

# Client's satisfaction with healthcare services received at the hospital outpatients department and the primary healthcare facilities in Al-Qassim, Saudi Arabia

## *A review of service users' satisfaction*

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### ABSTRACT

**الأهداف:** تقييم مستوى الرضا الذي عبر عنه العملاء في العيادات الخارجية و مرافق الرعاية الصحية الأولية عن الخدمات المقدمة في تجمع القسم الصحي بالمملكة العربية السعودية.

**المنهجية:** تم الاعتماد على دراسة مقارنة مسحية في سبتمبر 2023م، وتم الحصول على البيانات عن طريق استخراج البيانات الثانوية من « منصة تجربة المريض »، وزارة الصحة السعودية في شهر يناير 2023م. أجري تحليل لبيانات باستخدام STATA (الإصدار 16)، وتم تحديد مستوى دلالة عند 5%.

**النتائج:** في مقارنة متوسط الرضا للمجالات التسعة، كانت أعلى بشكل ملحوظ إحصائيًا بالنسبة لمرافق الرعاية الصحية الأولية مقارنة بالعيادات الخارجية في 7 مجالات. كان بحث المرضى عن موقع المنشآت الصحية ( $p=0.008$ )، وخدمات التمريض ( $p<0.001$ )، والخدمات الطبية ( $p=0.004$ )، والخدمات الإشعاعية ( $p<0.001$ )، والقضايا الشخصية ( $p=0.003$ )، و الصيدلة ( $p=0.005$ )، و التجربة بشكل عام ( $p=0.036$ ).

**الخلاصة:** وجدنا أن رضا المريض عن الخدمات المقدمة في مراكز الرعاية الصحية الأولية كان أعلى بكثير من رضا المرضى في العيادات الخارجية في منطقة القصيم. للوصول بكليهما إلى حالة مرضية أكثر للمرضى، من الضروري التحسين المستمر لجودة الخدمات المقدمة في العيادات الخارجية لجعلها على مستوى تلك التي تقدمها مراكز الرعاية الصحية الأولية مع تحسين خدمات الرعاية الصحية الأولية. وللوصول لذلك يجب على صانعي القرار ومقدمي الخدمات بذل جهد مستمر.

**Objectives:** To assess the level of satisfaction expressed for services rendered in the public health sector to clients who were seen at outpatient departments (OPDs) and primary healthcare (PHC) facilities in Al-Qassim Health Cluster in Saudi Arabia.

**Methods:** This study used a comparative cross-sectional study design, and data were obtained as secondary data from The Patient's Experience Platform. Data analysis was carried out using Stata (version 16), and the significance level was 5%.

**Results:** In comparing the mean satisfaction in 9 domains, statistically significantly higher means for

the PHC facilities than the OPDs were seen across 7 domains: patients navigating health facilities ( $p=0.008$ ), nursing services ( $p<0.001$ ), physicians' services ( $p=0.004$ ), radiological services ( $p<0.001$ ), personal issues ( $p=0.003$ ), the pharmacy ( $p=0.005$ ), and general experience ( $p=0.036$ ).

**Conclusion:** This study's findings are significant. They indicate that client satisfaction with services at PHC facilities was significantly higher than with services at hospital OPDs in Al-Qassim region. This underscores the need to improve the quality of services provided at OPDs to bring them to the same level as those provided by PHC facilities. Policymakers and implementers should, therefore, sustain efforts to make OPDs and PHC facilities more desirable for clients.

**Keywords:** patient satisfaction, healthcare services, outpatient departments, primary healthcare, Qassim region, Saudi Arabia

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Patient satisfaction is a vital indicator of the quality of care received since the effectiveness of medical treatment and the achievement of the desired state of health determine it.<sup>1</sup> How closely experiences meet expectations can describe how satisfied users are. This might be referred to as their assessment of the overall standard of care. The way patients' expectations and the services provided interact determines their satisfaction. Patients are dissatisfied if their expectations are unmet by the healthcare services they receive, and vice versa. Today, patients have higher expectations of the healthcare system, are better informed, and have access to more information.<sup>1</sup> Therefore, addressing service delivery concerns in this environment is more critical than ever.

