

# Factors Associated With Access, Utilization, and Level of Satisfaction With Primary Health Care Services in Hafar Al-batain City of Saudi Arabia

Sabah T Alharbi<sup>1</sup> & Dr. Muneeb M Alzghool<sup>2</sup>

<sup>1</sup> School of Nursing, Community and Mental Health Nursing Department, King Saud University, Ministry of Health, Riyadh, Saudi Arabia

<sup>2</sup> School of Nursing, Community and Mental Health Nursing Department, King Saud University, Riyadh, Saudi Arabia

Correspondence: Sabah Turayhib Alharbi, School of Nursing, Community and Mental Health Nursing Department, King Saud University, Kingdom of Saudi Arabia, Riyadh, Building 2, Saudi Arabia. Tel: 966-54-411-7779. E-mail: sabah7779@hotmail.com

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## Abstract

**Background:** Primary Health Care (PHC) Services in Saudi Arabia has reportedly been poorly accessed and utilized. Another concern is that the kingdom has to be strategic in reducing inequalities that exist between rural and urban communities. At present, there were limited scientific studies on access, utilization, and satisfaction of PHC services in areas most central to the kingdom.

**Aim:** The aim of this study is to explore the factors associated with access, utilization, and level of satisfaction with primary health care services in Hafar Al-batain of Saudi Arabia.

**Method:** A survey was conducted on June to August 2018 and data were gathered from June to August 2018. A self-report questionnaire was used which asked for the participants' characteristics, organization factors, financial factors, doctor-patient communication, access, utilization, satisfaction to PHC services and barriers were distributed to the different health centers. A total of 384 PHC receivers served as respondents of the study. Data analysis were processed and Chi-square was used to analyse quantitative data using Statistical Package for Social Sciences Ver. 21. Thematic analysis was used in analysing qualitative data.

**Results:** Findings showed that 50% of the total respondents were satisfied to some extent with the PHC services. On the other hand, only 39.7% were completely satisfied. Organizational, financial and doctor-patient communication factors were found to be barriers to PHC services in terms of access and utilization. Gender, age and educational level were found to influence perceived satisfaction towards PHC services. Themes relevant to barriers to PHC services were relevant to inadequate facilities and services, inaccessible location and access of health services, lack of specialized health care workers and services, poor observance of therapies and management, and insufficient implementation of policy and protocols.

**Conclusion:** Health care services in Hafar Al-batin were found satisfying to some extent but were found to have areas which needs improvement which are relevant to factors in the organizational, finance, doctor patient communication and health promotion and prevention.

**Keywords:** access, utilization, primary health care services, barriers, Saudi Arabia

## 1. Introduction

Primary health care (PHC) is an approach to making essential health care accessible and utilized. As a community-focused program, PHC aims to help solve health care problems through the provision of promotive, preventive, curative, and rehabilitative services (Ministry of Health, 2012). In PHC, nurses play an important role, becoming partners with patients from the community in accessing and utilizing PHC services. Nurses are the largest group of health care workers in PHC, and they impact patients' satisfaction and compliance to treatments McCarthy, Cornally, Moran, and Courtney (2012).

Through the MOH, the Kingdom of Saudi Arabia (KSA) formulated health-related goals aimed at increasing

accessibility of health care services and improving its policies. In the KSA, the first tier of the health care system includes a number of PHC centers (PHCCs) and clinics. These facilities focus on preventive and curative primary care services and provide referrals to secondary and tertiary hospitals (Alzaied & Alshammari, 2016). Most PHCCs are located near the residences or workplaces of their patients. In 2012, 2,000 PHCCs were established in the KSA that provide care for 13,455 people (Ministry of Health, 2012).

A number of concerns have been reported pertaining to PHC in the KSA. Those who visited PHCCs and utilized PHC were the poorest members of Saudi society; thus, the government conducted orientation programs to educate people and professionals in the community about PHC and its services. In addition, MOH increased the number of PHCCs and their staff and worked on enhancing the image of nurses in the KSA. The KSA also promoted PHC by building a national health development plan, orienting hospitals around PHC, increasing community health workers, advancing nursing education in public health, and improving the status of nursing (Ministry of Health, 2012).

