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Museums! How Accessible for Individuals with Disabilities?

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Abstract

The research examines the accessibility of museums in Istanbul for people with disabilities. The aim is to determine the suitability of museums in Istanbul for individuals with physical, visual, and hearing impairments, identify the problems they encounter in museums, identify physical limitations, and develop solution proposals. The qualitative research method was used in the research conducted in 2022-2023 covering museums in Istanbul. The research consists of two parts. In the first part, the museums to be visited were determined. Then, the checklists were submitted for approval to two expert academics. Opinions regarding the questions in the checklists were obtained by conducting a pilot study with six individuals with physical impairments, two with visual impairments, and two with hearing impairments. In the second part, the accessibility was evaluated by visiting 41 museums in Istanbul using checklists consisting of 23 questions. The findings were analyzed using the content analysis method. Considering the data of the research, none of the museums met the requirements for accessibility, museums were far from providing minimum standards for individuals with physical, visual, and hearing impairments, and individuals with physical, visual, and hearing impairments were unable to visit museums due to inadequate physical conditions rather than financial constraints.

Keywords: *Accessibility, reachability, disabled, museums*

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Müzeler! Engelli Bireyler İçin Ne Kadar Erişilebilir?

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Öz

Araştırmanın amacı İstanbul'da bulunan müzelerin engellilere yönelik erişilebilir ulaşılabilirliğin incelenmesidir. Bu doğrultuda İstanbul'da yer alan müzelerin bedensel, görme, işitme engelliler açısından uygunluklarının belirlenmesi, engellilerin müzelerde karşılaştıkları problemlerin ve müzelere ilişkin fiziki yetersizliklerin ortaya konması ve bunlara ilişkin çözüm önerilerinin geliştirilmesi amaçlanmıştır. İstanbul'daki müzeleri kapsayan ve 2022-2023 yılında gerçekleştirilen araştırmada nitel araştırma yöntemi kullanılmıştır. Araştırma iki kısımdan oluşmaktadır. İlk kısmında İstanbul'da yer alan ve ziyaret edilecek müzeler belirlenmiştir. Ardından müzelerin erişilebilir ulaşılabilirliğini belirlemede kullanılacak olan kontrol listeleri bedensel, görme, işitme engellilerin eğitimleri konusunda uzman iki akademisyenin onayına sunulmuştur. Oluşturulan kontrol listeleri altı bedensel, iki görme ve iki işitme engelli bireyle bir müzede pilot çalışması yapılarak müzelerin erişilebilir ulaşılabilirliğini belirlemede kullanılacak olan kontrol listelerinde yer alan soruların yeterliliğine ilişkin görüşleri alınmıştır. İkinci kısmında son şekli verilen 23 sorudan oluşan kontrol listeleri doğrultusunda İstanbul'da belirlenen 41 müze ziyaret edilerek engellilere yönelik erişilebilir ulaşılabilirlik açısından değerlendirilmiştir. Elde edilen bulgular içerik analizi yöntemiyle incelenmiştir. İstanbul'da 41 müzede gerçekleştirilen araştırmanın verileri incelendiğinde, İstanbul'da yer alan hiçbir müzenin erişilebilir ulaşılabilirlik açısından sahip olması gereken şartları sağlamadığı, müzelerin bedensel, görme, işitme engellilere minimum asgari standartları sağlamada çok uzak oldukları, bunun yanı sıra bedensel, görme, işitme engellilerin maddi olanaksızlıktan çok fiziki şartların yetersizliğinden dolayı müze ziyaretleri gerçekleştiremedikleri ortaya konmuştur.

