Patient satisfaction and experience of primary care in Saudi Arabia: a systematic review

MOHAMMED SENITAN1,2, ALI HASSAN ALHAITI3, and JAMES GILLESPIE1

1Menzies Centre for Health Policy, Sydney School of Public Health, University of Sydney, 2006 Sydney, Australia, 2Department of Public Health, Faculty of Health Sciences, Saudi Electronic University, 6481, 12231 Riyadh, Saudi Arabia, and 3Nursing Rehabilitation Department, King Fahad Medical City, 6481, 12231 Riyadh, Saudi Arabia

Address reprint requests to: Mohammed Senitan, No. 2W19/Level 2, Charles Perkins Centre D17, The University of Sydney, NSW 2006, Australia. Tel: +61 286276130; Fax: +2205 (02) 8627 0141; E-mail: malharbi@seu.edu.sa or malh8372@uni.sydney.edu.au

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Abstract

Purpose: This systematic review aims to explore patient satisfaction (PS) among patients who used Ministry of Health (MoH) primary care centres in Saudi Arabia, with a focus on their communication with physicians.


Study selection/Data extraction: The review focused on studies concerning PS in Saudi MoH primary care centres published between 2005 and 2017. Two independent reviewers confirmed that the included studies met the selection criteria, assessed the quality of the selected studies and extracted their significant characteristics. All of the articles were examined in terms of the five main domains that determine the patient–physician communication identified by Boquiren, Hack, Beaver et al. (What do measures of patient satisfaction with the doctor tell us? Patient Educ Couns 2015;98:1465–73).

Results: The literature search retrieved a total of 846 studies. Only 10 studies met the selection criteria. All of the studies reported at least one domain of PS. There was a strong relationship between the level of education, income and satisfaction rate. Most of the studies reported PS in terms of the domains of availability and accessibility, and communication. Few of the studies covered the other domains, such as relational conduct, views on the physician’s technical skills/knowledge and the personal qualities of physicians.

Conclusion: There was a contradiction between the patients’ responses to the surveys on the domains of PS and their actual experience. While the patients reported that they were satisfied with primary care centres, they frequently attended the emergency department directly. This indicated that they were unlikely to be fully satisfied with the primary healthcare centre.

Key words: patient satisfaction, patient experience, Saudi Arabia, primary care, communication, physicians, quality of care

Introduction

Patient satisfaction (PS) with the healthcare system has received substantial attention in the evaluation of modern healthcare. While PS measurements have been widely used to measure the quality of healthcare, they remain proxy measures [1]. Communication between the physician and patient is a significant component of PS that can affect overall satisfaction [2, 3].

The Ministry of Health (MoH) healthcare system was established in 1926 and consists of three levels: primary, secondary and tertiary healthcare services available through the MoH network [4].
Primary healthcare (PHC) is provided through healthcare centres. PHC centres are the first place where patients encounter the healthcare system [4].

Alyasin and Douglas [5] found that 65% of emergency visits to the hospital were for non-urgent cases. The main reasons for visits to the emergency department were lack of trust in PHC centres and the quality of care received in PHC centres not meeting expected standards. When patients were asked about their satisfaction with PHC centres, their satisfaction rate with the care provided by local PHCs was reported as mostly neutral or dissatisfied [5].

The critical issue in Saudi PHC is patient–physician communication, as most physicians in Saudi Arabia are from different backgrounds and speak different languages. According to Almutairi [6], cultural and language differences were two barriers to patient–physician communication. This could create the major barrier to patient trust in PHC, as the PS questionnaires revealed.

### Purpose

To better understand this issue, this paper examined the main domains of PS that explain the patient–physician relationship. The domains were adapted from Boquiren and colleagues [1], who concluded that the measurement of PS is necessary to assess, plan, deliver and improve medical services. In their review, they also identified five domains to productively assess the efficacy, quality and feasibility of healthcare institutions [1].