Some barriers to the access and utilization of PHC services have been identified in Riyadh, the capital of the KSA (Alfaqueh, Cook, Randhawa and Ali (2017). In rural areas, the distance to and cleanliness of the PHCCs and availability of prevention and promotion services were the primary concerns. According to nurses in Jazan, the quality of PHC work life was unfavorable in several aspects. These aspects included long working hours, lack of facilities for nurses, poor personal balance, lack of time with families, poor staffing, existing management and supervision practices, lack of professional development, low security, lack of supplies and facilities, the community's view of nursing, and an inadequate salary (Almalki, Fitzgerald, and Clark (2012).

Previous studies have emphasized the importance of describing and understanding health care utilization and health care systems in health care planning (W. J. Hermann, A. Haarmann, and Bærheim (2017); Sofianopoulou, Rushton, Rubin, and Pless-Mulloli, (2012). Many researchers have discussed the inequality of access and utilization regarding differences in sociodemographic factors or even locations (Terraneo, 2015). The demand for empirical data for health care planning is high, as the health care system in the KSA is progressively changing. Therefore, the findings of this study will benefit the policymakers in health care planning in the KSA.

### *1.1 Problem Statement*

The KSA is suffering from growing numbers of chronic health disorders (Almalki, Fitzgerald, and Clark (2012). These disorders include diabetes mellitus (DM), hypertension, and heart diseases (Al-Nozha, 2007). For example, the KSA ranked seventh in the world for cases of DM. The high number of patients with chronic diseases has increased the health cost for disease management in the KSA.

Early detection of diseases has been one of the strategies of health care professionals for reducing the incidence of the diseases and their progression. This early detection has been an efficient strategy for reducing the impact of the disease on the patient and others. PHC typically encounters patients in the early stages of the disease. Thus, its role is crucial in preventing the progression of the disease and reducing the cost of treatment. However, the access and utilization of PHC services are currently insufficient.

People from rural community settings in the KSA have the poorest access and utilization to PHC services. Therefore, the policies and planning in PHCCs should help reduce the inequalities that exist between rural and urban communities in the KSA (Alfaqueh et al., 2017). However, information about PHC services in the KSA and international community settings is still limited.

### *1.2 Purpose of the Study*

The aims of this study were to explore the barriers to access and utilization of PHC services and to assess the extent of patients' satisfaction with the provided services in Hafar Al-batain, KSA. The study aimed to answer the following research questions:

- 1) What are the organizational, financial, and doctor-patient communication barriers to access and utilization of services in Hafar Al-batain?
- 2) To what extent are those who receive PHC services in Hafar Al-batain satisfied with the services?

## **2. Research Design**

The study followed the mixed-method research design wherein both quantitative and qualitative research approaches were used to meet the objectives. In the quantitative approach, a descriptive, cross-sectional survey was used to identify the factors that influenced the perceptions of the respondents concerning the access and utilization of PHC services. The design was descriptive, as it aimed to determine the participants' characteristics and perceptions through survey (Corcadden et al., 2017). Furthermore, data were collected at a specific point in

time concerning participants' opinions or perceptions toward available PHC services. Therefore, the study was also cross-sectional. The data collection was conducted from February to June of 2018. In the qualitative approach, the study aimed to collect the respondents' views about the barriers to access and utilization of PHC services.

### *2.1 Study Population and Sampling*

Due to the large population and the fact that most patients are only transient in the PHCCs, a convenience sampling method was utilized for this study. A minimum number of 300 participants was the target sample size. After final data gathering and data screening for valid data, the researchers recruited 386 eligible participants. The inclusion criteria included individuals who visited the selected PHCCs in Hafar Al-batain, patients who were above 20 years of age, patients who had access to the selected PHCCs, and patients who had availed certain services in those centers.

