

Healthcare Service Quality and Pilgrim Satisfaction during Hajj: A Cross-Sectional Analysis

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Abstract

Background: Hajj is a religious journey that millions of people take each year, and therefore religious duty requiring sufficient health care services to respond to the needs of this large congregation. Previous researches show the difficulties of healthcare suppliers faced with satisfying the demand of pilgrims, while the lack of understanding the factors that affect pilgrim satisfaction with services in the sphere of healthcare during this time remains.

Aim: Ultimately, this study seeks to assess the general healthcare service quality together with the level of satisfaction of the pilgrims in the course of performing hajj exercise and to determine factors that would either enhance or reduce the level of satisfaction of pilgrims in hajj.

Method: Self-administered cross-sectional questionnaires were given to 2797 men who sought health care during hajj. Self-administered questionnaires containing closed-ended questions were developed from a review of the literature and previous research to capture demographic details, health status, perception and satisfaction with specific health care services, and areas for improvement. In addition to data description, inferential statistics were used to analyse the data.

Results: These results suggest a large number of pilgrims specifically searched for health and 85% of this respondent described themselves as having good health. Although, problems like language barriers, or being unhappy with one or another aspect of the healthcare services received, including hospital response to emergencies and personnel's work, were reported.

Conclusion: The study emphasizes the need to improve the health care needs of pilgrims during hajj in order to bridge the deficits. The highlighted barriers plan and the proposed

recommendations should be met so as to enhance the overall satisfaction and safety of pilgrims to make their pilgrimage a satisfying one. It is, therefore,

Keywords: Healthcare Service Quality. Pilgrim Satisfaction. Hajj. A Cross-Sectional Analysis"

CHAPTER I

INTRODUCTION

Introduction

The standard of healthcare services is an important determinant of patients' outcomes and satisfaction in the case of pilgrimage, due to cultural differences and crowding of people at a single place. Hajj is one of the pilgrimages that attracts more than 2.5 million pilgrims every year and this depicts challenges in providing health care in congested areas for a limited period of time (Falatah et al., 2021). The services of healthcare during such events have to meet certain attributes that depict quality and these are; access, efficiency, safety, effectiveness, and patient orientation (Rivaldi et al., 2022). This indicates that these factors are very important not only to assist in meeting the basic health and medical needs of the pilgrims, but also to enhance the quality of their experience during the pilgrimage (Banaser et al., 2020).

The issue of access to healthcare when people embark on pilgrimages relates to the delivery of medical services that is both usable and affordable by people in a given population; more so in event, often crowded places of mass people congregation. For example, during the hajj, millions of people come to Mecca and any existing health infrastructure is put to severe pressure (Mirza et al., 2020). To fulfill this need, pediatric hospitals or general hospitals with temporary structures or mobile clinics are created (Hassan et al., 2022). These have to be situated in a way that could allow access to basic needs and treat illness of all categories starting from even simple ones like lack of fluids to the complex ones like heart failure (Turkistani, 2022). The issue of accessibility also entails the availability of services for the pilgrims in different languages thus catering for the diverse population of the international demography (Saleh et al., 2021).

In essence, the mechanisms of health interventions during pilgrimages calls for efficiency of the health systems in the care of the large patient turnover (Harahap et al., 2024). Mass gatherings as observed in pilgrimage which include hajj involves millions of people and hence pose challenges in the provision of health services (Athiyah, 2021). Meant to be effective, such healthcare systems must be able to rapidly sort out patient flows, integrate the care given by different facilities, and adapt the medical staff according to the large number of patients (Alghamdi & Mostafa, 2024). This includes putting in place flexible working systems for dealing with patients, optimal time schedules for addressing patient awaiting time and proper organizing of suppling medical important commodities and staffing medical facilities all over the area of the pilgrimage (Hassan et al., 2023).

Hygiene is very essential in pilgrimage healthcare since many people are transported; and thus the possibility of disease spread is high in crowded places. For instance, during hajj event, one is most likely to be infected with respiratory diseases, heat related ailments and any other diseases attributable to large congregation (Aljuwaiber & Elnagar, 2022). To manage these risks, constant washing and dissection of the facilities are conducted while hand sanitizers are provided. Further, the established Standard Operating Procedures are important for meeting expected emergencies, including contagious diseases or disaster events for a large number of casualties (Bozonelos & Raj, 2022). Other mitigation measures include raising awareness on probable

catastrophes and preparing the staff that provides care to patients, as well as the availability of necessary medical facilities and supplies (Alhothali et al., 2022).

Healthcare services' efficiency relates to outcomes obtained from operations with pilgrims, thus, its meaning concerns effectiveness of medical treatment (Ronaldo & Maulini, 2021). This entails the use of best practices and clinical procedures that are appropriate to the conditions present in pilgrimages. For example, the cases of heat stress among the pilgrims call for preventive and curative measures to be taken in a bid to manage the same conditions (Ibrahim et al., 2022). Assessment of care quality is also done by checking on the outcome that is the rate of patients that fully recover from the diseases that they are diagnosed with and the level of satisfaction of the patients with the whole course of the treatment process (AlKarani, 2021). Evaluations and enhancement of health care delivery systems should be made a continuing process to sustain good health care systems (Banaser et al., 2020).

Patient-centered care is highly important in the pilgrimage context since the services to pilgrims need to be culturally and spiritually sensitive (Hassan et al., 2023). Religious beliefs and practices may include processes to do with pilgrimage that can affect a pilgrim's healthcare requirements and choices (AlKarani, 2021). For instance, in the Hajj, people are fasting during the day hence, needs to have modification in the timings of administering the drugs and consuming foods (Hassan et al., 2023). On the issue of culture, health care providers should also respect the religion people hold while taking care of them. Skillful communication, active listening with clients' respect and attempts to understand their needs play a major role to client satisfaction and health status (Aljuwaiber & Elnagar, 2022).