Anahtar Kelimeler: *Erişilebilirlik, ulaşılabilirlik, engelli, müzeler*

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Introduction

Museums have the characteristic of being spaces where memories of all lived experiences in a geography are collected, preserved, and transferred to the future. Museums are not merely structures where artworks are collected, restored, documented, and displayed. They are vital spaces where social memory and lived experiences, as well as the cultural, philosophical, and vital accumulation of that geography, are transmitted. Museums are important institutions that bring together the past with today and today with the future, allowing different layers of society to converge on common grounds, forming social consciousness, and indicating the developmental trajectory of society. Therefore, the accessibility of museums is crucial because society, along with all its stakeholders, constitutes a whole. Consequently, in order to maintain this integrity, all stakeholders of society must be able to benefit from the opportunities provided by the state under the same "freedom". In order to ensure this "freedom", museums need to be transformed into accessible and socio-culturally suitable spaces for the visitation of all segments of society. Thus, it is important to transform all museums, regardless of whether they are disabled-friendly or not, into structures where all individuals can benefit under equal conditions and visit. Museums belong to the community, and are a common asset of individuals constituting society, which everyone from all segments of society should benefit from. The concepts of "Accessible Museums" and "Museums for Everyone", adopted by many international and national institutions and civil society organizations since the year 2000, should not only remain theoretical but should also be reflected in practice through legal regulations and public awareness. Museums, whether they have barriers or not, should be transformed into structures that everyone can easily visit, roam around, and benefit from, without the need for others' assistance and without any issues of accessibility. Necessary efforts should be made as soon as possible to achieve this, which is also the requirement of being a social state and ensures that individuals forming the society can benefit from the state's resources under equal conditions.

Therefore, the aim of this study is to determine the extent to which museums are accessible for individuals with disabilities.

Method

The aim of this study is to identify the problems encountered by individuals with physical, hearing, and visual impairments during museum visits, to highlight physical inadequacies related to museums, and to determine the degree of accessibility of museums for individuals with disabilities.

In the selection of the disabled individuals in the study group, the fact that they reside in Istanbul province, apart from their disability status, was taken as a basis. Because Istanbul is the most populous city in Turkey and has a wide demographic structure. It offers a wide variety due to the different socio-economic, cultural and ethnic groups it hosts. This situation is important in terms of generalizing the findings of the study to a wider audience. In addition, disabled individuals residing in Istanbul or visiting Istanbul were preferred with the idea that Istanbul, as one of the cities with the most developed infrastructure in Turkey, would provide convenience and logistical advantages in the data collection processes.

The study included completely visually impaired (blind), physically disabled (wheelchair users) and hearing impaired (deaf) individuals.

Visually impaired (blind), physically disabled (wheelchair users) and hearing impaired (deaf) individuals are one of the groups that face the most access barriers in museum experiences. Museums generally create more difficulties for visually impaired individuals in terms of access due to their visually-based content and exhibition methods. Therefore, the experiences of this group allow the clearest and most comprehensive assessment of museum accessibility. Accessibility solutions developed for individuals with vision loss (tactile guides, audio narrations, Braille labels, etc.) provide an effective method for measuring museums' accessibility standards. Are these solutions sufficient, practical, and functional? Answering these questions becomes more meaningful with the feedback from this group. Data obtained from the experiences of individuals with complete vision loss can play a critical role in developing museums' accessibility policies. Meeting the needs of these individuals will guide museums in expanding and developing their accessibility strategies. The difficulties experienced by individuals with complete vision loss in their museum experiences are an important indicator in terms of measuring whether this right is fully realized. Studies on the museum experiences of individuals with visual impairments can help raise awareness of accessibility

both among museum managements and in society in general. This can encourage the widespread use of accessible museums. For this reason, it was preferred to include individuals with complete vision loss in the study.

Research Problem

There are over 1 billion individuals with disabilities worldwide, with approximately 10 million in Turkey, and this number is rapidly increasing every day. Therefore, removing the barriers to social, cultural, and social participation of this largest minority in the world and implementing regulations in this regard are not just a legal requirement but also a moral obligation of humanity. With changing perceptions in the twenty-first century, museums have evolved into socio-cultural institutions where different segments of society come together. Therefore, determining the accessibility of museums for individuals with disabilities, who are important tools for socialization and developing a sense of belonging to the community, is identified as the main problem of this research.

Sub-Problems of the Research

To what extent are museums accessible for individuals with disabilities?

- Determining the accessibility of museums for individuals with disabilities,
- Determining the usability of museums for individuals with disabilities,
- Assessing the suitability of museums for individuals with physical, visual, and hearing impairments,
- Identifying the problems encountered by individuals with disabilities in museums,
- Identifying the physical inadequacies of museums for individuals with disabilities.