### *2.2 Procedure of Data Collection*

Three research assistants were recruited from the PHCCs in Hafar Al-batain. The assistants were trained to administer the questionnaire through an interview. The recruitment of respondents was done either through posters or verbal invitation. The recruitment also depended on the approval of the organization. The data were gathered in two phases, pilot testing and the final gathering. Data gathering was performed in the PHCCs during duty hours, when respondents were conveniently available for interviewing.

### *2.3 Measurements*

A modified survey questionnaire by Ghadah Alfaqeeh was used, and permission to use the questionnaire was obtained from the author. The questionnaire was tested for reliability and validity; 30 respondents were interviewed to complete questionnaires during the pilot study. Reliability testing showed that the Cronbach's alpha for the different parts of the questionnaire was from 0.72 to 0.86, which indicated that all parts of the tool were acceptable for use.

The questionnaire had eight parts. The first determined the participants' characteristics, including gender, age, education level, and current monthly income. The second determined the utilization of PHC services, such as having an appointment with the doctor, a referral to a specialist, or other medical investigations. This was determined through yes or no questions. The third part covered organizational factors, like whether the doctors were on time, bloodwork results were received on time, the PHCC was clean, the PHCC had good mobility, and if others were helped to understand Arabic. The answering options varied for each of these items.

The fourth part determined access to health care utilization, which included whether the PHCC remained open during mandated hours and the distance of the PHCC from the patient. These were formatted as yes or no questions. Financial factors comprised the fifth part and asked whether patients paid for a prescribed medication. The sixth part covered doctor-patient communication, such as whether the doctors listened, allowed time to discuss the patients' health, treated the patient with dignity and respect, provided answers to the patients' questions, and clearly explained the results and treatments to the patients. Here, again, the format of the questions varied widely.

The seventh part, which included the last questions of the quantitative approach, uncovered the patients' satisfaction with the PHCCs. This was answered on a three-point Likert scale from no to yes, or completely. The final portion of the tool was an open-ended question that asked whether the participant had identified any barriers to access and use of PHC services. All questions were asked in Arabic, and the responses were translated to English, particularly those responses to the open-ended question.

### *2.4 Data Analysis*

For the quantitative approach, statistical analysis was performed. The data were entered into an Excel file and were exported to the IBM Statistical Package for Social Sciences (SPSS) Version 23. The chi-square test was used to determine the association between dependent and independent variables for the research questions [5]. For the descriptive qualitative approach, thematic analysis was performed. The data were grouped within 40 valid responses, which were considered for the production of subthemes. Based on the patterns and content of the data, thirteen sub-themes were made; this led to the production of five main themes.

## **3. Results**

This study was conducted on PHC services in Hafar Al-batain of the KSA. The sample included 386 Saudi males and females. This study presented the participants' characteristics and their perceptions regarding financial factors, organizational factors, and doctor-patient communication relevant to PHC services.

### 3.1 Participant Characteristics

Table 1. Profile of the respondents according to gender (N = 386)

Gender	Frequency	Percentage
Male	210	54.4
Female	176	45.6
Total	386	100.0

Table 2. Profile of the respondents according to age (N = 386)

Years	Frequency	Percentage
< 20	58	15.0
21–30	143	37.0
31–40	128	33.2
41–50	50	13.0
51–60	3	0.8
60 <	4	1.0
Total	386	100.0

Table 3. Profile of the respondents according to education (N = 386)

Level	Frequency	Percentage
Illiterate	6	1.6
Primary	15	3.9
Middle	40	10.4
High school	130	33.7
Diploma	92	23.8
Bachelor	96	24.9
Master/Doctorate	7	1.8
Total	386	100.0

### 3.2 Organizational Barriers to Access and Utilization of PHC

Table 4. Received by the doctor on time (N = 386)

Level	Frequency	Percentage
Yes	234	60.6
No	152	39.4
Total	386	100.0

Table 5. Received the blood test results on time (N = 386)

Level	Frequency	Percentage
No response	86	22.3
Yes, on time	132	34.2
Later than expected	67	17.4
Still waiting	101	26.2
Total	386	100.0

Table 6. The PHCC is clean (N = 386)

