



# The Perceptions of Mashhad Pilgrims and Health Care Providers Regarding Health and Medical Services at the End of Lunar Month of Safar: A Qualitative Analysis

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## ARTICLE INFO

## ABSTRACT

*Article type:*  
Research Paper

*Article History:*  
Received: 27 Mar 2023  
Accepted: 16 Apr 2023  
Published: 18 Jun 2023

*Keywords:*  
Health services  
Qualitative research  
Pilgrims

**Introduction:** "Health for All by 2000" was launched by WHO in 1978 and is based on primary healthcare availability worldwide. During the month of Safar, many people from neighboring cities and countries travel to Mashhad. Since the qualitative approach can lead to a better understanding of access to healthcare from the perception of consumers, this study aimed to assess the perception of Pilgrims and healthcare providers of healthcare services and gain more profound knowledge about healthcare consumers' experiences.

**Methods:** This qualitative study was conducted in Mashhad during Safar based on conventional content analysis from September 20-27, 2022. This study used a semi-structured in-depth interview on 36 participants, including pilgrims (n=27) and healthcare providers (n=9) such as medical doctors, nurses, and health experts selected through purposeful sampling. The interviews were transcribed word for word. The MAXqda software and Graneheim and Lundman's qualitative content analysis were used for data analysis.

**Results:** Data analysis revealed three categories, including 1. Understanding the challenges of the treatment services in terms of three subcategories: A. Lack of medical doctors, drug shortages, and higher prices of medicines, B. Experiencing the diseases (skin, cardiovascular diseases, poisoning, and digestive problems, musculoskeletal pain and asthma), and C. Lack of an appropriate place for patient examination and serum injection. 2. Understanding the challenges of health services, including three subcategories: A. Time and place insufficiency of services, B. Lack of access to sanitary detergents, C. Improper cleaning of resting spaces and places, and finally, 3. Understanding the challenges of welfare services, including two subcategories: A. Inadequacy and lack of access to the appropriate rest place, and B. poor quality and sortage of food.

**Conclusions:** The results indicated that access to healthcare, treatment, and welfare is more than just these services. Health policymakers' commitment to improving healthcare equity, hopefully, leads to positive changes in the healthcare system. Therefore, enhancing social participation in the healthcare system and providing comprehensive education on the optimal use of healthcare services is necessary to empower pilgrims to access better healthcare.

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► Please cite this paper as:

Saberi-Karimian M, Irani M, Ghiasi Hafezi S, Rajabloo Y, Hoseinpour S, Shahabi F, Ebrahimi A, Akbari M, Hoseini SJ, Badiee Aval Sh, Darroudi S, Vahdati-Mashhadian N, Kiani MA, Ghayour-Mobarhan M. The Perceptions of Mashhad Pilgrims and Health Care Providers Regarding Health and Medical Services at the End of Lunar Month of Safar: A Qualitative Analysis. *J Nutr Fast Health*. 2023; 11(2): 95-103. DOI: 10.22038/JNFH.2023.71411.1436.

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## Introduction

The end of the Safar lunar month (28-30th) includes several religious events, including the Martyrdom of Imam Reza and the Prophet Muhammad's death.

According to a report by the vice president of Astan Quds Razavi, more than 12 million visited Mashhad in the last week of the Safar lunar month in 2022, on the day of the Martyrdom of Imam Reza. About 5.2 million were pilgrims traveling to Mashhad. The vice president of the Department of Health at Mashhad University of medical sciences (MUMS) mentioned 160 active ambulatory bases and 262 active emergency bases at the end of Safar. There were 135 health stations, including around 680 environmental health experts and 810 other professionals daily. Mashhad is one of the most popular pilgrim destinations many pilgrims visit yearly. Thus, it is essential to identify the factors associated with pilgrim satisfaction to help health policymakers effectively implement welfare programs and increase the quality of existing welfare programs available to pilgrims. The determinants of satisfaction in pilgrims comprise healthcare and welfare services. Akbari et al. (2013) investigated tourists' satisfaction in Mashhad in a meta-analysis of 16 research projects. The results indicated that satisfaction with their vacation, hygiene (health), and nutrition ranked the lowest, and satisfaction with their fellow travelers ranked the highest (1).

