



ORIGINAL RESEARCH

# Patient Satisfaction with Primary Health Care Services in Riyadh, Saudi Arabia

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**Background:** Patient satisfaction emerges as an indicator for enhancing the quality of health organizations, facilitating the evaluation and identification of the most significant characteristics of patient experience and their corresponding satisfaction levels. This can guide decisions to improve healthcare services and develop policies for better care. This study seeks to assess the level of patient satisfaction with primary healthcare (PHC) services in a large military hospital in Riyadh, Saudi Arabia, and to determine the extent of association between the level of satisfaction and patients' social and demographic factors.

**Methods:** A cross-sectional study was carried out on a convenient sample who received primary health care at the Security Forces Hospital in Riyadh, Saudi Arabia, between January and June 2023. Comparisons between qualitative variables were made using the chi-square to test significance and the One-Way ANOVA test was used to compare the means of total patient satisfaction scores, p < 0.05 was considered significant.

**Results:** Among the 379 participants, 268 (70.7%) were males, 271 (71.2%) were married, 222 (58.6%) were military personnel, and 207 (54.6%) were between the ages of 31 and 49. The average satisfaction with PHC clinics was 52.1 (SD=4.9, highest score=60) while the average satisfaction with general evaluation was 27.6 (SD=3.4, highest score=35). Male participants exhibited greater satisfaction levels (M= 117.8, SD=12.8) than their female counterparts (M= 115.7, SD=15.3, p-value = 0.01). Patients aged 18–30 had greater satisfaction levels (M= 117.5, SD=16.8, p-value = 0.02). Individuals who were single reported higher levels of satisfaction (M= 118.3, SD=16.2, p-value = 0.001). Participants with lower earnings (less than 5000 SR) had greater satisfaction levels compared to individuals having a greater income (p-value = 0.002).

**Conclusion:** Patients attending a PHC center in a large military hospital in Riyadh generally reported high levels of satisfaction, particularly among male, single, younger, and low-income individuals. Despite these favorable results, several aspects of healthcare need enhancement to fulfill patient expectations and guarantee optimal healthcare provision. Therefore, healthcare practitioners must persist in determining and addressing these areas to guarantee that patients obtain optimal care and experience in primary healthcare clinics.

**Keywords:** patient satisfaction, health services, quality management, primary health care, healthcare quality

#### Introduction

Healthcare systems are constantly evolving, necessitating the development of methods to evaluate outputs while assessing the patient experience. Additionally, the continuous need for better outcomes and quality in healthcare is crucial for creating a more effective organizational policy tailored to the needs of patients. Health organizations understand that the level of service is particularly important for the public perception and the enhancement of the healthcare sector. Consequently, patient satisfaction emerges as an indicator for enhancing the quality of health organizations, facilitating the evaluation and identification of the most significant characteristics of patient experience and their corresponding satisfaction levels.

Patient satisfaction refers to a patient's response to various components of their healthcare experience. Patient satisfaction serves as a critical parameter for assessing healthcare quality, hence constituting an indispensable and commonly utilized indicator that influences clinical results, medical malpractice litigation, and the prompt, efficient, and patient-focused provision of healthcare. Healthcare leaders prioritize patient satisfaction and quality of health

services as a result of the growing demand for these services, which are essential for the continued effectiveness of healthcare organizations. 12 However, patient satisfaction involves a multifaceted interplay between their perceived needs, expectations from the healthcare service, and their experiences with the services provided. 13,14

Valuable and distinctive insights regarding the quality of daily hospital care and the experience of patients may be obtained by evaluating patient satisfaction. Assessing healthcare quality and satisfaction is a crucial aspect of effective resource management.<sup>15</sup> It enables a focus on users' preferences, allowing them to create a tailored health service that aligns more closely with their needs and expectations. 16 Thus, in conjunction with the objective assessment of quality, satisfaction plays a significant role in the overall evaluation of system performance and its effectiveness in fulfilling its intended purpose. 17 As market competitiveness rises, healthcare organizations are making greater efforts to address patients' needs, ensuring their satisfaction to foster loyalty towards the organization. 18 Also, structuring evaluations that pertain to patient judgments regarding inpatient care can be facilitated by patient satisfaction. <sup>13</sup> The long-term success of health institutions is, therefore, contingent upon patient satisfaction and the caliber of health services.<sup>19</sup>

Primary care is regarded as a more significant alternative to hospital care, particularly with the rising elderly population and an increased focus on patient autonomy and self-reliance.<sup>20</sup> The level of patient satisfaction in primary care is a predictor of both compliance and utilization, and it may even be associated with an improvement in health.<sup>21</sup> It also influences the PHC environment, which is linked to the continuity of treatment, the doctor's communication abilities, the extent of their patient-centeredness, and the alignment between the patient's requested intervention and the one they receive.<sup>22</sup> Additional elements affecting satisfaction with medical care encompass trust in the system and an optimistic perspective on life overall.<sup>23</sup> Ultimately, satisfaction constitutes the patient's assessment of the care received, with the physician serving as a pivotal factor in patient satisfaction.<sup>24</sup>

