Tasarım Kuram 2022;18(35):19-34 doi: 10.14744/tasarimkuram.2021.49091 / RESEARCH (THESIS)

An Analysis of the Concept of Accessibility in the Common Areas of Urban Hotels from the Perspective of Wheelchair Users: Three Hotels in Pendik[1]

Neslihan Yıldız
İstanbul Gedik Üniversitesi Mimarlık ve Tasarım Fakültesi, İç Mimarlık ve Çevre Tasarımı Bölümü, İstanbul, Turkey

Mahmut Atilla Sogüt
Mimar Sinan Güzel Sanatlar Üniversitesi Mimarlık Fakültesi, İç Mimarlık Bölümü, İstanbul, Turkey

Başvuru tarihi/*Received*: 25.11.2020, Kabul tarihi/*Final Acceptance*: 11.12.2021

Abstract
Urban hotels are easily accessible and ideal structures for business meetings, congresses, and social activities in regions where population is dense. Moreover, they offer comfort with their many facilities and have the equipment with the potential to meet all needs of each customer. The services and opportunities provided by such hotels should have the qualifications that will ensure fair accessibility for all individuals, whether they are disabled or not. In order to ensure accessibility in urban hotel buildings, it is necessary to design the physical conditions of the environment where the hotel is located and to provide all products or services offered by the hotel to disabled users in a way that would not make them need any assistance.

In the study, three selected disabled friendly urban hotels were analyzed in the context of interior spaces *(all areas inside the buildings)* under the headings of access routes to the usable areas of the building, ground levels at the entrances, width and layout of the entrance door, width of the corridors, stairs, platform raisers, and elevator size and controls. Within the scope of the study, the accessibility of the three disabled friendly 5 stars hotels that offer accommodation services was investigated within the national standards developed. Along with the standards, previous studies on the subject in the literature were examined and the results were presented. As a result of the study, the suitability of these three urban hotels for wheelchair users was analyzed on the basis of accessibility standards in question and presented in tables. By evaluating the data obtained, certain recommendations were made regarding the points that were determined to have deficiencies in terms of accessibility for wheelchair users.

Keywords: Urban hotels, physically disabled, wheelchair users, accessibility.

Genişletilmiş Öz
Turizm faaliyetlerine katılmanın her engelli birey özelinde bir hak olduğunu kabul eden ve özümseyen çoğu ülkede bu çerçevede etkili olabilecek önemli yasal düzenlemeler yer almaktadır. Bu yasal düzenlemelerin varlığıyla engelli bireyler turizm faaliyetlerine katılım sağlayarak birtakım ekonomik, sosyal ve kültürel olanaklardan faydalanmayı tercih eder hale gelmektedirler. Buna karşın birçok yapıda karşılaşılan şekilde turizm yapılarında da engelli bireyler için gerek fiziksel gerek duyusal anlamda uygun olmayan ve bu bireylerin gereksinimlerine hitap etmeyecek biçimde tasarlanmış iç mekanlar, engelli bireylerin turizm faaliyetlerine aktif katılım sağlamalarına engel olmaktadır. Engelli bireylerin, erişilebilir turizmin sunduğu etik ve eşitlik kavramları dahilinde, tüm olanaklardan bağımsızca (herhangi ikinci bir bireye muhtaç olmadan) yararlanabilmeleri ve bunları kullanabilmeleri için, iç mekanda erişilebilirlik çatısı altında bütünsel bir yaklaşımla (toplumdan ayırmadan) benimsenmesi gerekmektedir. Dolayısıyla, bedensel engelliler bağlamında sosyalleşme ve topluma katılım açısından özellikle fiziksel/mekânsal düzenlemelerin önemli bir tasarım ve planlama konusu olarak görülmesi gerekliliğine işaret sayılmalıdır. Bu noktada, bedensel engellilerin özellikle kentsel mekânlara ve yapısal tesislere kolay ve güvenli erişimine yönelik mekânsal düzenlemelerin önem kazandığı anlaşılmaktadır. Nitekim TS 9111 sayılı Özürlü İnsanların İkamet Edeceği Binaların Düzenlenmesi Kuralları Standardı ile Erişebilir Tesis Belgesi gibi yasal düzenlemelerin, engellilere yönelik iç ve dış mekân düzenleme esaslarına yönelik birtakım ilkelerin belirlendiği görülmektedir. Bu doğrultuda araştırma; bünyesinde pek çok sayıda şehir içi otel bulunduran İstanbul İli Pendik İlçesi'nde hizmet sunum kalitesi bakımından beş yıldızlı otel statüsünde konaklama tesisi olmasının ötesinde gerek bilimsel–sanatsal (konferans–sergi vb.) ve spor–eğlence gerekse iş dünyası (toplantı–etkinlik) bağlamında farklı mekânsal taleplere hizmet sunan şehir içi otellerini konu edinmiştir. Şehir içi otellerin seçilmesindeki temel ölçütler, konumsal nitelik açısından kolay erişebilir olması, farklı sosyal–kültürel etkinliklere konu olması ile konaklama olanakları bakımından sosyal statü yönünden geniş bir kullanıcı portfolyosu sunmasıdır (Yıldız 2020, 300-301).

Araştırmanın amacı; seçilen örnek şehir içi otellerin giriş/karşılama mekânları, merdiven ve sahanlıklar, koridorlar, kapılar ve pencereler ile asansör gibi iç mekân sirkülasyon/dolaşım donatı elemanlarının, TS 9111 sayılı Özürlü İnsanların İkamet Edeceği Binaların Düzenlenmesi Kuralları Standardı açısından ayrıntıda incelenerek, tekerlekli sandalye kullanıcıları yönünden erişilebilirlik sorunlarının tespit edilmesi ve çözüm önerileri için görüş geliştirilmesidir. Araştırma; "Erişilebilirliğin şehir içi otellerindeki yeri ve önemi, "Erişilebilirliğin şehir içi otelleri ortak alanlarında yasal mevzuat çerçevesinde tekerlekli sandalye kullanıcılarına sunduğu olanaklar" ve "Alan çalışması yapılan şehir içi otellerinin erişilebilirlik sorunları" temelinde yürütülmüştür. Araştırma; temelinde literatür taraması ve yerinde gözlem-tespit olmak üzere iki ana yaklaşımdan oluşmaktadır. Araştırmada, kavramsal–kuramsal arka plan oluşturulması, örneklem alanı tespiti, otel iç mekân sirkülasyon/dolaşım donanımlarının sınıflandırılması, yerinde tespit çalışmaları ile fotoğraflanması ve ölçülendirme yapılması, elde edilen bulguların standartlar ve mevzuat gereklilikleri ile karşılaştırmalı olarak değerlendirilmesine dayanan bir yöntem izlenmiştir (Yıldız 2020, 301).