The first domain emphasises the importance of good ‘communication’ between the patient and medical staff, highlighting the influence of the physician’s listening skills and comprehensibility. The second domain values ‘relational conduct’ via the interpersonal skills of the medical staff and how they address the patient with respect and courtesy. The third domain reflects the ‘technical skills’ of the clinic staff, and the available equipment in the healthcare institution. The professional level, knowledge and expertise of physicians play an important role in establishing patient trust and compliance with treatment. The fourth domain considers the ‘personal qualities’ and human nature of the hospital staff, emphasising their compassion and caring towards the patient. Finally, the fifth domain underlines the ‘availability/accessibility’ attributes of healthcare institutions by analysing the ease of obtaining appointments, waiting times and the availability of preferred doctors for accommodating patient wishes [1]. Table 1 shows the subdomains of these five domains.

### Method

This paper used the systematic review method. Two independent reviewers confirmed that the cross-sectional studies included in the review met the selection criteria. They also assessed the quality of the studies and extracted their significant characteristics. The selected studies were assessed based on the five main domains identified by Boquiren and colleagues (‘communication, relational conduct, technical skills, personal qualities and availability/accessibility’) that determine the patient–physician relationship [1].

### Data sources and search strategy

This review searched four major databases: Medline, CINAHL, Embase and Global Health. A manual search for articles on research into PS in Saudi Arabia was also conducted to retrieve articles that were not shown in the database searches. Three journals were also identified based on their relevance to the topic: the Saudi Medical Journal, Annals of Saudi Medicine and Journal of Family and Community Medicine. All searches were performed in English. We also used Google Scholar to search for any relevant articles using similar terms. Based on the most relevant articles identified, we performed a forward citation search to identify further studies to be included in this review.

We decided to use search terms that were relevant to the four main concepts (PS, PHC centre, MoH and Saudi Arabia). For example, the term ‘General Practice’ or ‘Medical Centre’ under the PHC centre concept identified a wide range of articles in the literature. We also used the term trees of different databases, such as MeSH for Medline. When collecting studies from the manual searches of journals and Google Scholar, we recognised that using a greater number of terms complicated the search and produced vague results and thus, for these searches, we used the concept terms.

### Study selection

All of the studies included in the analysis were required to meet the following inclusion criteria: (1) original research; (2) focused on PS in MoH PHC centres in Saudi Arabia and (3) published between January 2005 and January 2017 as there was a comprehensive review that covers years from 1985–2004 which considered in this review [7]. Studies were excluded if they focused on settings other than MoH PHC centres.

### Quality appraisal

Quality appraisal is a critical step in systematic reviews. It aims to assess the quality of the methodology used in a study and determine the extent to which a study has addressed the possibility of bias in its design, conduct and analysis. The Joanna Briggs Institute (JBI) critical appraisal tools have been developed by the JBI and collaborators, and approved by the JBI Scientific Committee following extensive peer review [8]. In this review, the quality of the studies was evaluated using these tools in the form of a checklist for analytical cross-sectional studies (see Table 2) [8].
Data extraction
A data extraction form was developed and used to extract data from the included studies. Table 1 shows the five main domains used for the PS measurements.

Results
The systematic search
The database search retrieved 846 articles from Medline, CINAHL, Embase and Global Health. After removing duplicates, 723 articles remained. Of these, a further 167 were removed as they were out of the specified date range. The titles of the remaining 567 articles were screened. A further 544 articles were excluded after screening the titles. Twelve articles were fully screened, of which six were included in the analysis. Another four articles were added from Google Scholar and forward citation searches. This gave a final count of 10 articles to be included in this review. Figure 1 illustrates the selection procedure utilised to obtain the studies analysed for this review.

Characteristics of the included papers
The included papers were quantitative cross-sectional studies. The papers in this review covered most of the regions in Saudi Arabia, including Riyadh province [9], Dammam [10], Majmaah [11], Abha [12, 13], Hail [14, 18], Jubail [15], Al-Laith [16] and Jeddah [17]. These studies provided a range of comparisons in terms of their survey approaches and their direct or indirect application of the five PS domains. Some of these studies mentioned the validity and reliability of PS questionnaires tools [9–14, 16]. Appendix presents the responses and a detailed description of all the factors showing positive and negative results regarding PS and the limitations faced by the researchers while collecting the survey responses.