In the past few years, there has been a growing focus given to concerns related to the assessment of health care.<sup>25</sup> Consequently, it has been suggested that the assessment of health care must involve not just metrics related to clinical efficacy and financial viability but also indicators of public acceptance of health care services. 26 Although numerous studies have been conducted on this topic, the findings remain inconclusive and vary from one study to another.<sup>27</sup> Because patient satisfaction is subjective, there are discrepancies in evidence from different studies.<sup>21</sup> For instance, a systemic review that examined patients' satisfaction in different settings found that Health care service quality indicators were the most influential determinants of patient satisfaction across the studies.<sup>21</sup> Thus, satisfaction is a relative concept, shaped by individual opinions, requirements, and assessments of healthcare features.<sup>28</sup> This study seeks to assess the level of patient satisfaction with PHC services in a large military hospital in Riyadh, Saudi Arabia, and to determine the extent of association between the level of satisfaction and patients' social and demographic factors.

The results of the study can be utilized to identify problem areas, thereby enhancing community PHC services. Improving the quality of primary healthcare services is essential to guarantee that all community members and their families can access affordable healthcare. Additionally, this study can enhance the understanding of patient satisfaction and serve as a vital resource for researchers or experts focused on this area of inquiry.

#### **Methods**

# Study Design and Settings

To assess the level of patient satisfaction with PHC services and to determine the extent of association between the level of satisfaction and patients' social and demographic factors, a cross-sectional study was carried out on a convenient sample of consecutive patients who received primary health care at the Security Forces Hospital in Riyadh, Saudi Arabia, from first day of January to the end of June 2023. The Security Forces Hospital is among the largest hospitals in the city, having an approximate capacity of 700 beds. The hospital provides specialized care along with comprehensive medical services. It serves as an educational and training center that is officially recognized by numerous local and international medical institutes.

# **Participants**

The study sample comprises all patients visiting the PHC. The primary inclusion criteria were to be over 18 years of age and possess the capability to accurately comprehend and complete a questionnaire. Patients under 18 years of age or those not attending the PHC center were excluded. The questionnaire was administered to participants who, for various reasons, attended their PHC and consented to participate in the study. Participants were informed by the authors of the study's goals and processes, and that the data gathered would be utilized solely for the specified research purpose. A calculated sample size of 400 was determined, accounting for a 5% margin of error, a 95% confidence level, a 50% response rate, and a previously predicted influenza vaccination uptake rate of 50%. An overall response rate of 94.7% was achieved, with a total of 379 responses being received from the 400 individuals who have been approached.

#### Data Collection Instrument

The questionnaire comprised socio-demographic variables (6 items) and overall patient satisfaction (30 items) regarding various elements of services in primary healthcare. Items related to patient satisfaction were adopted from the validated patient experience and satisfaction questionnaire developed by the Saudi Ministry of Health (MOH) (Table 1).<sup>30</sup> The questionnaire assesses patient satisfaction across 6 main categories of health care services: Appointments (3 items),

**Table I** Summary of Participants' Demographic Characteristics (n=379)

Characteristic	Description	n (%)	
Sex	Female	111 (29.3)	
	Male	268 (70.7)	
Marital status	Married	271 (71.5)	
	Single	86 (22.7)	
	Divorced	15 (4.2)	
	Widow	6 (1.6)	
Age	18–30	140 (36.9)	
	31–49	207 (54.6)	
	50–64	28 (7.4)	
	60 and above	4 (1)	
Occupation	Employed (Military)	222 (58.6)	
	Employed (Civilians)	59 (15.6)	
	Students	34 (8.9)	
	Retired	20 (5.3)	
	Unemployed	44 (11.6)	
Education level	Postgraduate Education	12 (3.2)	
	Undergraduate Education	146 (38.5)	
	Primary/secondary school	215 (57.5)	
	No general education	3 (0.8)	
Income level	More than 15,000 (SAR/month)	36 (9.5)	
	10,000–15,000 (SAR/month)	108 (28.5)	
	5000–9999 (SAR/month)	170 (44.6)	
	Less than 5000 (SAR/month)	65 (17.4)	

Clinics (13 items), Laboratory (3 items), Radiology (2 items), Pharmacy (2 items), and General Evaluation (7 items). The participants were presented with five options for responding to each question: excellent, very good, good, average, and poor. Options were evaluated on a scale of 1 to 5 points, with 5 indicating the highest level of satisfaction. The internal consistency of the questionnaire was assessed using Cronbach's alpha coefficient, which was calculated to be 0.96, indicating excellent reliability. The questionnaire was translated into Arabic to enhance communication with the respondents and was back translated prior to the start of gathering data.

#### Data Analysis

The acquired data were analyzed utilizing the Statistical Package for Social Sciences (SPSS 22; IBM Corp., New York, NY, USA). Categorical variables were represented as percentages and descriptive statistics were applied. For the purpose of determining the significance of the differences between qualitative variables, the chi-square test was employed. Additionally, the One-Way ANOVA test was employed to compare the means of overall patient satisfaction scores. A significance level of p < 0.05 was judged to be significant.

