International Journal of Heritage, Tourism and Hospitality
journal homepage: https://jihtha.journals.ekb.eg/

Challenges Facing People with Disabilities in Historic Jeddah

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ARTICLE INFO

Keywords:

Historic Jeddah

Accessible heritage

Accessible tourism

People with disabilities

Tourist guides

Challenges, Kingdom of Saudi Arabia

Received: 15 May 2025

Revised: 15 July 2025

Accepted: 1 August 2025

Published: 15 August 2025

ABSTRACT

Historic Jeddah (HJ) attracts great attention from all over the world, not only because it has been registered on the UNESCO list since 2014, but also because the city of Jeddah is considered the gateway to the Two Holy Mosques and is an important international Islamic commercial port. This has led to (HJ) topping the list of the most important heritage sites that people visit and because of this, visiting it should therefore be available to everyone, without discrimination. However, people with disabilities (PWD) face challenges in accessing heritage tourism. Because everyone has a right to tourism in general and heritage tourism in particular, this research aims to investigate those challenges. Semi-structured interviews with 21 participants and field study observations were used and the results are illustrated with photographs. This study will help to overcome the challenges encountered and contribute to the Saudi 2030 vision of enhancing development to meet accessibility requirements in the heritage tourism sector.

1. Introduction

In 2005 the United Nations World Tourism (UNWTO) Organization passed a resolution to promote tourism under the slogan ‘accessible tourism for all’ in order to ensure that a greater number of people could access tourism (IITTM, 2010, p.13). Tourism has now become a social construct that affects people’s daily lives and therefore, every individual has the right to enjoy it, regardless of their social status or any other characteristics (WTO, 2020).

The term “Accessible Tourism” thus refers to tourism for people with various types of disabilities, and it involves making the necessary efforts to remove the obstacles that may prevent them from enjoying tourist destinations independently (Sakarneh and Katanani, 2021). This is also in line with the commitment of the Government of the Kingdom of Saudi Arabia to take into account the requirements of (PWD) when implementing tourism and entertainment programs (The Authority

for the Care of (PWD), 2024). The concept "Accessible Tourism" has gained great popularity because of its impact on the integration of (PWD) into the tourism sector as well as its potential to improve the sector's returns (Darcy et al., 2020, p.1). This draws attention to the fact that, in some parts of the world, (PWD) spend more than the average person without a disability (Refaat and Ibrahim, 2017) and their market share of tourism spending is estimated at more than $120 billion annually (Sakarneh and Katanani, 2021).

There are many types of tourism, one of which is a heritage tourism. What distinguishes it from other types is that it connects people to their past and provides them with the opportunity to interact with it, establishing social and cultural ties, and most importantly, provides an opportunity to enhance a sense of self and belonging (Zahari et al., 2023). Because of this, this type of tourism in particular should provide accessibility for all people, including (PWD). Unfortunately, Zahari et al. (2023) stated that access for (PWD) is severely limited due to the physical barriers they face when trying to navigate heritage sites, such as entering and exiting buildings or walking along the street.

Although accessibility for (PWD) is important, research on the topic remains limited, unregulated, undirected and fragmented, and therefore, there need to be more academic studies in this area. Al-Qarni (2023) recommends that study of the challenges facing (PWD) should be expanded to other regions of the Kingdom of Saudi Arabia, not just Najran, Jazan, and Asir, which motivated the researcher to identify the challenges facing (PWD) in (HJ), with the aim of trying to reduce them and find solutions.

2. Research Significance

Although a number of studies have addressed the challenges facing (PWD) at heritage sites, they are, to the best of the researcher's knowledge, limited in several ways. First, in terms of research methodology and tools, most studies use a quantitative approach and only study the point of view of disabled people (Alawi et al., 2018; Sakarneh and Katanani, 2021; Alqarni et al., 2023). Some researchers employ standard analytical tools and have enhanced their quantitative studies by using photographs of sites (Hołownia and Kozak, 2024). Others adopt a mixed research approach, but gather data either from just government officials, destination managers and local staff working in the site or from tourist guides (Refaat and Ibrahim, 2017; Meskele et al., 2018). The remaining quantitative studies only use the descriptive (Marín-Nicolás and Sáez-Pérez, 2022; Assas, 2025) or comparative approach (Zahari et al., 2016). Although a fair number of studies use a qualitative approach, some are limited to studying the point of view of workers on heritage sites (Kruczek et al., 2024) while others only study disabled individuals' point of view (Zahari et al., 2023; Omi et al., 2024). As for the research of Omi et al. (2024), it is a qualitative study with observation, but it is also limited to disabled individuals. This current study is thus very important, as it is distinguished by the use of a qualitative approach, in the form of semi-structured interviews to identify the point of view of (PWD) in (HJ), their companions, and tourist guides. It also relies on observation and the inclusion of photographs to increase reliability and credibility.

Second, there is a dearth of research studying the challenges facing (PWD) in tourist sites in general and in heritage sites in particular in the Saudi context. Even though there is a study on the

challenges facing (PWD) in tourist sites in other cities such as Asir, Najran and Jazan (Alqarni et al., 2023), none has so far been carried out in Jeddah, specifically in (HJ).

Finally, most of the studies that focus on Saudi Arabia deal with accessible tourism on tourist sites and review just part of the research on accessible tourism for (PWD) (Alawi et al., 2018; Hisham et al., 2021; Hadrovic, 2024; Assas, 2025). In other words, their focus is not on the difficulties faced by (PWD). It is therefore very important to investigate the challenges that facing (PWD) in (HJ), as this group of people has the right, just like others, to enjoy heritage tourism and get to know (HJ).

3. Research aims and objectives

In order to overcome the challenges and make (HJ) accessible for (PWD), some objectives must be identified:

- Explore the challenges facing (PWD) in (HJ) from the point of view of (PWD);
- Identify the obstacles faced by (PWD) when visiting (HJ) from the point of view of (PWD)'s companions and tourist guides;
- Determine solutions to make (HJ) as accessible as possible to receive (PWD).