"Health for All by 2000" was a movement launched by WHO in 1978 and based on primary healthcare introduced to countries worldwide (2). According to Spillover's theory, an individual's satisfaction with one aspect of life flows into the others and vice versa. For example, when a patient is satisfied with his family and lives a peaceful family life, he is more resilient when dealing with problems at work and does not evaluate his job negatively (3). Therefore, satisfaction with a vacation can directly lead to higher life satisfaction because free time, hygiene, family, and work are the four most important aspects of life (4). Patient satisfaction is crucial in assessing the quality of healthcare services and helps predict consumers' behavioral patterns after receiving the services. These studies can also identify factors that increase satisfaction and utilization, which could assist healthcare providers and health policymakers in

making positive changes that lead to better outcomes (5).

Since the qualitative approach can lead to a better understanding of access to healthcare from the perception of consumers, this study aimed to assess the perception of pilgrims and healthcare providers of healthcare services and gain more profound knowledge about consumers' healthcare experiences. The study evaluated the Mashhad pilgrims' healthcare and drug services satisfaction for the first time. The results will help find strategies to improve the healthcare and welfare services provided to pilgrims.

## Methods

This cross-sectional study was conducted in Mashhad in September 2022. At first, all subjects filled out written informed consent forms. The study was approved by The Ethics Committee of Mashhad University of Medical Sciences (ID: 4011079; IR.MUMS.REC.1401.207). The participants of this study were pilgrims and healthcare providers that met the inclusion criteria. Participants were recruited from pilgrims traveling to Mashhad and healthcare providers working at Mashhad health stations and hospitals' emergency rooms. Sampling was performed with a total variation method (age, occupation, education, and type of city).

The inclusion criteria were Iranian pilgrims who traveled to Mashhad at the end of the Safar lunar month to visit the holy shrine of Imam Reza, the ability to understand and speak Farsi and express emotions, feelings, and experiences, the ability to communicate to give in-depth and detailed information to the researcher. This study conducted 36 semi-structured interviews with 27 pilgrims and nine healthcare providers (including doctors, nurses, and health experts).

The first participant was selected based on meeting the inclusion criteria from the pilgrims with the ability to communicate and the interest in sharing information. The second participant was selected based on this question: how likely this person is to help us gain a better perspective. This continued until data saturation occurred until no new data was collected from new participants because the depth of information needed determined the number of participants. When data saturation occurs, the number of participants is enough. Data saturation occurs when no new data is added with new participants

and is just a repeat of previous data. Semi-structured interviews were used for data collection. This type of interview is helpful for descriptive studies due to its flexibility and depth and allows the participants to share their experiences fully with more depth and detail this study.

The interview would start with some open-ended questions according to the interview guide. The questions in the interview guide would revolve around the topics that needed to be covered and would be focused on the research path. Then, exploratory questions were used to achieve clarity. After pilgrims and healthcare providers agreed, the time and place of the interview were decided. The researcher explains the study objective, gets informed consent, and assures them of the confidentiality of everything mentioned. Questions were about the participants' demographic, built rapport, and gained the participants' trust, leading to the right circumstances for conducting an interview. Then, participants were asked to talk about their experiences of access to healthcare and welfare services at the end of Safar. The following questions were based on the previous response of participants and were more focused on more critical issues. In this study, the researcher was flexible with the reaction content and participants' nonverbal cues. At the end of the interview, the participant was asked to talk about anything not mentioned. After thanking the participant, they would discuss possible future interviews. The researcher gave the participants his cellphone number so that he would talk to them to learn about their issues throughout the data collection process to continue communication with pilgrims and healthcare providers and follow up with them at different stages of the study. MAXqda was used for data analysis, and the researcher transcribed the recorded interviews word-for-word and turned them into a typed format.

The interviews listened to records many times, the transcripts were read many times, and each central concept was given a code. Then, codes were compared based on their similarities and differences, and similar codes or codes with meaning close to each other were put in the same category. On this basis, primary categories were obtained. These primary categories were compared, and types with similar meanings were put together. This process continued, and

ultimately, categories and subcategories were obtained.

