastructure for accessible tourism. Specifically, it seeks to assess the accessibility of selected sites using national standards and international literature, and to offer practical recommendations based on insights from site managers and tourism professionals. To this end, on-site evaluations were carried out using a structured assessment tool grounded in Turkish Standards Institute (TSE) criteria and relevant literature, supplemented by semi-structured interviews with responsible authorities to enrich and contextualize the findings.

LITERATURE REVIEW

The exploration of accessibility in museums and archaeological sites reveals a complex landscape characterized by numerous challenges, both nationally and internationally. Research indicates that many museums employ uniform structural designs, which frequently render

corridors and entrances inadequate for disabled visitors. Facilities specifically designed for individuals with disabilities, such as restrooms, are often lacking (Man and Yan, 2023). These issues are often magnified in museums housed within historical buildings, where the preservation of original structures tends to restrict the implementation of modern accessibility features (Kruczek et al., 2023). In addition to physical barriers, digital access remains insufficient. Despite the fact that disabled individuals account for approximately 10% of total museum attendance, few institutions offer virtual tours or online resources tailored to their needs, which further limits cultural participation. On the other hand, interestingly, a large proportion of museum staff perceive their institutions as accessible, with only around 8% expressing disagreement (Rocha et al., 2020). However, staff perceptions may not fully reflect the actual experiences of disabled visitors. As Mah and Yan (2023) note, The public's low awareness of accessibility issues poses significant barriers, underscoring the need for future studies to collaborate with disabled individuals to better understand and address their perspectives and needs (Rocha et al., 2020).

The examination of archaeological sites highlights similar challenges. Visitors with physical disabilities often face difficulties stemming from varying step dimensions and transitions between areas being accessible only via stairs, compounded by insufficient signage and markers (Naniopoulos and Tsalis, 2015). Authorities must navigate the delicate balance of preserving the historical integrity of these sites while enhancing accessibility, sometimes with features that could potentially disrupt the site's authenticity. A holistic approach is essential to ensure that effective accessibility practices are in harmony with accurate historical narratives.

In Turkey, the body of research specifically addressing the accessibility of museums and archaeological sites for individuals with physical disabilities remains limited. Noteworthy contributions include master's theses by Çetiner (2018), Bozok (2018), Arslan (2020), Yüksel (2021), and Erkan (2023). The most recent of these, conducted by Erkan (2023), investigates the accessibility levels of various museums for multiple disability groups. Utilizing a control form based on Universal Design Principles, this study analyzes the ten most visited museums in Turkey, finding them to be relatively favorable for physically disabled visitors. Bozok (2018) provides an assesment of the Turkish Islamic Arts Museum, indicating that the accessibility level determined through the control form remains a subject of debate. Çetiner's (2018) investigation into archaeological site accessibility similarly concludes that this issue has not been adequately

addressed. In a study of historical tourist structures in Safranbolu, Arslan (2020) employs a control form based on TS 12576 and TS 9111, ultimately determining that these historic buildings are insufficiently accessible. Yüksel (2021) further assesses the accessibility of transportation, accommodation, and tourist attractions in Kastamonu, finding significant deficiencies.

The studies Şen et al. (2014), Silav (2019), Erkan and Karakaya (2023), and Gür and Kahraman (2024) also reveal critical findings, including the inadequacy of entrances to archaeological sites for disabled visitors, the absence of appropriate ground materials along tour routes, and a lack of sufficient resting points (Silav, 2019). The presence of non-standard ramps has also been noted (Gür and Kahraman, 2024), alongside reports of inadequate or malfunctioning accessibility features in several museums and cultural centers, as well as insufficient signage (Erkan and Karakaya, 2023). Furthermore, legal regulations concerning accessibility are still in their early stages of development, yet the travel market comprising disabled individuals is increasingly being recognized by authorities (Şen et al., 2014).