Araştırma sonucunda her üç şehir içi otelinin; binanın kullanılabilir alanlarına erişim rotaları, girişlerdeki seviyeler, giriş kapısı genişliği ve düzeni, koridorların genişliği, merdivenler, platform yükselticileri, asansör boyutları ve kontrollerinin değerlendirilmesinde bir takım farklılıklar olduğu ve mevcut standartlara tam uyum sağlanmadığı tespit edilmiştir. Her üç otel çerçevesinde ise ortak olarak giriş kapısı genişliği ve düzeni, koridorların genişliği, asansör boyutları ve kontrolleri ölçütlerinde erişilebilirlik sorunlarının olduğu kanısına varılmıştır. Çalışmanın gerçekleştirildiği şehir içi otel yapılarında, verilen izinler ve zaman kısıtı çerçevesinde değerlendirme yapılabilmesi sebebiyle araştırmada incelenen erişilebilirlik parametreleri dışında kalan ortak alanlar ve buna ek olarak, otellerin isimlerinin çalışmada açıkça belirtilebilmesi için otellerden yazılı bir belge edinilemediğinden otellerin çalışma içerisinde A Oteli, B Oteli ve C Oteli şeklinde ifade edilmesi bu çalışma adına birer sınırlılık oluşturmaktadır. Bu bakımdan araştırmanın sonuçları bu kapsam ve sınırlılıklar doğrultusunda değerlendirilmelidir.

Araştırma kapsamında tekerlekli sandalye kullanıcılarının yasal mevzuat temelinde oluşturulan engelli tasarım ölçütleri bağlamında iç mekândaki erişilebilirliklerinin sorgulanması ve fiziksel kısıtlamaya dayanan sorunlarının tespit edilmesinin, gerek mevcut yasal mevzuatın ileride yapılacak şehir içi otel yapılarının mimari tasarımlarına yansıması gerekse engelli bireylerin toplumsal yaşama katılmaları ve sosyal hayatta rol almaları maksadıyla önemli ve gerekli olduğu düşünülmektedir (Yıldız 2020, 301).

Anahtar Kelimeler: Şehir içi otelleri, bedensel engelli, tekerlekli sandalye kullanıcıları, erişilebilirlik.

1. Introduction

The disabled individuals that form a significant part of the society are faced with certain problems in meeting their needs in all buildings where they stay, particularly in their own houses, and these problems make their lives even much harder. The downtown hotels that are a type of these structures can be considered as the accommodation units that are designed for the people to rest, work, and have entertainment for a short period. In this connection, it is unavoidable that the disabled individuals that form not just a small part of the society will use these spaces for vacation and business purposes just as the individuals with no disability do. Taking part in all domains of societal space is also among the basic needs, demands, and desires of all disabled individuals. In this context, perceiving the disabled individuals' needs and observing and solving several problems encountered by them will make it possible that the disabled individuals will take part in tourism activities and have accessibility at the hotels where they stay. At this point, the processes in the design stages of the hotel businesses have great importance. An accessible setting should be first designed, and then, according to this design, it should be built because making an inaccessible setting accessible afterward is much more costly and it also reduces functionality (Dünya Bankası 2012, 17). An accessible structure and setting can assure that disabled individuals will also enjoy tourism.

As the inhibiting quality of space will have a direct effect on all actions around daily life in that space, it also has particular importance in terms of the habitability of the space. Thus, removing the obstacles in the living settings by making physical arrangements will provide all individuals with the conditions necessary to ensure participation in social/active life and sustain it (Yılmaz 2005, 76). Among the categories of disabled individuals, the group with the highest number of needs in terms of both exterior and interior space arrangements is the group of individuals with physical disabilities. Individuals with physical disabilities need supporting equipment to perform the actions of walking and moving, and such equipment requires that certain arrangements be made in the design of the space (Yılmaz 2005, 79).

A number of legal regulations were put in effect at national and international levels so that human beings could act as independent individuals in society and space, their accessibility would not be restricted, and they could play an active role in social life. In Turkey, the first legal regulation about the concept of accessibility for the disabled individuals was put in effect in 1997 in additional article 1 in the Zoning Law no. 3194 stipulating, "Abiding by the relevant standards of the Turkish Statistical Institute about the zoning plans, urban, social, and technical infrastructure areas, and the buildings is compulsory to make the physical setting accessible and habitable for the disabled individuals.". Afterward, with the statutory decree no. 572, certain changes were made in 1999 in the Turkish Zoning Law, and a new regulation was created and new arrangements were brought in. Along with these new regulations, certain arrangements about the buildings to be dwelled by the disabled individuals were put in place, and also, the new regulations aimed to ensure the accessibility of streets, avenues, squares, roads, and all intra-city public transport systems in compliance with the standards prescribed by the Turkish Standards Institute. In Turkey that was among 120 countries signing the United Nations (UN) Convention on the Rights of Persons with Disabilities in 2007, the arrangements about the interior spaces of the public or semi-public areas open to people as well as the regulations issued by the municipalities in conformity with the UN Convention about the public areas such as streets, pavements, crosswalks, and so on have setbacks in terms of implementation (Yalçın Usal and Evcil 2014, 99).

Departing from all points above, the wheelchair users that formed one of the categories of individuals with physical

1 *Bu çalışma Dr. Öğr. Üyesi M. Atilla SÖĞÜT danışmanlığında, birinci yazarın "İstanbul Şehir İçi Otellerin Bedensel Engelliler Açısından Ulaşılabilirlik, Erişilebilirlik ve Kullanılabilirlik Kapsamında Değerlendirilmesi", (Yıldız., N) Yayımlanmamış Doktora Tezi, İstanbul, Mimar Sinan Güzel Sanatlar Üniversitesi, Fen Bilimleri Enstitüsü, 2017 künyeli tezinden üretilmiştir.*

disabilities were addressed in the study. As wheelchair users experience usage restrictions in terms of accessibility, several design-related obstacles come into play. To eliminate these obstacles, the spaces should be evaluated by considering all their details, and at the same time, they should be designed ergonomically. In light of all these issues, this study tried to present the problems encountered by the disabled individuals at the downtown hotel buildings and recommended solutions. In the current study, three five-star hotels located in Pendik district of Istanbul province were examined and the necessary analyses were conducted.

Performed to examine the interior space accessibility for wheelchair users in the context of the design criteria prescribed for the disabled individuals on the basis of the relevant Turkish laws and identify the disabled individuals' problems stemming from physical restrictions, this study evaluates the relationships of the need, spatial configuration, and the accessibility based on the existing structures at three downtown hotels.