Overall satisfaction
Overall satisfaction refers to the question at the end of the PS questionnaire asking about the participants’ general or overall satisfaction. Overall satisfaction was reported in almost all studies. The overall satisfaction reported in the included studies ranged from 50% to over 90% [9, 11, 12, 14–18]. In eight studies, the overall satisfaction was over 75%, which aligns with the previous review by Al-Ahmadi and Roland (2005) [7] (Table 3).

The five domains of patient–physician communication
Communication attributes
Six studies reported the communication domain [9, 10, 12, 14–15]. However, while some studies clearly reported the communication sub-domains between physicians and patients, some did not. Overall, the PS scores on the communication domain ranged from 50% to 89.5%. Table 4 shows the included studies report of the five domains.

In Al-Ali and Elzubair’s study [10], 49% of patients were not satisfied with physician communication. The mean satisfaction score of rapport among the participants in this study was 77% [10]. The highest communication satisfaction score came from elderly patients with a low level of education, suffering from chronic conditions and with fixed appointments with a physician.

Al-Ali and Elzubair [10] concluded that the patients and physicians had good communication. Almoajel, Fetohi and Alshamrani [15] reported that 70% of patients were satisfied with their doctors’ listening skills. Additionally, 60% of patients reported that their physicians treated them nicely, while 14% disagreed with this statement [15]. Furthermore, 21% of patients reported that the time spent with their physicians was not enough. Thus, this domain had substantial differences in PS.

Alshammari [14] reported that the communication domain received the third highest score (M = 3.64) of PS. In Ghazwani and Al Jaber’s study [12], 86% of patients were moderately to highly satisfied with the communication they had with their physicians and only 13% were not satisfied. Abdalla et al. [18] reported that the satisfaction rate for physicians was the highest; however, listening to patients’ complaints scored the lowest satisfaction scores.

Relational conduct
Only three studies reported the relational conduct domain [9, 14, 15]. The subdomains overlapped with the subdomains of personal qualities.
For instance, Alshammari [14] reported that the interpersonal dimension, which has six subdomains, with four domains (personal interest, reassurance, respect, and support and time offered to their patients) under relational conduct and two domains (friendliness, courtesy) under personal qualities.

Almoajel, Fetohi and Alshamrani [15] found that 82% of patients reported that the reception staff treated them well, 84% of patients agreed that their physicians treated them with respect, while 62% of patients agreed that their physicians did not listen to their complaints. Alshammari [14] reported that the interpersonal dimension (M = 3.78) had the highest score of the PS domains, which was represented by six items, among which four (personal interest, reassurance, respect, and support and time offered to the patients by their physicians) were related to relational conduct.

**Technical skill/knowledge**

Five studies reported the technical skill/knowledge domain [11, 13, 14, 17, 18]. Alshammari [14] identified the technical domain as the second-highest scoring dimension (M = 3.76), represented by four items measuring the skill, experience and training of physicians, thoroughness of treatment, examination and accuracy of diagnosis, and positive outcomes of medical care.

Mohamed et al. [11] reported that cleanliness (33%), technical competence of staff (24.2%), respect and good handling (23.2%), good service (8.3%) and others (11.2%) had the highest percentages.

Mahfouz et al. [13] reported a difference in PS in the personal qualities domain between urban and rural patients. The patients from urban areas were more dissatisfied (18.2%) compared with rural patients (6.1%) (P < 0.05).

**Personal qualities**

Four studies reported the personal qualities domain [10, 13, 14, 17]. In Alshammari’s study [14], the highest PS score was M = 3.78, representing friendliness, courtesy, personal interest, reassurance, respect, and support and time offered to the patient by the physician.

Mahfouz et al. [13] reported a difference in PS in the personal qualities domain between urban and rural patients. The patients from urban areas were more dissatisfied (18.2%) compared with rural patients (6.1%) (P < 0.05).