Overall, the intersection of accessibility challenges faced by disabled visitors in museums and archaeological sites underscores the need for comprehensive strategies that address both physical barriers and public awareness to ensure equitable access for all.

METHODOLOGY

This study focuses on evaluating the accessibility of museums and archaeological sites located in the central district of İzmir for individuals with physical disabilities. The research population consists of 11 museums and archaeological sites affiliated with the İzmir Provincial Directorate of Culture and Tourism (KTB, 2024). The sample, determined using the convenience sampling method initially included six institutions: Izmir Agora Archaeological Site (Smyrna Agora), Izmir Archaeology Museum, Izmir Ethnography Museum, Izmir Atatürk Museum, Izmir Painting and Sculpture Museum, and Izmir Museum of History and Art, all located in Izmir's central district. The Izmir Museum of History and Art could not be visited due to closure following the October 30, 2020 earthquake, as safety concerns led to the museum's indefinite suspension until its collections could be relocated. Similarly, both the İzmir Archaeology Museum and the İzmir Ethnography Museum were closed in the same period and later reopened as a merged institution under the name *İzmir Archaeology and Ethnography Museum*. As a result, the number of active research sites was reduced from six to four.

To assess the accessibility of these museums and archaeological sites for individuals with physical disabilities, the accessibility checklist prepared by Kirlar (2013) and Çetiner (2018) was used. This form, based on the European Union, Americans with Disabilities Act, and TSE (Turkish Standards Institution) 9111 regulations, was adapted for museums and archaeological sites. The checklist was completed by the researcher on site, under the supervision of designated institutional officials.

In the second phase, semi-structured interviews were conducted with various officials working in these museums and archaeological sites. These interviews aimed to collect qualitative data regarding the research topic. A series of layered and focused questions were developed to capture the participants' knowledge, opinions, and insights on the issue. In addition to pre-prepared questions, supplementary ones were asked for further clarification (Yıldırım and Şimşek, 2016). The interviews took place over a two-month period, from December 2023 to January 2024, and each interview lasted between 15 and 30 minutes. Some participants agreed to have their responses recorded and transcribed, while others requested their answers be written down directly by the researcher, after which both parties confirmed the accuracy of the records. While the limited duration of the interviews may restrict the depth of the data collected, this process allowed for the collection of foundational insights regarding institutional accessibility practices.

The semi-structured interview form included the following questions:

1. In your opinion, can individuals with orthopedic disabilities easily visit museums or archaeological sites?
2. What specific needs and expectations might individuals with orthopedic disabilities have when visiting a museum or archaeological site?
3. Do you think visits by individuals with physical disabilities should be encouraged? How?
4. What measures should be taken to improve accessibility for visitors with physical disabilities in a museum or archaeological site?
5. Do you currently receive visitors with disabilities at this museum/site?
6. What proportion of your total visitors are individuals with physical disabilities?
7. Can individuals with physical disabilities visit this museum/site? If so, what challenges might they face, and what solutions could be offered?

8. What practices are in place at this museum/site to facilitate access for individuals with physical disabilities? (Which parts of the site are accessible for these individuals? Do you have a designated route for them?)

FINDINGS

In the first phase of the study, a comprehensive analysis was conducted regarding the accessibility of museums and archaeological sites for individuals with physical disabilities. The evaluation primarily focused on compliance with the TS 9111 standards and other relevant accessibility regulations, determining the extent to which the museums and sites in the sample adhere to these criteria (Table 1).

Transportation and General Access: Public transportation options to the museums and sites were generally sufficient, and all locations were accessible via satellite connection, facilitating easy identification. However, while parking lots and passenger drop-off/pick-up areas are provided at the sites, there was a lack of designated disabled parking spaces. Passenger drop-off and pick-up areas at Museum 1 and Museum 3 are partially accessible and meet the relevant standards.

