


**Research Article**

# Quality and Performance of Public Hospital Services in Saudi Arabia: A Systematic Review

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## Abstract

**Objectives:** This study carries out a systematic literature review to examine the quality and performance of public hospital services in Saudi Arabia (KSA).

**Methods:** The study used a systematic review approach, following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) recommendations. Studies that have examined the quality and performance of healthcare in KSA public hospitals were identified and reviewed through online searches. Different databases were used, including PubMed, ScienceDirect, Google Scholar, Web of Sciences, and Cochrane.

**Results:** A total of 12 of 120 articles met the inclusion criteria and were included in this systematic review. Most of the studies showed low quality and performance regarding the five dimensions (reliability, tangibility, assurance, responsiveness, and empathy) or did not meet the patient's expectations. Hence, the analysis concluded that the quality of services the public hospitals delivered was unsatisfactory, which negatively affected the performance. The study also identified issues such as poor staffing, poor communication and hospital non-punitive response to errors, lack of up-to-date training, and failures of leadership due to factors such as Ineffective hospital management, weak administrative leadership, and lack of strategic planning.

**Conclusions:** This review showed that the Ministry of Health (MOH) has been investing in healthcare quality in KSA, but findings showed that they are yet to achieve those goals. Hence, public hospital management should develop monitoring services to improve patients' perspectives. Moreover, the effect of the service quality dimensions on patients' perception and hospital performance provides direction to develop a quality management model in public hospitals.

**Keywords:** Quality; Management; Public hospital; Healthcare; Patients; Saudi Arabia

## Introduction

The global healthcare services industry has experienced tremendous expansion because of the growing world population and rising living standards. All healthcare organizations globally aim to deliver high-quality healthcare services and improve performance since consumers expect better healthcare to support their lifestyles [1,2]. The overall quality of a given service is usually not seen in the outcome of the process; it can be identified and perceived throughout the production process to the delivery of the final goods/services [3].

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Performance is also essential, especially for the service sector, such as healthcare [4]. In many cases, disappointment from customers with a given service is usually encountered when the customers' perception fails to meet their expectations [5,6].

Researchers have noted that quality has become crucial part of any organization and affects the overall performance of an organization. It is therefore important to measure quality of services to ensure that customers' expectations are met and improve performance. In KSA, provision of quality service is essential for all hospitals as the country is keen in meeting its vision 2030 goals [1].

The government is committed to improving access quality and intervenes in determining how care is provided to protect patients. Several studies have been conducted on quality and performance of hospitals in Saudi Arabia [7-12]. A study by Álvarez-García et al. described quality as the performance of services provided to the users regarding how the users receive the service from the provider and how the provider delivers the service [13,14]. As aforementioned, there is no universal agreement or understanding of what can be used to identify quality in any organization. However, many researchers have argued that the focus should be on the patient's perspective [15,16]. The researchers have identified patients' perspectives as meaningful indicators of the quality of services in healthcare organizations.

A study by Yadav, & Rai, presented a different idea regarding the notion of quality in healthcare [17]. As noted in one study by Cheng, Lai, & Yeung, even if the service in healthcare is made for the patients, it cannot be achieved without the help of the service provider [18].

A research conducted by Majeed Alhashem, Alquraini, & Chowdhury, on factors influencing patient satisfaction in Kuwait's healthcare system showed that the quality of healthcare services in Kuwait falls short of patients' expectations [19]. This has been supported by other study that have shown that there is no difference between the expected and provided health services at the public hospitals in many developing nations in the middle east such as Jordan [20]. Many studies have agreed that patient satisfaction and the performance of hospitals is most influenced by the tangible nature of the service, which is followed by responsiveness, dependability, and certainty [21].

As noted by Albejaidi, all citizens of the KSA are entitled to free medical care under article 31 of the country's constitution [22]. According to Al-Homayan study, the MOH manages 43080 beds nationwide and provides basic, secondary, and tertiary healthcare services through 2361 primary healthcare facilities and 282 hospitals. Moreover, some of the main responsibilities of the MOH include strategic planning, development of healthcare policies, oversight all healthcare

service delivery programs, and the management of all other health-related activities [23].

Saudi Arabia is pursuing privatization initiatives to improve healthcare quality and is expected to privatize much of its health sector in the coming years. Therefore, this study conducts a systematic literature review to examine the quality and performance of public hospital services in Saudi Arabia.