4. Literature review

Regarding the accessibility of heritage sites for (PWD), it appears from the study conducted in Sicily by Giammanco et al. (2022) that (PWD) will not be able to visit heritage sites because they do not have the necessary facilities. This is due to what Fortuna-Marek and Szmygin (2017) conclude about the conflict between the requirements of heritage preservation and the needs of (PWD). However, as Hooi (2016, p.31) explains, it is possible to introduce some changes referred to as 'reasonable adjustments' in the England Code of Practice on Accessible Heritage Sites. These practices seek to balance accessibility and preservation methods for heritage sites, maintaining the importance of heritage, and making changes optional if they are not needed.

Das and Rudra (2015) define the basic elements that have an impact on stimulating the participation of (PWD) in tourism activities: physical accessibility, access information and an effective way of presenting information on sites. This research used Das and Rudra (2015) classification because the researcher observed, through the data she collected, that the accessibility challenges for (PWD) in (HJ) fall within this classification. The following sections will review each category in detail.

4.1. Physical accessibility

A field study conducted in Dhaka by Omi et al. (2024) examining the challenges that limit accessibility at the Lalbagh Fort, concludes there are a number of challenges, including the difficulty of accessing the fort due to the lack of direct routes to public transport stations, and the lack of provision for people using wheelchairs at the ticket office and the main entrance. As for the internal pathways, the researchers note that brick paving makes the surface uneven and therefore more difficult for people with wheelchairs, and that in addition the changes in surface and their flatness made moving between them very difficult. Abd-Elraof and Dawood (2018) also

point out that there is a shortage in facilities such as vehicles for the disabled, parking lots, and walking aids. To address these challenges, the researchers reported a number of improvements had been made, such as paving in the historic district being replaced with concrete slabs to create a wheelchair-accessible path, level, wider sidewalks, and installing lightweight ramps to facilitate moving and dismantling them when needed. Moreover, when Zahari et al. (2016) analyze and compare access to a number of heritage buildings in Perak, they explain that elderly people were unable to enter a heritage building due to the lack of an elevator for gaining access to the upper floors. Therefore, Hołownia and Kozak (2024) stated the necessity of installing elevators for wheelchair users as an alternative to stairs. This is in addition to a lack of seating and rest areas for (PWD), and the café being nearby but possibly still inaccessible for (PWD) (Omi et al., 2024).

Although the study discovers that there is one accessible toilet for men 75 meters from the fort entrance, it contains stairs, making it impossible for people with wheelchairs to reach it without relying on assistance (Omi et al., 2024). Participants in another study indicate that there should be designated, accessible toilets only disabled people should get access to them (Hua, 2019). Regarding accessibility for people with visual impairments, Hołownia and Kozak (2024) stated that lighting on the stairs and contrast-enhanced signage using the company's design and color schemes would contribute to improving accessibility. In terms of the tourist experience specifically in (HJ), Alawi (2018) asks tourists about their experience and it is clear that they are dissatisfied with accessibility, giving a rating of 2.25 out of 5. Regarding services provided to (PWD), there is a dissatisfaction rating of 1.98 out of 5. Road clarity and accessibility receive a low rating of 2.43 and transportation such as taxis and buses receive 2.33. Overall, this demonstrates the importance of making greater efforts and intensifying attention on improving, developing, and supporting physical accessibility in (HJ) (Alawi, 2018).

4.2. Accessibility of information

Researchers note that the provision of information is no less important than physical accessibility to a site and can even be the major element in motivating (PWD) as well as helping them to plan a travel experience. It affects a site's attractiveness if it succeeds in providing physical accessibility but fails to provide good and easy detailed information and thus, that information should be delivered to (PWD), in order to enable good, advance planning by them and their families (Sakarneh and Katanani, 2021). One of the barriers facing (PWD) in Sicily is the lack of information when visiting cultural sites, referred to in previous studies as the "information barrier" (Eichhorn et al., 2008, p.3). Attention should therefore be paid to this issue, and detailed information on accessibility be provided when implementing future development and improvement measures (Giammanco et al., 2022). In a study conducted by Hua (2019) into the level of satisfaction of (PWD) with the tourism activities provided in the city of Kuala Lumpur, Malaysia, the researcher concludes that, in general, most of the participants were satisfied with their access to tourism and its adaptation in the city. However, several explained that they were not satisfied with the information map provided because it was not clear, which may cause minor confusion and misunderstanding for (PWD).

Moreover, in terms of the orientation system, Omi et al. (2024) state that there is a lack of clear signs at the main entrance to guide visitors with disabilities and that although the fort receives many visitors, there is also a weakness in the internal way finding system, leading to a lack of clear directions for (PWD) (Omi et al., 2024). Signage is crucial for helping visitors find their way, communicate, navigate, and evacuate the site when needed, and this also goes for (HJ) (Shehata, 2022). As Fahad (2022) and Assas (2025) points out, the inadequacy of the signage system in (HJ) affects the experience of tourists, and thus the implementation of visitor guidance systems at the site is suggested. (HJ) is considered an open museum, so the presence of information signs about the history of the buildings and the area is important to enrich the visitor's experience. Assas (2025) shows in her comprehensive study of way finding signage in (HJ) and its ability to reflect the historical and cultural values of the site, that there is a lack of followings: signs in front of the buildings to introduce them, braille signage system to assist the visually impaired, and signs indicating the location of escalators or roads with ramps for physically impaired.

It has been found that (PWD) suffer also from weakness in the way tour guides deal with them. Gillovic et al. (2018) study enabling accessible tourism language, and Meskele et al. (2018) conduct a study in Ethiopia to explore the challenges facing development and accessible tourism for (PWD), finding that multilingual tour guides lack sign language skills and the ability to interact with this group. In addition, there is a lack of qualified translators in sign language for the deaf mute and inadequate provision of texts in braille (Meskele et al., 2018).