Primary healthcare (PHC) facilities are the primary starting point for new patients entering the healthcare system, and emerging data indicate that they are widely acknowledged as the first door into the health system, serving as an indicator of the quality of vital public health services.<sup>2</sup> The hospital outpatient department (OPD) is the first point of contact for patients using hospitals and may significantly influence their satisfaction levels with health care delivery in hospitals. Al-Qassim region, Saudi Arabia, has a few private health facilities, 19 public hospitals, 3 specialized medical centers, 167 PHC facilities, and one military medical institution that serves the 1,336,179 population as of 2023. Despite the region's many public healthcare facilities rendering free services, many clients still patronize private healthcare facilities. A previous study of Al-Qassim perspective of why patients go to private healthcare facilities revealed their high satisfaction with the respect and help patients get from private healthcare facility staff in Al-Qassim region.<sup>3</sup>

Few independent studies have been carried out comparing patients' satisfaction with the quality of services in public hospitals and private health facilities, hospitals and PHC facilities.<sup>3,4</sup> This research aimed to determine and compare clients' satisfaction with healthcare services at the various hospitals OPDs and PHC facilities in Al-Qassim, Saudi Arabia.

**Methods.** This research used a descriptive comparative study design. The study population was comprised of clients who used the public PHC facilities and the

OPDs of hospitals in Al-Qassim region. Secondary data were obtained from The Patient's Experience Platform of the Saudi Ministry of Health for 2023. The platform is used to obtain voluntary feedback data from all clients who received healthcare services in Saudi Arabia's public health sector. The study included all the clients seen in the PHC facilities and the hospital's OPDs in Al-Qassim region in January 2023 who voluntarily filled out the patients' service satisfaction form after receiving services. Those who did not complete or submit their filled-out patients' service satisfaction form after receiving services were all excluded.

The minimum sample size for the study was determined using the formula for comparative cross-sectional studies, which involves comparing 2 independent means. The minimum sample size equation ( $n$ ) is given as  $n=2\{[(Z\alpha + Z\beta)\sigma]^2\}/\delta$ .<sup>5</sup> Where  $\sigma$ : population variance;  $Z\alpha$ : standardized value associated with  $\alpha$ , the level of significance;  $Z\beta$ : standardized value associated with  $\beta$ , the type II error;  $\mu_1$ =population mean in group 1 (clients in PHC);  $\mu_2$ =population mean in group 2 (clients attending OPD);  $\mu_1-\mu_2$ =the difference the investigator wishes to detect; and  $\delta=|\mu_0-\mu_1|$  is the detectable difference in the mean=5. For  $\alpha=0.05$ ,  $z_\alpha=1.96$ ; for  $\beta=0.20$ ,  $Z_\beta=0.842$ .<sup>6</sup>

Substituting into the equation above,

$$n = 2 \frac{|(1.96 + 0.842)10|^2}{5} = 64.$$
 Therefore, the minimum sample size for each group is 64.

Primary data were sourced using a simple random sampling technique. There were 709 participants from the OPDs of 19 public hospitals and 2,559 participants from 154 functional PHC facilities, making a ratio of one hospital to 8 functional PHC facilities and an average of 79 responses for the OPD and 17 responses for the PHC facilities in 2023. However, the total number of clients seen in each of the facilities was not determined as it was outside the scope of this research, so the feedback response rate could not be determined. The patients' satisfaction feedback platform questions were categorized into 9 domains. The responses to the questions were on a scale of 1-5, with 1 representing very poor and 5 representing very good. The variables were measured as nominal and numerical variables. Frequencies and percentages were obtained from the categorical data.

**Statistical analysis.** both descriptive and inferential, was carried out with Stata (version 16) software. Alpha ( $\alpha$ ) was set at a 5% significance level. The  $p$ -values for parametric analyses was one-tailed and non-parametric analyses was 2-tailed.