Due to the large number of participants that attend pilgrimages like the annual hajj, complicated healthcare models have been called for. Mobile health units, field hospitals and other kinds of temporary structures are used for fulfilling both the primary and emergency health care services (Hassan et al., 2023). Such solutions are useful where facilities for treating the patients may be lacking or inadequate, yet they need to be offered proper care at the right time. In addition, with the help of telemedicine and digital health records, an organization will be in a position to improve on the coordination of care during large events (Banaser et al., 2020).

Reviews of the healthcare service quality and pilgrim satisfaction benefit from scientific research that focuses on areas for upgrade in the delivery of services. Quantitative data often gathered from patient's questionnaires, clinical reviews, and health outcome research provide information about the efficacy of health care delivery services (AlKarani, 2021). For instance, investigations into the aspects of health risks and interventions in the course of performing the hajj have provided enhanced means to address conditions such as heat stress and spread of diseases among the religious pilgrims (Banaser et al., 2020). This enhances a more refined aspect of practices with strategies that would enable them address needs of pilgrims more effectively; this consequently improves pilgrim's service quality (Aljuwaiber & Elnagar, 2022).

Such feedback mechanisms are crucial in assessing and enhancing pilgrims' health care services. Apart from surveys and reviews, such kind of feedback collection helps to establish an understanding of the experiences of pilgrims as well as areas of concern (AlKarani, 2021). For instance, assessment results may indicate that there are frequent delays or facilities that are substandard, hence the need to improve on the provision of services (AlKarani, 2021). In doing so, receiving and discussing feedback also helps to sustain the journey to continuously improve the practice where organized healthcare services will undergo changes to cater for the pilgrim's population as toward creating a better and worthy experience of any pilgrimage.

Problem Statement

By now, healthcare service quality was recognized as a critical component of the healthcare system that safeguards the health of pilgrims, but there are still some barriers to providing adequate medical help to people who plan to perform a pilgrimage (Hassan et al., 2023). Larger congregation of people, different cultural practices, need to have specialized medical care requirement arising out of the pilgrimages like those related to Hajj makes the provision of health care a challenge. Depending on the country, important topics like accessibility, efficiency, safety and subject-centeredness must be solved depending on the quality of medical services provided in areas with high population density. The current health care facilities prove wanting in their ability to effectively attend to the number of people who crossed the dua, hence the delays in the treatment process, lack of adequate equipment and facilities and other potential health risks that may befall the pilgrims.

Significant of Study

The rationale for investigating the healthcare service quality and pilgrim satisfaction is embedded in the possibility of improving the quality of experience of those people who participate in pilgrimages, which are important religious and cultural events that occur with millions of participants on an annual basis (AlKarani, 2021). Based on these needs and difficulties observed in the medical field during pilgrimages, the outcomes of this research can contribute to the increased availability, quality, and safety of medical services. Improving the quality of delivered healthcare services aims directly at the spiritual and physical health of the pilgrims, and minimizes the likelihood of diseases and illnesses and also guarantees urgent and appropriate treatment. This, on one hand, helps to improve the quality of the pilgrims' experience, which is in line with the purpose and tradition of the act of pilgrimage.

Aim of study

The primary objective of this research is to assess the standard of health care services delivered to pilgrims during festivals; and the degree of satisfaction of the pilgrims undergoing such care (Banaser et al., 2020). Thus, the significance of this work lies in the application of the identified criteria to the case of pilgrimage places and the assessment of the current state of healthcare activities, their strengths and limitations characteristic of service quality in the field of healthcare. This entails profiling the extent to which the requirements of the pilgrims have been met in terms of health care needs and with due regard to cultural and temporal requirements as a way of identifying the effectiveness of the health interventions in those settings.

Research Objectives

1. To assess the overall satisfaction of pilgrims with healthcare services during Hajj in KSA.
2. To identify factors influencing pilgrims' satisfaction with healthcare services, including accessibility, quality of care, and language barriers.
3. To provide recommendations for improving healthcare services for pilgrims based on their feedback and experiences.

Research Questions

1. What is the overall level of satisfaction of pilgrims with healthcare services during Hajj in KSA?
2. What are the key factors that influence pilgrims' satisfaction with healthcare services, such as accessibility, quality of care, and language barriers?

3. What specific improvements do pilgrims suggest for enhancing the quality of healthcare services during Hajj?

CHAPTER II

LITERATURE REVIEW

The literature on healthcare service quality demonstrates that there is a number of relationships between different aspects of the offered care and shown results with specific reference to the large groups, which could be understood as pilgrimages. To this effect, quality in healthcare service delivery is commonly evaluated in terms of the following components of care: accessibility, efficiency, safety, effectiveness, as well as patient-centeredness. Stemming from the above literature review, accessibility in the context of healthcare therefore is not just the geographical, functional, or spatial access to services, but the price as well as the capacity to address the patient's needs in time. This is closely related to the task of delivering satisfactory medical care to a vast number of individuals from various backgrounds and possibly needing medical assistance in non-permanent structures assisting pilgrimages. Observations from countries where large number of people conducts mass gatherings like, the Hajj, literature has emphasized on the effective and efficient utilization of the required resources such as mobile clinics or temporary health facilities available to meet the health care needs of all the performers.