4.3. Accessibility of presenting information

As for the third element, which is the method and the effective ways of presenting information on sites, it is possible to use technologies that facilitate access as Ch'ng (2011) studies digital heritage tourism, aiming to reconstruct the visitor experience at heritage sites, and states that technology plays a significant role in improving the visitor's cultural experience by replacing traditional information sources with digital ones, such as social media sites, smart phone applications, braille screens, screen readers, audio recorders and digital video cameras provide features such as panoramic and 3D images, (Reino et al., 2007; Sakarneh and Katanani, 2021).

Moreover, Ozdemir (2021) explains that providing information through augmented or virtual reality can help remove physical barriers. In addition, Khayyat et al. (2020) recommend integrating maps, GPS technologies, and augmented reality with mobile applications in historical areas. Regarding the technologies available and integrated into the (HJ) site however, visitors express dissatisfaction, giving them a very low rating of 2.65 out of 5 (Alawi, 2018). Moreover, in terms of the availability of information and services via digital technologies such as smart phone applications, web browsers and social media, visitors are more satisfied, with a rating of 2.84 out of 5. In contrast, dissatisfaction is expressed with various technologies that enhance the visitor experience, such as the voice recorder, 2D image scanner, and panoramic screen, with a rating of 2.45 out of 5. In short, these ratings demonstrate the importance of providing and integrating such technologies into the (HJ) site to facilitate and enhance visitors' experience (Alawi et al., 2018).

After studying the reasons that may hinder access for (PWD) to tourism attractions, Liasidou et al. (2019) conclude that one of the ways to avoid this is to pay attention to tourism curricula, since they find they lack information about accessibility to tourist sites. Therefore, they call for a review of tourism curricula to compensate for this deficiency. This is consistent with what Refaat and Ibrahim (2017) previously recommended, stating that universities and educational institutions bear a significant responsibility in developing and improving their curricula to include study of accessible tourism, its objectives, and how to achieve it.

Another way to address the challenges facing (PWD) is offered in a case study conducted at the Krakow Museums (Kruczek et al., 2024) where it is found that staff employed to assist (PWD) are in urgent need of appropriate training that will enable them to carry out their tasks effectively. Moreover, heritage site managers have a responsibility to understand the needs of (PWD) and to meet and serve those needs by providing qualified, trained employees (Hołownia and Kozak, 2024).

Involving (PWD) in development decisions is one way to reduce the accessibility challenges in tourist places, as Zahari et al. (2023) point out in a study conducted on heritage tourism and the right of (PWD) to engage in social activities. They conclude that when promoting heritage buildings and historical monuments, the opinions, requirements, preferences and involvement of (PWD) in decision-making should be taken into account, in addition to providing accessible facilities such as braille displays, audio recordings and physical access via ramps.

Al-Zahrani (2022) conducts a study in Al-Baha and states that the accessible tourism sector faces many challenges and difficulties in the Kingdom of Saudi Arabia and needs to be developed, supported and improved to meet the needs of tourists with disabilities. This is consistent with the study conducted by Alqarni et al. (2023) who conclude that the obstacles are numerous, so much so that families refrain from traveling due to the suffering and exhaustion they might face (Alqarni et al., 2023). Therefore, it is necessary for another study to be conducted on the challenges facing (PWD) in (HJ), in an attempt to find solutions to avoid them.

5. Materials and Methodology

5.1. Study area

This study was conducted in (HJ), located in the city of Jeddah in the Kingdom of Saudi Arabia. Jeddah is the second largest city in the kingdom after Riyadh and has gained wide fame due to its geographical location on the north-eastern coast of the Red Sea (Hadrovic, 2024). In addition, it is the largest seaport on the Red Sea and the 40th busiest seaport in the world (Aarts, 2007), serving most of the commercial needs of the Kingdom of Saudi Arabia. According to Massoud (2023), this strategic geographical location has made Jeddah a focal point not only on ancient trade routes but also during the modern era, leading to the city being a melting pot of different civilizations and cultures. Jeddah is also an Islamic port for Mecca and Medina, with pilgrims and Umrah performers arriving at Jeddah International Airport (Assas, 2025). It is considered one of the oldest historical cities, due to the belief that the grave of our mother Eve, peace be upon her, is located there

(Hadrovic, 2024). In addition, apart from Jeddah, which is the only intact historic city, most of the cities on the Red Sea coast were abandoned or demolished (Hadrovic, 2024). Due to the importance of Jeddah, the government has paid great attention to it and carried out major developments on all levels, and interest has extended from the local to the international level, with (HJ), the vibrant economic, religious and cultural heart of the city of Jeddah, known as Al-Balad, being registered in the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2014 AD (Alitany, 2014; Assas, 2025). Thus, the attention that Jeddah receives extends to (HJ), which is a living record of the diversity of cultures, races and ethnicities that can be seen in the buildings and monuments that remain to this day and that have shaped Hijazi society (Assas, 2025). Moreover, it is considered the only inhabited site of living heritage in the Kingdom of Saudi Arabia and in 1981 Saudi Arabia recognized (HJ) as a 'preservation zone', making it the first heritage site to be registered (Bagader, 2016).

5.2. Heritage tourism

Heritage/ cultural tourism are considered to be fundamental elements in the tourism sector and top the list of the fastest growing types of tourism in the world (Alawi, 2018). According to the National Trust for Historic Preservation in the United States, heritage tourism is defined as "traveling to experience the places and activities that authentically represent the stories and people of the past". This prompted Fyall and Garrod (1998) to define heritage tourism as an economic activity that exploits and benefits from social cultural assets to attract tourism and visitors. In recent times, historical buildings have gained great popularity among people due to their interest in what these buildings tell us about our ancestors (Zahari et al., 2023). Graham (2002) points out that heritage buildings have been called the legacy of knowledge, and this description expresses the social, political, economic and cultural framework that existed in the past. This has contributed to increasing awareness and interest in the civilizational and cultural value that these buildings provide for the future.