Entrances: Museum 3 is the only site to provide an entrance from a flat surface, fully complying with accessibility standards. The main entrances at the archaeological site, Museum 1, and Museum 2 feature steps that do not meet the required standards. Specifically, Museum 2 lacks a ramp or stair lift at the main entrance, requiring physically disabled visitors to use a rear entrance with a ramp. At the archaeological site, the stair lift is broken, creating significant access challenges. Museum 1 provides a portable ramp, but staff assistance is needed for disabled visitors to enter.

Ramps and Stairs: In terms of interior steps, the study found that those at Museums 1 and 2 and the exterior steps at the archaeological sites comply with accessibility standards. However, the interior steps at Museum 3 do not meet the depth requirements. Only Museum 2 was found to lack a lowered counter that complies with accessibility standards. Regarding ramps, only one of the two ramps at Museum 3 meets the required accessibility standards, while ramps at the other sites and the archaeological site do not meet the slope requirements. Most ramps comply with material standards, but the marble-covered ramp at Museum 2's alternative entrance does not meet safety standards, as it lacks protective coverage and poses a risk to wheelchair users,

particularly on rainy days. The archaeological site has ramps with handrails; however, the handrails are positioned too high. Museum 1's portable ramp lacks handrails, and both Museums 2 and 3 have ramps without handrails, which fail to meet accessibility standards.

Walking Paths and Gallery Access: Walking paths at the archaeological site are mostly accessible, although two connection points—one with steps and another with a dirt road—are unsuitable for wheelchair users. Museum 3 has wide walking paths that meet accessibility standards, while Museum 1's paths are compliant, except for the entrance to the "Old Tekel Factory Memorial Room," which does not meet accessibility standards. Museum 2 has some gallery entrances that do not meet standard dimensions, though the walking paths are largely compliant.

Rest Areas and Signage: Regarding rest areas, Museums 1 and 3 provide accessible rest areas that meet standards, while the archaeological site and Museum 2 lack adequate rest areas, with limited availability at the latter. Corridor widths at all locations are mostly adequate, with the exception of the Basilica at the archaeological site, which does not meet standards. In terms of signage, all museums and archaeological sites in the study feature clear written information and route indicators. However, the signage at Museum 2 and Museum 3 is positioned at heights that do not comply with accessibility standards.

Toilets: All sites were found to have public toilets that meet the accessibility standards for disabled visitors. The lavatory heights were compliant in all areas, though knee clearance heights met the standard only at Museums 1 and 3. Mirror heights were non-compliant across all sites, and Museum 2's accessible toilet had a door that opened inward, which is against the standard.

While all sites had public toilets for disabled visitors that met interior space requirements, only Museum 2 met the necessary toilet height standards, and only Museum 3 met the required distance between the toilet and the wall. All sites offered sufficient space and grab bars for safety, but the emergency cord was only present in the archaeological site's toilet, with the other locations lacking this crucial safety feature.

Websites and Digital Access: Overall, the study highlights several positive aspects, including good accessibility within facilities (except Museum 2). All sites had websites created by the Turkish Ministry of Culture and Tourism, offering general information and location services.

Museums 1 and 3 featured accessibility panels that allow users to adjust text size and contrast, enhancing the usability of the websites. Museum 2 offered a virtual tour on a separate website, enabling disabled visitors who cannot visit physically to explore the museum online. However, improvements are needed in staff training and wheelchair availability across the sites.

Table 1. Assessment Form for the Compliance of Museum and Archeological Sites with Disability Standards (A - Adequate, UA - Unadequate)