Żywiólek et al. (2023), focused on changing the role of pilgrims as clients in the study of pilgrimage tourism. The authors of their study focused on demonstrating how Lok Samuel's, pilgrimage sites are forced to draw up their respective infrastructures and service delivery systems in the new order. Based on the Kano Model, the survey was carried out in 2020 with the aim of identifying the level of pilgrim satisfaction with condition of services availed in pilgrimage destinations. The research used descriptive cross-sectional survey design focusing on assessing the satisfaction constructs on pilgrimage related services. The conclusion is that today's pilgrims have higher demands in regards to well-organized logistical conditions and provision, and diverse aspects of immigration, making people changing their perception of pilgrimage as a customer-oriented spectacle. This study is rather suitable for the present research as it emphasizes the importance of quality delivery in pilgrimage areas and responds directly to the analysis of healthcare services' quality and pilgrims' satisfaction.

In the study regarding service quality of the US HAJ, Alshaibi (2024), examined the influence of Saudi Arabia's vision 2030 focused on improving the pilgrimage experience. This research employed a narrative and systematic review, which comprised 157 articles; moreover, the Delphi study involved fifteen specialists to propose a Hajj service quality assessment framework. In the research process, the longitudinal research design was employed where quantitative data was gathered using an online survey created from Qualtrics website. A total of 149 respondents' responses were deemed valid for the study and were gathered from U. S. pilgrims. This paper explores the service quality dimensions, such as hospitality, guidance, transportation, facility, safety, and healthcare and revealed the impact of those service quality dimensions on pilgrim satisfaction and willingness to visit heritage sites. This study is relevant to the present research as it outlined a model to assess healthcare services in general and in the context of pilgrimage in particular and imported insights into what affects pilgrim's satisfaction.

Therefore, the aim of the study by Wijaya et al. (2022), was to evaluate the level of satisfaction of prospective Hajj pilgrims in the GET pharmaceutical service in the Dinoyo Public Health Center. The intervention was made with the aim of assessing the extent to which these services enhance the fitness of the pilgrims for hajj or "istitha'ah". Conducting survey research with the qualitative observational cross-sectional research design, the study targeted the

prospective pilgrims aged 18 years and above who have received pharmaceutical services. The sampling adopted a validated questionnaire whilst the analysis was done by a customer satisfaction index formula. It was observed that patients had fairly high level of satisfaction with the various pharmaceutical service dimensions; technical, reliability, responsiveness, and empathy were all above 90% while guarantee/assurances were 96.8%. This study is pertinent to the current work due to its focus on pharmaceutical services in pilgrimage contexts and findings pointing out to the service quality aspects influencing pilgrim satisfaction.

Moreover, Hassan et al. (2022), investigated the effect of satisfaction of the numerous services offered during hajj on spiritual quality of religious travellers in Saudi Arabia. It was therefore the intention of the study to determine the role that satisfaction levels on services perhaps in the area of food, transportation, accommodation or medical services play in the pilgrims spiritual journey. The formal surveys were sent to the domestic pilgrims who arrived to perform hajj under licensed agencies to measure the associations between service satisfaction and the spiritual experience using the statistical techniques. The results suggested that the satisfaction with transportation as well as the religious guideline influenced the spiritualness; meanwhile, the satisfaction with medical services interacted with the participants' characteristics. This work is relevant to the present research in that it links service quality with spirituality; thus, expanding the sphere of health care and other services to pilgrimage satisfaction.

Furthermore, Alshaibi et al. (2023), have also discussed about the quality service models that were employed in the tourism and pilgrimage with specificity to the Hajj event. Hence, the study sought to establish an integrated model that would apply the evaluation of service quality in the context of the Hajj. According to the PRISMA guideline in the current study, the researchers conducted a systematic literature review regarding multiple service quality models and their deployment in the context of hajj. The study in a way integrated data collected from a variety of sources and presented its overall proposition of a standardized measurement instrument for the donating service quality in line with its context of pilgrimage. The research therefore pointed out the need to have tailor made service quality models to suit the specific needs of hajj pilgrims in other to satisfaction them fully. This study is useful for the current research in that it offers the theory and the framework that could be applied to the assessment of healthcare service quality in the context of pilgrimages; in doing so, it advances knowledge of factors affecting the pilgrim satisfaction.

Exploring pilgrim satisfaction more narrowly reveals that the most important attribute of overall problem is the sphere of healthcare services. There are implications of the result that when healthcare service providing organizations embrace and attend Pilgrims' needs appropriately and with dignity, this does influence their level of satisfaction with the Pilgrimage. For instance, surveys and pilgrims' feedback obtained during such activities like the Hajj gives satisfaction with health care emphasizing on the access, quality and cultural appropriateness. Writing review indicates that, closing gaps in service delivery like; long waits or bad facilities, increasing the rightly reputed health care personnel can meet user satisfaction leading to a spiritually fulfilling hajj journey.

CHAPTER III

METHODOLOGY

Study Design

The research uses a cross-sectional quantitative research design. This approach permits collection of data at a certain time hence offering a more informed view of quality of health care service as well as pilgrim satisfaction at the time of pilgrimage.

Population

Hajj pilgrims were source of sample for the study is because they were directly affected population. This group concerns persons who are attending one of the biggest meetings annually CoL, and thus it is quite relevant for studying the quality of the presented healthcare services in the frame of a highly populated and culturally valuable context.

Sample and Sampling

A stratified random sampling used to guarantee that the sample obtained have sub-groups to represent the sampled demographic variables of the pilgrims. The sample size was 2,797, because such number gives the researcher a large enough number of participants that, in turn, result in a sufficient variation of the participants in the sample as they were a part of the pilgrimage population.

Selection Criteria

Inclusion Criteria:

- Frequent travelers since they are groups of people that are likely to engage in the pilgrimage exercise during the period under consideration.
- Individuals of any sex and gender who meet the specified age criteria of 18 years and above.
- Persons who willingly and intelligently agree to be used in the study.
- For this reason, the target respondents of the study are the taxi drivers oranos who can fill up the structured questionnaire.