As a result, countries have started to compete to develop this type of tourism and thereby obtain a larger share of tourists. It is therefore necessary to pay attention to developing heritage/cultural tourism in the Kingdom of Saudi Arabia and to develop a plan to enter this race (Alawi, 2018). Despite this importance and competition between countries, interest remains limited, as (PWD) have faced neglect in heritage tourism. Yaacob and Hashim (2007) note that providing facilities and access for this group will not change the general appearance of the buildings and make them lose their authenticity,but will complement the important activity of preserving heritage buildings. Heritage sites should be accessible to all and free of obstacles so that everyone can fully enjoy them.

5.3. People with disabilities

According to the World Health Organization "Disability can occur at three levels: an impairment in body function or structure; a limitation in activity, [.....]; a restriction in participation, [.....] (WHO, 2013, p. 3). As for the definition of persons with disabilities based on the Law of the Rights

of Persons with Disabilities, which was regulated by Resolution No. 110 of the Council of Ministers dated 06\02\1445H, in the Kingdom of Saudi Arabia, "Disability is a permanent or long-term total or partial impairment in one of the physical, sensory, mental, communicative, educational or psychological abilities. They mean that normal life requirements cannot be met by the disabled person, leading them to depend on others to meet them, or need a special tool that requires special training or rehabilitation for good use" (The Authority for the Care of (PWD), 2024, p. 2). This means that, as Abdul Rahim and Abd Samad (2010) state, disability is not just a health problem, but rather a complex phenomenon that reflects the extent of interaction between the characteristics of a person's body and the society in which they live. Therefore, interventions are needed to remove environmental and social barriers and overcome the difficulties faced by (PWD) (Abdul Rahim and Abd Samad, 2010).

According to the Ministry of Health (2024), there are different types of disabilities, which might involve visual, hearing, mental, physical and motor disabilities. The World Health Organization (2013) indicates that about 15% of the world's population suffers from disabilities, and in Saudi Arabia, the General Authority for Statistics (2022) estimates that that is the case of about 4.1% of the population. The World Health Organization (2013) thus states that (PWD) should have the same rights as everyone else, as has been stipulated by the Kingdom's Government (The Authority for the Care of (PWD), 2024).

5.4. Data collection and research instrument

For this research a qualitative method, an excellent way of reaching results, was used to achieve the established aims. Thus, the data was collected using methods such as observation and semi-structured interviews which enable participants to freely express themselves. Semi-structured interviews with (PWD) in (HJ), their companions, and tourist guides were based on the 'go-along' interview method, which, as Zahari et al. (2019) report, allows for the evaluation not only of participants' spoken responses, but also their physical expressions and the extent of their joy or dissatisfaction when visiting a site. Go-along interviews, also known as walking interviews, have recently been shown to be beneficial in studies where, for example, "understanding primarily depends on knowing how

participants perceive their environment" (Garcia et al., 2012, p. 1395). Observation was also used so that the extent to which (PWD) could access the sites in (HJ) could be evaluated. This method, as Creswell (2014) explains, helps observe the behavior and activity of people on the research site. In addition, to clarify the challenges in a deeper way that connects the reader to the site and to the obstacles facing (PWD), the researcher decided to enhance the study using photos. This is consistent with the work of Banks (2007), who reports that images spread more quickly in society and researchers should focus on them, especially in research of a social nature.

Given the nature of the research approach used, the evaluation of the research sample does not depend on numerical quantity, but rather on the amount of useful information obtained, which is known as data saturation (Creswell, 2007). This study reached saturation after interviewing 21 participants, 8 of whom were (PWD) in (HJ), 8 of whom were companions, and 5 tourist guides.

The (PWD) participants were divided into 3 males and 5 females, and the age of them varied from 25 to 65. When it came to marital status, 3 of them were married with children, one was divorced, and 4 were single. As a type of qualification, 4 of (PWD) hold university education and 4 hold high school. Regarding the type of employment, 5 of the (PWD) were in administrative jobs, 3 were retired. For the number of visits, all (PWD) visited the (HJ) more than ones and some of them were living in it. Table 1 includes detailed about demographic information of 8 (PWD) interviewees.

Table 1: Interviewee demographics of (PWD)

Gender		Age	Marital Status			Education Level		Type of employment		Number of visits
Male	Female	25–65	Married with children	Divorced	Single	University	High school	Administrative jobs	Retired	More than ones or living in (HJ)
3	5		3	1	4	4	4	5	3	All

Regarding the 8 participants of the companions were divided into 2 males and 6 females, and the age of them varied from 25 to 50. Marital status was divided, one of them was married with children, 2 were divorced, and 5 were single. Regarding the type of qualification, 6 of companions hold university education and 2 hold high school. When it came to the type of employment, all of the companions were in administrative jobs. For the number of visits, all companions visited the (HJ) more than ones and some of them were living in it. Table 2 includes detailed about demographic information of 8 companions interviewees.

Table 2: Interviewee demographics of companions

Gender		Age	Marital Status			Education Level		Type of employment	Number of visits
Male	Female	25–50	Married with children	Divorced	Single	University	High school	Administrative jobs	More than ones or living in (HJ)
2	6		1	2	5	6	2	All	All

As for tourist guides, the researcher was able to collect data from a total of 5 participants divided as follows: 3 male and 2 females and the age of them varied from 35 to 55. Marital statuses were divided, 3 of them were married with children, 2 were single. Regarding the type of qualification, all of them hold university education. When it came to the type of employment, all of them were Freelancer. For the number of years of experience, all tourist guides have from 7 to 20 years. Table 3 includes detailed about demographic information of 5 tourist guides interviewees.

Table 3: Interviewee demographics of tourist guides

Gender		Age	Marital Status		Education Level	Type of employment	Experience (years)
Male	Female	35-55	Married with children	Single	University	Freelancer	7-20
3	2		3	2	All	All	All

Most of the interviews took between 30 and 40 minutes as the researcher took into account the busyness of destination managers and did not want to prevent (PWD) from enjoying their time on site. Creswell (2014) explains that researchers must pay attention to the site of research, the conduct of interviews, and their timing to avoid disturbing study participants. Some interviews with tourist guides were face-to-face and others took place via Zoom. As for interviews with (PWD) and their companions, the researcher visited the (HJ) site to interview them while they were walking around, in addition to recording observations and finding out how well they could access the heritage sites in (HJ), and taking photos.