Ethical permission had been obtained from the ethical committee at the Security Forces Hospital (IRB number: 22–577-13). The study complies with the Declaration of Helsinki. Informed consent was acquired from the subjects. The data were maintained in confidentiality and utilized solely for the objectives of this study.

#### Results

## General Findings

Out of 400 questionnaires were distributed, 379 were completed with no missing data, yielding a response rate of 94.7%. Among the participants, 268 (70.7%) were males, 271 (71.2%) were married, 222 (58.6%) were military personnel, and 207 (54.6%) were between the ages of 31 and 49. About one-third of the participants possessed an undergraduate education while only 3 participants had no prior general education, however, they can write and read. A total of 108 individuals, representing 28.5%, reported a monthly income level ranging from 10,000 to 15,000 Saudi Riyals per month (SAR/month) while 17.4% earned less than 5000 (SAR/month). Table 1 presents the frequency and percentage of the demographic characteristics of the participants.

#### Satisfaction Levels

Table 2 illustrates the participants' levels of satisfaction with the services provided by the PHC for each category. Of the participants, 56% rated their overall evaluation of the care they received during their visit as above average. Additionally,

Table 2 Items of Participants' Satisfaction Levels With the Services Provided by the PHC Center

		Excellent n (%)	Very Good n (%)	Good n (%)	Average n (%)	Poor n (%)
App	pointments (Max=15, M= 12.8, SD= 1.7)					
I	Booking an appointment	136 (35.9)	96 (25.3)	62 (16.4)	54 (14.2)	31 (8.2)
2	Contacting the clinic by phone	118 (31.1)	109 (28.8)	97 (25.6)	39 (10.3)	16 (4.5)
3	Care of the staff in the reception area	20 (5.3)	94 (24.8)	133 (35.1)	122 (32.2)	10 (2.6)
Clir	nics (Max= 60, M= 52.1, SD= 4.9)					
I	Informing you about any delays in the procedures	87 (23)	135 (35.6)	109 (28.8)	35 (9.2)	13 (3.4)
2	Knowing that the universally recognized waiting time for a doctor is 20–30 minutes, how do you evaluate the waiting time in the clinic?	145 (38.3)	118 (31.1)	88 (23.2)	26 (6.8)	2 (0.5)

(Continued)

Table 2 (Continued).

		Excellent n (%)	Very Good n (%)	Good n (%)	Average n (%)	Poor n (%)
3	Comfort in waiting areas	69 (18.2)	139 (36.7)	87 (23)	62 (16.4)	22 (5.8)
4	Toilet's hygiene	14 (3.7)	28 (7.4)	152 (40.1)	161 (42.5)	24 (6.3)
5	Nurses listen and pay attention to you	10 (2.6)	19 (5)	67 (17.7)	175 (46.2)	108 (28.5)
6	The care shown by the nurse to your medical condition	11 (2.9)	22 (5.8)	78 (20.6)	196 (51.7)	72 (19)
7	Kindness and care of the nurse	15 (4)	19 (5)	146 (38.5)	173 (45.6)	26 (6.9)
8	The care shown by the doctor to your concerns and questions	5 (1.3)	85 (22.4)	167 (44.1)	97 (25.6)	25 (6.6)
9	Explanation of your condition by doctor	4 (1.1)	81 (21.4)	170 (44.9)	100 (26.4)	24 (6.3)
10	The doctor ensures that you are participating in the treatment decision	5 (1.3)	56 (14.8)	121 (31.9)	101 (26.6)	96 (25.3)
П	The doctor discusses the possible treatment methods with you (options, side effects, benefits.)	12 (3.2)	63 (16.6)	137 (36.1)	95 (25.1)	72 (19)
12	The doctor discusses the possibility of obtaining a second opinion from other doctors	9 (2.4)	23 (6.1)	97 (25.6)	153 (40.4)	97 (25.6)
Labo	pratory (Max= 15, M= 11.5, SD= 1.8)	I	1	l	1	1
I	Waiting time before taking a blood sample	2 (0.5)	17 (4.5)	63 (16.6)	169 (44.6)	128 (33.8)
2	Ensuring your comfort during the process	6 (1.6)	29 (7.7)	117 (30.9)	136 (35.9)	91 (24)
3	The skills of the person who performed phlebotomy (quickly and less painful)	28 (7.4)	77 (20.3)	168 (44.3)	89 (23.5)	17 (4.5)
Rad	iology 10 (Max= 10, M= 8.2, SD= 1.1)					
I	Waiting time before the radiology	83 (21.9)	97 (25.6)	152 (40.1)	42 (11.1)	5 (1.3)
2	Explanation provided to you on the steps of the examination or the radiology procedure	65 (17.2)	81 (21.4)	148 (39.1)	71 (18.7)	14 (3.7)
Phai	rmacy 10 (Max= 10, M= 7.9, SD= 0.9)	ı	1	I	l	
I	Waiting time before receiving your medications	54 (14.2)	127 (33.5)	132 (34.8)	54 (14.2)	12 (3.2)
2	Pharmacist's explanation of the instructions for the medications' usage	78 (20.6)	121 (31.9)	136 (35.9)	38 (10)	6 (1.6)

(Continued)

Table 2 (Continued).