## Methods

This systematic review was carried out using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (figure 1).

### Search strategy:

Studies that have examined the quality and performance of healthcare in KSA public hospitals were identified and reviewed through online searches. Literature searches were conducted in different databases, including PubMed, ScienceDirect, Google Scholar, Web of Sciences, and Cochrane. Search terms used to help narrow down the relative articles include "quality", "health quality", "patients' perception", "patients' expectation", and "healthcare in Saudi Arabia". The literature was restricted and searched between 2012 and 2023.

The studies' abstracts and titles from the search strategy were first scrutinized.

### Inclusion/exclusion criteria

This systematic review included studies that were conducted from 2012 to 2023 specifically in KSA public hospitals/healthcare sector. The researcher focused on the

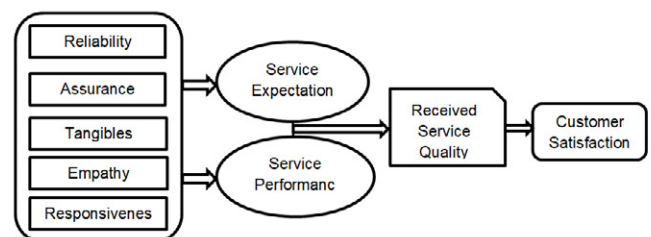


Figure 1: The five key service dimensions of the SERVQUAL model

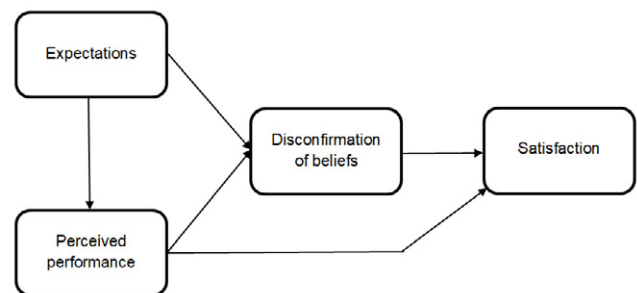


Figure 2: The Expectation Confirmation Theory

current structure and development of healthcare quality in KSA public hospitals and areas of concern or issues related to the quality of care and performance.

Studies not carried out in KSA were excluded. Studies investigating service quality and performance of private hospitals were excluded. Studies published before 2012 were excluded from this study.

**Extraction and analysis**

The extracted data included the name of the author, year of publication, study design and population, sample size, and the findings. The reporting of the findings would be guided by PRISMA guidelines. After the standardized sheet was used to extract the data from the included research studies, the articles were reviewed and then analyzed.