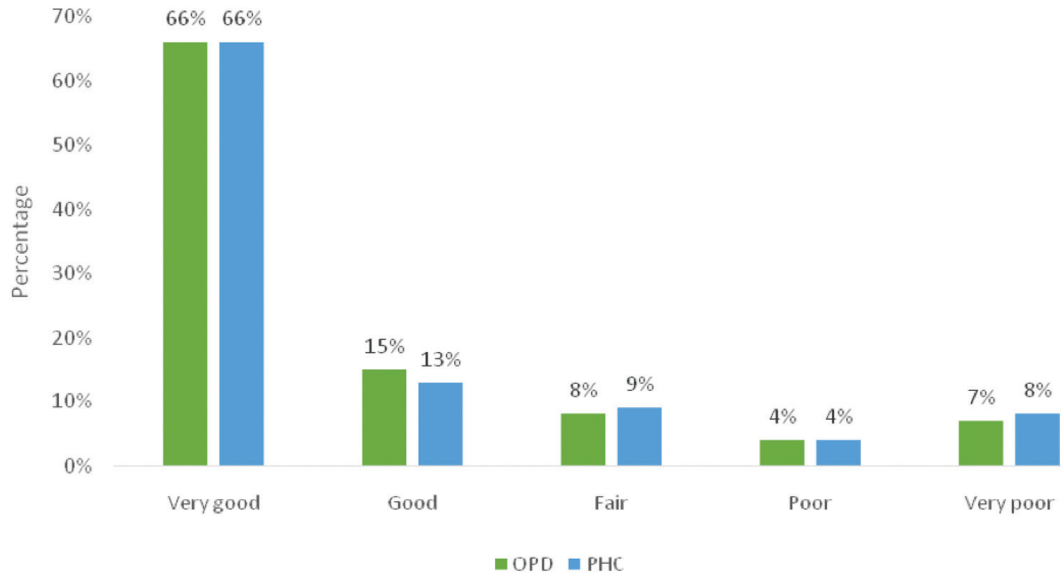
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**Results.** The proportion of respondents who stated that their level of satisfaction as very good was 66% for OPD and PHC service users. The percentage who described it as good was 15% for OPD users and 13% for PHC users. The lowest percentage (4% for OPDs and PHC facilities) was for those who claimed poor satisfaction (Figure 1).

The average weighted mean scores for satisfaction with access was 81.51 for clients seeking care in OPDs

and 89.83 for clients seeking care in PHC facilities. The weighted average satisfaction with ease of navigation was 78.61 for clients seeking care at OPDs and 86.64 for clients seeking care at PHC facilities. Finally, the weighted average satisfaction with general issues was 83.14 for clients seeking care at OPDs and 85.47 for clients seeking care at PHC facilities (Table 1).

The weighted average mean score for satisfaction with the nursing services was 82.41 for clients seeking



**Figure 1 -** Service users' overall satisfaction with outpatient department and primary healthcare facilities in Al-Qassim region, Saudi Arabia. OPD: outpatient department, PHC: primary healthcare

**Table 1 -** Service users' satisfaction levels concerning the ease of accessing facilities, navigating the facility, and other general issues in public health facilities in Al-Qassim region, Saudi Arabia.

Variables	Average level of satisfaction	
	OPD	PHC
<i>Satisfaction with access</i>		
Ease of scheduling appointments	84.84	95.74
Ease of contacting health facility	74.95	84.39
Courtesy of staff in theregistration area	84.74	89.35
Total	81.51	89.83
<i>Satisfaction with ease of navigation</i>		
Ease of registration process	85.49	89.71
How promptlyclients were informed regarding any delays	77.49	85.29
Wait times at the clinic	74.4	83.69
The comfort of the waiting area	75.35	82.9
Bathroom cleanliness	80.3	91.61
Total	78.61	86.64
<i>Satisfaction with general issues</i>		
How well staff worked together to care for clients	83.91	86.27
The likelihood of clients recommending the health facility to others	81.81	84.10
Overall rating of care received during visits	83.69	86.05
Total	83.14	85.47

Values are presented as mean scores. OPD: outpatient department, PHC: primary healthcare

care at the OPDs and 91.34 for clients seeking care at the PHC facilities. The weighted average mean scores for satisfaction with the physician services were 81.98 for clients seeking care at OPDs and 86.01 for clients seeking care at PHC facilities. Finally, the weighted average scores for satisfaction with other personal issues was 82.70 for clients seeking care at OPDs and 91.35 for clients seeking care at PHC facilities (Table 2).

The clients' reported weighted average mean satisfaction for laboratory services was 87.20 for those

seeking care at OPDs and 87.99 for those seeking care at PHC facilities. The weighted average satisfaction with radiological services was 82.88 for clients seeking care at OPDs and 87.36 for clients seeking care at PHC facilities. Finally, the weighted average satisfaction with pharmacy services was 84.50 for clients seeking care at OPDs and 91.30 for clients seeking care at PHC facilities (Table 3).