2. Conceptual-Theoretical Descriptions

2.1. Disabled-Urban Hotel-Accessibility Concepts

When it comes to disability, there are many definitions regarding the disabled. According to the Turkish Standards Institute, on which the standards of the study are based, a disabled individual is defined as;

"A disability is physical restriction or loss in the use of bodily functions. A physically disabled person is someone who does not have the mobility of a normal person and can move with the help of devices and tools due to lack or malfunction in movement organs. A disabled person who uses a wheelchair is someone who has a walking disability or is restricted in terms of walking, and can only move with the help of a wheelchair, with or without assistance" (TS 9111, 2011). A physically handicapped person, on the other hand, is "someone who has lost his/her physical abilities in various degrees as a result of malfunctions in skeletal (bone), muscular and nervous system due to some reason before, during and after birth, experiences difficulties in adapting to community life and meeting his/her needs in daily life, and therefore is in need of protection, care, rehabilitation, counseling and support services" (MEB 2008, 3). The fine and gross motor skills of these individuals have been negatively affected due to a variety of reasons, and they are restricted in terms of fulfilling the functional movements and abilities expected from them (MEB 2008, 3). Thus, these individuals need certain assisting equipment in order to move (Yılmaz and Aydın 2004, 2). These equipment include some walking aids such as wheelchair, walker or crutches.

Compared to other hotels, urban hotels are more spacy and comfortable, have luxury restaurants serving various cuisines, and provide opportunities for organizing different activities regarding fashion, social activities and business (Karahasanoğlu 2004, 8). In general, these hotels are built in the prestigious areas of the city where big business centers and shopping centers are located. Easily accessible urban hotels in dense areas are ideal structures for business meetings, congresses, and social activities. At the same time, urban hotels provide comfort with their countless opportunities, and they have buildings with the equipment to meet all needs of each and every guest. The hotels with this status should have the quality to provide equal access to their services and opportunities for all individuals with or without a disability (Burak 2018, 132). In order to ensure accessibility in urban hotel buildings, first of all, the physical conditions of the environment (the surroundings of the hotel) where the hotel is situated should be designed correctly, and all products and services provided by the hotel should be offered to the disabled in such a fashion that they would not need any assistance while using them (Türkmen 2018, 57).

The user is always at the very center of architectural designs, and all criteria to

be used in the design process should be determined on the basis of the user. Developing designs that will appeal to the whole mass of the users and will meet the basic needs of the users in the best way also provides a significant input in terms of improving people's quality of life. In cases where the user is placed at the center, the concept of "accessibility" comes to the foreground.

The concept of accessibility refers to the access of individuals with different needs in their daily lives to all public buildings that provide various services and all public areas open to the public use, their ability to walk around in these areas and to make use of these areas without needing the assistance of a second individual (Demirkan 2015, 1). Accessibility is also a basic right owned by all individuals that expresses action networks such as access, entry-exit, and circulation, etc. between exterior and interior space for disabled individuals. Therefore, problems regarding access to the physical environment should be eliminated, and accessibility should be provided on the principle that disabled individuals can move on an equal basis together with other individuals in their daily lives independently from another individual (Yücesoy et al. 2007, 94).

There are studies in Turkey with a parallel topic with the present study such as participation in accessible tourism, the suitability of existing hotel businesses for disabled individuals, observation of the disability factor in the architectural and interior architecture design of tourism buildings, determination of the infrastructure opportunities in accommodation businesses in terms of developing accessible tourism, and the opinions of the managers of accommodation businesses on accessible tourism (Şahin 2012, 4-5). Thanks to many studies conducted on tourism, accommodation and disability, this topic has gained importance in the last 20 years. When the studies conducted are reviewed; it is seen that numerous studies have been carried out in terms of active participation of disabled persons in tourism activities, the appropriacy of the structures of the existing accommodation businesses for disabled individuals, consideration of the disability factor in the architectural design process of tourism structures, and revising the opportunities in accommodation structures in order for them to provide active service by developing accessible tourism (Şahin 2012, 4-5). These studies are important in that they constitute a guide for the studies conducted after them. These studies carried out in the literature are illustrated in Table 1 below.

In parallel with what is summerized in table above, it is necessary to make and implement legal regulations regarding accessibility in terms of participation in social life (Akın Güler and Tutal 2017, 352). The obligation that works regarding accessibility must be carried out in line with the standards to be formed by the Turkish Standards Institute was addressed in the Government Circular numbered 2006/18. In addition, as per Annex Article 1 of the Zoning Law numbered 3194, "it is mandatory to abide by the relevant standards of the Turkish Standards Institute in zoning plans and urban, social, technical infrastructure areas and buildings in order to make the physical environment accessible and livable for the disabled." The compulsory implementation of the standards determined by TSI are possible through legal regulations made by the government (Türkmen 2018, 31).

Accordingly, national standards have been determined in parallel with international standards by the Turkish Standards Institute in order to ensure universal consistency.

Within the scope of the evaluation of the current situation, one of the standards implemented in Turkey in relation to the subject of the study is as follows:

TS 9111 " The requirements of accessibility in buildings for people with disabilities and mobility constraints"

This standard, which is the main standard of TSI regarding accessibility, has been formed in order for persons

with disabilities to use the immediate surroundings, entrances and interior spaces of buildings independently, safely and comfortably. In addition, thanks to certain legal regulations introduced by management units in the facilities where service is provided, design constructs and accommodation opportunities provided have become inspectable. In this context, a field study was conducted considering the

Table: 1
Academic studies conducted on accessibility.