Exclusion Criteria

- Persons up to the age of, say, 18 years.
- People who are outside performing the holy pilgrimage of Hajj during the specified duration of the study.
- People who cannot make explicit choices, are coerced or do not wish to/cannot complete the said surveys.
- Patients or respondents that are unable to respond to the questions set in the structured questionnaires due to language issues or for other reasons.

Research Instruments

Demographic sheet

The demographic sheet gathered data concerning the basic demographic variables such as age, gender, nationality, occupation, education, marital status, and SES. This extensive demographic information collection helped in creating an understanding of differences in healthcare services delivery standards & pilgrim satisfaction on a sociodemographic basis, but without subjecting the respondents to identification.

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HSQPS consists of 40 items divided equally across eight subscales: A self-administered questionnaire were used to collect the following health factors; medical history, medication, heat

illness history, health promotion, healthcare contact, healthcare satisfaction, language preference, sleep, and physical activity. The number of items assessed in each subscale is five, which aims to reflect various aspects of pilgrims' experience. For all the items, a 5-point Likert scale was employed for measuring the response ranging from 1 - strongly disagree, 2 – disagree 3 - neutral, 4 – agree, and 5 – strongly agree This helped to show the extent of perceived factors that affect healthcare services quality and pilgrim satisfaction. Reliability and internal consistency of .88 and 79 (Al-Hoqail et al., 2010; Batabyal et al., 2023; Ande et al., 2024).

Data Collection Procedure

Participants' consent was also be sought in order to alert them about the purpose of the study as well as their rights. The consent to participate in the research study also be sought from the IRB so that they can approve the research and ensure that the set ethical standards are adhered to during the conducting of the research. Questionnaire Data gathered incorporating an extensive list of questions regarding demographics, medical history, medications, history of heat illness, health education on heat illness, visitation to healthcare facilities, rate of satisfaction and dissatisfaction; language preference, sleep, exercise and other pertinent questions that are relevant in this study. This host of measures gives a broad perspective of indices affecting healthcare service quality and levels of satisfaction among the pilgrims.

Data Analysis

The data analysis involved several computations and models; the statistical software to be used for this study is Statistical Package for Social Sciences (SPSS) v28. Measurement was done at the descriptive level to determine another characteristic and how distributed the various attributes are within the sample of the study. Finally use descriptive statistics to screen various inferential statistics such as chi-square tests of independence and logistic regressions in order to establish the pattern of the variables and the impact of various factors towards the overall pilgrims' satisfaction level. These statistical tools shall enable correlation and factor analysis to define those that affect satisfaction with healthcare services, the values attached to it, and the overall understanding of the figures.

Ethical Considerations

Despite the fact that planning for the study is important, ethical issues surrounding the study respected at all levels. Participants shall be reminded of their right to participate and right to privacy and the purpose of study explained to all the participants before data collection is conducted. To ensure the anonymity of the study and security of the respondents' data, this research adhered to the ethical guidelines.

Research Timeline

Research Timeline (Gantt Chart)

Month	Task
May	Task 1: Review of literature
May	Task 2: Problem definition and hypotheses formulation
June	Task 3: Study design
July	Task 4: Data collection
July	Task 5: Data entry
August	Task 6: Data analysis
August	Task 7: Findings interpretation
September	Task 8: Report preparation
September	Task 9: Report review

October	Task 10: Report revision and final adjustments
October	Task 11: Final submission

CHAPTER IV

RESULTS

The chapter: Results describes only the conclusions resulting from the gathered data during the research relevant to the overall satisfaction of pilgrims with healthcare services during Hajj. Non-parametric descriptive analysis is applied to quantify some demographic distributions and consider the associations between factors like accessibility, quality of care, and language and satisfied, among others. A hypothesis test using chi-square and logistic regression tests was performed to determine significant features and relationships to support quantitative analysis on the specific features of healthcare services that directly affect the pilgrims' experience during the pilgrimage.

Table # 1: Demographical Information of the study participants. (N=2,797)

Variable	Categories	f	%
Age of the Participants			
	20 - 30	439	15.7
	31 - 40	714	25.5
	61 - 50	440	15.7
	51 - 60	642	23.0
	61 - 70	330	11.8
	71 - 80	232	8.3
	20 - 30	439	15.7
Nationality of Participants			
	Afghan	340	12.2
	Bangladesh	27	1.0
	Barbados	5	.2
	Bruneian	5	.2
	Egyptian	218	7.8
	French	2	.1
	Georgian	1	.0
	Indian	4	.1
	Indonesi	621	22.2
	Jordanian	6	.2
	Kuwaiti	3	.1
	Mauritan	1	.0
	Moroccan	269	9.6
	Pakistan	64	2.3
	Saudi	70	2.5
	Sudanese	91	3.3
	Syrian	437	15.6
	Tunisian	48	1.7
	Yemenite	4	.1
	Canadian	58	2.1
	Iraqi	226	8.1

Kazakhstani	66	2.4
South African	94	3.4
Tajik	6	.2
Lebanese	128	4.6
South Korean	1	.0
Albanian	2	.1

Note: f = frequency, % = personage

From the 2797 pilgrims who participated in the study, a summary of their demographic characteristics is shown in the table below, in details are described in table 1. Results based on the age suggest that a greater number of participants were within 31 – 40 years (25.5 %), 51 – 60 years (23%) and 20 – 30 percent (15.7 percent). The participants that were of different nationality were mostly Indonesians 22.2%, Syrians 15.6%, and Afghans 12.2%. Other major nationalities were Egyptians 7.8% Moroccans (9.6) and Iraqis (8.1) the other nationalities included Bangladeshi 1.0% Canadians 2.1% and South Africans 3.4%. Said demographic spectrum indicates various nationalities and ages of the participants in the study as well as a wide spectrum of the pilgrims' encounter with the health care services during hajj.