Table 4 shows that clients seeking care at PHC facilities experienced statistically significantly higher

**Table 2 -** Respondents' average satisfaction levels concerning healthcare workers' services in hospitals' outpatient departments and primary healthcare facilities in Al-Qassim region, Saudi Arabia.

Variables	The average level of satisfaction	
	OPD	PHC
<i>Satisfaction with nursing services</i>		
How well the nurses listened to the client	82.73	91.99
Concern the nurses showed for the client's problems	81.53	90.48
Nurses' friendliness and politeness	82.98	91.56
Total	82.41	91.34
<i>Satisfaction with physicians' services</i>		
The physician's response to the client's questions and concerns	82.85	87.21
Explanations the physician gave the client regarding problems or conditions	82.92	87.55
Physician's efforts to include clients in decisions on treatment	81.89	86.53
Physician's discussion of proposed treatments (namely, options, risks, and benefits)	80.82	86.98
Likelihood of client recommending physician to others	81.42	81.79
Total	81.98	86.01
<i>Satisfaction with personal issues and experiences</i>		
Concerns for client's privacy	85.96	91.91
How well the medical staff protected client's safety (sanitizing hands and wearing gloves)	83.03	89.01
Cleanliness of clinics	84.5	92.97
Parking	77.32	91.53
Total	82.70	91.35

Values are presented as mean scores. OPD: outpatient department, PHC: primary healthcare

**Table 3 -** Respondents' average satisfaction levels concerning diagnostic and pharmaceutical services in hospitals' outpatient departments and primary healthcare facilities in Al-Qassim region, Saudi Arabia.

Variables	Average level of satisfaction	
	OPD	PHC
<i>Satisfaction with laboratory services</i>		
Waiting time to have blood drawn	86.11	88.79
Concern for the client's comfort when blood was drawn	88.09	89.86
Skill of the person who took blood (namely, did it quickly, with minimal pain)	87.39	85.33
Total	87.20	87.99
<i>Satisfaction with radiological services</i>		
Waiting time for radiology test	82.85	87.21
Explanations from the staff on what would happen during a test or imaging procedure	82.92	87.55
Total	82.88	87.36
<i>Satisfaction with pharmacy services</i>		
Waiting time for filling prescriptions	85.96	91.91
The pharmacist's explanations on prescriptions	83.03	89.01
Availability of prescribed medications	84.50	92.97
Total	84.50	91.30

Values are presented as mean scores. OPD: outpatient department, PHC: primary healthcare

weighted mean satisfaction than those at OPDs in 7 of the 9 domains. These 7 domains include: ease of navigating the facilities ( $p=0.008$ ), attending to general issues ( $p=0.036$ ), services rendered by nurses ( $p<0.001$ ), services rendered by physicians ( $p<0.004$ ), solving personal issues ( $p=0.003$ ), radiological services ( $p<0.001$ ), and pharmacy services ( $p<0.005$ ).

There was no statistically significant difference between the overall level of services received by clients at hospital OPDs and at PHC facilities in Al-Qassim region (Table 5).

**Discussion.** This study's comparison of the overall grading of satisfaction levels expressed by clients at PHC

**Table 4 -** A comparison of the association between clients' satisfaction with access across various hospitals' outpatient departments and primary healthcare facilities in Al-Qassim region, Saudi Arabia.

Groups	Mean±SD	t-test	df	P-values
<i>Access</i>				
OPD	81.51±32.28	1.7915	2	0.074
PHC	89.83±32.38			
<i>Ease of navigation</i>				
OPD	78.61±19.95	3.0537	4	0.008*
PHC	86.64±14.66			
<i>General issues experienced</i>				
OPD	83.14±1.33	2.4367	2	0.036*
PHC	85.47±1.43			
<i>Services rendered by nurses</i>				
OPD	82.41±0.60	14.0840	2	<0.001*
PHC	91.34±0.61			
<i>Services rendered by physicians</i>				
OPD	81.98±0.83	3.5269	4	0.004*
PHC	86.01±5.71			
<i>Personal issues</i>				
OPD	82.70±14.31	4.1821	3	0.003*
PHC	91.35±2.82			
<i>Laboratory services</i>				
OPD	87.2±1.01	0.5365	2	0.310
PHC	87.99±5.61			
<i>Radiological services</i>				
OPD	82.88±0.00	25.8980	1	<0.001*
PHC	87.36±0.06			
<i>Pharmacy services</i>				
OPD	84.50±2.15	4.6744	3	0.005*
PHC	91.30±4.20			

\*Statistically significant. SD: standard deviation, df: degree of freedom

**Table 5 -** A comparison of clients' overall satisfaction with the services received in various hospitals' outpatient departments and primary healthcare facilities in Al-Qassim region, Saudi Arabia.