Study Group/Population and Sample

In this research aimed at determining the accessibility of museums for individuals with disabilities, a qualitative research method was employed, and a general scanning model was conducted (Büyüköztürk et al., 2008).

The aim of the conducted study is to evaluate the accessibility of the museums in Istanbul for individuals with physical, hearing, and visual

impairments. Based on this problem, the study aims to determine the extent to which museums are suitable for individuals with visual, hearing, and physical disabilities, as well as to identify the common problems encountered during museum visits, and to uncover the physical inadequacies of museums and factors affecting museum visits. The research was conducted between 2022-2023. Initially, the museums located in Istanbul that would be visited were identified.

While determining the museums to be included in the study, the most visited museums in Istanbul were determined according to the lists of the Ministry of Culture and Tourism of the Republic of Turkey, the Governorship of Istanbul, TUİK and TURSAB, and the museums that could be reached with the "Convenient sampling" method were included in the study. The following criteria were taken into consideration when selecting the museums in Istanbul. These are;

- Representation of diversity,
- Accessibility practices,
- Suitability for comprehensive research,
- Location and ease of access,
- Visitor density and popularity,
- Physical and technical application possibilities.

However;

- Museums that repeated each other in the context of the exhibited works were eliminated (for example, 1 painting museum, 1 toy museum)

- Convenient sampling method was used.

- Easy Access
- Resource Limitations
- Practicality was taken as a basis.

Then, the checklists to determine the accessibility of the museums were presented to two academics who are experts in the education of individuals with physical, visual, and hearing impairments for approval. Pilot studies were conducted with six individuals with physical disabilities, two with visual impairments, and two with hearing impairments in one museum to gather their opinions on the adequacy of the questions in the checklists to be used in determining the accessibility of the museums. In the second part, a total of 41 museums were visited in Istanbul, including 16 private and 25 state museums, based on the finalized checklists consisting of 23 questions. These checklists were used to evaluate the

accessibility for individuals with disabilities. The purposive sampling method was preferred as the sampling method in the study. The criterion chosen was that those individuals participating in the study and applying the checklists must have at least one museum visit experience (Yıldırım & Şimşek, 2011). The obtained findings were analyzed using the content analysis method.

Information about the evaluated museums within the scope of the research is shown in Table 1:

Table 1. Distribution of Museums by Districts

Districts	Private	State	Total
Beyoğlu	7	1	8
Fatih	1	9	10
Beşiktaş	--	6	6
Şişli	2	1	3
Çatalca	--	1	1
Beykoz	--	2	2
Beylikdüzü	2	--	2
Üsküdar	1	1	2
Bakırköy	1	2	3
Kadıköy	1	--	1
Balat	1	--	1
Zeytinburnu	--	1	1
Sarıyer	1	--	1
Total	16	25	41

Data Collection Tools

The research utilized the "How Accessible are Museums for Individuals with Disabilities?" scale. This scale was adapted from the "Practices of Museums in Izmir for Visually Impaired Individuals" scale used in the study "The Silent and Dark World of Museums: Is "Museums for All" Possible?" by Hülya Yeşilyurt, Burçin Kırlar, and Ceyda Lale. The research is qualitative and consists of 23 questions answered in a yes or no format. A total of 41 museums were examined, including 16 private and 25 state museums. The study was conducted between November 2022 and February 2023 in the districts of Beyoğlu, Fatih, Beşiktaş, Şişli, Çatalca, Beykoz, Beylikdüzü, Üsküdar, Bakırköy, Kadıköy, Balat, Zeytinburnu, and Sarıyer in Istanbul Province.

Results

The findings of the research were collected in terms of supply and demand, categorized into subcategories following similar studies in the literature, and presented in tables. There are a total of 91 museums in Istanbul Province. Of these museums, 19 are affiliated with the Ministry of Culture and Tourism, 12 belong to the Grand National Assembly of Turkey, 3 are under the Turkish Armed Forces, 4 are under the Directorate General of Foundations, 9 belong to the Istanbul Metropolitan Municipality, 9 belong to universities and other state institutions, and 35 have private museum status. Between November 2022 and February 2023, a total of 41 museums were examined, including 16 private and 25 state museums. The findings obtained are presented in Table 2.