Table # 2: *Factors Influencing Pilgrims' Satisfaction with Healthcare Services, Including Accessibility, Quality of Care, and Language Barriers. (N = 2,797).*

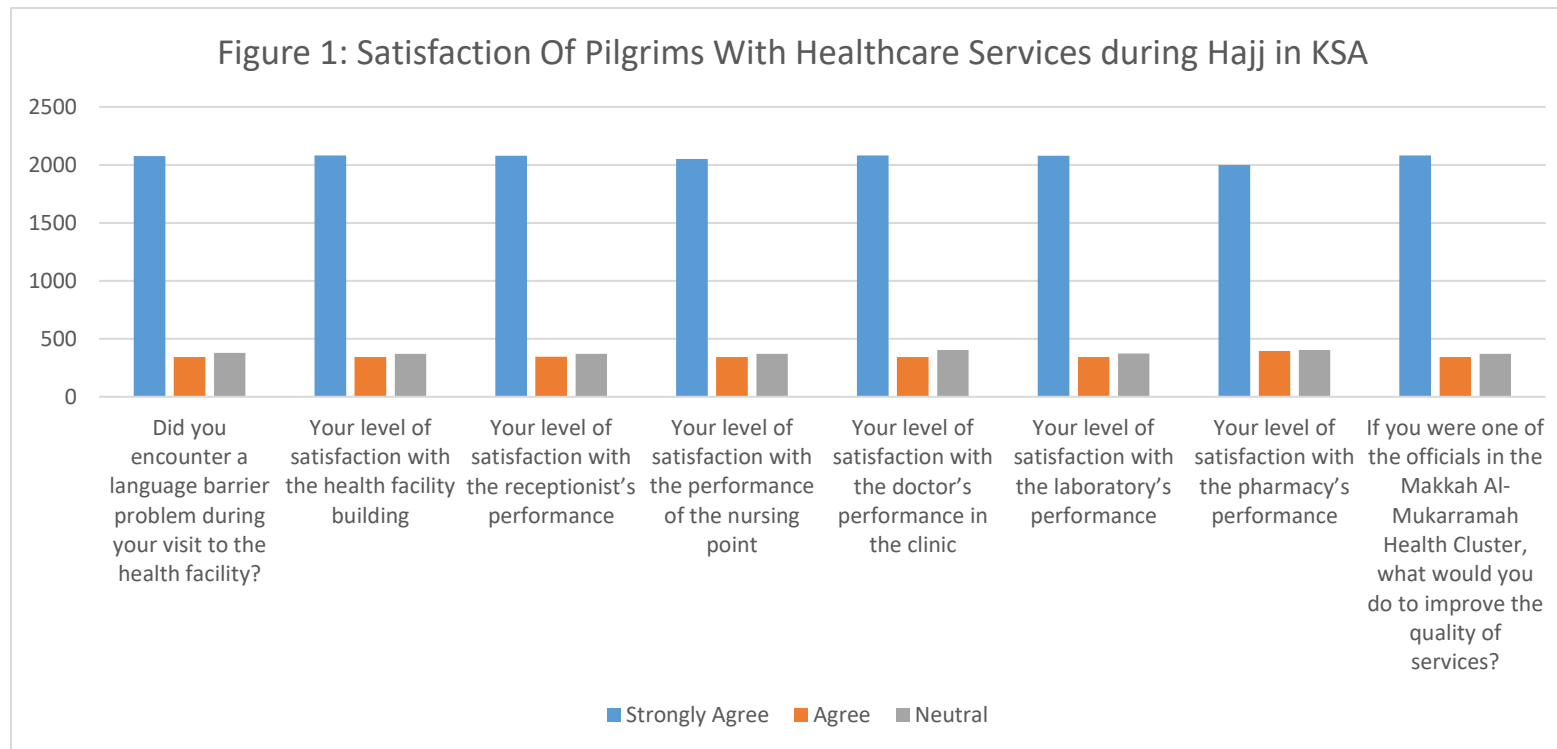
Variable Categories	f	%
How do you rate your health in general?		
Poor	53	1.9
(Good) جيدة	2378	85.0
(Excellent) ممتازة	366	13.1
Do you suffer from any chronic diseases such as diabetes and high blood pressure?		
(Yes) نعم	1406	50.3
(No) لا	1391	49.7
Specify the particular diseases		
(Diabetes) سكري	670	24.0
(Hypertension) ارتفاع ضغط الدم	670	24.0
(Asthma) الربو	455	16.3
(Chronic kidney diseases) أمراض الكلى المزمنة	354	12.7
Cardio vascular Disease	343	12.3
(Others) أخرى	114	4.1
Diabetes, Hypertension, Chronic kidney disease	151	5.4
Diabetes. Asthma. Cardio Vascular disease	40	1.4
Do you use any treatments regularly?		
(Yes) نعم	1328	47.5
(No) لا	1469	52.5
List the medicine that you used		
Organized pills	334	11.9
Insulin	389	13.9
Ointment for bone pain	300	10.7
Compression treatments	346	12.4
Compression treatments + insulin needles	280	10.0
Blood pressure treatments and insulin injections	316	11.3
amlodipine	416	14.9