		Excellent n (%)	Very Good n (%)	Good n (%)	Average n (%)	Poor n (%)		
General evaluation 35 (Max= 35, M= 27.6, SD= 3.4)								
I	Consideration of your privacy	17 (4.5)	193 (50.9)	108 (28.5)	39 (10.3)	22 (5.8)		
2	Carefulness of the medical staff for your safety (sterilize their hands, wear gloves)	73 (19.3)	94 (24.8)	112 (29.6)	86 (22.7)	9 (2.4)		
3	Clinics' hygiene	67 (17.7)	86 (22.7)	128 (33.8)	91 (24)	7 (1.8)		
4	Parking lot	4 (1.1)	29 (7.7)	72 (19)	197 (52)	77 (20.3)		
5	Cooperation between staff to provide you with care	15 (4)	69 (18.2)	94 (24.8)	175 (46.2)	26 (6.9)		
6	Possibility to recommend our clinics to others	36 (9.5)	83 (21.9)	108 (28.5)	139 (36.7)	13 (3.4)		
7	Overall evaluation of the care you received during your visit	9 (2.4)	75 (19.8)	128 (33.8)	157 (41.4)	10 (2.6)		

most participants expressed above-average satisfaction with the appointment booking process (77.6%), the waiting time before consulting the doctor (92.6%), the waiting time before receiving their medications (82.6%), the proficiency of the laboratory staff (72%), the clarity of explanations given by the pharmacy team (88.4%), consideration of your privacy (83.9%), and the staff's attentiveness to patient safety and hygiene (74.9%). However, A larger proportion of the participants expressed average to poor satisfaction with the nurses' paying close attention in listening to them (54%), involvement in treatment decision-making alongside the doctor (50.9%), the doctor discussing the possibility of obtaining a second opinion from other doctors (66%), and the collaboration among staff to ensure proper care (53.1%). Additionally, Table 2 displays the average level of total satisfaction among the six categories. The average satisfaction with PHC clinics was 52.1 (SD=4.9, highest score=60) while the average satisfaction with general evaluation was 27.6 (SD=3.4, highest score=35).

#### Factor Associated with Satisfaction Levels

Table 3 illustrates the mean overall satisfaction (M=116.3, SD=14.7, Max=145) and the p-values related to participants' demographic variables with PHC services categories. The examination of the correlation between the characteristics of patients and general satisfaction with PHC services revealed that male participants exhibited greater satisfaction levels (M= 117.8, SD=12.8) than their female counterparts (M= 115.7, SD=15.3), with a significant p-value of 0.01. Patients

Table 3 The Mean Overall Satisfaction and Its Relationship to Participants' Demographic Variables With PHC Services Categories

		Mean	SD	p-value
Overall satisfaction (out of 145 points)			14.7	-
Sex	Female	117.8	12.8	0.01*
	Male	115.7	15.3	
Marital status	Married	115.6	14.9	0.03*
	Single	118.3	16.8	
	Divorced	116.2	19.1	
	Widow	115.9	13.8	

(Continued)

Table 3 (Continued).

		Mean	SD	p-value
Age	Age 18–30		16.2	0.02*
	31–49	116.2	14.4	
	50–64	115.7	17.5	
	60 and above	115.3	13.6	
Occupation	Employed (Military)	116.7	14.9	0.18
	Employed (Civilians)	116.6	15.3	
	Students	11.7.1	13.7	
	Retired	115.9	19.5	
	Unemployed	116.4	17.1	
Education level	Postgraduate Education	115.8	18.2	0.27
	Undergraduate Education	117.5	17.9	
	Primary/secondary school	116.2	13.5	
	Illiterate	117.2	18.7	
Income level	More than 15,000 (SAR/month)	114.9	15.7	0.03
	10,000–15,000 (SAR/month)	115.7	16.2	
	5000–9999 (SAR/month)	116.1	18.1	
	Less than 5000 (SAR/month)	118.3	16.7	

**Note**: \*P value < 0.05.

aged 18–30 had greater satisfaction levels (M= 117.5, SD=16.8) than older patients, with a statistically significant p-value of 0.02. Moreover, there was a significant correlation between marital status and patient satisfaction; individuals who were single reported higher levels of satisfaction (M= 118.3, SD=16.2) than those who were married (p<0.001). As for the participants' income level, participants with lower earnings (less than 5000 SR) had greater satisfaction levels compared to individuals having a greater income, with a significant p-value of 0.002.

#### **Discussion**

# General Findings

The purpose of this study was to examine the degree of the association between the level of satisfaction and the social and demographic aspects of patients, as well as to evaluate the level of patient satisfaction with primary health care services in a large military hospital in Riyadh, Saudi Arabia. We found that although the overall degree of satisfaction level was substantially high, our research results revealed specific categories of the PHC services demonstrated a degree of dissatisfaction among patients. Consequently, health administrators and planners should not rely solely on a comprehensive evaluation of satisfaction. Each service must be evaluated separately, considering the various service items and components involved. Furthermore, we found that males, younger, single, and patients with low income (below 5000 SAR/month) had a significantly higher degree of satisfaction with primary health care services. However, the patient's occupation and educational level were shown to have insignificant association with their level of satisfaction.