Table 2. Accessibility Arrangements for Visually, Hearing, and Physically Impaired Individuals in Museums in Istanbul

Museums	Tactile Surfaces	Braille Alphabet	Touchable Objects	Audio Guide	Description	Sharp-cornered Display Cases
Museum 1	--	--	--	--	X	X
Museum 2	--	--	--	--	X	X
Museum 3	--	--	--	--	X	X
Museum 4	--	--	--	--	X	X
Museum 5	--	--	--	--	--	--
Museum 6	--	--	--	--	X	X
Museum 7	--	--	--	--	X	--
Museum 8	--	--	--	--	--	--
Museum 9	--	--	--	--	X	--
Museum 10	--	--	--	--	--	--
Museum 11	--	--	--	--	--	--
Museum 12	--	--	--	--	--	X
Museum 13	--	--	--	--	--	--
Museum 14	--	--	--	--	X	X
Museum 15	--	--	--	--	--	--
Museum 16	--	--	--	--	X	--
Museum 17	--	--	--	--	--	--
Museum 18	--	--	--	--	--	--
Museum 19	--	--	--	--	--	--
Museum 20	--	--	--	--	--	--
Museum 21	--	--	--	--	--	X
Museum 22	--	--	--	--	--	--

Museum 23	X	--	X	--	X	X
Museum 24	--	--	--	--	X	X
Museum 25	--	--	--	--	--	--
Museum 26	--	--	--	--	--	--
Museum 27	--	--	--	--	--	X
Museum 28	--	--	--	--	--	X
Museum 29	--	--	--	--	--	--
Museum 30	--	--	--	--	--	X
Museum 31	--	--	--	--	X	X
Museum 32	--	--	--	--	--	X
Museum 33	--	--	--	--	--	X
Museum 34	--	--	--	--	--	--
Museum 35	--	--	--	--	--	X
Museum 36	--	--	--	--	--	--
Museum 37	--	--	--	--	--	X
Museum 38	--	--	--	--	--	X
Museum 39	--	--	--	--	--	--
Museum 40	--	--	--	--	--	--
Museum 41	--	--	--	--	--	--

When Table 2 is examined, it is observed that none of the museums evaluated in the research met the criteria for individuals with physical, hearing, and visual impairments. Only one museum had tactile surface covering; one museum had touchable replicas for visually impaired individuals; in nineteen museums, the display cases where the artifacts were exhibited were not sharp-cornered and did not pose a danger; and in twelve museums, the audio descriptions of the artifacts were available.

Table 3. Accessibility Arrangements for Visually, Hearing, and Physically Impaired Individuals in Museums in Istanbul

Museums	Statistical Information	Wheel chair Access	Staff Proficient in Sign Language	Brochures	In-Service Training	Large-Font Artifact Descriptions
Museum 1	--	X	X	--	X	X
Museum 2	--	X	--	--	--	X
Museum 3	--	X	--	--	X	X
Museum 4	--	X	--	--	X	X
Museum 5	--	--	--	--	X	--
Museum 6	--	X	X	--	X	X
Museum 7	--	--	--	--	X	X
Museum 8	--	--	--	--	--	--

Museum 9	--	X	--	--	--	--
Museum 10	--	--	--	--	--	--
Museum 11	--	--	--	--	--	--
Museum 12	--	X	--	--	X	X
Museum 13	--	--	--	--	--	X
Museum 14	--	X	--	--	X	X
Museum 15	--	X	--	--	--	--
Museum 16	--	--	--	--	--	X
Museum 17	--	--	--	--	--	--
Museum 18	--	--	--	--	X	X
Museum 19	--	X	--	--	--	X
Museum 20	--	--	--	--	X	X
Museum 21	--	X	--	--	--	X
Museum 22	--	X	--	--	--	--
Museum 23	--	X	X	X	X	X
Museum 24	--	X	--	--	X	X
Museum 25	--	--	--	--	--	X
Museum 26	--	X	--	--	--	--
Museum 27	--	--	--	--	X	X
Museum 28	--	--	--	--	--	--
Museum 29	--	X	--	--	--	X
Museum 30	--	X	--	--	--	--
Museum 31	--	X	--	--	--	--
Museum 32	--	--	--	--	X	--
Museum 33	--	--	--	--	--	--
Museum 34	--	--	--	--	--	X
Museum 35	--	--	--	--	--	X
Museum 36	--	--	--	--	--	--
Museum 37	--	--	--	--	--	--
Museum 38	--	--	--	--	X	X
Museum 39	--	--	--	--	--	X
Museum 40	--	--	--	--	--	X
Museum 41	--	--	--	--	--	--