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**Table 3 Overall satisfaction**

<table>
<thead>
<tr>
<th>Study</th>
<th>Overall satisfaction (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfaqeeh et al. [9]</td>
<td>88</td>
</tr>
<tr>
<td>Al-Ali and Elzubair [10]</td>
<td>NA</td>
</tr>
<tr>
<td>Mohamed et al. [11]</td>
<td>82</td>
</tr>
<tr>
<td>Ghazwani and Al Jaber [12]</td>
<td>87</td>
</tr>
<tr>
<td>Mahfouz et al. [13]</td>
<td>82</td>
</tr>
<tr>
<td>Alshammari [14]</td>
<td>NA</td>
</tr>
<tr>
<td>Almoajel et al. [15]</td>
<td>77</td>
</tr>
<tr>
<td>Aljasir and Alghamdi [16]</td>
<td>96.9</td>
</tr>
<tr>
<td>Maram BanaKhar et al. [17]</td>
<td>89</td>
</tr>
<tr>
<td>Abdalla et al. [18]</td>
<td>73.6</td>
</tr>
</tbody>
</table>

For instance, Alshammari [14] reported that the interpersonal dimension, which has six subdomains, with four domains (personal interest, reassurance, respect, and support and time offered to their patients) under relational conduct and two domains (friendliness, courtesy) under personal qualities.

Almoajel, Fetohi and Alshamrani [15] found that 82% of patients reported that the reception staff treated them well, 84% of patients agreed that their physicians treated them with respect, while 62% of patients agreed that their physicians did not listen to their complaints. Alshammari [14] reported that the interpersonal dimension (M = 3.78) had the highest score of the PS domains, which was represented by six items, among which four (personal interest, reassurance, respect, and support and time offered to the patients by their physicians) were related to relational conduct.
Almoajel and Elzubair [10] found that patients with physician empathy were not high, they did not report the percentage or meaning of ‘not high’. The most recent studies (two from 2014 and one from 2016) reported the personal qualities domain, showing that this domain is becoming more and more important in PS [10, 14, 15].

Availability and accessibility
Eight studies reported the availability and accessibility domain, making it the most frequently reported domain in this review [9, 12–18]. Aljasir and Alghamdi [18] reported that the majority of patients were satisfied with PHC working hours, physicians and nurses, which were rated as acceptable or good. Almoajel, Fetohi and Alshamrani [15] found that 86% of patients were satisfied with the accessibility of their clinics, reporting that the distance between their home and the PHC centre was acceptable.

Alshammari [14] reported that the lowest-scoring domain in their PS study was accessibility (M = 3.56). The accessibility and availability domain was represented using five items measuring the access to and the convenience of medical care. Availability was indicated using two items: the ease of seeing the physician of choice and the number of physicians at the centre. Ghazwani and Al Jaber [12] reported that 28% of patients were dissatisfied with pre-clinic items that were directly related to the steps performed before meeting the physician. The pre-clinic satisfaction rates were the lowest for PHC accessibility, availability of parking areas, comfortable waiting areas, short waiting times and measurement of the patient’s vital signs before meeting the physician.

Mahfouz and colleagues [13] reported that in the accessibility domain, 35% of patients were not satisfied with the lack of signs to emergency rooms in PHC centres, and 19.4% reported insufficient parking places. Unlike Aljasir and Alghamdi’s study [16], 30% of patients in urban areas were dissatisfied with the working hours of PHC centres, compared with 11% of rural patients.

Discussion
The reviewed studies are in some ways contradictory. For example, Alshammari [14] reported that the accessibility and availability score was the lowest, and yet when examining the subdomains of this factor, the time offered to patients by the physicians, represented under personal qualities, was the highest scoring item. The accessibility domain was used differently in this study compared with the other studies as it discussed access when patients were inside the PHC centre, access for the distance from home to the PHC centre, and certain other access factors.

Further, Almoajel et al. [15] showed that 84% of participants reported that their physicians treated them with respect. However, 62% reported that the physician and medical staff did not listen to their complaints.

For Maram BanaKhar et al. [17], 52.9% of patients reported that the number of physicians was adequate and 89% were satisfied. However, 58.6% answered the same question with ‘no’ and their satisfaction was reported at 82%. While in some responses patients identified issues with PHC, these were not reflected in their overall satisfaction.

This review showed that the experience of patients was different from the high satisfaction rates reported. A study conducted in Kuwait on overall PS found that the overall satisfaction of participants was 99.6%. However, when the same participants were asked about their satisfaction with each service, their mean satisfaction rate dropped to 88.6% [20]. This result aligns with other studies. For example, Williams and Calnan [21] showed that while general levels of consumer satisfaction were high, questions of a more detailed and specific nature revealed greater levels of expressed dissatisfaction.