Museum / Ruins		Ruins	Museum 1	Museum 2	Museum 3
1.	What are the transportation facilities for museum/Ruins? (Private vehicle (PV), Bus (B), Subway (S), Tram (T), Ferry (F))	PV / B / S	PV / B / T	PV / B / F	PV / B / T
2.	Can the museum/ruins be found via satellite connection?	Yes	Yes	Yes	Yes
3.	Do museum/ruins have a disabled parking lot?	No	No	No	No
4.	Passenger drop-off and pick-up areas	A **	A	-	A
5.	How is the museum/ruins main entrance?	Cascading	Cascading to inside	Cascading	Direct
6.	Are there any ramps or lifts (for sloping or stepped entrances)	Entrance with lift. Lift is out of order	Access with portable ramp	No	-
7.	Museum/Ruins' steps	steps (outside)	A	-	UA **
		steps (inside)	UA	A	UA
8.	Is there a lowered desk (ticket offices visitors and visitor centers) for disabled? and length (cm)	Yes / 89	Yes / 75	No	Yes / 75
9.	Museum/Ruins' ramp slope %	UA	UA	UA	UA/A
10.	Are there any grab bars or handrails in the ramp and lift? if yes height (cm) from basement.	Yes /UA	No	No	No
11.	Is walking route adequately wide? / cm (min 120 cm.)	Yes/120	Mostly yes / 205 UA – Entrance	Mostly yes / 130 UA- Gallery Doors	Yes / 155-256
12.	Is the walkway material suitable for the use of disabled visitors? (nonslippery etc.) wood (w) micro concrete (mc) marble (m)	Yes (w)	Yes (mc)	No (m)	Yes (mc)
13.	Is there a resting point every 30 meters?	No	Yes	No	Yes
14.	Width of corridors inside a museum/ruins (cm) * entrance to basilica	A / 75* UA	A	A	A
15.	Are signage and markings at appropriate heights and placed at visible and accessible points? cm (120 – 160 cm)	Yes / A	Yes / A	No / UA	No / UA
16.	Is there clear written information on signage and markings?	Yes	Yes	Yes	Yes

17.	Is there an accessibility map showing facilities and routes on signage and markings?	Yes	Yes	Yes	Yes
18.	Are toilets located in a way that is accessible to disabled visitors?	Yes	Yes	Yes	Yes
19.	Toilet height dimensions (cm): sink / knee clearance / mirror	A / UA / UA	A / A / UA	A / UA / UA	A / A / UA
20.	Toilet door direction	Outside	Outside	Inside	Outside
21.	Toilet and dimension (cm)	inside area	A	A	A
		toilet height / distance to wall / grab bar?	UA / UA / Yes	UA / UA / Yes	A / UA / Yes
22.	Emergency alert in toilet?	Yes	No	No	No
23.	Is there more space for wheelchair users in restrooms?	Yes	Yes	Yes	Yes
24.	Are there any facilities such as cafeteria, souvenir shop, etc. accessible to visitors with disabilities in the museum/ruins?	Yes	Yes	-	Yes
25.	If the museum/archaeological site has a website or mobile application, are there any applications for disabled visitors	No	Yes	Yes	Yes
26.	Are staff trained in communicating with visitors with disabilities about Museum/Ruins ?	No	No	No	No
27.	Are there any wheelchairs in Museum/Ruins?	No	Yes	No	No
28.	Is there any safe evacuation area in Museum/Ruins?	Yes	Yes	Yes	Yes

Fonte: Prepared by the author (2024).

In the second phase (qualitative research), data were gathered from a total of 4 individuals using a semi-structured interview form. The data collected through the interviews were examined using the descriptive analysis technique (Yıldırım and Şimşek, 2016). The responses from the participants were evaluated under the following themes:

Theme 1: Evaluation from the Perspective of Physical Disabilities

Demand level of physical disabled visitors: Most participants indicated that physical disabled visitors do visit museums and archaeological sites, although there is no exact information on the total number of disabled visitors. Participants provided responses based on their personal observations.

Participant 4: "Yes, we do have visitors with disabilities. Both local and foreign tourists who have partial use of their legs visit this place."

Participant 3: "No distinction is made regarding whether our visitors are individuals with disabilities or not. There is no such criterion when determining visitor numbers. Based on observation, it can be estimated at around 15% to 20%."

Challenges faced during visits: Most participants noted that physical disabled visitors encounter some accessibility challenges in museums and archaeological sites, but improvements have facilitated easier access. However, one participant expressed that there are still deficiencies in accessibility.