5.5. Data analysis

The data collection and analysis phase of this study followed a number of steps which are considered important in the qualitative approach. First, as previously mentioned, the researcher conducted interviews with tourist guides, some of which were face-to-face and others via Zoom, depending on participants' preference, and face-to-face interviews were conducted with (PWD) and their companions. All interviews were recorded after obtaining participants' consent. The researcher relied on an interview guide in order to focus on the research questions. For the convenience of participants the interviews were conducted in Arabic and then translated into English, as some of them are not confident speaking English and have difficulty expressing their opinions. Although conducting interviews in Arabic allows participants to express their opinions in more depth, it is possible that the researcher may lose some of those opinions when translating from Arabic to English because most participants use colloquial language, proverbs, etc. to express their opinions and feelings, which are difficult to translate literally. The researcher therefore paid special attention when translating the interviews and reviewed the translation several times in order to protect valuable information (Creswell, 2014).

To protect participants' privacy, each recording was given a code: PWD for (PWD), C for their companions and TG for tourist guides. The codes were then numbered based on the order of interviews: PWD 1- PWD 8, C 1 - C 8 and TG 1 - TG 5. When starting the process of data analysis generated by the interviews and observations, the researcher used thematic analysis strategy, as is usual in the qualitative approach (Braun and Clarke, 2006). This method depends on identifying patterns and organising them thematically, which makes the coding process easier. In thematic analysis coding is defined as "examining and breaking down the data into pieces of text and naming them" (Jones et al., 2013, p.199). In this study, the researcher coded each interview separately and manually to be able to create an interaction between the researcher and the data. It will also allow the researcher to evaluate the data based on relevant academic literature and the researcher's knowledge. After identifying potential codes from the data, the researcher categorized them into similar groups to generate potential themes.

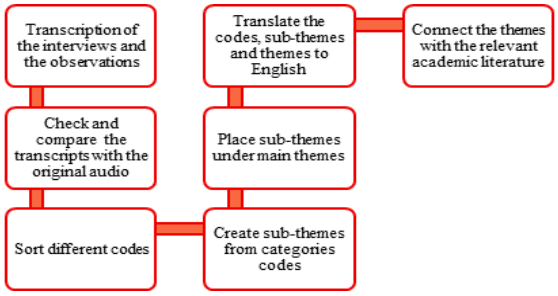


Figure 1: Summary of the process of data analysis employed in the study. Source: The researcher.

In collecting data the study used triangulation in order to increase reliability and validity as Creswell (2014) explains: 'Triangulation or multiple methods of data collection and analysis will be used, which strengthens reliability as well as internal validity' (p. 260). Triangulation also reduces potential researcher's bias and any temptation to manipulate data to reach specific conclusions.

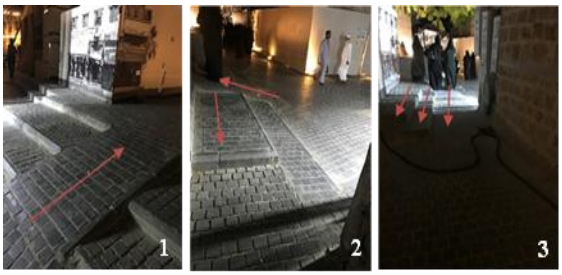
6. Results and discussion

The need to study this phenomenon arose as a complement to the findings of other research on this topic. Al-Zahrani (2022) and Alqarni et al. (2023) conclude in their studies that the challenges and difficulties facing (PWD) in the tourism sector in the Kingdom of Saudi Arabia are numerous and require development, support, and improvement of services. They also recommend studying these challenges in different regions of the Kingdom to contribute to identifying a greater number of difficulties that may vary from one region to another and from one type of tourism to another. This, in turn, will contribute to the development of a greater number of solutions.

6.1. Physical accessibility

6.1.1. Accessibility of roads

In terms of spatial and physical challenges, participants identify several in (HJ) including, but not limited to, the lack of direct roads leading to specific locations. People who use wheelchairs face significant difficulty getting from one place to another in (HJ), so it can take a long time to reach a specific location, resulting in fatigue and exhaustion for them and their companions. Participants explain that unfortunately, there are no signs indicating whether a road is wheelchair-accessible or not, especially since the (HJ) site, like any archaeological site, has many elevated areas and steps that require a ramp to allow wheelchairs to pass. Sometimes, there is a ramp, but the road is blocked by steps or a wide sidewalk, so the person is forced to go back again to look for another road with a ramp. As shown in the following pictures (1, 2, 3), although there was a ramp (indicated by the red arrow), the road was cut off by large steps, forcing the participants to go around looking for a way to get to their destination. This is similar to what Omi et al. (2024) report about the difficulties faced by (PWD) in Lalbagh Fort, including the lack of direct roads, and explains why tourists give (HJ) an accessibility rating of 2.25 out of 5 (Alawi, 2018).



6.1.2. Accessibility of services

Among the challenges, as shown in the following pictures (4, 5, 6, 7), wheelchair users state that they face difficulty in accessing basic services. For example, there is a ramp leading to the women's mosque, giving the impression that entry to the mosque itself will also be easy. However, upon arriving at the mosque, they were surprised to find wide steps that hindered their entry to one of the important mosques in (HJ). Similarly, Omi et al. (2024) explain that although there were toilets for (PWD), they had to be accessed down a flight of stairs, making them difficult to get to. According to Alawi (2018) services in (HJ) receive a very low rating from participants of 1.98 out of 5.

Participants note that what distinguishes (HJ) is not only its historic buildings, but also the fact that it is a unique shopping location, as Jeddah is a global commercial port and (HJ) is a meeting place for various commercial goods from different countries in the world. However, they face difficulty accessing those shops and thus they and their companions are unable to enjoy the site like others. They explain that many shops have high steps and do not have a ramp for wheelchairs, as shown in picture (8). In other cases, the path leading to the shop is in a poor state, as in picture (9), which may lead to wheelchairs not passing easily. More importantly, it may lead to wheelchair users falling if their companions are not paying attention. Omi et al. (2024) observe something similar in their study of the Lalbagh Fort, where the ticket office and entrance are not equipped to receive people with wheelchairs due to damage to the entrance steps and the steps being made of irregular cobblestones.