Historically, PS measurements were introduced in 1961 from the consumer movement, which viewed patients as consumers of healthcare [1]. This means that PS is related to the expectations of the patient, where patient experience is related to the quality of the health services provided.

As most physicians in Saudi Arabia are from overseas, a clearer and deeper examination of the communication domain is needed. An analysis of the communication subdomains is essential to strengthen our understanding of the communication between physicians and patients.

Future research should address this gap by comparing patient experiences and satisfaction within the same sample. Research is needed to enhance the use of different PS measurements that represent the actual status of PHC for the Saudi population. Future research should also examine patient experience measurements of PHC in Saudi Arabia.

This paper (1) examined literature from January 2005 to January 2017 on PS of PHC and the relationship between patients

Table 4 Checklist for the inclusion of five domains in the reviewed studies

<table>
<thead>
<tr>
<th>Domain article</th>
<th>Communication attributes</th>
<th>Relational conduct</th>
<th>Technical skill and knowledge</th>
<th>Personal qualities</th>
<th>Availability and accessibility</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfaqeeh et al. [9]</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>3</td>
</tr>
<tr>
<td>Al-Ali and Elzubair [10]</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>2</td>
</tr>
<tr>
<td>Mohamed et al.[11]</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>1</td>
</tr>
<tr>
<td>Ghazwani and Al Jaber [12]</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>2</td>
</tr>
<tr>
<td>Mahfouz et al. [13]</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>3</td>
</tr>
<tr>
<td>Alshammari [14]</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>5</td>
</tr>
<tr>
<td>Almoajel, Fetohi and Alshamrani [15]</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>4</td>
</tr>
<tr>
<td>Aljasir and Alghamdi [16]</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>1</td>
</tr>
<tr>
<td>Maram BanaKhar et al. [17]</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>2</td>
</tr>
<tr>
<td>Abdalla et al. [18]</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>3</td>
</tr>
<tr>
<td>Total yes</td>
<td>6</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>8</td>
<td>26</td>
</tr>
</tbody>
</table>

Y, Yes; N, No.
and physicians in Saudi Arabia. It (2) highlighted the quality of the literature and (3) addressed the knowledge gap in terms of the quality of PHC from the patient’s perspective. It provides stakeholders and researchers with the information to reassess the priority areas in providing better quality measurements in Saudi PHC. The aims of this paper (4) aligned with the aims associated with the transition of the Saudi MoH healthcare system to a privatised system and the Saudi 2030—vision to improve the quality of PHC.

**Limitations**

This systematic review has three main limitations. Firstly, the limited number of studies analysed in this review may not represent the actual PS with MoH PHC centres in Saudi Arabia. Secondly, this review was restricted to English publications due to the lack of relevant research literature in Arabic. Finally, while the quality of some of the studies was low, they were nonetheless included to represent what the available literature says about PS in Saudi Arabia.

**Conclusion**

The overall satisfaction reported in almost all studies was ranging from 75% and above. Six studies reported the domains of communication. Only three studies reported the relational conduct domain. Five studies reported the technical skills/knowledge domain, while four studies reported the personal qualities domain. Eight studies examined the availability and accessibility domain, making it the most commonly reported domain in this review.

There was a contradiction in the patients’ responses to the tools assessing PS and their actual experience. The participants’ level of education and income may contribute to the overestimation of PS. While the patients reported that they were satisfied with PHC centres, they frequently attended emergency departments directly. This indicated that they were unlikely to be satisfied with the PHC centres. More research is needed to examine the link between patients’ experiences and satisfaction in Saudi Arabia.

**Acknowledgement**

We would like to thank the librarian in Charles Perkins Centre for the recommendation about the most relevant databases and search terms.