Participant 1: "Individuals with physical disabilities can easily visit museums and archaeological sites. With the latest regulations, all excavation directorates continue to make arrangements to ensure barrier-free visits to museums and archaeological sites."

Participant 4: "No, individuals with physical disabilities cannot easily visit museums or archaeological sites."

Expectations and needs: Participants emphasized the need for accessible areas, standardized directional signs, and personal hygiene facilities for orthopedic disabled visitors.

Participant 3: "The areas should have the comfort, route, and appropriate signage that allow these visitors to easily visit on their own."

Participant 4: "Additionally, accessibility to restrooms is also a very important need."

Theme 2: Evaluation in Terms of Provided Services

Accessibility status: It was reported that museums and archaeological sites have accessibility facilities such as ramps, elevators, and disabled restrooms. However, there are still deficiencies in some areas, and participants highlighted the need for additional support personnel for disabled visitors.

Participant 2: "Our museum has ramps, elevators, and restrooms that can be used by people with orthopedic disabilities."

Participant 4: "Our tour route has been established. However, we do not have an elevator or a stair lift. Therefore, a part of the area cannot be accessed."

Participant 1: "We do not have a special route for people with disabilities. Our security personnel, who are part of our support staff, greet all visitors, including those with disabilities, at the entrance ticket counter and provide physical assistance to disabled visitors from entering and exiting the museum to moving around inside the museum. We offer physical support to wheelchair users during ramp descents and ascents, as well as inside the museum."

Current Arrangements: Participants generally found the improvements sufficient, though some expect more positive developments over time.

Participant 3: "We can say that the improvements made are more positive than sufficient."

Barriers and limitations: All participants agreed that the museum or site they were involved with was accessible for physical disabled visitors. Additionally, some participants provided self-criticism regarding spaces designed in the past without considering the needs of disabled individuals. Participants also noted that historical buildings may not be suitable for disabled access, although recent improvements have been made with more attention. One participant remarked that certain adjustments might be challenging due to the historical nature of some buildings.

Participant 1: "It is difficult to construct facilities based on the awareness that 'every moment of life should be evaluated from another person's perspective' in our country. In the past, spaces may have been designed without considering the question, 'How would someone in a wheelchair stroll here?' I mean, this question should be asked institutionally, not personally. If we set aside what was done in the past, perhaps the designs for the future are being done with more care."

Participant 4: "Archaeological sites consist of many obstacles with varying elevations. When it comes to accessibility for people with disabilities in archaeological sites, the following questions should be asked: Should archaeological sites be modified to be fully accessible, or is it sufficient to provide access at specific points? If every part of a site is equipped with accessible features, will this disrupt the site's structure? If so, how will this affect visitors..."

Actions to be done: Participants suggested that a combination of improved infrastructure, staff training, and thoughtful planning could greatly enhance the accessibility of these sites for physical disabled individuals.

Participant 2: "I believe more work should be done to create school/family/institution partnerships that allow easy (and free) access to the museum, particularly for physical disabled children."

Participant 4: "Additionally, the staff on-site should be trained on what to do in case of any issues experienced by disabled visitors. Staff must be trained in communication and first aid as well."

Participant 1: "In the future, new buildings and spaces should incorporate the necessary designs in their initial planning to overcome such obstacles. This approach will make the structures and spaces safer and healthier compared to later additions, while also considering the presence of people facing all kinds of access difficulties in life, showing value and respect to these individuals."

13

Theme 3: Managers' Perspectives on Disabled Tourism

Supporting individuals with physical disabilities: In the interviews, participants shared positive feedback on supporting visits by physical disabled individuals to museums and archaeological sites(suggesting special activities to encourage such visits, etc.). They emphasized the importance of not isolating disabled visitors and creating inclusive experiences that foster dignity and accessibility for all.