#### Level of Satisfaction

Overall satisfaction level with the services offered by the PHC center was relatively high, with an average overall satisfaction score of 116.3 (SD=14.7, Max=145). Moreover, 56% of participants rate their overall evaluation of the care

they received during their visit as above average. Such findings are lower than other studies conducted in Saudi Arabia<sup>31,32</sup> and globally.<sup>33–36</sup> A recent study comparing patient satisfaction across ten major cities in Saudi Arabia found that satisfaction levels range from 64.2% to 84.2%.<sup>37</sup> Our findings, however, align with those of other studies focusing on military hospitals.<sup>38</sup> The comparatively lower level of satisfaction may be attributed, in part, to the fact that this is a military hospital serving a huge population that may exceed its capacity. Other similar studies indicated that military hospitals exhibit lower satisfaction levels compared to public or private hospitals.<sup>39</sup>

Our study indicated that pharmacy services received the greatest level of satisfaction evaluations, whereas a separate study conducted in Saudi Arabia revealed that certain facets of pharmacy services garnered low satisfaction scores due to challenges encountered by patients, including deficient drug supply and inadequate details regarding drug interactions and side effects. Effective communication by pharmacists is crucial for enhancing medication use among patients and achieving the best therapeutic results. Pharmacists have the ability to enhance patient adherence to medication regimens by implementing effective strategies, such as providing patient counseling and education. 41

In our study, we found that most participants were satisfied with the appointment booking process. This was consistent with other studies conducted in Saudi Arabia.<sup>31</sup> Utilizing comprehensive online appointment booking systems can yield advantages, including awareness of all healthcare facilities in affiliated centers, a complete understanding of physicians' schedules, an integrated search feature, optimal allocation of specialty services, user-friendliness, enhanced patient satisfaction, time savings, and streamlined scheduling in clinics. Consequently, medical universities must prioritize the design, development, and implementation of comprehensive online appointment booking systems.<sup>42</sup>

Our findings indicated that the majority of participants expressed dissatisfaction with the attentiveness of nursing staff, the engagement of physicians with their patients, and the coordination of personnel to ensure adequate treatment. These findings were also supported by other research.<sup>37,43</sup> This may be ascribed to the demanding schedule, time constraints among the medical personnel, the hectic environment of the hospital, and a shortage of medical staff.<sup>44–46</sup> Effective communication and involvement between patient and their healthcare professionals serve as the foundation for the relationship between the staff and patient.<sup>47</sup> Additionally, Increased participation and engagement of patients during the encounter would enhance satisfaction, compliance, and treatment outcomes.<sup>48</sup>

A significant percentage of patients reported higher-than-average satisfaction regarding the waiting time prior to consulting the doctor (92.6%) and before obtaining their medications (82.6%). This exceeds the findings of a recent study conducted in Saudi Arabia, which indicates a satisfaction level of 29%.<sup>37</sup> In assessing patient satisfaction, waiting time is a critical issue to evaluate. A comprehensive study reviewing over 237,000 appointments identified waiting time as a crucial element in sustaining and enhancing patient satisfaction.<sup>49</sup> Another study indicated that patients take it for granted and neither express satisfaction nor dissatisfaction when the waiting time is absent. However, their unhappiness escalates significantly as the waiting time extends.<sup>50</sup>

#### Association with Overall Satisfaction

Our data indicated a significant correlation between overall satisfaction and gender, demonstrating that females exhibited lower levels of satisfaction compared to males. The findings were consistent with those of comparable research conducted in other countries.<sup>51</sup> This can be ascribed to the observation that females represent their families and utilize PHC services more frequently than males.<sup>43</sup>

In our findings, we found younger patients were generally more satisfied with PHC services compared to older patients. The literature indicates that elderly respondents exhibit greater attentiveness to the details of the healthcare services delivered than their younger counterparts.<sup>52</sup> Other research has shown patient age as a significant factor influencing patient satisfaction with younger patients having higher levels of satisfaction.<sup>53</sup>

Our findings also indicated that patients with lower levels of education tended to express greater satisfaction with the services provided by primary healthcare.<sup>33</sup> Other studies found that higher-educated individuals typically report less satisfaction with the healthcare services that are available to them, according to other studies.<sup>54–56</sup>Additionally, our study revealed a correlation between marital status and patient satisfaction, with single patients indicating higher levels of satisfaction. This contrasts with other research that found no significant relationship between patient satisfaction and marital status, or that single participants reported the lowest satisfaction with the services provided.<sup>36</sup>

Finally, we observed that patient satisfaction correlated with monthly income; individuals with low income exhibited the highest satisfaction compared with those with average and high income. These results are in agreement with findings from other studies.<sup>21,57</sup> This may be because patients with high income are more likely to be exposed to other hospitals private or public with higher standards. However, more research is needed to shed some light on such a relationship. The satisfaction of patients is directly linked to their loyalty to the healthcare provider. Patient loyalty leads to beneficial behaviors, including recommendations from healthcare providers, adherence to treatment, and increased utilization of healthcare services, ultimately enhancing profitability.