**References**


### Appendix Summary of results obtained from the included studies

<table>
<thead>
<tr>
<th>Case study</th>
<th>Setting/City</th>
<th>Type of study</th>
<th>Sample size</th>
<th>Aim/s</th>
<th>Results</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfaqeeh et al. [9]</td>
<td>Riyadh province</td>
<td>Quantitative</td>
<td>(935)</td>
<td>Patients 52.9% urban population, 47.1% rural population</td>
<td>Overall a high rate of satisfaction in patients of all PHCs. Main barriers among rural patients: Accessible location and opening times of the PHC. Cleanliness of the PHC. Availability of health-related promotion and prevention services to improve health outcomes for the community. This study reported significant differences between ‘being treated with dignity and respect’ and ‘treatment explained and understood’ among urban and rural patients attending PHC centres. Patient attending rural PHC centres were satisfied that their doctors treated them with dignity and respect at all times, compared with urban patients, who were more likely to state that they were satisfied only some of the time that their doctors treated them with dignity and respect. Overall, this study concluded that patients and physicians have good communication. The reason for good satisfaction between Physician and patient was explained by author that physicians were from countries who share similar language and religion.</td>
<td>- The restricted access of the lead researcher to male respondents. - The patient questionnaire: some questions were not answered, which may not be related to the settings.</td>
</tr>
<tr>
<td>Al-Ali and Elzubair [10]</td>
<td>Dammam</td>
<td>Quantitative</td>
<td>(27) Physicians (374) Patients</td>
<td>To assess the percentage of physician–patient relationships with good rapport in the PHC and the percentage of satisfied patients.</td>
<td>51.9% of physicians had a good rapport with their patients. Factors contributing to a significant relationship with rapport were: Physician’s age ($P = 0.016$), experience ($P = 0.043$) and professional status ($P = 0.031$), 50.5% of the attendees were satisfied with their rapport with their physician. The factors contributing to a significant relationship with PS were: Attendee’s age ($P &lt; 0.0001$), educational level ($P &lt; 0.0001$), having a chronic illness ($P &lt; 0.0001$), having an appointment ($P &lt; 0.0001$), physicians’ professional status ($P &lt; 0.0001$), and a nonsurgical specialty ($P &lt; 0.0001$).</td>
<td>Not available</td>
</tr>
<tr>
<td>Case study</td>
<td>Setting/City</td>
<td>Type of study</td>
<td>Sample size</td>
<td>Aim/s</td>
<td>Results</td>
<td>Limitations</td>
</tr>
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<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Mohamed et al. [11]</td>
<td>Majmaah</td>
<td>Quantitative</td>
<td>Patients (370)</td>
<td>To assess the satisfaction level among patients attending the PHC centre in Majmaah City, Kingdom of Saudi Arabia; To explore the reasons behind the satisfaction level. To determine the social factors impacting on the satisfaction level.</td>
<td>The overall satisfaction level among patients was 81.7%. The factors affecting the level of satisfaction were the cleanliness of the facilities and the technical competence of the staff (33.1% and 24.2%). Unsuitable buildings (29%) were the most stated factor contributing to dissatisfaction. This was followed by dissatisfaction with the number of staff available, followed by the unavailability of dentistry.</td>
<td>The use of self-report was a limitation because respondents were speaking for themselves or their children, and this may have introduced surrogate bias. Another limitation may be recall bias since respondents addressed their current experience and sometimes previous experiences also.</td>
</tr>
<tr>
<td>Ghazwani and Al Jaber, [12]</td>
<td>Abha</td>
<td>Quantitative</td>
<td>Patients (600)</td>
<td>To evaluate the satisfaction rate of patients with the main aspects of PHC centres at a chronic diseases clinic. To identify the healthcare areas that showed low satisfaction. To identify barriers to PS.</td>
<td>Of the 600 respondents, 87% were satisfied (i.e. 44% were moderately satisfied, and 43% were highly satisfied), while 13% were dissatisfied. Low levels of satisfaction were observed among diabetic patients. The highest rate of dissatisfaction was in patients aged &lt;50 years, males, with lower levels of education and higher monthly income. Unemployed patients expressed significantly higher grades of satisfaction than employed patients (P = 0.005).</td>
<td>NA</td>
</tr>
<tr>
<td>Alshammari, [14]</td>
<td>Hail</td>