The issue was not limited to shops, and participants explain that even restaurants and cafes did not provide a ramp for (PWD) or people with special needs, forcing some to leave their chairs and lean on their companions to enter, as shown in picture (10), or sit in front of the shop and wait for their companions to serve them, as shown in picture (11).

Study participants praise the fact that although some cafes and restaurants did not provide wheelchair-accessible ramps, others did (pictures 12, 13), making it easier for visitors to access the building and enjoy their visit. Furthermore, some important historical buildings do offer ramps (pictures 14,15) to facilitate access and allow visitors to enjoy the building's history from within, just like any other visitor.

6.1.3. Accessibility of historical buildings

However, in addition to facing difficulty accessing services such as shops, cafes, and restaurants, (PWD) add that access to historical buildings is also hard. Many of the high-value historical buildings in (HJ), such as in pictures 16, 17, 18 and 19, lack ramps and study participants explain

that this made them and their companions feel isolated and inadequate, even though they have the right to enjoy the history and beauty of the buildings, just like everyone else. As a result they have considered never returning to the historic buildings ever again. This is consistent with what Zahari et al. (2016) conclude about elderly people who were unable to return to a heritage building due to the lack of an elevator to access the upper floors.

6.2. Challenges of an uneven surface

Study participants highlight the fact that brick paving which makes the surface uneven is a significant challenge, not only hindering access but also representing a risk factor for people with mobility and other disabilities. This is further complicated by the large number of potholes that have formed, as shown in pictures 20, 21, 22, 23 and 24. These challenges can can have a negative impact on (PWD), leading to falls, back pain, and other problems. This is consistent with what Omi et al. (2024) observe in Lalbagh Fort where brick paving and changes in surfaces and their flatness created unevenness which caused difficulty for people with wheelchairs.

6.3. Challenges of poor implementation, negligence, or a lack of oversight

Participants also add that challenges stemming from the design of (HJ) and its buildings, like other historical sites, sometimes make it difficult to avoid or mitigate them due to financial cost, time, or difficulty of implementation while preserving historical identity. Obstacles also arise due to poor implementation, negligence, or a lack of oversight, as illustrated in the following picture (25), where prominent wires were installed in the crossing for wheelchair users, potentially obstructing passage or causing the risk of tipping over. In the second picture (26), wheelchair users are confronted by a very wide rope thrown across the road leading to the other side.

6.4. Challenges of poor lighting

Visually impaired participants report difficulty walking through Jeddah's historic streets at night due to poor lighting, as shown in pictures 27 and 28. What further complicated the situation was the fact that some of these streets lead to key entrances and exits to important sites and buildings. This is consistent with the conclusions of Alawi (2018), who reports that road clarity and accessibility in (HJ) receive a low rating of 2.43 out of 5.

6.5. Solutions to improve physical accessibility

To sum up, regarding physical challenges participants propose several solutions that would mitigate the obstacles that limit accessibility for (PWD), including, but not limited to, providing golf carts that are accessible to (PWD) or those with special needs, allowing them to ride and navigate around (HJ), especially since the historic area is very large and diverse. Participants explain that although there are golf carts, they are not for general use, but rather for special guests of the Ministry of Culture. Therefore, making them available to everyone would be a major attraction for this group and their companions, thus helping them enjoy themselves while reducing effort, fatigue, and time. Abd-Elraof and Dawood (2018) report a shortage of some facilities such as vehicles for the disabled. Another solution proposed by the participants, which has already been

implemented in small areas of (HJ), is to replace uneven or broken tiles with asphalt concrete as shown in picture (29), at least along the sides of the road. This would create a path for (PWD) that facilitates their passage and avoids the difficulties they face. It would also reduce the dependence on others of those with mobility, vision, or other disabilities. This is also the conclusion of Omi et al. (2024) who study the replacement of paving in historical areas with concrete slabs to create a wheelchair-accessible path. Moreover, participants suggest that those in charge of historical buildings, services, restaurants and cafes could install a permanent or movable ramp which could be put in place when needed if they did not wish to make permanent changes to the building's entrance.

As indicated by Hołownia and Kozak (2024) restaurants and cafes should provide permanent ramps as shown in picture (30) or lightweight ramps as shown in picture (31) for wheelchairs. Installing an elevator, if possible, to enable access to upper floors, could also be a solution. Abd-Elraof and Dawood (2018) and Omi et al. (2024) suggest that installing elevators for wheelchair users could be an alternative to stairs. An important solution proposed by the participants that greatly benefits people with visual impairments is to place lighting on the stairs to distinguish each step from the rest of the floor, especially if there is a change in stair thresholds. This is consistent with Hołownia and Kozak (2024) who state that the use of lighting on stairs will contribute to improving accessibility for people with visual impairments.

6.6. Accessibility of information

6.6.1. Official website accessibility

With regard to providing information, participants explain that although there is an official website for (HJ), it lacks accurate information that would be particularly helpful to (PWD). For example, there is no map showing the direct routes leading to a wheelchair-accessible ramp. There is no explanation about the services that support accessibility for people with disabilities and there are no publications on the site that clarify and facilitate the communication of information to (PWD) and their companions. Participants indicate that the presence of such information would play a significant role in facilitating good tour planning, reducing effort and time and increasing enjoyment. This is consistent with what Eichhorn et al. (2008) call the "information barrier" (see also Hua, 2019) and Sakarneh and Katanani (2021) agree that failure to provide good and easily accessible detailed information about cultural sites affects their attractiveness.

6.6.2. Signage system

Participants in the study urge officials responsible for (HJ) to create a signage system that meets the needs of (PWD), given that such a system is important in facilitating access and thus enriching their experience. This is consistent with what Fahad (2022) states about the necessity to pay attention to the signage system in (HJ) to enhance the experience of tourists.