Level	Frequency	Percentage
Very clean	137	35.5
Fairly clean	221	57.3
Not very clean	21	5.4
Not at all clean	1	.3
Unable to say	6	1.6
Total	386	100.0

Table 7. Mobility within the PHCC (N = 386)

Level	Frequency	Percentage
Very easy	248	64.2
Fairly easy	122	31.6
Not at all easy	9	2.3
Unable to say	7	1.8
Total	386	100.0

Table 8. Help understanding the Arabic language (N = 386)

Level	Frequency	Percentage
No response	44	11.4
Yes	331	85.8
No	11	2.8
Total	386	100.0

Table 9. The distance to the PHCC is easy (N = 386)

Level	Frequency	Percentage
Yes	300	77.7
No	86	22.3
Total	386	100.0

### 3.3 Financial Barriers to Access and Utilization of PHC Services

Table 10. Paid for prescribed medications (N = 386)

Response	Frequency	Percentage
Yes	33	8.5
No	353	91.5
Total	386	100.0

### 3.4 Doctor-Communication Barriers to Access and Utilization of PHC Services

Table 11. The doctor listens carefully (N = 386)

Response	Frequency	Percentage
Definitely	252	65.3
To some extent	134	34.7
Total	386	100.0

Table 12. The doctor spends adequate time with patients (N = 386)

Response	Frequency	Percentage
Definitely	192	49.7
To some extent	165	42.7
No	29	7.5
Total	386	100.0

Table 13. The doctor treats patients with dignity and respect (N = 386)

Response	Frequency	Percentage
Yes, all of the time	283	73.3
Some of the time	103	26.7
Total	386	100.0

Table 14. The doctor provided answers to questions (N = 386)

Response	Frequency	Percentage
Yes, definitely	218	56.5
Yes, to some extent	143	37.0
No	5	1.3
Did not need to	12	3.1
No opportunity	8	2.1
Total	386	100.0

Table 15. Treatment was properly explained and fully understood (N = 386)

Response	Frequency	Percentage
Yes, definitely	226	58.5
Yes, to some extent	124	32.1
No	22	5.7
Did not want	4	1.0
Not needed	10	2.6
Total	386	100.0

Table 16. Results were explained and understood (N = 386)

Response	Frequency	Percentage
Yes, definitely	200	51.8
Yes, to some extent	159	41.2
No response	23	6.0
Still waiting	4	1.0
Total	386	100.0

### 3.5 Satisfaction Toward PHC Services in Hafar Al-batain

Table 17. Satisfaction of the respondents to the PHC services (N = 386)

Level	Frequency	Percentage
Yes, completely	153	39.7
Yes, to some extent	202	52.3
No	31	8.0
Total	386	100.0

### 3.6 The Relationship Between Participants' Characteristics, Different Barriers, and Levels of Satisfaction

Table 18. Significant relationship between satisfaction and organizational factors, financial factors, and doctor-patient communication

Variables	Level of Satisfaction
<b>1. Organizational Factors</b>	
• See doctor on time at appointment	$\chi^2 = 13.092$ df = 4 Asymp. Sig. (2-sided) = 0.011*
• Received blood results on time	$\chi^2 = 30.990$ df = 6 Asymp. Sig. (2-sided) = 0.000*
• Cleanliness of PHCC	$\chi^2 = 62.105$ df = 8 Asymp. Sig. (2-sided) = 0.000*

• Mobility within PHCC	$\chi^2 = 32.986$ df = 6 Asymp. Sig. (2-sided) = 0.000*
• Help understanding Arabic	$\chi^2 = 5.675$ df = 2 Asymp. Sig. (2-sided) = 0.059
<b>2. Financial Factors</b>	$\chi^2 = 0.685$ df = 2 Asymp. Sig. (2-sided) = 0.710
<b>3. Doctor-Patient Communication</b>	$\chi^2 = 110.829$ df = 8 Asymp. Sig. (2-sided) = 0.000*

\*Significance at the 0.05 level.