Based on the transcripts of each interview, plans were made for upcoming interviews. In this study, criteria from Lincoln and Guba (6) were used to confirm the data, which include the following: Credibility, Dependability, confirmability, and Transferability. The following methods were used:

1. Spending enough time to collect and analyze data to achieve a deeper understanding of the participants of this study
2. Working on the data for a long time and reviewing the coding many times
3. Double-checking the interviews and primary coding by the participants
4. Double-checking the interviews and primary coding by the team
5. Describing all of the steps of the research from beginning to the end

## Results

The mean age of participants was  $52.58 \pm 13.84$  years (ages between 28-80). The education of participants ranged from illiterate to specialist doctors, and the meantime of the interview was 25 minutes. The demographic characteristics of study participants are presented in (Table 1).

After analysis of pilgrims' and healthcare providers' experience, three main categories were extracted, including understanding the challenges of healthcare services (three subcategories), health services (three subcategories), and welfare services (two subcategories) (Table 2).

### *Understanding the Challenges of Healthcare Services*

Mashhad airport, railway health station, and hospitals all over the city reported little problems due to 24/7 access to healthcare workers. At the same time, pilgrims on foot said many issues in this area. Data analysis revealed three categories, including understanding the challenges of healthcare, health, and welfare services.

Understanding the challenges of healthcare was in terms of three subcategories: A. Lack of medical doctors, drug shortages, and higher prices of medicines, B. Experiencing the diseases (skin, cardiovascular diseases, poisoning, and digestive problems, musculoskeletal pain, and asthma), and C. Lack of an appropriate place for patient examination and serum injection.

**Table 1.** Demographic characteristics of study participants.

Participant	Pilgrim Or Service Provider	Age	City They Live	Location Of Interview	Transportation
1	pilgrim	71	Neyshabur	Ebadi street	On foot
2	pilgrim	49	Neyshabur	Ebadi street	On foot
3	pilgrim	69	Gonabad	Ebadi street	On foot
4	pilgrim	45	Rostam Shahr Shiraz	Shahid Motahari Street	On foot
5	pilgrim	51	Neyshabur	Shahid Motahari Street	On foot
6	pilgrim	36	Neyshabur	Shahid Motahari Street	On foot
7	pilgrim	60	Khorramabad	Shirazi Street	Bus
8	pilgrim	48	Birjand	Shirazi Street	Train
9	pilgrim	63	Sabzevar	Shirazi Street	Car
10	pilgrim	32	Qom	Ansar alzahra Mookeb	On foot
11	pilgrim	80	Qom	Ansar alzahra Mookeb	On foot
12	pilgrim	28	Qom	Ansar alzahra Mookeb	On foot
13	pilgrim	74	Qazvin Railway Station	Ansar alzahra Mookeb	On foot
14	pilgrim	42	Tehran	Ansar alzahra Mookeb	Car
15	pilgrim	38	Isfahan	Mosque (in Sajedi Street)	Car
16	pilgrim	41	Isfahan	Mosque (in Sajedi Street)	Bus
17	pilgrim	53	Jajarm	Mosque (in Sajedi Street)	Bus
18	pilgrim	61	Bojnourd	Mosque (in Sajedi Street)	Car
19	pilgrim	39	Bojnourd	Mosque (in Sajedi Street)	Bus
20	pilgrim	40	Jajarm	Mosque (in Sajedi Street)	Bus
21	pilgrim	55	Tehran	Mookeb (Shohada Square)	Bus
22	pilgrim	74	Tehran	Mookeb (Shohada Square)	Airplane
23	Pilgrim	43	Shiraz	Mookeb (Shohada Square)	Car
24	pilgrim	59	Ferdows	Mookeb (Shohada Square)	On foot
25	pilgrim	66	Shiraz	Mookeb (Shohada Square)	On foot
26	pilgrim	71	Birjand	Mookeb (Shohada Square)	On foot
27	pilgrim	75	Torbat-e-Jam	Mookeb (Shohada Square)	-
28	General practitioner	54	Mashhad	Basij Square Health Station	-
29	General practitioner	42	Mashhad	Basij Square Health Station	-
30	Emergency medicine specialist	49	Mashhad	Ghaem Hospital	-
31	Triage nurse	36	Mashhad	Ghaem Hospital	-
32	Triage nurse	34	Mashhad	Ghaem Hospital	-
33	Occupational health expert	58	Mashhad	Mashhad Railway Station	-
34	Occupational health expert	52	Mashhad	Molk-Abad Health Station	-
35	Occupational health expert	58	Mashhad	Suburban Terminal	-
36	General health expert	47	Mashhad	Suburban Terminal	-