6.6.3. Way finding system

Participants explain that the way finding system increased their burden, effort, time and confusion as it lacked clarity. This is evident in pictures (32, 33), as the signboards are very difficult to read at night, in addition to not containing braille. It is also clear from picture (34) that the sign is placed high on the wall and not at eye level, which makes it difficult to read, especially for people using wheelchairs. Participants add that there is no way finding system to indicate the locations of major services for (PWD), including accessible facilities, wheelchair ramps, or golf cart rental locations, nor are there signs indicating contact numbers that this group may need. These challenges are similar to those found by Assas (2025), including lack of braille, inconsistent positioning and colors of signs, and difficulty reading signs at night due to the lack of direct lighting.

6.6.4. Access to tourist guides

Participants note that in terms of what is appropriate for the needs of (PWD) the same applies to tourist guides when it comes to quality of information in general and the lack of it in particular. Despite the availability of tourist guides who speak different languages and are highly qualified in dealing and communicating with visitors, there is a scarcity of guides who can read braille to help blind people, use sign language for the deaf mute or have the ability to deal and communicate well with people with various types of disabilities. This is consistent with the findings of Gillovic et al. (2018) who conclude there is a weakness in the way tour guides deal with and communicate with (PWD). (PWD) demand that officials responsible for (HJ) appoint well-trained and qualified tourist guides and provide training for existing ones so they can assist and communicate effectively with (PWD).

6.6.5. Accessibility of presenting information Technology accessibility

Regarding the lack of effective ways of displaying this information on websites, participants state that there is a weakness and deficiency in tactile and visual signs, posters, visual and audio systems, as well as in the use of sound and light to communicate with the deaf mute in (HJ). This is consistent with what participants in Alawi's (2018) study state, as they express dissatisfaction with technology in (HJ) and give it a very low rating of 2.65 out of 5. Thus, technology can be used to provide effective access to historical buildings in (HJ), for example through the use of instant translation of text into sign language and smart phones with audio guides. Participants add that the use of technology could significantly contribute to overcoming physical challenges, particularly those related to visiting historic buildings in (HJ), where, due to the nature of their design, it is difficult to install an elevator to reach the upper floors and experience the history and beauty of the building. This is consistent with the findings of Ozdemir (2021) who suggests that the use of technology contributes to reducing physical barriers in historical areas and enhances tourism experiences. Participants note that although there are signs in (HJ) that provide simple details about some buildings or the site itself, they are not enhanced with technology, as shown in picture (35).

Although some signs are illuminated as shown in picture (36), they lack braille screens, screen readers and voice recognition for the visually impaired or those with other disabilities. Participants add that the introduction of this technology significantly contributes to reducing their sense of isolation and their dependence on others, and enhances their enjoyment of (HJ). This is compatible with what Sakarneh and Katanani (2021) find, when they point out that physical sites need to pay attention to using modern technologies in order to facilitate access, such as braille screens, screen readers and voice recognition.

Participants also note that even the official website for the (HJ) area was of no use to them because when visiting the website, as shown in picture (37), a barcode appears, but clicking on it does not lead to a tool that would contribute to accessibility for (PWD), such as voice recognition or virtual tours showcasing the interiors of historical buildings. What (PWD) expect to see is consistent with

the recommendation of Ozdemir (2021) for virtual tours on websites to be one of the tools available for people with physical disabilities.

In other words, (PWD) express the desire that, rather than depending on traditional resources, more attention be paid to providing digital resources about (HJ) to facilitate accessibility remotely, make it possible to obtain information, enhance their visits and feel satisfied. From their point of view, some of the tools that would help achieve the goal are: smart phone applications, virtual tours on the official website as well as on social media sites, video cameras with panoramic and 3D images and audio recorders.

Moreover, the study participants also added that using a virtual reality (VR) headset could help reduce physical barriers in (HJ). This is consistent with the recommendations of Reino et al. (2007) and Ch'ng (2011) regarding the integration of technology in heritage tourism research. (PWD) also add that since the roads in (HJ) are full of intersections, and often confusing and dark, there should be maps and GPS devices for hire providing electronic maps supported by audio and showing the direction to important sites. This would contribute to reducing excessive effort and loss of time and facilitate access. Khayyat et al. (2020) similarly suggest integrating mobile applications, maps, GPS technologies in the historical area. The study participants also recommended the provision of a smart cane, which would reduce the challenges faced by the visually impaired in (HJ).

6.7. General solutions to mitigate challenges of accessibility

6.7.1. Accessibility curricula

When the researcher asked (PWD), their companions, and tour guides about proposed solutions to reduce the challenges they face, they report that in addition to trying to implement the aforementioned solutions related to spatial challenges, making information about accessibility available and effectively displaying it on websites, one of the solutions is related to university curricula. Tourist guides report a lack of clarity and deficiencies in the curricula offered at Saudi universities on courses related to the tourism and hospitality sector in general, and tourist guiding in particular. There are no curricula that teach how to communicate with (PWD), whether through sign language, braille, or other basic aspects of communication and interaction with this group or their companions. Furthermore, there are no curricula or even parts of curricula that explain the psychological and physical needs of these people.

Liasidou et al. (2019) conclude that one of the possible solutions to addressing the issue of accessibility for (PWD) in tourist destinations lies in including relevant curricula. Given that, as noted earlier, (PWD) make up 15% of the world's population (The World Health Organization, 2013), and 4.1% of the population of Saudi Arabia (The General Authority for Statistics, 2022), including curricula related to their needs, communication methods, and other issues is essential, and universities must reconsider their curricula. This is consistent with the recommendations set out by Refaat and Ibrahim (2017), who state that universities have a great responsibility in developing and updating curricula to improve accessibility in tourist areas. It is particularly important that heritage tourism play a significant role in improving and developing services

provided to (PWD) since this type of tourism narrates a past that belongs to every individual in society, and thus requires tour guides to have basic communication skills so that (PWD) can get a sense of the past, experience its details, and connect it to their present.