### 3.7 The Relationship Between Participants' Characteristics and Their Perceived Level of Satisfaction

Table 18 shows a significant linear trend (df = 9.008, p = 0.003) that suggested both genders' level of satisfaction about the access of care was positive. The findings also showed no significant linear trend (df = 0.156, p = 0.012), which suggested that age was not a determining factor of satisfaction concerning access to care. Furthermore, the results showed a significant linear trend (df = 33.080, p = 0.001) suggesting that educational level was a factor in the respondents' perceived level of satisfaction concerning the access to care.

Table 19. Relationship between participants' characteristics and satisfaction to PHC services

Variables		Value	df	Asymp. Sig. (2-sided)
<b>1. Gender</b>	Pearson Chi-Square	9.339a	2	0.009*
	Likelihood Ratio	9.598	2	0.008
	Linear-by-Linear Association	9.008	1	0.003
	N of Valid Cases	384		
<b>2. Age</b>	Pearson Chi-Square	22.752a	10	0.012*
	Likelihood Ratio	25.530	10	0.004
	Linear-by-Linear Association	.156	1	0.693
	N of Valid Cases	384		
<b>3. Educational Level</b>	Pearson Chi-Square	33.080a	12	0.001*
	Likelihood Ratio	36.947	12	0.000
	Linear-by-Linear Association	4.294	1	0.038
	N of Valid Cases	384		

\*Significance at p < 0.05.



## 3.8 Perceived Barriers to Access and Utilization to PHC Services by Qualitative Means

Table 20. Perceived barriers that prevent access to PHC services

Code	Narrative Statement	Sub-theme of the Narrative Statement	Main Theme
R1	"Delay files"; "It takes time to retrieve medical files"	<b>Sub-theme 1:</b> Ineffective/lack of proper medical documentation and filing (R1, R2)	
R2	"Lack of proof of displaced tribes"; "No medical records for refugees or foreigners"	<b>Sub-theme 2:</b> Inadequate medical services given to patients (R3, R20, R25, R27, R34, R35)	<b>Theme 1: The lack of proper facilities and poor services contributed greatly to the barriers patients experienced in their access to PHC services.</b>
R3	Lack of service; "There is no adequate medical service given"	<b>Sub-theme 3:</b> PHCC location not ideal for patients (R4, R19, R28, R29, R31, R36, R38, R39)	
R4	The center is far; "The PHCC is quite far"	<b>Sub-theme 4:</b> The medical personnel lacks professional work ethics (R5, R7, R9, R15, R27, R34)	<b>Theme 2: Poor access to location of PHCCs due to distance and lack of transportation contributed to a logistical barrier to the access of health services.</b>
R5	The staff leaves before work ends; "The staff leaves even before the end of their official duty hours"	<b>Sub-theme 5:</b> No adequate medical materials and tools (R6, R18, R21, R22, R23, R30)	<b>Theme 3: The lack of trained/specialized health professionals and services was a barrier in catering to the diverse health needs of patients of PHCCs</b>
R6	Lack of sterile tools; "There is lack of sterile materials being used"	<b>Sub-theme 6:</b> No medical laboratories and facilities (R8, R12, R23, R24, R30)	<b>Theme 4: The lack of professionalism and poor observance of therapeutic care and management was found to be a barrier in the health care services offered.</b>
R7	Bad dealings with staff; "The medical staff are not friendly and accommodating"	<b>Sub-theme 7:</b> Poor quality of medicines (R10, R35)	<b>Theme 5: Poor regulation and implementation of health care facilities' policy and protocols were deterrents in the giving of efficient and effective services by PHCCs.</b>
R8	Laboratory does not exist; "There are no laboratories"	<b>Sub-theme 8:</b> Waiting time for consultation and subsequent release of laboratory results is too long (R11, R26, R33)	
R9	Bad doctor; "The doctors do not deal with patients' needs and are not accommodating"	<b>Sub-theme 9:</b> Lack of trained medical professionals (R13, R17)	