Pilgrim on foot (participant 4), who was staying at one of the hospitals on Shahid Motahari Street, reported some problems, including a "lack of access to medical doctors," "lack of bandages, syringes, and lack of refrigerators to keep insulin." An occupational health expert (participant number 35) said, "At city entrances, there is a need for a physician because, if needed, pilgrims on foot have to be referred to the nearest city and the Center for Integrated City Healthcare Services, which is very difficult for pilgrims on foot."

Pilgrim number 9, who traveled to Mashhad by car and stayed at a rented house near the shrine of Imam Reza, said, "Our family is almost 15 people, and we are unsatisfied with the lack of medical care. A pregnant lady with us needs an injection to continue with the pregnancy. Still, we could not use emergency services or health tents (Mookeb)." Pilgrim number 10 said regarding the treatment issues, "I am coming from Qom. I have diabetes, hypertension, and left-sided chest pain(heart). When I want to refill my prescription, the pharmacy won't give my medications to me

and tells me I must go to a medical doctor to write my prescription, and then I can get my medications. The cost of medications is too high." Pilgrim on foot number 2 in Ebadi Street said,

"My companions and I had blisters on our feet, but no medications, bandage or ointment were provided to us."

**Table 2.** Extracted categories, subcategories and code

Code	Subcategories	Categories
Lack of medical doctor Higher prices of medicines Lack of prescribed medication	Experience the lack of medical doctor, drug shortages and higher prices of medicines	
Experience respiratory illness Experiencing leg pain Getting poisoned Involvement of gastrointestinal disease Experience back pain Experiencing insect bites Experience hypertension Experience diabetes	Experience the diseases including: <ul style="list-style-type: none"> <li>○ Skin (foot blister, insect bites in Mookheb)</li> <li>○ Cardiovascular disease (hypertension and diabetes)</li> <li>○ Poisoning and digestive problems</li> <li>○ Musculoskeletal pain</li> <li>○ Asthma</li> </ul>	<b>understanding the challenges of healthcare services</b>
Lack of suitable place for examination Lack of a suitable place for injections Lack of suitable place for serum therapy	Experience the lack of appropriate place for patient examination and serum injection	
Less visit time by the doctor The remoteness of the examination places by the doctor Long waiting time for examination Lack of access to sanitary detergents Improper cleaning of resting spaces and places Filthy sinks Broken faucet Lack of toilets Broken showers Lack of access to hot water	Time and place insufficiency of services   Lack of access to sanitary detergents  Improper cleaning of resting spaces and places	<b>understanding the challenges of health services</b>
Lack of appropriate rest place Lack of blanket Bad catering service Poor quality of restaurant food Lack of plastic cups Lack of canned food	Inadequacy and lack of access to the appropriate rest place   Poor quality and lack of food	<b>understanding the challenges of welfare services</b>

An occupational health expert (participant number 35) at a health station believed, "Medications (such as hyoscine, acetaminophen, burn ointment, supplements, covid, and rapid cholera test) are available, but no physician can prescribe them at the terminal. We must refer pilgrims to the health station at Basij Square or Dar al-Shafa clinic." Another health expert at a health tent (Mookheb) at the city entrances of Molk-Abad stated, "There is a need for temporary buildings with cooling and heating systems and appropriate places for examination to provide better services to respiratory, dermatological, and GI patients." Therefore, after diagnosis of COVID-19, the patient can be quarantined and stopped from going to the shrine of Imam Reza. A general

practitioner (participant number 28) working at one of the health stations expressed, "First, the right infrastructure needs to be prepared. Instead of these health tents, a health bus like blood transfusion buses that have reception, nurses, and medical doctors to provide better services. For example, we don't have drinking water here, and the weather is hot. What are we supposed to do if a patient has a heatstroke and we want to give them a serum injection? We have to refer the patient to somewhere else."