Participant 2: "We could all become physical disabled one day. Instead of separating this visitor group, we should ensure that everyone enjoys the comfort of visiting, with special activities organized for orthopedic disabled individuals on certain days."

Participant 1: "Disability starts in the mind. Everyone may or may not have a disability, but it shouldn't stop us from living life. I see disability as an unfortunate circumstance, and we shouldn't let it define us. Everyone should be able to visit and experience these places—it's a matter of human dignity."

Participant 3: "Visits should be encouraged not just for physical disabled individuals, but for all disadvantaged groups."

These statements reflect a broader philosophy of inclusion, suggesting that improving accessibility benefits not only individuals with physical disabilities but also a variety of disadvantaged groups.

DISCUSSION AND CONCLUSION

Theoretical Implications

This study investigated the accessibility of museums and archaeological sites in the city center of Izmir for visitors with physical disabilities. The findings indicate that although there have been some positive advancements in accessibility, notable deficiencies remain. Transportation to the museums and archaeological sites examined in the study is facilitated through various means of transport, including public transportation, private vehicles. However, it was observed that the distances to certain stops, stations, and piers could pose accessibility challenges for individuals with physical disabilities. A major issue identified in the study is the absence of designated parking spaces for disabled visitors, alongside the failure of existing parking facilities to meet accessibility standards. Furthermore, most museums have main entrances with stairs, and only a few provide ramps or alternative access points, creating significant barriers to accessibility. The study aligns with findings from prior research, highlighting that certain archaeological sites and museums in both China and Turkey lack suitable entrances for disabled visitors (Man and Yan, 2023; Silav, 2019). The steps at museums and archaeological sites were generally found to be unsuitable for physically disabled visitors. None of the sites met standard step height requirements, making access difficult. In archaeological areas, steps were often challenging even for non-disabled individuals. A similar pattern was observed regarding non-standard step dimensions at archaeological sites, with the study in Greece identifying step measurements that failed to meet standard requirements (Naniopoulos and Tsalis, 2015). Measurements revealed that only one museum had a ramp with a standard slope, while all other ramps at museums and archaeological sites were found to be inadequate for individuals with mobility limitations. This presents a serious issue. Additionally, the absence of support bars on ramps, which are essential for assistance, was noted. This is a significant accessibility gap that needs to be addressed. Similar issues were reported as in the study by Erkan and Karakaya (2023), especially regarding missing or incomplete handrails, and malfunctioning accessibility features (such as lifts). The

evaluation of walking paths in the study revealed partially positive results. While some museums had walking areas that met accessibility standards, it was found that the entrance points to archaeological sites, historical buildings converted into museums, and some galleries were not in compliance with these standards. In terms of resting areas, the study reflects similar results found in previous research. While some museums meet accessibility standards, many others, including archaeological sites, lack adequate rest areas and fail to comply with required standards (Silav, 2019). The study differs from the previous studies (Man and Yan, 2023; Erkan and Karakaya, 2023; Naniopoulos and Tsalis, 2015) in terms of the overall accessibility improvements observed, particularly in the quality and adequacy of signage and labeling, as well as the corridor design features and desks except a few ones at the archaeological site and museums. Regarding toilets, although the internal dimensions of the toilet cabins generally met accessibility standards, the height of toilets as well as knee clearance height in some areas did not comply. To further enhance accessibility, it is essential to provide safety features such as grab bars (included in all) and emergency cords (only one) in all areas. To ensure rapid response in the event of any issues, it is essential to have safety cords in all areas. Some museums and archaeological sites provide restaurant and café services that are accessible to individuals with orthopedic disabilities, while others lack such facilities altogether. Addressing these gaps and ensuring that food services are available and accessible will improve the overall experience for disabled visitors. In situations where individuals with physical disabilities are unable to physically visit museums and archaeological sites, their websites and virtual museum applications can serve as alternative means for access. However, when examining the websites of the museums and archaeological sites included in the study, it was found that only one museum offered a virtual tour application. Similar findings have been reported in foreign studies, where it was noted that very few museums offer virtual tours (Kruczek et al., 2023).