This research has certain limitations. Initially, we depended on self-reported data from the participants, which may have contributed to subjectivity and recall bias. Secondly, we employed a convenience sample from many hospitals in the Riyadh region, which compromised the study's representativeness. Consequently, a larger sample size from diverse places is favored to enhance generalizability. Furthermore, the responses of participants may be swayed by the tendency to provide socially acceptable answers. This bias was reduced by confirming that no identifiable information was required and that data would remain confidential.

#### **Conclusion**

The current study demonstrates that patients attending a PHC center in a large military hospital in Riyadh generally reported high levels of satisfaction, particularly among male, single, younger, and low-income individuals. The development of new improvements, including an appointment system, has significantly improved patient experiences regarding ease, effectiveness, and convenience. Nonetheless, despite these favorable results, several aspects of healthcare want enhancement to fulfill patient expectations and guarantee optimal healthcare provision. Therefore, healthcare practitioners must persist in determining and addressing these areas to guarantee that patients obtain optimal care and experience in primary healthcare clinics. Additionally, as the healthcare sector becomes more competitive, assessing patient happiness and quality enables managers to regulate, enhance, and optimize various organizational elements. Healthcare practitioners must remain vigilant about the evolving behaviors of patient expectations. Our findings may be further contrasted with studies conducted in alternative healthcare settings or populations that determine patient priorities as well as satisfaction levels. Furthermore, the findings might inform decisions to enhance healthcare services and formulate policies for improvement. Our findings could be applied in comparable healthcare settings to enhance the standard of healthcare services and improve their quality by ensuring high patient satisfaction.

# **Highlights**

- The patient's satisfaction level of primary health care was examined.
- Patient Satisfaction level with the offered services was relatively high.
- Pharmacy services received the greatest level of patient satisfaction.
- Patient satisfaction correlated with gender, age, education, marital status, income.
- Interaction between patient and practitioner was key to patient satisfaction.

#### **Institutional Review Board Statement**

Ethical permission had been obtained from the ethical committee at the Security Forces Hospital (IRB number: 22-577-13).

#### **Informed Consent Statement**

The study complies with the Declaration of Helsinki. Informed consent was acquired from the subjects. The data were maintained in confidentiality and utilized solely for the objectives of this study.

#### **Author Contributions**

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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#### **Disclosure**

The authors declare that they have no conflict of interest.

#### References

- Levesque J-F, Sutherland K. Combining patient, clinical and system perspectives in assessing performance in healthcare: an integrated measurement framework. BMC Health Serv Res. 2020;20(1):1–14. doi:10.1186/s12913-019-4807-5
- Foley T, Vale L. A framework for understanding, designing, developing and evaluating learning health systems. Learn Health Syst. 2023;7(1): e10315. doi:10.1002/lrh2.10315
- 3. Ajegbile MD, Aderonke Olaboye J, Cosmos Maha C, et al. The role of data-driven initiatives in enhancing healthcare delivery and patient retention. *World J Biol Pharmacy Health Sci.* 2024;19(1):234–242. doi:10.30574/wjbphs.2024.19.1.0435
- Ajegbile MD, Olaboye JA, Maha CC, Tamunobarafiri G. "Integrating business analytics in healthcare: enhancing patient outcomes through datadriven decision making". World J Biol Pharm Health Sci. 2024;19:243