Author/Authors	Title of the Study	Colophon	Study Subject
Tuğrul AYYILDIZ, Hakan ATAY, Ahu YAZICI (2014)	The Opportunities Provided to the Disabled in Accommodation Businesses and Managers' Opinions: Kuşadası Example	Gazi University Tourism Faculty Journal 2 (2014), pp.. 84-100.	• Revealing the suitability of the opportunities provided in accommodation businesses for disabled persons, • Identifying the opinions of the managers of the hotels operating in Kuşadası on the participation of the disabled in travel in Turkey, • Determining the opinions of hotel managers on the measures to be taken regarding the orientation of foreign disabled tourists towards Turkish tourism.
Gülay BULGAN, İlker Hüseyin ÇARIKÇI (2015)	Accessible Tourism: A Research on 4-5 Stars Hotel Businesses in Antalya Province	Mehmet Akif Ersoy University Social Sciences Institute Journal 13 (2015), pp. 15-42.	• Investigation of accessible tourism in 4-5 stars hotels in the province of Antalya which have the most number of rooms for the disabled, • Investigation of the sufficiency of the opportunities provided to the disabled tourists in Turkey, • Awareness of the managers of hotel businesses about accessible tourism market.
Seyithan KETBOĞA (2016)	A Comparative Analysis of the Compliance of Hotel Businesses in the Example of Istanbul Province with the EU Accessibility Standards	Istanbul University Social Sciences Institute Istanbul Studies Department Master's Thesis.	• Identifying Turkey's current potential for tourism and accessibility problems experienced by hotels in the context of the EU accessibility criteria and suggestions for solution.
Ümit Kadri YÖRÜK (2003)	An Analysis of the Disability Factor in the Design of Tourism Structures	Yıldız Technical University Physical Sciences Institute Architecture Department Master's Thesis.	• Identifying the architectural design criteria to ensure accessibility for the disabled and examination of the immediate surroundings of the building, building entrances, circulation areas, bedrooms and interior common usage areas. • A field study that aims to determine the suitability of the existing accommodation facilities for the disabled and offering suggestions for solution.
Vildan ATAK (2008)	The Approach of Hotel Businesses in Marmaris Towards Accessible Tourism for the Physically Disabled	Muğla University Social Sciences Institute Business Department Master's Thesis.	• Evaluation of 3-4-5 stars hotels operating in Marmaris in terms of their suitability for the physically disabled, the way they are recommended, and the sufficiency of the number of rooms allocated for the disabled tourists.
Sıla KARACAOĞLU (2012)	A Research on Determining the Expectations of the Physically Disabled Individuals from Accommodation Businesses: Eskişehir Example	Eskişehir Anadolu University Social Sciences Institute Tourism and Hotel Business Department Master's Thesis.	• Determining the participation status of the physically disabled in travel and tourism activities, identifying the expectations of these people from accommodation businesses, and evaluating the suitability of accommodation businesses for the physically disabled, • Developing suggestions for the development of accessible tourism in Turkey and for accommodation businesses to offer suitable services for the disabled tourists.
Burhanettin ZENGİN, Burak ERYILMAZ (2013)	An Evaluation of Accessible Tourism Market in Bodrum Destination	International Economic and Administrative Studies Journal 11 (2013), pp. 51-74.	• Examination of 4-5 stars hotels and holiday villages operating in Bodrum in terms of accessible tourism and determining the hotel managers' opinions on the subject.
Anday TÜRKMEN (2018)	Designing the Common Areas of Hotels in Terms of Disabled Users	Marmara University Fine Arts Institute Interior Architecture Department Master's Thesis.	• Compiling data related to disability in Turkey, analyzing current approaches on a global scale and their relations with the common areas of hotels, and bringing a systematic and interdisciplinary perspective to the concept of accessibility, • In addition, creating references regarding the possibility to produce accessible environment without interrupting the integrity of existing environments, and contributing to the democratization of space usage.

standard numbered TSI 9111, which was also referred to in The Law on People with Disabilities.

2.2. Required Areas and Dimensions for Wheelchair Users

Since the fact that a space is of preventive quality will directly affect all activities of daily life in and around that space, it is also significant in terms of livability, therefore, eliminating obstacles in living environments by making physical arrangements will provide the necessary conditions for all individuals to participate in social/active life and maintain their living (Yılmaz 2005, 76).

Among the individuals with disabilities, the group that needs the arrangements both in exterior and interior spaces the most is the physically disabled individuals. Physically disabled individuals need assisting tools and equipment in order to move and walk, and these tools and equipment necessitate some arrangements to be made in the design of space (Yılmaz 2005, 79). The anthropometric dimensions of a wheelchair, which is among the tools and equipment used by physically disabled individuals, is as follows (Figure 1-2-3).

3. Material and Method

3.1. Purpose

The primary material of the study consisted of Hotel A, Hotel B, and Hotel C located in Pendik district of Istanbul province. The research on the three hotels was carried out over the common areas of the hotels. The secondary material of the study was

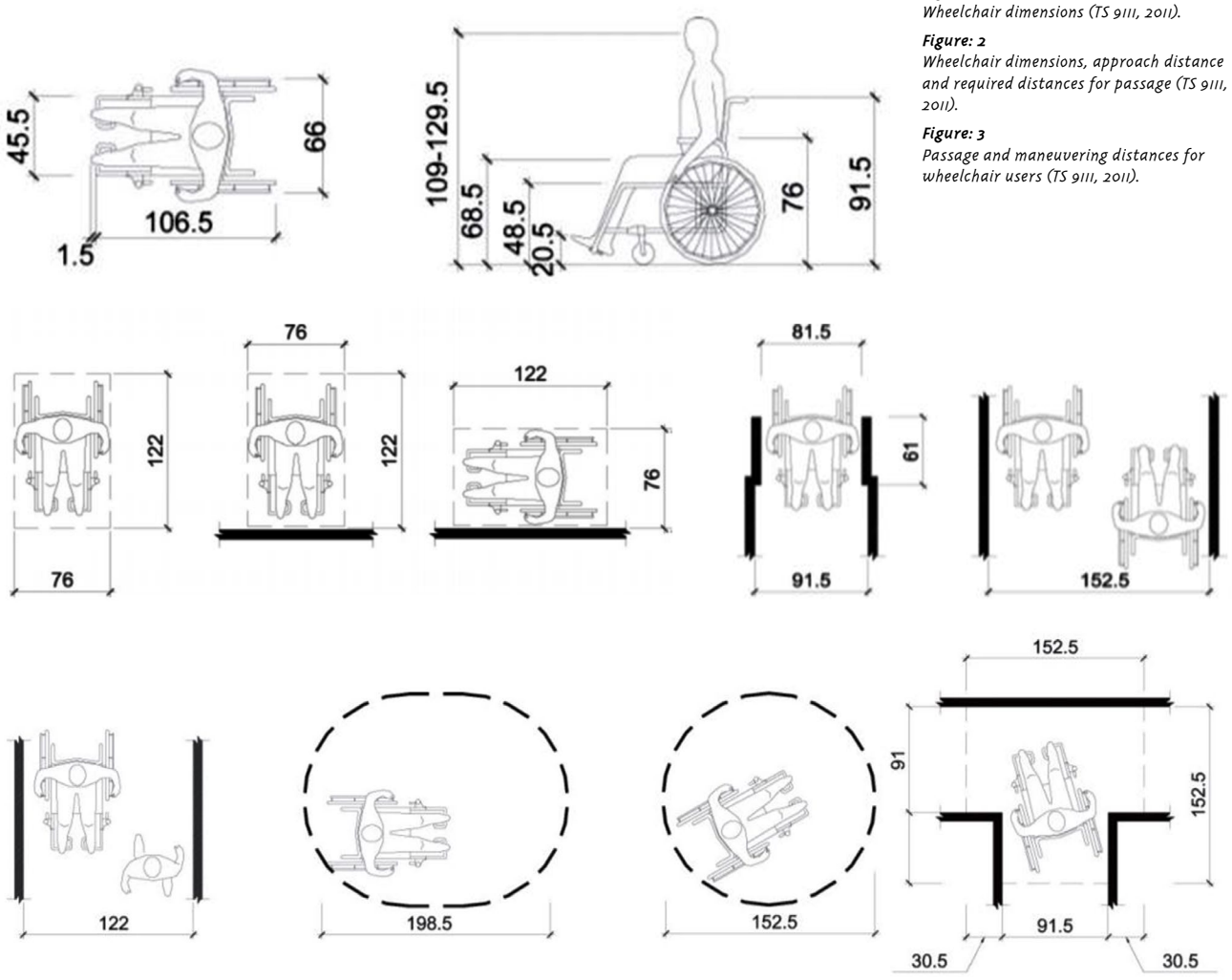


Figure: 1
Wheelchair dimensions (TS 9111, 2011).