Upon examining Table 3, it is observed that none of the museums evaluated in the study kept statistics for visitors with physical, hearing, and visual impairments. In eighteen museums, wheelchairs were provided upon request for individuals with physical, hearing, and visual impairments. Three museums had staff proficient in sign language, and twenty-four museums used large-font informational texts for artifact descriptions. It was noted that only one museum had brochures in Braille alphabet, and that in fifteen museums, in-service training was provided to museum staff for communication with individuals with special needs.

Table 4. Accessibility Arrangements for Visually, Hearing, and Physically Impaired Individuals in Museums in Istanbul

Museums	Contrast Color on Glass	Elevator	Ramp	Guide Dog	Raised Relief Map	Corridor Width Suitable for Wheelchair
Museum 1	X	X	X	X	--	X
Museum 2	X	X	X	--	--	X
Museum 3	X	X	X	--	X	X
Museum 4	X	X	X	X	--	X
Museum 5	X	X	X	X	X	--
Museum 6	X	X	X	--	--	X
Museum 7	--	--	--	--	--	X
Museum 8	--	--	--	--	--	--
Museum 9	--	--	--	--	--	X
Museum 10	X	--	--	--	--	--
Museum 11	--	--	--	--	--	--
Museum 12	X	X	X	--	X	X
Museum 13	--	--	--	--	--	X
Museum 14	X	X	X	X	--	X
Museum 15	--	--	--	--	--	--
Museum 16	--	--	--	--	--	X
Museum 17	X	X	X	--	--	--
Museum 18	X	--	--	--	--	X
Museum 19	--	--	--	--	--	X
Museum 20	--	--	--	--	--	X
Museum 21	X	X	X	--	--	X
Museum 22	X	--	X	--	--	--
Museum 23	X	X	X	--	--	X
Museum 24	X	X	X	--	X	X
Museum 25	--	--	--	--	--	--
Museum 26	--	--	--	--	--	X
Museum 27	--	--	--	--	--	X
Museum 28	X	--	--	--	--	--
Museum 29	X	--	X	--	--	X
Museum 30	X	--	X	--	--	X
Museum 31	X	X	X	--	X	X
Museum 32	X	--	--	--	--	--
Museum 33	--	--	--	--	--	--
Museum 34	--	--	--	--	--	X
Museum 35	--	--	--	--	--	--

Museum 36	X	--	--	--	--	--
Museum 37	--	--	--	--	--	--
Museum 38	--	--	--	--	--	--
Museum 39	X	X	--	X	--	X
Museum 40	--	--	--	--	--	X
Museum 41	--	--	--	--	--	--

Upon examining Table 4, it is observed that in twenty-two museums evaluated in the study, contrast colors were used on glass surfaces. Fourteen museums had elevators suitable for individuals with physical, hearing, and visual impairments. Sixteen museums had ramps in areas with level differences. Five museums allowed visits accompanied by guide dogs for visually impaired individuals. The corridors in twenty-five museums were wide enough for wheelchair use, and five museums had raised relief maps of the museum structure.

Table 5. Accessibility Arrangements for Visually, Hearing, and Physically Impaired Individuals in Museums in Istanbul

Museums	Disabled Parking	Disabled WC	Directional Signage	Seating Area	Portable Listening Device
Museum 1	X	X	--	X	X
Museum 2	X	X	--	X	X
Museum 3	--	X	--	X	X
Museum 4	X	X	--	X	X
Museum 5	X	X	--	--	--
Museum 6	--	X	--	X	X
Museum 7	---	X	--	--	--
Museum 8	--	X	--	--	--
Museum 9	--	X	--	--	X
Museum 10	--	--	--	--	--
Museum 11	--	--	--	--	--
Museum 12	X	X	--	X	X
Museum 13	--	X	--	--	--
Museum 14	--	X	--	X	X
Museum 15	--	--	--	--	--
Museum 16	--	X	--	--	--
Museum 17	--	X	--	--	--
Museum 18	--	--	--	--	--
Museum 19	--	X	--	X	X
Museum 20	--	--	--	X	--
Museum 21	X	X	--	X	X
Museum 22	X	X	--	--	X