A triage nurse (participant number 31) reported about the supply of medications, staff, and equipment, "From the beginning of the month, they have made our schedules busier, and more staff members are available in the department, so

if it were similar to previous years, there would be many pilgrims; there would not be any issues with services, either lack of staff or equipment. Most pilgrims that come here need outpatient care, usually just an IV and medications, and they will not stay because they are from another city. Today, when I was here, most of their problems were diarrhea, vomiting, body aches, and tiredness, or they hadn't brought their medications. For example, there was a seizure patient that hadn't brought their medications, a diabetic patient that had not brought their medications, and we wrote their prescription, and they went on their way."

Emergency department of a hospital, GI symptoms (including diarrhea, nausea and vomiting, and abdominal pain) were the most common reason pilgrims visited the hospital. The other reasons pilgrims visited the hospital's emergency department were body aches and rarely, cold or Fever and chills, and needing medications. An emergency medicine doctor (participant number 30) said, "Access to medication is good. Although the patients here are outpatient, and their prescriptions are pretty standard."

The triage nurse (participant number 32) confirmed the reason most pilgrims visit and stated, "Usually pilgrims are outpatient level 4 patients, and the most common reasons are GI symptoms (diarrhea, nausea, vomiting, abdominal pain), body aches, as well rarely the cold, fever, and chills." Another nurse at the emergency department said, "Pilgrims visited the emergency department because they did not have their medications. For example, a patient with seizures or diabetes, heart problems, or asthma did not have a spray, and the hospital provided it. In the hospital, we don't have a problem with lack of medications or staff."

Seemingly, there was no major healthcare problem on the Railway. According to an interview with the health expert of the Railway Department (Participant number 33), pilgrims were visiting the Railway health station just to check their blood sugar and blood pressure, determined by two healthcare providers at the health station. It should be noted that the emergency department of the Railway Department is run by two emergency medicine experts 24/7.