Figure: 2
Wheelchair dimensions, approach distance and required distances for passage (TS 9111, 2011).

Figure: 3
Passage and maneuvering distances for wheelchair users (TS 9111, 2011).

composed of various plans and projects made related to the subject, foreign standards regarding the use of interior spaces for the disabled, the standards created by the Turkish Standards Institute for the disabled, research, articles, and thesis studies on the subject.

3.2. Scope

Pendik region, which was selected as the study area due to its location characteristics, is differentiating very fast from other regions with its transportation, tourism, social, and cultural opportunities. The existence of important structures such as airport, techno park, satellite city, the related transportation need resulting from these structures, and the rights of the persons with physical disabilities to travel as everyone else all bring along the need for accommodation. The common points of the three hotels discussed within the scope of the study in the context of this need were that they were situated in the same region, that they had rooms for the disabled, and that they had equal number of stars (5 stars) in terms of service quality. There are 4 hotels with 5 stars status in Pendik district (TÜROB 2016, 5). General information about the 3 hotels examined out of these 4 hotels are as follows (Table 2).

As understood from the table above, the rooms for the disabled in the hotels are not classified according to disability groups. Consequently, the rooms for the disabled are designed to provide service for all disability groups.

3.3. Method

In the study method, the stages such as determining the purpose and scope of the study and reviewing the literature for previous studies conducted on the subject, determining the national and international standards created for wheelchair users, deciding on the sample area for field study, performing measurements in the sample areas and analyzing the compatibility of measurement results with the standards determined for wheelchair users, and finally developing results and suggestions in line with these studies were followed. In the study, the compliance of the common areas of urban hotels with the current standards of accessibility for wheelchair users was investigated in the example of Pendik district of Istanbul province.

Within the scope of the study, based on the standards determined for wheelchair users on the national scale, equipment/usage elements in the common areas of the sample urban hotels such as access routes to the usable areas of the buildings, levels at the entrances, the design and width of the entrance doors, the width of the corridors, stairs, platform raisers, elevator dimensions and control buttons were examined.

In the study, collection of the data through observation, identification on site, and photographing, and analysis of these data were chosen as the method. The analysis of the data obtained on accessibility from the entrance to the interior spaces in the 3 samples hotels was made comparing them with the criteria determined in line with TS 9111 "The Requirements Of Accessibility In Buildings For People With Disabilities And Mobility Constraints." guide.

3.4. Limitations

As evaluations were made within the limitations of the permission taken and time restrictions in the sample hotel areas, the areas which were not included in the accessibility parameters examined in the study (common areas such as working areas, activity areas, sauna, swimming pool, etc.) constituted a limitation for the study, and including them in future research would

Table: 2
General Information About the Hotels.

Name	Hotel A	Hotel B	Hotel C
Category	5 Stars	5 Stars	5 Stars
Construction year	2010	2010	2009
Number of rooms	538-540	336	231
Number of rooms for the disabled	6	3	2
*Table Generated by Author (Number of rooms have been taken from the 2017 data.)			

contribute to the literature. Besides, since a written consent that would allow to use the names of the hotels in the study could not be obtained, they were referred to as Hotel A, Hotel B, and Hotel C. Therefore, the results of the study should be evaluated considering the scope and limitations.

4. Spatial Analyses

In the study, qualitative data were collected, and using the observation on site technique, Hotel A, Hotel B and Hotel C were visited, and the analyses were made in terms of accessibility of the interior spaces of these urban hotels for the disabled. As the study included lots of technical data, these data were categorized and presented in tables for ease of reading. The interior space pictures of the three hotels subject to the study taken in line with the parameters of accessibility, recommended dimensions, the findings obtained and suggestions for the arrangements that should be made were presented in the study.

4.1. Access Routes to the Usable Areas of the Building

The exterior space pictures of the sample hotels taken in line with the parameter of "Access Routes to the Usable Areas of the Building" within the scope of accessibility, recommended dimensions, and the findings obtained are as follows (Figure 4, Table 3).

4.2. Levels at the Entrances

The interior space pictures of the sample hotels taken in line with the parameter of "Levels at the Entrances" within the scope of accessibility, recommended dimensions, and the findings obtained are as follows (Figure 5, Table 4).

4.3. Entrance Door Width and Layout

The interior space pictures of the sample hotels taken in line with the parameter of "Entrance Door Width and Layout" within the scope of accessibility, recommended dimensions, and the findings obtained are as follows (Figure 6, Table 5).

4.4. The Width of the Corridors

The interior space pictures of the sample hotels taken in line with the parameter of "The Width of the Corridors" within the scope of accessibility, recommended dimensions, and the findings obtained are as follows (Figure 7, Table 6).

4.5. Stairs, Platform Raisers

The interior space pictures of the common areas of the sample hotels taken in line with the parameter of "Stairs, Platform Raisers" within the scope of accessibility, recommended dimensions, and the findings obtained are as follows (Figure 8, Table 7):

4.6. Elevator Dimensions and Control Buttons

Figure: 4
Hotels A, B, and C Building Entrances (Yıldız 2017, 134), (Yıldız 2017, 151), (Yıldız 2017, 168).