Museum 23	X	X	--	X	--
Museum 24	X	X	--	X	--
Museum 25	--	--	--	X	--
Museum 26	X	X	--	X	--
Museum 27	X	X	--	X	--
Museum 28	--	--	--	--	--
Museum 29	--	--	--	--	--
Museum 30	X	X	--	X	--
Museum 31	X	X	--	X	--
Museum 32	--	--	--	X	--
Museum 33	X	--	--	--	--
Museum 34	--	--	--	--	--
Museum 35	--	--	--	--	--
Museum 36	--	X	--	--	--
Museum 37	X	--	--	--	--
Museum 38	--	X	--	--	--
Museum 39	--	X	--	--	--
Museum 40	--	X	--	--	--
Museum 41	--	--	--	--	--

As seen in Table 5, it is observed that in the fifteen museums evaluated in the study, there were designated parking spaces for disabled individuals. Twenty-seven museums had toilets suitable for use by disabled individuals. Eighteen museums had seating areas available for use by disabled individuals during museum visits. Portable listening devices were provided in eleven museums. However, it was noted that there were no directional signs arranged in Braille alphabet in any of the museums.

Conclusion, Discussion and Recommendations

Museums, as institutions that form the collective memory of society, bridging the past with the present and transmitting it to the future, should be organized within the framework of the principle of equality, regardless of whether individuals have disabilities or not (Yeşilyurt et al., 2014). Ensuring accessibility and inclusivity in museums is not only a requirement of being a social state but also, above all, a necessity for all individuals who constitute society to benefit from the opportunities provided by the state under equal conditions (Tozlu et al., 2012). The accessibility of museums, along with considering the needs of individuals with disabilities in museum arrangements, is also important for the integration of disabled

individuals into the society they live in (Diker & Çetinkaya, 2016). Museums should serve as inclusive spaces, providing rich and varied life experiences to individuals regardless of their background or abilities, and offer opportunities for everyone to engage in activities freely, without encountering barriers, while celebrating and embracing diversity (Danacı Polat, 2019). Museums belong to "everyone". Therefore, it is important to transform museums into places where "everyone" can benefit (Aktop, 2022).

In this study, a total of 41 state and private museums in Istanbul Province, affiliated with the Ministry of Culture and Tourism and other institutions, were examined for their suitability and accessibility for individuals with physical, visual, and hearing impairments, using checklists consisting of 23 questions.

The research conducted examined 41 museums, and it was found that none of them fully met or complied with the criteria for tactile surface covering, replicas of exhibited artworks, touch replicas, audio descriptions, audio guides, sign language guides, display cases, and Braille alphabet usage. The implementation of these criteria was deemed inadequate. Upon reviewing the results of the museum-related research, it was observed that only one museum had tactile surface coverings and replicas of exhibited artworks, that audio descriptions were available in 12 museums, and that display cases where artworks were exhibited did not have sharp corners in 19 museums. Another finding of the research was the absence of Braille alphabet explanations in any of the museums. Considering factors such as the low percentage of individuals who are proficient in Braille (2.5% nationwide), high costs, and the unavailability of printing services in this regard, it would be a more appropriate approach to develop solutions that are sustainable and accessible to all visually impaired individuals (Başkurt, 2015).

Another finding of the research is that in none of the museums evaluated, audio guide services and audio description tours were available. The high costs associated with technology-based applications used in audio description tours, as well as the periodic maintenance and updates required, pose significant challenges in procuring this service within the budgets allocated to museums (Özarslan, 2019).

When the exhibition areas and display surfaces of the museums examined in the study were analyzed, it was found that only 18 museums took preventive measures to avoid injuries for individuals with physical,

hearing, and visual impairments, while no such measures were taken in 22 museums. The display areas where the artworks are exhibited are custom-made products, and opting for rounded products instead of sharp-edged ones at the ordering stage would not only incur additional costs for institutions but also transform exhibition spaces into safer and more accessible places for individuals with physical, visual, and hearing impairments.