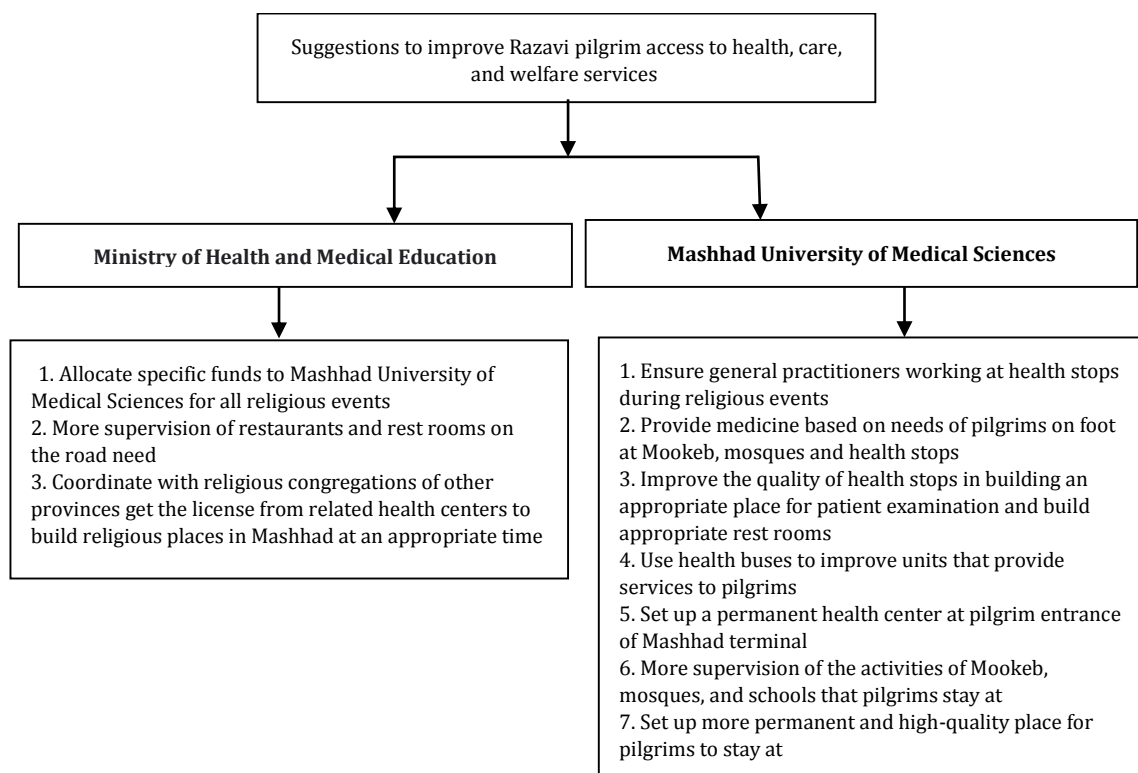


Figure 1. A summary of suggestions to improve Mashhad Pilgrims access to healthcare, drug, and welfare services.

### **Understanding the Challenges of Health Services**

The challenges of health services consisted of the following subcategories: time and place insufficiency of services, lack of access to sanitary detergents, and improper cleaning of resting spaces and places.

In the subcategories of lack of access to sanitary detergents on the road, improper cleaning of resting spaces and places on the road and Mashhad, broken faucets and wasting water at restrooms on the road, lack of toilets on the road, filthy sinks on the road, broken showers and lack of access to hot water for showering at some of the mosque Mookes throughout the city needed attention. Pilgrim on foot (participant number 4) noted, *"On the way to Mashhad, the fact that some Mookes were very far from each other, but some were very close caused some problems. In some cases, two Mookes were less than 500 meters apart, and others were some kilometers apart. Sometimes we needed to use the restroom, but we were not allowed to use the restrooms in Mokeb"*. Pilgrim participant number 17 pointed out, *"Catering was excellent. The restroom is not bad, it is downstairs, but we do not have a shower. It has been two nights since that shower is broken, and we don't have hot water."*

A pilgrim (participant number 15) in the local mosque of Sajedi Street said, *"Since we had three wheelchair users, we were always worried about their toilet. Since it was always full, we could not use it, which is a significant problem for people with disabilities. We came from Isfahan by car."*

The general practitioner in charge of the health station near the shrine of Imam Reza (participant number 29) expressed, *"The main health service problem is that there is no restroom here. It is not right on the way to the shrine of Imam Reza, maybe someone with their families and children needed it, or even for ourselves, there is no restroom. Lack of safe drinking water in the area is another problem."*

Regarding improving the quality of health services, pilgrim participant number 20 stated, *"The activity of restaurants and restrooms on the road need to be under more supervision."*

An occupational health expert (participant number 35) mentioned, *"Lack of timely action of religious congregations of other provinces to get the license from related health centers led to lack of appropriate circumstances to keep food and*

*compliance with environmental health as a temporary place."*

### **Understanding the Challenges of Welfare Services**

The challenges of welfare services included A. inadequacy and lack of access to the appropriate rest place, and B. poor quality and lack of food.

A pilgrim on foot mentioned the most crucial welfare issues, including lack of appropriate rest places, lack of blankets, poor quality restaurant food on the road, and escalator malfunctions. Pilgrim participant number 19 stated, *"Mokeb workers had access to plastic cups, canned food, and sandwiches but did not give us any and said it was for their coworkers."*

Pilgrim on foot (participant number 5) complained of welfare issues such as lack of appropriate rest place and blanket. Furthermore, the catering services were not good. A health expert (participant number 34) working at Molk-Abad health station said, *"Lack of timely action of religious congregations of other provinces to get the license from related health centers led to lack of appropriate circumstances to keep food and compliance with environmental health as a temporary place."*

A general health expert (participant number 36) and an occupational health expert (participant number 35) working at the health station mentioned the low quality of place in terminal health stations as their main welfare issue. A general health expert noted, *"Noise pollution is high, especially near Mokeb and from the other side, near the terminal restroom."*