Evaluation Areas / Evaluation Criteria		HOTEL A		HOTEL B		HOTEL C	
Access Routes to The Usable Areas of the Building	Recommended	Detected	Suitability Status	Detected	Suitability Status	Detected	Suitability Status
Disability Access and Entrance	Disability access and entrance should be provided in at least one entrance to the building.	Disability access and entrance has been provided in at least one of the entrances to the building.	√	Disability access and entrance has been provided in at least one of the entrances to the building.	√	Disability access and entrance has been provided in at least one of the entrances to the building.	√
All Accessible Route Points	Should be at least 90 cm. wide.	The widths of all accessible route points are above the recommended width.	√	The widths of all accessible route points are above the recommended width.	√	The widths of all accessible route points are above the recommended width.	√
Accessible Route Ramp Slope	It should not be more than 1:12 (%8).	No slope.	√	The slope was applied steeper than recommended.	x	The slope was applied closer to the recommended slope.	√
Existence of Railings on Both Sides of the Ramps	There must be railings on both sides of the ramps that go up higher than 15 cm.	–	√	There are railings on both sides of the ramp.	√	There are no railings on both sides of the ramp.	x
Ramp Railings Height	It must be 90 cm. starting from the surface of the ramp.	–	√	90 cm.	√	–	x
Existence of Ramp Side Guard	There must be side guards of at least 5 cm. high on both sides of the ramp.	–	√	–	x	–	x
*Table Generated by Author							

Table: 3
Access Routes to the Usable Areas of the Building within the Scope of Accessibility.

The interior space pictures of the common areas of the sample hotels taken in line with the parameter of "Elevator Dimensions and Control Buttons" within the scope of accessibility, recommended dimensions, and the findings obtained are as follows (Figure 9, Table 8):

5. Conclusion and Recommendations

In the study, which aimed to analyze the accessibility of urban hotels by wheelchair users, three disabled friendly hotels, namely Hotel A, Hotel B, and Hotel C, were examined in terms of accessibility, and the buildings in the study area were evaluated in terms of their access routes to usable areas, levels at the entrances, the width and layout of the entrance door, the width of corridors, stairs, platform raisers, elevator dimensions and control buttons for the accessibility of disabled individuals using a wheelchair.

In the study, it was aimed to examine interior spaces of urban hotels from the perspective of wheelchair users within the scope of accessibility, and to design hotels where wheelchair users can be accommodated as everyone else, or to turn them into such hotels with the arrangements made. Another purpose of the study was to ensure that wheelchair users can make use of all services provided

Figure: 5
Hotels A, B and C Entrance Levels (Yıldız 2017, 134), (Yıldız 2017, 154), (Yıldız 2017, 170).

by urban hotels without needing the help of anyone and without experiencing any restrictions.

Although it was observed that there was some sensitivity in the interior space design solutions in the selected urban hotels' structures in terms of accessibility, a detailed analysis revealed that in all three hotels, the areas that needed a solution in terms of accessibility were the access routes to the usable areas of the buildings, entrance door width and layout, platform raisers, and elevator dimensions and control buttons. The levels of entrances and the widths of the corridors as common usage areas were found to meet the minimum needs of wheelchair users in all three hotels. The compliance status to accessibility standards of these urban hotels in line with these parameters are presented in Tables 3, 4, 5, 6, 7 and 8.

In the study, through examinations made according to TS 9111 standards, the minimum requirements for the physical accessibility for individuals with disabilities were determined, and the analysis of these requirements were made over the sample urban hotels. By evaluating the data obtained as a result of analyses, the accessibility of the present urban hotels was identified, and by considering the minimum requirements, some inferences were made on how accessible designs could be achieved.

As a result of the study, for the areas that were found to be insufficient, some recommendations were made regarding interior design arrangements to be made in terms of accessibility for the three hotels.

In terms of Accessibility in the Interior Spaces of Urban Hotels;

Table: 4
Levels at the Entrances within the Scope of Accessibility.

Evaluation Areas / Evaluation Criteria		HOTEL A		HOTEL B		HOTEL C	
Levels at the Entrances	Recommended	Detected	Suitability Status	Detected	Suitability Status	Detected	Suitability Status
Existence of Floor Grates on walking Route	If there are grates on the walking route, the openings in them in one direction must not be over 1.3 cm.	–	√	–	√	–	√
Existence of Ramp etc. Level Difference at the Building Entrance	It must be between 0.6 cm.-1.3 cm.	–	√	–	√	–	√

*Table Generated by Author

Figure: 6
Hotels A, B and C Entrance Door Width and Layout (Yıldız 2017, 135), (Yıldız 2017, 154), (Yıldız 2017, 171).

Access routes to the usable areas of the building,

- It was seen that accessible route ramp slope in Hotel B was steeper than the recommended level. Since this situation will make it difficult for wheelchair users to use the ramp, the slope should be rearranged in line with the recommended level.
- No railings on both sides of the ramp in Hotel C were considered. As this situation will pose a threat for wheelchair users, railings should be added on both sides of the ramp.
- In Hotel B and C, ramp side guards do not exist. In order to eliminate this danger for the wheel, it is recommended that ramp side guards should be added to the ramps at recommended levels.

Levels at the entrances,

- In all three hotels, since there is no level difference resulting from grates

Table: 5
Entrance Door Width and Layout within the Scope of Accessibility.

Evaluation Areas / Evaluation Criteria		HOTEL A		HOTEL B		HOTEL C	
Entrance Door Width and Layout	Recommended	Detected	Suitability Status	Detected	Suitability Status	Detected	Suitability Status
Entrance Door Type	If there is a revolving door, there must be another door with hinges or photocell.	Revolving door+Photocell door	√	Revolving door+Hinged door	√	Revolving door+Hinged door	√
Entrance Door Width	The width of the main entrance door with two wings must not be less than 150 cm., with one of the wings having at least a width of 100 cm.	Double wings 210 cm.	√	One wing 95.5 cm.	x	One wing 100 cm.	√
The Height of Intercom, Door Bell Panel, and Buttons for the Disabled	It must be between 90 cm.-140 cm.	The height of the button for the disabled is 80 cm.	x	The height of the button for the disabled is 85 cm.	x	The height of the button for the disabled is 88 cm.	x
*Table Generated by Author							

Figure: 7
Hotels A, B and C Corridor Widths (Yıldız 2017, 136), (Yıldız 2017, 155), (Yıldız 2017, 172).

on the walking routes and ramps at the entrances of the buildings, etc., there is no problem detected in terms of wheelchair use.

Entrance door width and layout,

- The width of the entrance door to Hotel B was found to be narrower than the recommended level. As this situation will create a difficulty for the disabled while entering and exiting the hotel, the door should be dealt with and made wider.
- In all of the three hotels, intercom and doorbell panel were not available, and the height of the existing buttons did not comply with the recommended level. Intercom and doorbell should be set up at the entrance of the three hotels for the wheelchair users to use in cases when they cannot enter the hotel. Moreover, the existing disability buttons at the doors should be moved to the recommended level.