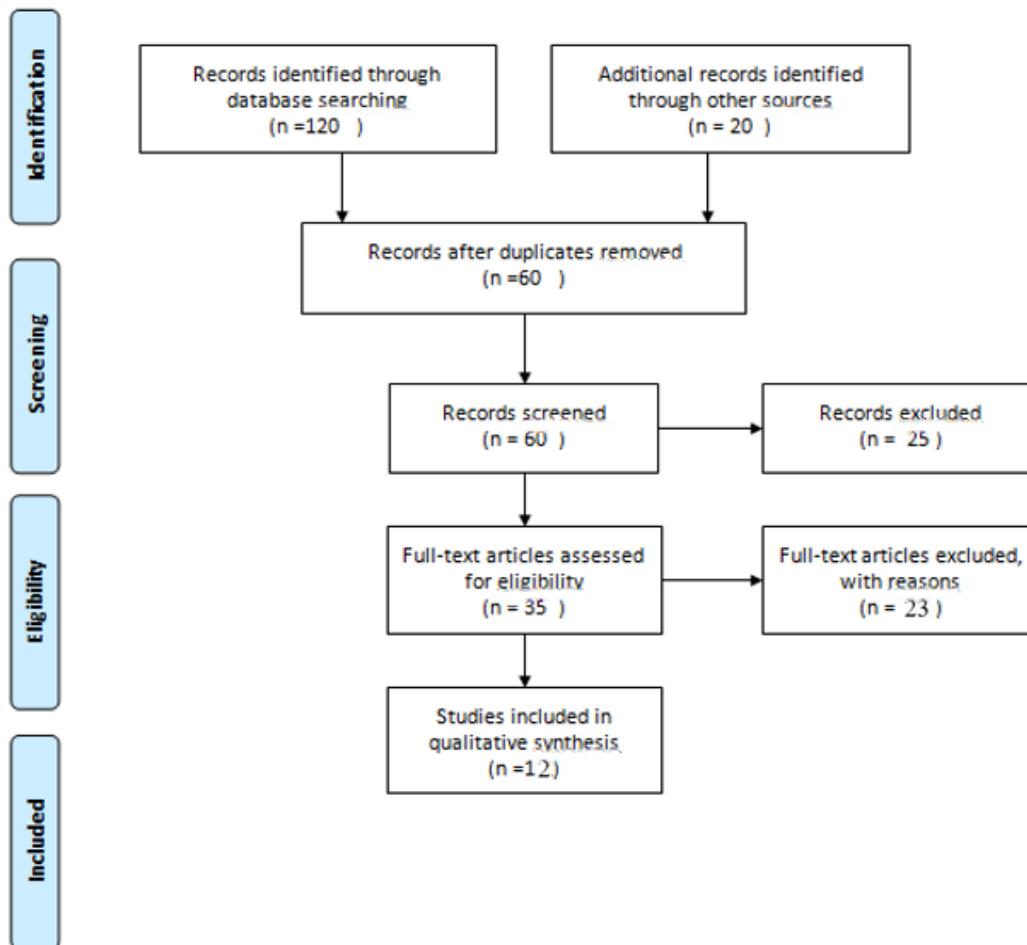
**Results**

**Overall Search Findings**

A total of 120 references were identified in the initial research study from the mentioned databases. After initial screening, A total of 60 research articles/studies were identified

in the online search and subjected to initial screening. 35 articles were then selected provisionally for more in-depth full-text evaluation and after this step, 12 studies were found to have met the inclusion criteria and hence included in the study. 23 articles were excluded after the full-text articles were evaluated for eligibility as they failed to meet the inclusion criteria as shown in Figure 3 below. The reviewed articles are summarized in Table 1 below. All the 12 articles were cross-sectional studies which shows that they met the main quality assessment criteria for the study [1,2,7,8,24-31].

Out of the 12 studies chosen for the analysis, five of the articles evaluated quality of care and performance based on the five dimensions of quality (reliability, tangibility, assurance, responsiveness, and empathy). A study by Al-Borie & Sheikh Damanhoury of 1000 inpatients from five Saudi public and five private sector hospitals to compare patient satisfaction with service quality showed high Cronbach's alpha (a way of assessing reliability) for the five service quality dimensions [26]. One the other hand, Al Fraihi, FAMCO, & Latif found that patients' expectations exceeded perceptions in all the dimensions, and this shows a quality gap which is supported by the study by Al-Momani, and Mahmood &