Variables	Health facilities		$\chi^2$	P-value
	OPD (hospitals)	PHC		
Very good	468 (66.0)	1,686 (65.9)	2.0607	0.7246
Good	105 (14.8)	338 (13.2)		
Fair	60 (8.5)	238 (9.3)		
Poor	26 (3.7)	110 (4.3)		
Very poor	50 (7.1)	187 (7.3)		
Total	709 (100)	2,559 (100)		

Values are presented as numbers and percentages (%). OPD: outpatient department, PHC: primary healthcare



facilities and the OPDs in Al-Qassim region of Saudi Arabia indicated no statistically significant difference in their levels of satisfaction. Of the clients who received services at PHC facilities in Al-Qassim region, 66% were very satisfied, and 13% described the services as good. The remaining 21% were unsatisfied with the services they received, noting their satisfaction levels as very poor (8%), poor (4%), and fair (9%). These findings are similar to those from a study carried out at PHCs services, Majmaah, Saudi Arabia, in which 82% of patients were satisfied with the services they received, but they differ from findings concerning PHC services in Al-Ahsa, Saudi Arabia, which showed lower patient satisfaction (only 13.2% of the respondents were highly satisfied).<sup>7,8</sup> Of the respondents who received services at hospital OPDs in Al-Qassim region in this study, 66.0% were very satisfied, and 15% rated their satisfaction levels as good. The remaining respondents described their level of satisfaction as very poor (7%), poor (4%), and fair (8%). This finding was consistent with findings from a previous Saudi Arabia national survey data in which over 80% of respondents were satisfied with the level of outpatient responsiveness.<sup>9</sup>

In terms of navigating the public healthcare facilities in Al-Qassim region, the weighted mean score for the ease of the registration process in the facility or area they were to receive medical care, the receipt of information on any delays and waiting time, the comfort of the waiting area, and the cleanliness of the bathroom and toilets in the facilities were statistically significantly lower in OPDs than in PHC facilities. The average satisfaction for this domain was statistically significantly higher for PHC facilities ( $86.64 \pm 14.66$ ) than for OPDs ( $78.61 \pm 19.95$ ). In this study, the mean score for satisfaction with the registration process and access to PHC facilities was 86.64%. This score was higher than the findings reported for PHC facilities in Riyadh, Saudi Arabia, which had a mean of 70.0%.<sup>10</sup> Various patient satisfaction evaluation surveys have found waiting times a significant, ongoing source of dissatisfaction. A previous study carried out in Riyadh, Saudi Arabia, reported concerns regarding the longer waiting time patients experienced while seeking healthcare services.<sup>11</sup> Patients are expected to see their doctors or other healthcare providers on time because of the interval appointments system given at specific times in Al-Qassim public healthcare sector. Accordingly, waiting time should be reduced.

In this study, the clients rated their satisfaction with nurses' services in PHC facilities and OPDs as high. None of the ratings were lower than 80% satisfaction

concerning all issues in the nursing services domain (nurses listening to clients, nurses showing concern over clients' problems, and nurses being friendly and polite). The mean score for the level of satisfaction obtained by patients was statistically lower for OPDs ( $82.41 \pm 0.60$ ) than for PHC facilities ( $86.64 \pm 0.61$ ). This finding is relatively similar for the PHC facilities compared to what was reported in a previous study carried out in Taif, Saudi Arabia, in which 90.8% of the patients were satisfied with the nursing care received.<sup>12</sup>