The research conducted examined 41 museums, and it was found that none of them fully met or complied with the criteria for collecting statistical information on disabled individuals, providing wheelchair access, using large-font for informational texts about artworks, providing in-service training to museum staff for communication with disabled individuals, and employing personnel proficient in sign language. The implementation of these criteria was deemed inadequate. Furthermore, none of the museums examined in the study maintained statistical data specifically related to disabled visitors. Regularly collecting statistical data is crucial not only for providing information about disabled visitors to museums but also for determining the necessary investments in making appropriate accommodations for them. Regular statistics will not only provide information on which types of disabilities are predominantly represented among visitors but also serve as a roadmap for determining the necessary accommodations for disabled individuals in visited museums.

In the scope of the study, it was found that only 3 out of the 41 museums examined employed staff proficient in sign language. However, this issue stems more from the perspective towards disabled individuals visiting museums rather than being purely economic. By reaching out to adult education centers or universities providing sign language training, in-service training sessions for museum staff could be organized without the need for additional personnel recruitment, enabling current staff to learn sign language. Indeed, within the scope of the "Accessible Museums Project" conducted in Bursa between 2015 and 2016, sign language training was provided to 25 museum personnel over an 8-month period. This addressed the shortage of staff proficient in sign language without requiring additional hiring, thereby ensuring that hearing-impaired individuals receive sign language support during museum visits (Erbay, 2017).

Within the scope of the study, it was determined that only 15 out of the 41 museums examined provided in-service training to museum staff on

communicating with disabled individuals. Especially in today's world, where communication is "everything," communication with disabled individuals is one of the issues that requires careful attention. In-service training on communicating with disabled individuals will not only enhance empathy skills among museum staff but also minimize potential communication problems with disabled individuals to the fullest extent possible (Göktaş & Bulgan, 2016). Furthermore, such training will not impose additional budget pressure on museums with limited budgets but will instead enhance the quality and quantity of their own resources.

The research findings revealed that none of the 41 museums examined fully complied with the criteria for contrast colors on display surfaces, disabled elevators, ramps, guide dogs, tactile maps, and corridor width suitable for wheelchairs, indicating insufficient implementation of these criteria. Among the 41 museums surveyed, only 3 accepted guide dogs, while 38 museums did not allow guide dogs during museum visits. However, any such practice or sanction that treats a disabled individual unfavorably due to their disability is referred to as "discrimination arising from disability". For example, if a visually impaired individual using a guide dog wishes to visit a museum with their guide dog, and museum officials claim that the guide dog could pose a safety risk to others or artworks, resulting in the guide dog being denied entry, it constitutes discrimination arising from disability and carries legal consequences (Elmacı, 2019).

The research found that out of the examined museums, only 19 had elevators, while 22 did not. Moreover, it was observed that many of the museums with elevators did not meet the necessary standards for disabled access. The absence of elevators in multi-story buildings is often attributed to their historical nature, with concerns about preserving the historical fabric of these structures. However, it should be noted that there are elevator systems designed to provide access to historical buildings from the exterior without causing damage to their historical integrity. For example, Çimenlik Castle, located within the boundaries of Çanakkale province and built in 1463, serves as an example from Turkey. As a multi-story structure, Çimenlik Castle features an external elevator system constructed to allow disabled individuals to access other floors without compromising the castle's historical fabric (Nemutlu, 2021).

Out of the museums examined in the study, only 16 had ramps in areas with level differences, while the remaining 25 museums lacked ramps in

such areas. This situation particularly poses accessibility issues for disabled individuals, significantly restricting their freedom of movement within the museum premises. Permanent ramps can be installed in museums, and in historical buildings converted into museums, and portable ramp applications can be implemented to ensure the mobility of disabled individuals without compromising the historical integrity of structures (Baş et al., 2015).