An occupational health expert working in a health station (participant number 35) suggested, *"Nowruz Health Basij is only 15 days. Mashhad is a pilgrimage city. Many people travel to this city during religious events. There should be a permanent health center in the Railway station, airport, and terminals because many pilgrims travel to Mashhad via buses."*

### **Discussion**

Data analysis revealed three categories including: 1. Understanding the challenges of the healthcare services (three subcategories): A. Lack of medical doctors, drug shortages, and higher prices of medicines, B. Experiencing the diseases (cardiovascular skin diseases, poisoning, and digestive problems, musculoskeletal pain, and asthma), and C. Lack of an appropriate place for patient examination and

serum injection. 2. Understanding the challenges of health services (two subcategories): A. Time and place insufficiency of services, B. Lack of access to sanitary detergents, C. Improper cleaning of resting spaces and places), and finally, 3. Understanding the challenges of welfare services (two subcategories): A. Inadequacy and lack of access to the appropriate rest place, and B. poor quality and lack of food).

According to the results, ensuring the presence of physicians around the city and at city entrances is crucial to improve the quality of healthcare services at religious events because pilgrims would not be referred throughout the city to a clinic or another city on the road. Likewise, health buses could be used to improve health and welfare services. Restaurants and restrooms on the road need to be under more supervision. Suppose religious congregations of other provinces attempt to get the license from related health centers sooner to build religious places in Mashhad at an appropriate time. In that case, this can lead to better health and welfare services for pilgrims. One suggested way to improve healthcare services provided to pilgrims and the welfare of healthcare providers is to create a permanent health center at the entrance of pilgrims to the bus terminal. A permanent health facility exists now at the Mashhad airport under the supervision of the Vice President of the University Health Department, whose dependent health center is open 24/7 and round with at least two health experts throughout the year. Due to the Vice President of Health's instructions, experts and physicians are present according to demand under exceptional circumstances. Moreover, at Mashhad Railway station, the Emergency department is run by two medical emergency experts 24/7 throughout the year. Pilgrim visits to the Railway station were explicit to check their blood sugar and blood pressure, measured by health experts at the health station. Few studies have been conducted to understand pilgrim satisfaction with health and healthcare services in Iran. Most previous studies have been conducted to increase religious tourism in neighboring countries such as Iraq (7) and Saudi Arabia (8). Tajbakhsh et al. (2020) examined the satisfaction of 27 Iranian pilgrims in Iraq through semi-structured interviews with purposive sampling and available (7). The results indicated that satisfaction is low regarding infrastructures, but the satisfaction levels in pilgrims are

appropriate for cultural, social, and religious aspects. The study also mentioned some of the crucial needs of the pilgrims, including increased transport, serious supervision of the pricing of transport, improved telecommunication infrastructure, cooling systems, appropriate hygiene, and place to stay, replacement and troubleshooting of road problems to reduce the risks of the road, create more sites to answer questions and misunderstandings (7). Providing the cooling systems, appropriate hygiene, and a place to stay is consistent with the present study's findings. Previous descriptive studies have focused on Iranian pilgrims in the Arba'een Pilgrimage in Iraq, which is the most extensive group travel of Iranians abroad (7, 9). In these studies, the motivations of Iranian pilgrims were studied with semi-structured interviews. The results indicated that Iranian pilgrims participated with a sense of necessity, responsibility, and passion on a personal and social level.

The present study investigated the Mashhad pilgrims' satisfaction with healthcare and drug services for the first one. Moreover, the current qualitative study explored the problems of providing services at different levels of pilgrims and healthcare providers from the healthcare stations and hospital emergency. At the hospital level, only one hospital has been investigated in several work shifts, which is better to conduct future studies at the level of service providers in several hospitals. Studies can be performed in numerous clinics near Imam Reza Holy Shrine and, if possible, at comprehensive health service centers in cities on the roads leading to Mashhad.

## Conclusion

Based on the results, access to healthcare, treatment, and welfare is about more than just the existence of these services. Health policymakers' commitment to improving healthcare equity will hopefully lead to positive changes in the healthcare system. Therefore, social participation in the healthcare system and comprehensive education on the optimal use of healthcare services is necessary to empower pilgrims to access better healthcare.

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