Based on the results of the interviews, participants have noted that the percentage of physical disabled visitors among total visitors in some sites reached as high as 20%, others reported a significantly lower percentage, even as low as 0.1%. On the other hand, the study by Kruczek et al. (2023) has reported that the proportion of disabled visitors to total visitors is around 10%. In this regard, the findings in Turkey appear more favorable. The majority of officials stated that physically disabled individuals are able to visit sites more comfortably compared to previous years, citing the increase in accessible features. However, the reported improvement in

accessibility—such as the increased comfort of physically disabled visitors compared to previous years—is based solely on the perspectives of museum and site authorities. In terms of the needs and expectations participants emphasized that individuals with physical disabilities expect to be able to access all areas of museums and archaeological sites. Participants agreed that equal access must be ensured for all visitors. In doing so, one participant highlighted the importance of gathering feedback from disabled individuals to improve accessibility similar with the study emphasizing cooperation with the disabled (Rocha et al., 2020). Additionally, it was emphasized that staff working in the area should be trained to support and exhibit helpful and compassionate attitudes toward individuals with disabilities. Another point raised by the participants in meeting the needs and expectations, a decision-making process is essential to choose between preserving the historical integrity of a site or increasing accessibility through measures. (Bellanca et al., 2022). When evaluating the existing accessibility measures in museums and archaeological sites, participants noted the presence of ramps, elevators, and stair lifts, which allow easier movement for individuals with mobility impairments supporting the results of the study by Kruczek et al. (2023) that indicates museums are more accessible to individuals with physical disabilities compared to those with other types of impairments. However, investigations revealed that most ramps did not meet standards, and handrails were either missing or only partially installed. In some cases, elevators or stair lifts were out of order, or walkways were not properly designed for effective use. Some participants believed the current arrangements were sufficient, while others considered the steps taken are in the right direction. It shows similar results with the study by Rocha et al. (2020), reporting that majority of museum officials did consider the museum they worked at to be accessible. Historical buildings were seen as a challenge in balancing preservation with accessibility. Another point raised by the participants was that a decision-making process is essential to choose between preserving the historical integrity of a site or increasing accessibility through measures (Bellanca et al., 2022). To make improvements participants suggested increasing special activities for disabled. Participants emphasized the significance of incorporating accessibility improvements from the initial stages of planning as well. finally the participants all agreed promoting visits for orthopedic disabled individuals requires not only the provision of accessible infrastructure but also increased social awareness and inclusivity and should be encouraged.

Practical Implications

The analysis of the museums and archaeological sites in the study shows that positive steps have been taken towards accessibility in line with the principle of equality. However, there are still gaps in physical adjustments, accessible services, training, and practices. Addressing these gaps is essential for a more inclusive experience. *Improving feedback* and ensuring accessible environments should be a shared responsibility of both designers and authorities. The government must *collaborate* with organizations advocating for the rights of disabled individuals, strengthen efforts, and ensure proper oversight. *Budget planning* should facilitate the necessary financial framework, and *public awareness of disability* issues must be raised. A holistic approach, supported by adequate funding and public awareness, is essential to improve accessibility for physical disabled individuals, benefiting all visitors with mobility limitations. Closing these accessibility gaps will improve the overall visitor experience. Future research could focus on balancing historical preservation with increased accessibility.

LIMITATIONS

The limitations of the study include its focus solely on orthopedic disabled visitors, excluding other types of disabilities, and its restriction to museums and archaeological sites located only in İzmir city center. The closure of a museum due to the earthquake in İzmir on October 30, 2020, and its exclusion from the study, along with the merging of two museums into one, further restricted the scope of the research. Additionally, a key limitation of the study is that no interviews were conducted with disabled individuals during the research process.

These findings are presented as an article based on the author's master's thesis.

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