Width of the corridors,

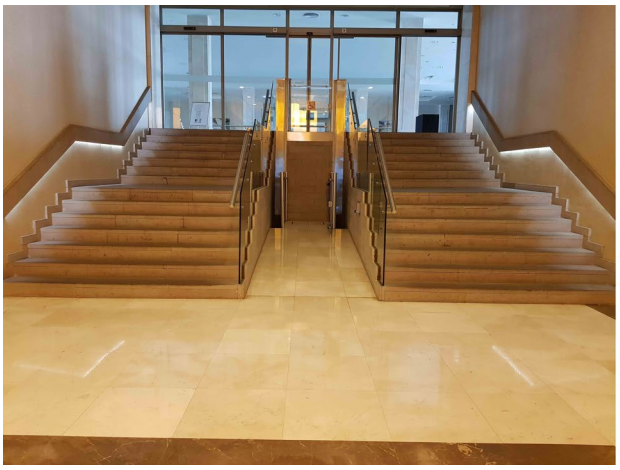
- In all three hotels, the corners of the corridors were not bevelled. As this

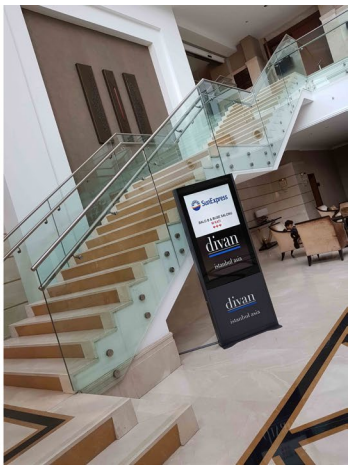
Table: 6
The Width of the Corridors within the Scope of Accessibility

Evaluation Areas / Evaluation Criteria		HOTEL A		HOTEL B		HOTEL C	
The Width of the Corridors	Recommended	Detected	Suitability Status	Detected	Suitability Status	Detected	Suitability Status
Net Width of the Corridors	Disability net width of the corridors must be at least 90 cm.	143 cm.	√	175 cm.	√	163.5 cm.	√
Corridor Corners Being Bevelled	The corners at corridor turns must be designed to be bevelled.	Unbevelled	x	Unbevelled	x	Unbevelled	x
Maneuver Spaces at Corridor Turns	Suitable areas for maneuvering must be created in the corridors.	Suitable area for maneuvering has been created.	√	Suitable area for maneuvering has been created.	√	Suitable area for maneuvering has been created.	√

*Table Generated by Author

Figure: 8
Hotels A and C Stairs (Yıldız 2017, 137), (Yıldız 2017, 173).





situation will constitute a danger during the passage of wheelchair users close to the corners, the corners of the corridors should be rearranged to be bevelled urgently.

Stairs, platform raisers,

- Hotel B and C do not have any platform raisers. In addition to the existing elevators, platform raisers should be considered for wheelchair users to have access to heights that cannot be accessed with elevator.

Elevator dimensions and control buttons,

- It was determined that the width

Table: 7
Stairs, Platform Raisers within the Scope of Accessibility.

Evaluation Areas / Evaluation Criteria		HOTEL A		HOTEL B		HOTEL C	
Stairs, Platform Raisers	Recommended	Detected	Suitability Status	Detected	Suitability Status	Detected	Suitability Status
Existence of Stairs	–	Existing	–	Not existing	–	Existing	–
Stairs Flight Width	The net width of the stairs must be at least 180 cm. between the two railings.	266 cm.	√	–	–	234 cm.	√
Existence of Platform Raiser	–	Existing	√	Not existing	x	Not existing	x
Width of Access Corridor to Platform Raiser	The disability net width of corridors in the building must be at least 90 cm.	153 cm.	√	–	–	–	–
Height of Platform Raiser Button	For approaching sideways, the height from the ground must be at most 137 cm, and at least 23 cm.	68 cm.	√	–	–	–	–
Base Area of the platform Raiser	The base area of the platform raiser must not be less than 89 cm. x 152.5 cm.	103 cm.x148.5 cm.	Width: √ Height: x	–	–	–	–
*Table Generated by Author							

Figure: 9
Hotels A, B and C Elevator Cabins (Yıldız 2017, 138), (Yıldız 2017, 156), (Yıldız 2017, 174).

Table: 8
Elevator Dimensions and Control Buttons within the Scope of Accessibility.

Evaluation Areas / Evaluation Criteria		HOTEL A		HOTEL B		HOTEL C	
Elevator Dimensions and Control Buttons	Recommended	Detected	Suitability Status	Detected	Suitability Status	Detected	Suitability Status
Cabin Entrance Door Width	Cabin Entrance Door must be at least 91.5 cm. wide.	105 cm.	√	121 cm.	√	90 cm.	x
Width and Depth of the Elevator Cabin	129.5 cm.x172.5 cm.	145 cm.x157 cm.	Width: √ Depth: x	168 cm.x174 cm.	Width: √ Depth: √	141 cm.x151 cm.	Width: √ Depth: x
Existence of Holding Bars	–	–	x	+	√	+	√
Height of Holding Bars	In the cabin, there must be holding bars at a height of 85-90 cm. from the floor.	–	x	105 cm.	x	102 cm.	x
Existence of Emergency Phone	It is recommended that there be an emergency phone in the cabin.	–	x	–	x	–	x
Floor Material of the Elevator Cabin	The floor must not be covered with carpets holding to the floor.	–	√	–	√	–	√
Existence of Seating Opportunity in the Cabin	It is recommended that there be a small folding seat in the cabin.	–	x	–	x	–	x
The height of Elevator Call Buttons	Elevator call buttons must be at a height of 106.5 cm.	110 cm.	x	110 cm.	x	104 cm.	x

*Table Generated by Author
*The evaluation criteria in the tables above were analyzed with the rating of "√ = Suitable, x = Unsuitable".

of the elevator cabin door in Hotel C was not within the dimensions recommended. This problem, which will constitute an obstacle for wheelchair users to enter the cabin, should be solved by changing the elevator cabin with a cabin with a wider door.

- In Hotel A and C, the depth of the existing elevator cabins do not comply with recommended dimensions. Elevator spaces should be designed so as to match these dimensions, and cabins with suitable dimensions should be placed.
- In Hotel A, holding bars in the elevator cabin do not exist. Holding bars should be mounted in the cabin for wheelchair users to get support in a potential situation.
- In Hotel B and C, the heights of the holding bars in the existing elevator cabins do not match the recommended height. Holding bars should be moved the recommended height for wheelchair users to have easy access.
- In all three hotels, emergency phone is not available in elevator cabins. In order for users to communicate with outside in case of an emergency, each elevator cabin should be provided with an emergency phone.
- In all three hotels, seating was not planned in elevator cabins. A seating element should be added to each cabin to provide opportunity for easy transfer from the wheelchair.
- In all three hotels, the heights of elevator call buttons did not comply with the recommended dimension. The height of elevator call buttons in each hotel should be arranged for easy access of wheelchair users.