  –250.
- Kalaja R. Determinants of patient satisfaction with health care: a literature review. European J Natural Sci Med. 2023;6(1):43–54. doi:10.2478/ejnsm-2023-0005
- 6. Mallat A, Vrontis D, Thrassou A. Patient satisfaction in the context of public-private partnerships. *Int J Organizational Analysis*. 2021;29 (6):1395–1422. doi:10.1108/IJOA-03-2020-2066
- 7. Aladwan MA, Anuar MM, Aladwan RM, et al. The effect of service quality, patient trust and hospital reputation on patient satisfaction in Jordanian public hospital. WSEAS Transactions Business Economics. 2024;21:410–426. doi:10.37394/23207.2024.21.36
- 8. Dewi AAS, Ernawati E. The influence of BPJS health services quality on patient satisfaction at Ciseeng Public Medical Centre. *J Social Sci*. 2023;4 (2):555–560. doi:10.46799/jss.v4i2.554
- 9. Fitzpatrick R. Satisfaction with health care. In: The Experience of Illness. Routledge; 2022:154-176.
- 10. Mubayiwa F. "A holistic investigation into healthcare service quality using a multi-stakeholder approach: the case of Parirenyatwa Hospital". 2023.
- 11. Lumbi WM. Governance accountability mechanisms as a determinant of delivery of quality health services in Kenyatta National Hospital, Kenya. Diss. KeMU, 2020.
- 12. Dignum F, Dignum V, Davidsson P, et al. Analysing the combined health, social and economic impacts of the corovanvirus pandemic using agent-based social simulation. *Minds Mach.* 2020;30(2):177–194. doi:10.1007/s11023-020-09527-6
- 13. Vogus TJ, McClelland LE. When the customer is the patient: lessons from healthcare research on patient satisfaction and service quality ratings. Human Resource Manag Rev. 2016;26(1):37–49. doi:10.1016/j.hrmr.2015.09.005
- 14. Omaghomi TT, Akomolafe O, Onwumere C, et al. Patient experience and satisfaction in healthcare: a focus on managerial approaches-a review. *Int Med Sci Res J.* 2024;4(2):194–209. doi:10.51594/imsrj.v4i2.812
- 15. Li L, Cui X, Feng W. Enhancing patient satisfaction in cross-regional healthcare: a cross-sectional study in the knowledge-based healthcare landscape. *J Knowledge Economy*. 2023;1–27.
- 16. Browne AJ, Varcoe CM, Wong ST, et al. Closing the health equity gap: evidence-based strategies for primary health care organizations. *Int J Equity Health*. 2012;11(1):1–15. doi:10.1186/1475-9276-11-59
- 17. Hookmani AA, Lalani N, Sultan N, et al. Development of an on-job mentorship programme to improve nursing experience for enhanced patient experience of compassionate care. *BMC Nursing*. 2021;20(1):1–18. doi:10.1186/s12912-021-00682-4
- 18. Meesala A, Paul J. Service quality, consumer satisfaction and loyalty in hospitals: thinking for the future. *J Retailing Consum Serv.* 2018;40:261–269. doi:10.1016/j.jretconser.2016.10.011
- 19. Alabdali MA, Husain KS. Understanding the relationship between patient satisfaction and loyalty through telemedicine platform quality: an empirical study. *Int J Healthc Manage*. 2023;1–13. doi:10.1080/20479700.2023.2290351
- 20. Savatagi SB, Nuggehalli Srinivas P, Payyappallimana U. Factors influencing the emergence of self-reliance in primary health care using traditional medicine: a scoping review. *Indian J Public Health*. 2022;66(2):214–222. doi:10.4103/ijph.jjph\_1863\_21
- 21. Batbaatar E, Dorjdagva J, Luvsannyam A, et al. Determinants of patient satisfaction: a systematic review. *Perspectives Public Health*. 2017;137 (2):89–101. doi:10.1177/1757913916634136
- 22. Lateef A, Mbali Mhlongo E. Factors influencing patient-centered care in the primary health care settings: the impact of the pandemic crisis and nurses' experience. *Open J Nursing*. 2022;12(3):220–233. doi:10.4236/ojn.2022.123014
- 23. Javed SA, Liu S, Mahmoudi A, et al. Patients' satisfaction and public and private sectors' health care service quality in Pakistan: application of grey decision analysis approaches. *Int J Health Plann Manag.* 2019;34(1):e168–e182. doi:10.1002/hpm.2629
- 24. Friedberg MW, Chen PG, Van Busum KR, et al. Factors affecting physician professional satisfaction and their implications for patient care, health systems, and health policy. *Rand Health Quarterly*. 2014;3(4).
- 25. Shi L. The impact of primary care: a focused review. Scientifica. 2012;2012(1):432892. doi:10.6064/2012/432892
- 26. Calnan M, Katsouyiannopoulos V, Ovcharov VK, et al. Major determinants of consumer satisfaction with primary care in different health systems. Family Pract. 1994;11(4):468–478. doi:10.1093/fampra/11.4.468
- 27. Miao R, Zhang H, Wu Q, et al. Using structural equation modeling to analyze patient value, satisfaction, and loyalty: a case study of healthcare in China. *Int J P Res.* 2020;58(2):577–596. doi:10.1080/00207543.2019.1598595
- 28. Sofaer S, Firminger K. Patient perceptions of the quality of health services. *Ann Rev Public Health*. 2005;26(1):513–559. doi:10.1146/annurev. publhealth.25.050503.153958
- 29. Taherdoost H. Determining sample size; how to calculate survey sample size. Int J Economics Manag Systems. 2017;2.
- 30. The Ministry of Health (MOH) in Saudi Arabia, patient satisfaction survey, 2020. Available from: https://www.moh.gov.sa/en/Ministry/pxmp/ Pages/default.aspx. Accessed February 25, 2024.