<td>Quantitative</td>
<td>Patients (433)</td>
<td>To identify the factors contributing to PS in PHC centres in Hail city, Saudi Arabia.</td>
<td>The overall satisfaction level (on a scale from 1 to 5) was indicated by a mean score of 3.60 (95% CI = 3.53, 3.67) compared with a previous survey of PS in Hail city, conducted in 1999. The highest level of satisfaction was reported for the quality of the services provided by the doctors and staff. The lowest level of satisfaction was for access to medical care and the availability of doctors.</td>
<td>One limitation is that the study was undertaken on one population of patients visiting six PHCCs in Hail city for one month, which limits the generalisability of the findings. An assumption was made by the researcher that the data were not limited by extreme response bias i.e. a very strong polarisation of good vs. bad quality judgements, which is a typical communication style found among Middle Eastern Arab societies (24).</td>
</tr>
<tr>
<td>Almoajel et al. [16]</td>
<td>Jubail</td>
<td>Quantitative</td>
<td>Patients (200)</td>
<td>To evaluate the satisfaction level among patients at different PHC centres. To evaluate the available health education programmes.</td>
<td>The overall satisfaction of the patients was 77%, 10% were not sure, while 13 % of the patients were dissatisfied.</td>
<td>NA</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Location</td>
<td>Study Design</td>
<td>Participants</td>
<td>Objective 1</td>
<td>Objective 2</td>
<td>Notes</td>
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<td>--------------------------------</td>
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<td>-----------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
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<tr>
<td>Aljasir and Alghamdi [17]</td>
<td>Al-Laith</td>
<td>Quantitative</td>
<td>Patients (176)</td>
<td>To examine the perceived quality of services provided to villages in the Al-Laith region.</td>
<td>Most of the 176 participants found the operating hours and staff on duty satisfactory. On the other hand, 35.8% patients found mobile clinic accessibility and location unsatisfactory. Moreover, 20.5% patients were completely dissatisfied with the clinic timings, which did not match their schedule even though overall PS score was very high. Almost all patients were satisfied with the competence of the nursing staff and doctor. It must be noted that 72.7% of the population in this study were unemployed.</td>
<td>Female participation was limited due to cultural unacceptance of the survey and male supervision.</td>
</tr>
<tr>
<td>Mahfouz et al. [13]</td>
<td>Abha</td>
<td>Quantitative</td>
<td>Physicians (47)</td>
<td>To assess emergency healthcare services delivery at PHC level in the Abha health district of the Asir region of Saudi Arabia.</td>
<td>With low satisfaction levels among their patients, medical services in the PHC involved were deficient in terms of the number of cardiovascular management staff—a 72.3% need was identified. Use of emergency services was reported as 43.7% in trauma, burns and orthopaedic emergencies (42.6%). Interestingly, about 40.4% of doctors did not consider most the cases as an emergency, and about 20% considered themselves incompetent in treating emergency cases.</td>
<td>NA</td>
</tr>
<tr>
<td>Maram BanaKhar et al. [18]</td>
<td>Jeddah</td>
<td>Quantitative</td>
<td>Patients (27)</td>
<td>To investigate different factors responsible for PS provided by the Al-Balad Jeddah centre and how to improve shortcomings. To assess the independent variables responsible for patient responses.</td>
<td>The availability and the number of doctors were the main issues faced in the Al-Balad PHC centre. However, the patients were satisfied with the nursing staff, their education and their cooperation in providing good services to patients and their carers, but their listening skills were in question. The PHC lacked good medical technology, machines and laboratory facilities. Therefore patients had to go elsewhere for certain medical procedures and tests. Patients were happy about obtaining appointments over the phone or at the counter. Patients wished to have home care by nursing staff to save time and reduce healthcare costs.</td>
<td>NA</td>
</tr>
<tr>
<td>Abdalla et al. [15]</td>
<td>Hail</td>
<td>Quantitative</td>
<td>Patients (320)</td>
<td>To assess patients satisfaction among patients attending PHC in Hail and its correlations.</td>
<td>Satisfaction rate for physicians was the highest, however, listening to patients' complaints scoring was the lowest satisfaction scores.</td>
<td>NA</td>
</tr>
</tbody>
</table>

NA, not available.