If statistical data regarding various user groups are collected, and research is conducted on the subject before designing urban hotels, all user groups, including persons with disabilities, can perform their daily functions during their stay in the hotel. Besides, instead of determining the general dimensions for wheelchair users, a guidebook aimed at only wheelchair users for different structure groups (educational structures, public structures, hotel structures, etc.) and the included spaces should be prepared. Upon examining the existing urban hotels, the suitability of the dimensions for disability accommodation in the district was determined, and it is believed that the findings obtained will be determinant in the design of the urban hotels that will be built or rearranged from now on, and that the study will shed light on similar studies to be conducted in the future●

Kaynakça

Akın Güler, G. and Tutal, O. (2017). Tarihi Yapılarda Erişilebilirlik ve Kullanılabilirlik, Uluslararası

Katılımlı 6. Tarihi Yapıların Korunması ve Güçlendirilmesi Sempozyumu, Trabzon, 351-361.

Atak, V. (2008). Marmaris'teki Otel İşletmelerinin Bedensel Engelli Turizmine Bakışı (Yüksek Lisans Tezi). Muğla Üniversitesi, Sosyal Bilimler Enstitüsü, Muğla.

Ayyıldız, T., Atay, H. and Yazıcı, A. (2014). Konaklama İşletmelerinin Engelliler İçin Olanakları ve Yöneticilerin Görüşleri: Kuşadası Örneği, Gazi Üniversitesi Turizm Fakültesi Dergisi, 84-100.

Bulgan, G. and Çarıkçı, İ. H. (2015). Engelli Turizmi: Antalya İlindeki Dört ve Beş Yıldızlı Otel İşletmelerinde Bir Araştırma, Mehmet Akif Ersoy Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 13, 15-42.

Burak, Y. (2018). Konaklama Tesislerinin Engelli Bireylere Uygunluk Açısından Değerlendirilmesi: Sivil Toplum Kuruluşlarındaki Engelli Üyelerin Bakış Açısı (Yüksek Lisans Tezi). Selçuk Üniversitesi, Sosyal Bilimler Enstitüsü, Konya.

Demirkan, H. (2015). Mekanlarda Erişilebilirlik, Kullanılabilirlik ve Yaşanabilirlik, Tmmob Mimarlar Odası Ankara Şubesi Dergisi, 36, 1-4.

Dünya Bankası. (2012). Engelliler İçin Kolaylaştırıcı Ortamlar ve Evrensel Erişim: Ávila. Ávila Örneği İspanya.

Karacaoğlu, S. (2012). Bedensel Engellilerin Konaklama İşletmelerinden Beklentilerini Belirlemeye Yönelik Bir Araştırma: Eskişehir Örneği (Yüksek Lisans Tezi). Anadolu Üniversitesi, Sosyal Bilimler Enstitüsü, Eskişehir.

Karahasanoğlu, E. B. (2004). Beş Yıldızlı Şehir Otellerinin İşletme Modelleri ve Mimari Tasarım Kimliği Etkileşimi (Yüksek Lisans Tezi). İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, İstanbul.

Ketboğa, S. (2016). İstanbul İli Örneğinde Otel İşletmelerinin AB Erişilebilirlik Standartlarına Uygunluğunun Karşılaştırmalı Analizi (Yüksek Lisans Tezi). İstanbul Üniversitesi, Sosyal Bilimler Enstitüsü, İstanbul.

MEB, (2008). Özel Öğretim Kurumları Genel Müdürlüğü, Özel Eğitim ve Rehabilitasyon Merkezi Bedensel Engelli Bireyler Destek Eğitim Programı, 1-146.

Şahin, H. (2012). Engelli Bireylerin Konaklama Tesislerinden Memnuniyet Durumlarının İncelenmesi (Doktora Tezi). Hacettepe Üniversitesi, Sosyal Bilimler Enstitüsü, Ankara.

TS 9111/Kasım (2011). Engelliler ve Hareket Kısıtlılığı Bulunan Kişiler İçin Binalarda Ulaşılabilirlik Gerekleri (Bu standart iptal edilen TS 9111-Nisan 1991 standardı yerine çıkartılmıştır), Türk Standardları Enstitüsü, Ankara.

Türkmen, A. (2018). Otel Ortak Alanlarının Engelli Kullanıcılara Yönelik Kurgulanması (Yüksek Lisans Tezi). Marmara Üniversitesi, Güzel Sanatlar Enstitüsü, İstanbul.

TÜROB, (2016). Türkiye Otelciler Birliği İstanbul Otel & Kapasite Raporu, Rapor No:4, 1-16.

Yalçın Usal, S. S. and Evcil, A. N. (2014). The Accessibility in Shopping Centres: The Cases of Istanbul Profilo and Kozzy Malls, International Journal of Architecture and Planning (ICONARP), 2(1), 97-109.

Yıldız N. and Söğüt, M.A. (2020). Şehir İçi Otel Odalarının Banyolarında Kullanılabilirlik Kavramının Tekerlekli Sandalye Kullanıcıları Açısından Analizi: Pendik'te Üç Otel, Mimarlık ve Yaşam Dergisi, 5(2), 299-333.

Yıldız, N. (2017). İstanbul Şehir İçi Otellerin Bedensel Engelliler Açısından Ulaşılabilirlik, Erişilebilirlik ve Kullanılabilirlik Kapsamında Değerlendirilmesi (Doktora Tezi). Mimar Sinan Güzel Sanatlar Üniversitesi, Fen Bilimleri Enstitüsü, İstanbul.

Yılmaz, B. (2005). Bedensel Engelli Çocukların Temel Eğitim Okullarında Eğitim Alabilmesi İçin Gereken Mimari Düzenlemeler, Selçuk Üniversitesi Mühendislik Mimarlık Fakültesi Dergisi, 20(3), 73-84.

Yılmaz, B. and Aydın, D. (2004). Ortopedik Engelliler İçin Eğitim Mekanları Tasarımında Malzemenin Önemi, 2. Ulusal Yapı Malzemesi Kongresi ve Sergisi, 1-11.

Yörük, Ü. K. (2003). Turizm Yapılarının Tasarımında Özürlü Etmeninin İrdelenmesi (Yüksek Lisans Tezi). Yıldız Teknik Üniversitesi, Fen Bilimleri Enstitüsü, İstanbul.

Yücesoy, E., Gülmez, F.G., and Aysel, N.R. (2007). Kentli Dostu Fiziksel Çevrenin Erişebilirliği Kapsamında İstanbul'da Alan Çalışması, Uluslararası Katılımlı II. Kent ve Sağlık Sempozyumu, Bursa, 82-95.

Zengin B. and Eryılmaz, B. (2013). Bodrum Destinasyonunda Engelli Turizm Pazarının Değerlendirilmesi, Uluslararası İktisadi ve İdari İncelemeler Dergisi, 11, 51-74.