The level of satisfaction with the services clients received from their doctors was assessed in 5 dimensions. Physicians' responses to clients' questions or concerns, the explanations given regarding clients' problems and conditions, efforts to include the clients in the decision-making process for their treatment, the discussion of the proposed treatment options and the associated risks and benefits, and the likelihood of clients recommending their attending physicians to others were all statistically significantly ( $p=0.004$ ) higher for PHC facilities than for OPDs and above 80% for both. These findings could be because clients' expectations at the secondary and tertiary levels of healthcare could have been higher than what they were for PHC facilities. A similarly high level of satisfaction was also found in a Canadian study, which reported that approximately 84% of respondents perceived their experience as satisfactory.<sup>13</sup> However, the level of satisfaction was lower than the 90.1% satisfaction identified in an Al-Baha, Southern Saudi Arabian study.<sup>14</sup> The high level of satisfaction of clients with the care they received from their doctors, although comparatively lower for OPDs, could reveal an improvement in Al-Qassim region over the findings of a 2015 study in Al-Baha region of Saudi Arabia.<sup>15</sup> It is unsurprising because previous studies carried out in Saudi Arabia have indicated that there are deliberate healthcare reforms in Saudi Arabia that have focused on improving patients' experiences at PHC facilities with physician-patient communication.<sup>16</sup> The reforms may have begun to achieve the needed results in the public PHC facilities.

In terms of solving personal issues at OPDs and PHC facilities, the mean satisfaction for clients seeking care at OPDs ( $82.70 \pm 14.31$ ) was statistically significantly lower than for those seeking care at PHC facilities ( $91.35 \pm 2.82$ ). Similarly, differences in weighted mean satisfaction with general issues for clients seeking care at OPDs ( $83.14 \pm 1.33$ ) were statistically significantly lower than those for clients seeking care at PHC facilities ( $85.47 \pm 1.43$ ). The personal questions asked involved clients' concerns regarding privacy, their

satisfaction with parking areas at health facilities, and how well the medical staff protected their safety by using hand sanitizers, wearing gloves, and maintaining their clinics' cleanliness. For patient privacy, the findings in the present study were slightly lower than those of Khan et al's study,<sup>17</sup> in which 94% of patients revealed that they were satisfied with the nursing practice because the nurses ensured patient privacy. To medical practitioners in Saudi Arabia, respecting patients' privacy is crucial to a successful practice. Patient privacy is one of the criteria used to assess patient satisfaction and has been reported to demonstrate a strong positive correlation with patient satisfaction.<sup>18,19</sup>

There was no difference in satisfaction with general access to healthcare facilities and laboratory services for service users at PHC facilities and OPDs in Al-Qassim region. Conversely, there was a statistically significantly higher level of satisfaction among patients and clients seen at PHC facilities than those seen at OPDs in Al-Qassim region for radiological and pharmacy services. The higher satisfaction for radiological services in the PHC facilities in this study might be because fewer radiological investigations are carried out at the PHC level of care than at hospital facilities. Hence, they may be rapidly carried out, therefore, meet users' expectations with a satisfaction level of above 80% as seen in this study. This percentage was higher than the levels of satisfaction found in Jazan, Saudi Arabia, with 56.8% satisfaction with the availability of clinical diagnostic methods.<sup>20</sup> Also, the satisfaction scores for waiting times for prescription filling and pharmacists' explanations of the availability of prescribed medications were above 80% for OPDs and PHC facilities. This finding is similar to that reported in a previous study carried out in Saudi Arabia, in which respondents' satisfaction levels with the information they received on taking medicine was of 87.1% and other explanations was of 84.0%.<sup>21</sup>

**Study limitations.** The cross-sectional nature of this study may limit its finding generalization. Secondly, a single patient may have filled out more than one response following service utilization. However, using one-month feedback records helped reduce such occurrences.

In conclusion, the levels of satisfaction expressed by patients who used the services of public PHC facilities and hospitals' OPDs in Al-Qassim region, Saudi Arabia, showed a statistically significant higher in all domains examined in this study except for access to the health facilities and laboratory services. The domains showing higher levels of satisfaction were navigating

the facility, personal experiences, nursing services, physicians' services, general experiences, radiological, and pharmaceutical services. Therefore, we recommend that the policymakers in Al-Qassim healthcare sector strategically look at possible ways to sustain and improve the quality of services provided at PHC facilities in the region while trying to bring OPD services to the level of PHC facility services. Furthermore, Al-Qassim public health sector stakeholders should facilitate more in-depth research to unravel the possible reasons for the lower levels of satisfaction in the identified domains at the OPDs with the intention of addressing them. The improvements in the services rendered at the OPDs of hospitals will positively impact healthcare services rendered across all levels of care.

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