R10	Poor quality of medicines; “The medicines are of poor quality”	<b>Sub-theme 10:</b> Conflicting medical appointment schedule between doctors’ and patients’ work schedules (R14, R37)
R11	Length of medical appointments; “The waiting time for medical check-ups is too long and tiring”	
R12	Lack of dental clinic; “There is no dental clinic”	<b>Sub-theme 11:</b> No medical doctor specialization and/or specialized patient services (R16, R24)
R13	Lack of doctors; “There is not an adequate number of doctors to accommodate the many numbers of patients for consultation”	<b>Sub-theme 12:</b> Inadequate number of PHCCs (R32)
R14	Hours don’t fit my work hours; “My medical appointment schedule set by my doctor is in conflict with my work schedule”	<b>Sub-theme 13:</b> Massive patient consultation and loading (R40, R17)
R15	Lack of nursing care; “There is lack of nursing care”	
R16	The doctor is not a specialist; “The doctors are only general practitioners, not specialists”	
R17	The doctor is busy with more than one patient; “The doctor is so busy that he finds it difficult to deal with more than one patient at a time”	
R18	No X-ray machine; “There is no X-ray machine”	
R19	The center is far; “The center is far”	
R20	Lack of services; “Adequate medical services are not given”	
R21	No X-ray machine; “There is no X-ray machine”	
R22	No existing dental clinic; “There is no dental clinic”	
R23	No existing dental clinic, X-ray machine,	

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- or lab; “There is no dental clinic, X-ray machine, or other laboratory facilities”
- R24 No existing lab or entrance for the disabled; “There are no medical laboratories or adequate facilities for disabled patients”
- R25 No existing ambulance care; “There are no ambulance services”
- R26 Length of wait; “The length of wait for the doctors’ consultation is long”
- R27 Lack of efficiency of treatment and staff; “There is no efficiency in the treatment modality, and the staff is also ineffective in their medical care services”
- R28 I don’t have a car; “I don’t have a car, thus making it hard for me to go to the PHCC”
- R29 The center is far away; “The center (PHCC) is far from where we live”
- R30 Lack of laboratory tools; “There are no laboratory services or equipment”
- R31 Lack of transportation; “There is no available transportation to and from the PHCC”
- R32 Lack of PHCC; “There is not an adequate number of PHCCs”
- R33 Length of time waiting for laboratory results; “The waiting time for the laboratory results takes a long time”
- R34 Failure to manage the center by the response; “There is no proper management of the center or their patients”
- R35 Lack of initial examination of the patient and lack of medication; “No proper assessments or thorough medical examinations are given to the patient, and
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	medications were inadequately provided”
R36	Lack of transportation; “There is no available transportation to and from the PHCC”
R37	Time of work; “My medical appointment schedule set by my doctor is in conflict with my work schedule”
R38	Lack of transportation; “There is no available transportation to and from the PHCC”
R39	Lack of transportation; “There is no available transportation to and from the PHCC”
R40	Crowd of patients; “There are so many patients”

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In the qualitative portion of the study, 40 responses were valid and directly answered the open-ended question, which asked about barriers to PHC services (see Table 20). Out of thirteen sub-themes, five main themes were generated. The first recognized theme was the lack of proper facilities and poor services. This theme, which was connected with sub-themes 2, 5, 6, and 7, contributed widely as a barrier to patients’ access to PHC services. This finding implied that respondents believed inadequate medical services were given, medical materials and tools were inadequate, and medical laboratories and facilities were inadequate. Additionally, they believed the quality of medicines was poor.

Theme 2, poor access to the PHCCs due to distance and lack of transportation, contributed to the logistical barrier in the access of health care services. Sub-themes 3, 12, and 13 supported this theme. The PHCCs’ locations were not ideal for patients; the number of PHCCs was inadequate, and there was massive patient consultation and loading.

The lack of trained medical professionals, conflicting medical appointment schedules between doctors’ and patients’ work schedules, and the absence of medical doctor specialization and/or specialized patient services comprised the third theme. This theme referred to the lack of trained/specialized health care professionals and services and identified a barrier in catering to the diverse health needs of patients of PHCCs. This theme was supported by sub-themes 9, 10, and 11.

The fourth theme was the lack of professionalism and poor observance of therapeutic care and management. This barrier in the health care services was supported by sub-theme 4. The medical personnel lacked professionalism and work ethics.