Pressure treatments	322	11.5
sprayer	94	3.4
Have you ever had heat exhaustion?		
Mina / منى	2155	77.0
Makkah / مكة المكرمة	642	23.0
If yes, where was the injury?		
Dehydration, 2, 1 / جفاف	2108	75.4
Heat exhaustion / إنهاك حراري	689	24.6
What were the symptoms and signs of infection last time?		
Five hours or less / خمس ساعات أو أقل	1288	46.0
6-8 / ساعات 6-8 hours	1509	54.0
How many hours do you usually sleep daily?		
No illness / لم أمرض	1690	60.4
Less than one day in duration / أقل من يوم واحد	1084	38.8
Lasting about 2 days / حوالي يومين	22	.8
More than 4 days in duration / أكثر من 4 أيام	1	.0
During the past week, have you been ill with a high (more than 38.5) or gastrointestinal symptoms such as vomiting or diarrhea?		
Yes	1814	64.9
No	752	26.9
(Not applicable) لا ينطبق	231	8.3
What is the nature of your work?		
Yes	936	33.5
No	1471	52.6
(Not applicable) لا ينطبق	390	13.9
Did you visit your doctor before coming to perform Hajj?		
Yes	2148	76.8
No	649	23.2
Have you received health awareness since coming for Hajj?		
(Very active) نشط جداً	2082	74.4
(Moderately active) متوسط النشاط	344	12.3
(Sedentary) كسول	371	13.3
How do you rate your physical activity?		
Moderately Active	382	13.7
Satisfactory active	2274	81.3
Very Active	141	5.0
How do you rate your physical activity?		
Moderately Active	382	13.7
Satisfactory active	2274	81.3
Very Active	141	5.0
Are there health facilities near your residence?		
Yes	2345	83.8
No	452	16.2
Did you visit a health facility after your arrival?		
(Primary health care center) مركز صحي	289	10.3
Pregnancy clinic	2188	78.2

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	مستشفى عام (General hospital)	207	7.4
Healthcare camps		113	4.0
Location of the health facility	المشاعر المقدسة (Holy sites)	1406	50.3
	مكة المكرمة (Makkah)	1391	49.7
The time it takes to reach the health facility			
	5-2 دقائق (2-5 min)	228	8.2
	20-6 دقائق (6-20 min)	793	28.4
	أكثر من 20 دقيقة (More than 20 min)	120	4.3
	25-22 دقيقة (22-25 min)	990	35.4
	26 - 20 دقيقة (26-20 min)	666	23.8
Reason for visiting the health facility			
	To get medications for a chronic disease	2082	74.4
	Urgent symptoms	344	12.3
	Ambulance transfer	371	13.3

Table 2 presents the demographic profile of the respondents along with the determinants of pilgrims' satisfaction with the healthcare services among 2,797 participants in terms of different aspects of health. The participants' self-perceived health status In regard to self-perceived health status, the majority (85.0%) described it as good, and nearly equal proportions reported that they had been diagnosed with chronic diseases, the most common of which were diabetes (24.0%) and hypertension (24.0%). The self-reported treatment compliance was evenly distributed, with 52.5% using no standard treatment regimens. Many respondents had developed heat exhaustion (77.0 %) and it was widespread in Mina, with 75.4% of the participants reporting they were dehydrated. A significant one [Age group 19-24] 64.9% of the participants affirmed to have experienced illness with high-fever or GI symptoms in the last one week. In particular, 76.8% seen a doctor prior to performing hajj, and 83.8% had ease of access to health facilities in their homes. Of the respondents that received medical attention soon as they arrived, most of them, 78.2%, attended pregnancy clinics. The results show that, most of the respondents focused on health care, particularly on communication needs while doing pilgrimage since some participants had limited mobility resulting from disease and infection and low health conscious as highlighted in appendix two.



The Figure 1 below shows the level of satisfaction of the pilgrims on healthcare service during Hajj in Saudi Arabia and the details for different elements of the trip. The participants were asked if they ever faced language barriers while visiting the health facilities, the majority affirmatively responded that they did not experience the same, out of the respondents, 2057 confirmed they did not experience any language barriers. The findings were almost equally as positive regarding the physical attributes of health facility buildings (2,082), the receptionists (2,080), nurses (2,050), doctors (2,082), laboratories (2,080), and pharmacy services (2,000). On the performance of these services most of the respondents displayed a positive response, indicating that they were satisfied. Furthermore, 2,082 participants answered that when asked about the ways to increase the quality of health care within Makkah Al-Mukarramah Health Cluster would suggest the improvement, proving to be sensitive and willing to contribute to the promotion of higher quality health care services during the pilgrimage. The results imply that although organisational satisfaction is comparatively high, there is still scope for pilgrim engagement in service enhancement.

Table 3: *Recommendations for Improving Healthcare Services for Pilgrims Based on their Feedback and Experiences (N = 2,797).*

Sr	List of Recommendations	f	%
	Saving the lives of pilgrims who are outside the mission	312	11.2
	The presence of mobile vehicles or clinics	144	5.1
	Providing more health centers	113	4.0
	The clinic must have a diabetes monitor and a blood pressure monitor	197	7.0
	Ensuring the intensification of field clinics for rapid access to emergency cases, which reduces deaths	240	8.6
	The level of services is excellent	168	6.0
	Dispensaries in Arafat refuse to receive pilgrims and are very slow when calling for an ambulance. Shad	215	7.7
	A complete report on each case before Hajj	309	11.0
	9.00	157	5.6
	Medical staff on scooters or golf cars walk alongside the pilgrims	161	5.8
	Improving communication with public security	173	6.2
	Do not go out at noon	208	7.4
	Tremendous efforts	35	1.3
	Coordinating with the authorities concerned with distributing drinking water to the many pilgrims due to deaths	78	2.8
	Bracelets that alert or determine the pilgrim's location in the event that they get lost during the campaign	118	4.2
	No	169	6.0