- 31. Alqahtani M, Alanazi M, Alsuwaidan S. Patient satisfaction with primary health care services in Riyadh City, Saudi Arabia. *Int J Clin Med.* 2023;14(8):366–376. doi:10.4236/ijcm.2023.148032
- 32. Mohamed EY, Sami W, Alotaibi A, et al. Patients' satisfaction with primary health care centers' services, Majmaah, Kingdom of Saudi of Saudi Arabia. *Int J Health Sci.* 2015;9(2):163. doi:10.12816/0024113
- 33. Wetmore S, Boisvert L, Graham E, et al. Patient satisfaction with access and continuity of care in a multidisciplinary academic family medicine clinic. *Can Family Physician*. 2014;60(4):e230–e236.
- 34. Raghunath E, Vijayalakshmi S, Sathagurunath PA, Mail ID. A study of outpatient satisfaction at primary health centers in Puducherry. *Health*. 2013;1(4):118–121.
- 35. Tahiri Z, Toci E, Rrumbullaku L, et al. Patients' evaluation of primary health care services in Gjilan region, Kosovo. *J Public Health*. 2014;36 (1):161–169. doi:10.1093/pubmed/fdt041
- 36. Hussien AH, Abd Sa'adoon A, Razaq Museher T. Patients' satisfaction for health care services at Thi-qar province, Iraq. *University Thi-Qar J Med*. 2008;2(1):39–45.
- 37. Salem A, Abdullah A, Ezat Wan Puteh S, Noor Aizuddin A. Comparison of patient's satisfaction level with the provided health services in primary healthcare centers-PHCCs in Ten Cities-Saudi Arabia. *J Pharm Sci Res.* 2020;12(11):1411–1419.
- 38. Al-Neyadi HS, Abdallah S, Malik M. Measuring patient's satisfaction of healthcare services in the UAE hospitals: using SERVQUAL. *Int J Healthc Manage*. 2018;11(2):96–105. doi:10.1080/20479700.2016.1266804
- 39. Farooq A, Khaliq MA, Toor MA, et al. Assessment of patient satisfaction in a military and public hospital: a comparative study. *Cureus*. 2020;12 (8). doi:10.7759/cureus.10174
- 40. AI-laris EA, Khoja TA. Patients satisfaction with accessibility and services. Saudi Med J. 1996;17(1):11.
- 41. Chevalier BAM, Watson BM, Barras MA, et al. Hospital pharmacists' and patients' views about what constitutes effective communication between pharmacists and patients. *Int J Pharm Pract.* 2018;26(5):450–457. doi:10.1111/ijpp.12423
- 42. Samadbeik M, Saremian M, Garavand A, Hasanvandi N, Sanaeinasab S, Tahmasebi H. Assessing the online outpatient booking system. *Shiraz E-Medical J.* 2018;19(4).
- 43. Al-Eisa IS, Al-Mutar MS, Radwan MM, Al-Terkit AM, Al-Eisa I. Patients' satisfaction with primary health care services at capital health region, Kuwait. *Middle East J Family Med*. 2005;3(3):10–16.
- 44. Roohangiz N, Aghabarari M, Shiri M, et al. Communication barriers perceived by nurses and patients. *Glob J Health Sci.* 2015;8(6):65–74. doi:10.5539/gjhs.v8n6p65
- 45. Wune G, Ayalew Y, Hailu A, et al. Nurses to patients communication and barriers perceived by nurses at Tikur Anbessa Specilized Hospital, Addis Ababa. Ethiopia 2018. Int J Africa Nursing Sci. 2020;12:100197. doi:10.1016/j.ijans.2020.100197
- 46. Chan EA, Jones A, Wong K. The relationships between communication, care and time are intertwined: a narrative inquiry exploring the impact of time on registered nurses' work. *J Adv Nurs*. 2013;69(9):2020–2029. doi:10.1111/jan.12064
- 47. Bakić-Mirić NM, Bakić NM. Successful doctor-patient communication and rapport building as the key skills of medical practice. *Facta Univers*. 2008;15(2):74–79.
- 48. Nelson R, Vega C. Improving communication skills enhances efficiency and patient-clinician relationship. Arch Intern Med. 2008;168(13):1364.
- 49. Ferreira DC, Marques RC, Nunes AM, et al. Patients' satisfaction: the medical appointments valence in Portuguese public hospitals. *Omega*. 2018;80:58–76. doi:10.1016/j.omega.2017.08.009
- 50. Ferreira DC, Vieira I, Pedro MI, et al. Patient satisfaction with healthcare services and the techniques used for its assessment: a systematic literature review and a bibliometric analysis. *Healthcare*. 2023;11(5):639. doi:10.3390/healthcare11050639
- 51. Biderman A, Carmel S, Yeheskel A. Measuring patient satisfaction in primary care: a joint project of community representatives, clinic staff members and a social scientist. *Family Pract*. 1994;11(3):287–291. doi:10.1093/fampra/11.3.287
- 52. Sitzia J, Wood N. Patient satisfaction: a review of issues and concepts. Soc Sci Med. 1997;45(12):1829–1843. doi:10.1016/S0277-9536(97)00128-7
- 53. Hekkert KD, Cihangir S, Kleefstra SM, et al. Patient satisfaction revisited: a multilevel approach. Soc Sci Med. 2009;69(1):68–75. doi:10.1016/j. socscimed.2009.04.016
- 54. Rahmqvist M, Bara A-C. Patient characteristics and quality dimensions related to patient satisfaction. *Int J Qual Health Care*. 2010;22(2):86–92. doi:10.1093/intqhc/mzq009
- 55. Alshammari F. "patient satisfaction in primary healthcare centers in Hail city, Saudi Arabia". 2014;1234-1240.
- 56. Almoajel A, Fetohi E, Alshamrani A. Patient satisfaction with primary health care in Jubail City, Saudi Arabia. World J Med Sci. 2014;11 (2):255-264.
- 57. Al-Azmi S, Aida F, Mohammed M, Manal IH. Patients' satisfaction with primary health care in Kuwait after electronic medical record implementation. *J Egypt Public Health Assoc.* 2006;81(5&6):278–300.

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