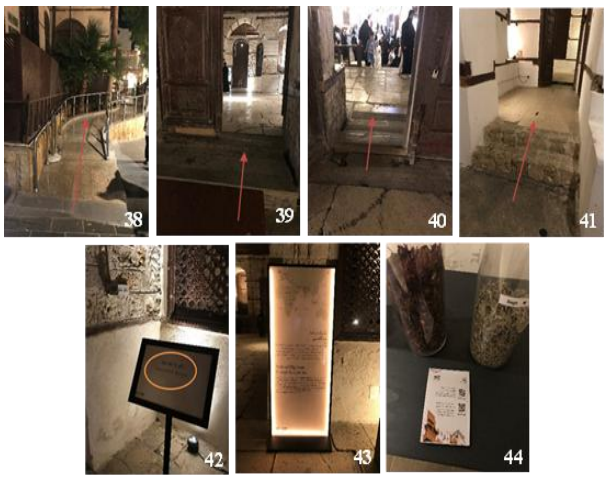
6.7.2. Accessible communication

(PWD) and their companions also mention training, as they report that they face difficulty interacting and communicating with workers, employees, and tourist guides at heritage tourism sites due to their inability to interact, explain, and communicate information in a simplified manner. (PWD) note that there are no tourist guides or employees in (HJ) who can use sign language or are able to communicate information in an easy-to-understand manner. This is consistent with work by Zahari et al. (2023) and Hołownia and Kozak (2024) who state that there is a need to train workers and tourist guides on how to communicate and interact with (PWD).

6.7.3. Participation in decision-making

Most study participants report that participation in decision-making to mitigate the challenges that limit this group's access to heritage tourism sites is a crucial part of the solution. They explain that this is because this group and their companions are more aware of their own needs and the challenges they face in enjoying tourism and have in-depth knowledge of how to overcome and mitigate problems. They would therefore like decision-makers and officials responsible for developing (HJ) to consult them on the development and improvement of the historic area. Zahari et al. (2023) agree that the involvement of (PWD) in decision-making to improve accessibility is essential.

Measures taken in one of the most important historic houses in Jeddah summarize and are a vivid example of the importance of taking the opinions of (PWD) into account and involving them in the development process of (HJ), and show what can go wrong when they are not consulted and their needs are not considered. The ground floor of this building was transformed into an open museum, where, as picture (38) shows, there is a permanent ramp providing access for wheelchair users, which is considered a positive development. Picture (39) also shows the presence of a movable ramp at the entrance to the building. All of these modifications help (PWD) access the building and enable them to do so independently.



However, as shown in picture (40) there is no ramp at the exit and instead there are stairs, which reduce ease and accessibility for this group. Picture (41) also shows that some museum exhibition rooms are slightly higher up, but there is no ramp, making (PWD) feel isolated from the experience. In addition, although there are signs either to indicate directions, as in picture (42), or to clarify information, as shown in picture (43), or information extracted from the area's official website as shown in picture (44), despite the use of technology, the area lacks the kind of technology that assists and supports (PWD). Therefore, seeking their opinions would have helped those interested in developing (HJ) understand the types of technology needed by this group.

7. Conclusion

Given the heritage significance of (HJ) for a number of reasons, including its strategic location in the city of Jeddah, the gateway to the Two Holy Mosques and an important Islamic commercial port, people from all segments of society have the right to visit and explore it, and this study has thus aimed to identify the challenges faced by (PWD) when visiting (HJ). The qualitative study utilized observations and semi-structured interviews with 8 (PWD), 8 of their companions, and 5 tourist guides. Photographs were also used to vividly convey the challenges present at the site.

Overall, the study concluded that (PWD) face physical challenges, lack of information about accessibility, and a lack of effective display of that information on websites. Regarding solutions that mitigate the challenges and could contribute to improving accessibility, study participants indicate that incorporating into curricula in Saudi universities study of how to communicate and engage with this group, training staff, employees, and tour guides, and taking the opinions of (PWD) into account when making development decisions would effectively contribute to mitigating challenges and, consequently, improving accessibility in heritage sites.

Therefore, this study recommends that the Ministry of Tourism and the Ministry of Culture make efforts to improve and support accessibility for (PWD) at tourist sites in general, and at heritage sites in particular, in a manner that contributes to preserving their right to enjoy themselves, like non-disabled people, with complete freedom and independence, as recognized by the Government of the Kingdom of Saudi Arabia, in addition to taking into account all the solutions discussed in this study. This applies not only to the Ministry of Tourism and the Ministry of Culture, but also to the whole of the public and private sectors, including universities, who need to cooperate and participate in making accessibility possible and easy for (PWD).

8. Limitations of the study

This study has some limitations that can be addressed in future studies. First, due to time constraints, it only focuses on the challenges facing (PWD) in (HJ), so other areas and cities could also be studied. Second, this study only relies on interviews with (PWD), their companions, and tourist guides, while there are other parties, such as managers, employees, operators and workers, who are aware of the challenges and have the ability to make decisions to mitigate them, thus contributing to improved accessibility at sites. Third, with regard to the methodological approach,

for several reasons the researcher faced difficulty in conducting interviews. The nature of the qualitative approach and the conducting of interviews are unfamiliar to many people in Saudi Arabia, and many people refused to give an interview either because they did not have enough time or because they wanted to enjoy their time rather than answering questions. This means that the research sample is small, which may lead to difficulty in generalizing the research results and may be subject to bias.

9. **Recommendations for future research**

First, research could be carried out at other heritage sites in the Kingdom of Saudi Arabia in order to identify the challenges facing (PWD) and discover whether there is any similarity between those sites and (HJ) and thus develop solutions to address those challenges. Second, in future studies not only the perspective of (PWD), their companions and tourist guides should be explored, but also that of heritage site managers, employees, operators and workers who can get to grips with the challenges and address them. Third, it would be useful to increase the study sample to avoid bias and be able to generalize the research results and the solutions proposed.

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