Table 3 presents a summary of the suggestion made by the respondents in assisting the improvement of healthcare services for pilgrims which was based on the data obtained from 2,797 participants. The most commonly mentioned measure, proposed by 312 of the respondents (11.2%), regards the preservation of lives of the pilgrims beyond the mission area. Mobile clinics or vehicles received approval from 5.1% of the participants (144), and the request for more health center was approved by 4.0% of the participants (113). A significant number of the pilgrims strongly recommended clinics to be equipped with basic monitoring equipment including diabetes and blood pressure checking machines, 197 (7.0%). Additional suggestions were also made, which referred to the amplification of work involving field clinics for emergency needs (240 participants, 8.6%) and to future communication with public security (173 participants, 6.2%). While several suggestions were driven, concerning strategic approaches to healthcare delivery, as organizing distribution of drinking water (78 respondents, 2.8 %) and, as an instance, using technological options, such as location-tracking bracelets for missing pilgrims (118 respondents, 4.2%), a few also pointed to the remarkable efforts made already (35 respondents, 1.3%). In general, the feedback captured and reinforces a potential convergence of what can be considered various interests ranging from the need to improve the quality of the infrastructure, or redesign widgets, in order to create a system that might safely transport pilgrims during hajj.

Summary

The findings of this study point out and explain critical activities that directly impact pilgrims' perceived satisfaction with healthcare services during Hajj and shed light on the challenges the healthcare system faces during such events. While a large number of workers rated their health 'good' or 'excellent', a reasonable number of workers claimed to have a diseased

condition requiring medication constantly, thus calling for special health care programs for these workers. Most of the respondent's positive attitudes towards one or several aspects of the healthcare services including the conditions of the facilitation and performances of the staff but the issue of language barrier cropped up. The participants' recommendations are the main areas that have been underlined to need improvement including; opening of more health centers, mobile clinics and improved emergency response. Based on this survey and literature review of pilgrims' experience and feedback, it is crucial to build accurate strategies to promote health care services in an effort to enhance the protection of pilgrims on forthcoming hajj events.

CHAPTER V

DISCUSSION

This study therefore sought to establish the standard of the health care services possibly offered in pilgrims during the hajj exercise, and to measure the satisfaction levels of these pilgrims with the health care services they possibly received. People attending this event are more than two million; therefore, handling numerous people creates significant strain to health care, making it obligatory to evaluate service delivery. The goals of this study were therefore to examine various factors affecting pilgrim satisfaction; to determine demographic differences; and to provide a research agenda and recommendations for enhancing healthcare services to pilgrims during Hajj.

The outcomes suggest a high level of perceived health among pilgrims; 85% of respondents claimed their general health to be either good or excellent. This result supports other works that point towards pilgrims having a high level of motivation and resiliency to perform religious activities hence affecting their well-being performance during pilgrimage (Hassan et al., 2022). But, it is worthy of note that half the pilgrims were found to be suffering from one ailment or the other including diabetes, hypertension. It is against this backdrop therefore that health wise, the most vulnerable of the pilgrims are those with chronic health conditions. These results suggest that there are significant positive self-perceived health among these people with several chronic diseases, a state that we believe points out the interplays between the physical and psychological aspects of life and the spiritual experiences hence the importance of specialized health intercessions.

This publication highlighted one particular care area where language was a salient issue experienced by pilgrims. The study established that communication problems with healthcare providers were reported by 74% of the respondents. This finding is in concordance with prior studies that have emphasized customers' communication needs in healthcare facilities especially across cultures when more than one language is used (Albahar et al., 2023). The consequence of language differences is thus massive, for which patients can be misunderstood, inadequately treated, and thus, overall, the satisfaction levels of these patients would be low. Thus, the health care practitioners have no option than to look for multilingual employees or possibly use translation to boost on the communication front to serve the pilgrims with the best services.

When making a deeper assessment of the study results, it was possible to identify that pilgrims' satisfaction levels are directly connected with the assessment of the condition of healthcare facilities and the performance of the staff members. The majority had positive attitude towards the healthcare facilities especially on issues of cleanliness and ease to access. These accords with findings that the physical setting like cleanliness of the hospitals and other aspects of the physical surroundings play important determinants of patient satisfaction (Mohammed et al., 2024). Whereas such findings indicate that by providing the best facilities characterized by clean

and comfortable environments, they respective authorities managing health care services during hajj should consider improving on.

The study also found out that most of the respondents received health awareness prior to arriving for hajj, this is according to the 76.8% of the respondents who said they had pre – hajj medical checkup. This finding implies that mass health education and awareness campaigns before the pilgrimage might go a long way in preparing the hajj pilgrims for the rigours of the pilgrimage. Past research has paid attention to the importance of pre-travel medical check-up visits focusing on reduction of health risks and improving the level of safety among the pilgrims during Hajj (Deria & Izmuddin, 2023). Therefore, authorities should carry on encouraging and may be extending these programs to ensure all the pilgrims are well informed on health hazards and their prevention before proceeding to make their pilgrimage.

While acknowledging the benefits of endeavor toward the enhancement of healthcare service quality, the study revealed areas for quality improvement especially in the emergency response service. Concerning the organization of field clinics, 8.6% of the respondents operate that there is a need for more of them in order to access emergency care. Poor emergency medical services particularly in huge congregational incidences such as the hajj are a vice whose implication should not be overstressed. Research that has been done on the event has revealed that earlier response to emergencies during mass events can help to lower morbidity and mortality of patients (Hassan et al., 2022). Therefore, improving this essential component of comprehensively managed emergency medical care should constitute strategic HM Agenda for health authorities in subsequent Hajj operations.