The last theme was poor regulation and implementation of health care facilities’ policy and protocols, which were deterrents in giving efficient and effective PHC services. This theme was supported by sub-themes 1 and 8. The findings revealed that PHCCs showed ineffective/lack of proper medical documentation and filing and had unfavorable wait times for consultation and the subsequent release of laboratory results.

#### **4. Discussion**

This section discusses the findings according to the literature review and those published studies relevant to PHC services.

##### *4.1 Organizational Barriers*

In this study, the distance of PHCCs from patients was found to be a significant factor in satisfaction toward PHC

services. In the qualitative results, distance was mentioned as one of the concerns when accessing and utilizing PHC services. Therefore, in this study, distance was a barrier to access and utilization of PHC services. Several other studies related to access and utilization to PHC have shown the impact of distance (Ministry of Health, 2012).

Previous studies have suggested that distance from health care facilities has a detrimental impact on health care utilization Arcury, Gesler, Preisser, Sherman, Spencer and Perin, (2005); McLaren, Ardington, and Leibbrandt (2014). In the KSA, most people are reluctant to travel long distances to PHCCs because of the hot climate during the summer months (Al-Shahrani, 2004). However, a study published in 1992 showed that households within the KSA have high rates of car ownership, so the availability of transportation to the PHCC was not considered an important factor that might intersect with distance from the residence as a barrier to accessing the PHCC (Al-Sahili & Aboul-Ella, 1992).

Another remarkable finding in this study was the respondents' perception of the PHCCs' cleanliness. Most of the respondents stated that the PHCCs were only fairly clean. Clean settings for appointments will most likely lead to a positive, systematic effect, such as improved staff performance.

#### *4.2 Financial Barriers*

In utilization of PHC services, no significant financial factors were found in this study. It was not found significant to the satisfaction of PHC receivers or even perceived as a barrier. This finding contrasted a previous study, which reported that affordability of health care services was perceived as a substantial barrier (Corcadden et al., 2017) . In fact, this barrier was more common in Australia than 7 of 10 countries. According to one study, financial barriers are linked with lack of awareness about what the health care system offers to the people (Luther, 2016). After explaining the two type of financial barriers, this study expressed that some people think that PHC services are not worth utilizing because this leads to additional and unattainable services (Luther, 2016). Therefore, the ability to pay has been shown as a significant barrier to utilizing PHC services.

In the KSA, the government offers free health care services. However, some private companies offer similar services for pay. It is the role of the health care providers to enhance the people's awareness about the financial risk and benefits of acquiring PHC services. Eliminating financial barriers and promoting adherence to guideline-based recommendations can improve the health of individuals in these cases (Parikh et al., 2013); due to financial reasons, individuals with chronic diseases experience impaired access to medical care, inferior quality of care, and greater vascular morbidity.

#### *4.3 Communication Barriers*

In this study's quantitative findings, doctor-patient communication was not perceived as a barrier. However, in the qualitative analysis, poor regulations and services, as well as the lack of health care professionals, somewhat affected the connection with PHC patients. All items in these barriers were significantly linked with the level of satisfaction to PHC services.

The qualitative findings emphasized that accessibility was poor due to distance and lack of transportation. The unfavorable distance contributed to the logistical barrier in the access of health services. According to one study, the accessibility of the health care facility is a major factor in the utilization of the health care service (Bhola, Kumari, and Nidha (2008); this has also been highlighted in the principles of PHC.

In patient-doctor relationships, establishing good communication is essential Li, Abdulkerim, Jordan, and Son (2017). In a study conducted in the KSA, the doctor-patient communication in selected PHCCs was perceived overall as good (Alfaqeeh et al., 2017) Despite the demand of cultural competency and awareness, the hired doctors in the KSA come from Arab countries; this guarantees that the language being spoken is common to both the doctor and the patient, which enhances communication. Additionally, the Muslim religion is common to both the patients and doctors, which adds equal understanding for the context of the information.