The research examined 41 museums, none of which fully met the criteria for disabled parking, accessible toilets, directional signs for disabled individuals, seating areas, and portable listening devices. It was concluded that there was insufficient implementation of these criteria. None of the museums examined in the study had directional signs that complied with the standards for disabled individuals. Braille alphabet directional signs provide information to disabled individuals about their current location and the locations they would like to reach, thus enhancing their mobility (Yapıcı, 2022). In Batman province, the "Accessible Museums Project" conducted between 2015 and 2016 included an 8-month process that implemented embossed images and alphabets in historical sites. This initiative facilitated the transfer of information about the structures and their contents, particularly benefiting visually impaired individuals, thus enhancing accessibility to these historical sites (Erbay, 2017).

The research revealed that out of the 41 museums examined, only 11 had portable listening devices, while the remaining 30 lacked such provision. Particularly in museums where there are no tactile copies or replicas of artworks for visually impaired individuals, the widespread implementation of portable listening device applications is crucial for them to acquire information about museums and the exhibited artworks. One of the best examples of such practices is undoubtedly the Metropolitan Museum of Art in New York. In this museum, provisions are made to accommodate both visitors with visual and hearing impairments through the provision of portable listening devices. Additionally, the museum offers sign language interpretation services, encompassing group tours as well as audio descriptive tours (Küllük, 2019).

The research identified significant deficiencies in accessibility for individuals with physical, visual, and hearing impairments in the museums examined. It is thought that making adjustments for accessibility and inclusivity in museums for individuals with physical, visual, and hearing impairments will positively impact their motivation to visit museums and

increase demand for museum visits. Moreover, such museum adjustments are expected to reduce the need for caregiver support for disabled individuals, thereby enhancing their freedom of movement, self-confidence, and sense of belonging to society. Implementing accessibility measures for disabled individuals in museums will facilitate more museum visits by disabled individuals, thus easing their social integration and fostering a culture of living together with diversity in society.

The increase in the number of educated and employed individuals with disabilities, as well as the enactment of laws aimed at protecting the rights of disabled individuals, are positive developments that have enabled them to participate more actively and effectively in various aspects of social life. This has not only made disabled individuals and their issues more visible but has also fostered the formation of a social awareness towards resolving these issues. Findings from a literature review reveal that numerous adjustments have been made in museums worldwide, particularly in Europe, to enhance accessibility for individuals with physical, visual, and hearing impairments. As a result, disabled individuals are able to integrate into social life more effectively. Based on the findings, recommendations for improving accessibility for individuals with physical, visual, and hearing impairments in museums in Turkey can be summarized as follows: Implementing tactile surface coverings for visually impaired individuals both inside and outside the museum, using contrasting colors on surfaces and employing non-slip surface materials; using contrast colors on display cases and creating tactile replicas of exhibited artworks; providing audio descriptions for exhibited artworks, utilizing Braille alphabet on informational texts, opting for larger font sizes and bold colors on informational texts; installing portable listening devices providing information about exhibited artworks and organizing audio description tours accompanied by audio guides; providing subtitles on visual informational materials such as videos for individuals with hearing impairments; employing staff proficient in sign language; providing training to museum personnel on effective communication with disabled individuals; ensuring that disabled parking, toilets, and elevators are designed in compliance with accessibility standards; and installing ramps in areas with differences in elevation and allowing visits with guide dogs. These measures aim to enhance the accessibility and inclusivity of museums for individuals with disabilities in Turkey.

In order for individuals with physical, visual, and hearing impairments to equally benefit from all the opportunities provided by the state as a social welfare obligation, more should be conducted beyond the "free admission" policy for disabled individuals. While the efforts and projects of private institutions and NGOs should be supported, long-term and state-backed initiatives aimed at providing lasting solutions should be developed and implemented to address the challenges and inequalities in this field. By doing so, barriers to accessibility between museums and individuals will be removed, taking a significant step towards achieving social equality.

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Ethical Information Regarding Research

This research strictly adhered to ethical principles, ensuring that no personal data related to museums (such as museum names, etc.) was included. The researcher affirm his commitment to upholding all ethical principles and regulations throughout the data collection, analysis, and reporting processes. The Ethics Committee Decision Number is E-45379966-050.06.04-86497.

Contribution Rate Of Researchers

The article was prepared as a single-authored work.

Conflict Declaration

There is no potential conflict of interest in this study.