Furthermore, the respondents in the present study recommended the creation of mobile clinics and improving cooperation with public security to have the increased reaction time. This recommendation supports the previous studies that require the rapid delivery of coordinated health services and teamwork between the health organizations and rescue services during mass gatherings (Hafsah et al., 2024). If such measures are put in place, they could not only enhance the access to healthcare during the period of hajj but also the effectiveness in the delivery of health care which directly enhances pilgrim's satisfaction.

In strengthening cultural competence, participants' suggestions include future improvement on the logistics to encourage healthcare staff training and education on culture and communication skills. Since pilgrims are from different cultural backgrounds, providers must be able to appreciate diversity, and assess the care needs of different people. Studies have shown that cultural competence in health care delivery organization results in better communication between health provider and patients as well as better patient compliance, thus improved patient health status (Jouda et al., 2022). Hence, it is important to provide training to employees who can promote culture in patients and customers during the pilgrimage to enhance and develop good health services.

Survey for the research also showed that many of the respondents had fallen prey to heat stress during the journey and dehydration topped the list. This show that there is need to offer sufficient water and other cooling stations to the pilgrims because of the harsh weather that is usually dictated during hajj. Earlier research has highlighted comparable results regarding heat illnesses as one of the main issues for pilgrims (Quaium et al., 2023). Thus, the provision of adequate access points to water and shelter even in the routes to be used for pilgrimage should be given highest priority to reduce the occurrence of heat-related illnesses.

Last but not the least, the present study also forms an important addition to the body of knowledge on the assessment of healthcare service quality and pilgrim satisfaction during

pilgrimage journey of hajj. The study therefore points out the need to periodically review and revamp the Health care services for pilgrims to suit a changing environment. If top health management priorities health care communication, emergency preparedness and response, cultural sensitivity, and environmental context, the quality of services delivered to the pilgrims can improve the satisfaction of this spiritual visitors. Subsequent research based studies should try to involve assessment of fluctuations in the changes in the service quality of the healthcare providers and the satisfaction levels of the pilgrims over successive hajj seasons in order to gather additional data regarding the effectiveness of improvement measures.

In conclusion, this study reveals that although the participants of this research have positive attitude toward health care service receiving during Hajj, there are some potential issues that must be solved. Through the adoption of the ideas put forth by the participants and synthesis of the findings of literature, healthcare authorities can meet the participants' needs and provide a safe and meaningful experience of pilgrimage to the other participants. The general developmental paradigm should be to encourage guests to feel that they are being cared for, to provide them with the psychological frame of services in this massive religious event to help them achieve their religious goals.

CHAPTER VI

LIMITATION. RECOMMENDATION and CONCLUSION

Limitations

The present study has some limitations that might influence generalization and interpretation of the study findings. First, the study's cross-sectional research design limits the generalizable conclusions about causality between fixing healthcare service quality to pilgrim satisfaction. Because data were summarized at one point in time, it is unclear how fluctuations in healthcare services delivery may affect satisfaction patterns with time. Secondly, the data used in this research are self-reported and may contain some biases due to the common method variance since sometimes-respondent claim high level of satisfaction or even do not report unfavorable experiences. Moreover, it should be noted that in this research only pilgrims who received care in the healthcare facilities were included which, therefore, may not include those pilgrims who had to seek care outside a healthcare setting or those who experienced specific care access problems. Last, the demographic differences of pilgrims may lead to a different perception of healthcare quality, which consideration might be limited in this study. More elaborate future research designs should involve longitudinal settings to capture the continuous experience of the pilgrims and include participants from a wider diverse population to give a wide picture of the challenges faced by pilgrims in their health care during the exercise.

Recommendations

In light of the research limitations and conclusions of this study, the following recommendations are made with a view to improving health care delivery to pilgrims during hajj. Firstly, health authorities ought to consider extending multilingual services regarding the health sector to hospitals or any other health facility in order to minimize the embarrassment commonly realized by language barriers between the providers and the pilgrims. This kind of barrier may be addressed by offering several staff members training in several languages, or engaging translators. Secondly, expansion of functional field clinics and the usage of Mobile Health Units should be developed also in order to increase availability of emergency care. Public security, and rapid response teams should also be involved in their coordination in order to make the interventions

early enough. Furthermore, bearing in mind that pilgrims from different cultural backgrounds may present different needs, cultural competency training for healthcare human resource should also be conducted continually. Furthermore, extensive health promotion measures for pilgrims should be formalized as well as containing useful advice on how to cope with CHD or identify heat illness, enabling the participants to be physically ready for the challenge. Finally, the establishment of an ongoing feedback system by which pilgrims could provide feedback on their experiences of healthcare services and care might ensure that further enhancements of service delivery are achieved.

Conclusion

In sum, it is now possible to identify the nature of health services and the extent of the pilgrims' satisfaction levels to serve the interest of advancing the field of study. Hence, the study finding shows that although many Pilgrims claimed satisfaction with healthcare facilities, there are still big challenges and gaps. The major themes of the study were language; emergency responses; cross-cultural competencies; interactions between pilgrim and healthcare staff. To that end it is critical that efforts be made to tackle some these problems because the healthcare services being offered to the millions of pilgrims ranging in all age groups, health status and needs who attend Hajj each year must be well equipped to handle the challenges that come with this service. Thus, the recommendations as described in this study can be understood and formulated in the following way to help the health authorities improve the values for patient satisfaction and safety and supplement to the joyful journey (pilgrimage) perception of patients: Further investigations and the assessment of the health care facilities available for pilgrims during hajj should be conducted to enhance these services appropriately so that pilgrims can undertake their Programs effectively with assurance of an optimum health care services delivery.

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