#### *4.4 Satisfaction With PHC Services*

In this study, the results showed that half of the respondents from Hafar Al-batain were satisfied with the PHC services, but only to some extent. Only a third of the respondents claimed that they were completely satisfied. A study conducted in Arabia showed that the satisfaction of the PHC nurses depended on how healthy work life was in the PHCCs (Al-Sahili, and Aboul-Ella, 1992). The findings suggested that the PHC nurses in the Jazan region in the KSA were dissatisfied with their work life. This finding was in contrast with the results of this present study in Hafar Al-batain. Perhaps the imbalance of the allocation of resources and attention from the administrators in the central regions make other far-flung areas less desirable for PHC nurses to practice PHC nursing.

The satisfaction of the community greatly depends on how regularly or infrequently the people visit and utilize PHC services (Al Qatari & Haran, 1999). Additionally, how someone uses the PHCC is more predictive in deciding the extent of satisfaction. This is congruent with the findings of the present study. Thus, awareness campaigns and promotion of PHC services should be encouraged both in rural and urban areas in the KSA, specifically in Hafar Al-batain.

The satisfaction of people from the communities in Riyadh concerning PHC services has been supported by a previous study (Ministry of Health, 2012), which highlighted high levels of satisfaction among patients for all PHCCs. Regarding differences between urban and rural respondents, the findings indicated a significant relationship between satisfaction and education level, monthly income, medical investigations, receiving blood tests on time, extra opening hours, distance, cleanliness, and health prevention. Core barriers for rural patients were related to the distance to reach the PHCCs and their cleanliness.

#### *4.5 Participants' Characteristics and Level of Satisfaction*

Gender, age, and educational status were found to be relevant to the satisfaction in PHC services. The association of the population when grouped according to the participants' characteristics might have been due to the type of care or medical treatment they received in the PHCCs in Hafar Al-batain.

Gender was found to affect the satisfaction of the respondents with PHC services. According to (Carretero et al., 2014) females in the United States have been found to visit PHCCs more than men. Age has also been associated with satisfaction of PHC services. Unlike this present research, (Al Qatari and Haran, 1999). showed contrasting results wherein age showed no association and gender was less important than in other studies. This study was similarly conducted in the KSA in 1999 (Al Qatari and Haran, 1999). However, with the current changes in the health care system of the KSA, the increase of patients and complexity of diseases has led to the increase of visitors in health care centers for consultations and treatment, ensuring availability of materials and equipment for management of diseases and disorders. Hence, the relationship between the perception of patients concerning the satisfaction with health care services in the KSA and age was found to be significant.

The present study determined a relationship between educational status and satisfaction with PHC services in Hafar Al-batain. In one study about utilization of PHC services in northern India, the illiterate population was less likely to utilize PHC services compared to those with high literacy rates (Rajpurohit, Srivastava and Srivastava (2013). In relation to another study in Riyadh, KSA, which established differences between urban and rural respondents, the findings also indicated a significant relationship with education level (Ministry of Health, 2012). In another study, the literacy status of the household head played a crucial role in encouraging the family and others toward PHC utilization in Riyadh (Al Qatari and Haran, 1999).

## **5. Conclusion**

Health care services in Hafar Al-baitin were found satisfying to some extent but were also found to have areas needing improvement. These areas were relevant to doctor-patient communication, organizational, and financial factors. Participants' characteristics, such as gender, educational level, and marital status, were significantly associated with perceived satisfaction to PHC services.

### *5.1 Limitations*

The setting, research design, and sampling technique used in this study limited the generalizability of its findings. The study was conducted in several conveniently selected PHCCs in Hafar Al-batain. Thus, the findings did not represent the entirety of Hafar Al-batain nor of the KSA. Therefore, the generalizability of the findings of this study was limited. Furthermore, the cross-sectional approach did not establish causal relationship between the dependent and independent variables. However, findings of the qualitative analysis in this study supported the findings about correlations in this study. Finally, the convenient recruitment and selection of respondents did not limit the bias, since not all PHC receivers had an equal chance to share their perception toward PHC services in Hafar Al-batain.

### **Competing Interests Statement**

The authors declare that there are no competing or potential conflicts of interest.

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