**Figure 3** Preferred Reporting Item for Systematic Review

**Table 1:** Summary of study characteristics included in the systematic review

Author/year	Aim	Sample size	Design	Model	Results / conclusion
Alumran et al. (2021)	To measure the quality of health care services from the patients' perspective and to compare the service quality of public and private hospitals in the eastern region of Saudi Arabia.	258 inpatients	quantitative cross-sectional design	SERVQUAL dimensional model	Private hospital patients perceived a higher level of quality of the health care services ( $t=3.390, p<0.01$ )
El-Jardali et al. (2014) Patient safety culture in a large teaching hospital in Riyadh.	To conduct a baseline assessment of the patient safety culture in a large hospital in Riyadh, Kingdom of Saudi Arabia	2572 participants'	Cross-sectional survey	This cross sectional study adopted a customized version of the HSOPSC	Main areas of improvements in the country were Organizational Learning and Continuous Improvement and Teamwork. The areas with lowest score were in staffing (35.1%), Hospital non-punitive response to error (26.8%) and Communication Openness (42.9%).
Al-Borie & Sheikh Damanhour, (2013) Patients' satisfaction of service quality in Saudi hospitals: a SERVQUAL analysis	to provide guidelines to the on-going Saudi Arabian health service reorganization.	1000 inpatients	Cross-sectional survey	SERVQUAL dimensional model	The Cronbach's alpha for the five service quality dimensions (safety, empathy, tangibles, reliability, and responsiveness) were high. The findings showed that education, income and occupation and sex was statistically significant in influencing the satisfaction of patients.
Alghamdi, (2014). The impact of service quality perception on patient satisfaction in Government Hospitals in KSA	To examine the impact of service quality perception on patient satisfaction	183 eligible patients	cross-sectional method	using a modified Assessment of Service Quality questionnaire to collect the data.	The result of the study showed that there was statistically significant effect of health service quality on satisfaction. Empathy had the greatest effect on satisfaction ( $\beta=0.476$ ). This was followed by tangible dimension at $\beta=0.198$ and responsiveness ( $\beta=0.164$ ).
Alamri, (2012). Knowledge of the residents at King Abdul-Aziz University Hospital (KAAUH) about palliative care	to determine the knowledge of residents at King Abdul-Aziz University Hospital (KAAUH) on palliative care.	80 participants'	Cross-sectional survey	two-part self-administered questionnaire in June 2010	Less than one-third (29.2%) of the respondents taking part in the study noted that they had previous didactic education on palliative care. Majority of the resident physicians possess suboptimal knowledge of basic palliative care.
Atallah et al. (2013) Patients' satisfaction with the quality of nursing care provided: The Saudi experience	to examine patients' satisfaction with quality of nursing care provided in Saudi Arabia	100 participants'	Cross-sectional descriptive correctional design	Data collected using structured interview from patients related to six dimensions of nursing care	There was high satisfaction levels with nursing care provided (86 agreement), and availability (20% disagreement rate) have been identified with the lowest rates of patients satisfaction.
Al Fraihi, FAMCO, & Latif, (2016) Evaluation of outpatient service quality in Eastern Saudi Arabia	To investigate perceptions and expectations of patients regarding hospital outpatient services by using a service quality gap model	306 patients	cross-sectional descriptive study	SERVQUAL dimensional model	The patients' expectations exceeded perceptions in all the dimensions and this shows a quality gap. The results showed that empathy contributed most patients' expectations
Alatawi, Niessen, & Khan, (2020). Efficiency evaluation of public hospitals in Saudi Arabia	To assess the performance of public hospitals in Saudi Arabia	91 hospitals	data envelopment analysis (DEA)	They employ data envelopment analysis (DEA) to measure the technical efficiency of 91 public hospitals	The Findings of the study showed that 75.8% of public hospitals as technically inefficient Performance analysis showed that a shortage of health services production, as major causes of inefficiency..



Alatawi et al. (2022) actors influencing the efficiency of public hospitals in Saudi Arabia	To examine the factors that influence the efficiencies of health service provision in public hospitals in the Kingdom of Saudi Arabia (KSA)	20 participants'	a qualitative design	interviewing the key informants (KIs) using semi-structured interviews (SSIs) as the data collection tool	Residents noted inefficient service in public hospitals due to factors in community, facility and the wider health system. Some of the identified factors include Ineffective hospital management, weak administrative leadership and lack of strategic planning.
Al-Momani, (2016). Gap Analysis between Expectations and Perceptions of Patients in a Public Hospital in KSA	To investigate patients' satisfaction with nursing care by measuring the gap between patients' expectations of care and perceptions of the actual care provided	432 patients	A cross-sectional survey	SERVQUAL dimensional model	The gap score for the dimensions of the services was responsiveness, -1.71; empathy, -0.96; tangibles, -1.36; reliability, -1.48; and assurance, -1.26. This shows that patients were not satisfied with service quality provided
Mahmood & Alkhateeb, (2017). An Estimation of Service Quality in King Khalid Hospital, Saudi Arabia	To investigate the patient's utility of hospital-service provided by the hospital.	250 respondents	A cross-sectional survey	SERVQUAL dimensional model	The findings showed negative and significant gap between the expected and actual quality in the five dimensions and average quality.
Satisfaction of patients with health care services in tertiary care facilities of Riyadh, Saudi Arabia: A cross-sectional approach	it aimed to investigate the key areas of the patient satisfaction scale that require immediate intervention and to identify the factors that predict patients' satisfaction.	384 participants'	A cross-sectional survey	The PSQ-18 (Patient Satisfaction Questionnaire-18)	The overall degree of satisfaction with all 18 items was 73.77%.

Alkhateeb, which showed negative gaps for the service quality dimensions [9,29,31]. Most of the studies showed that the quality and performance regarding the five dimensions were low or did not meet the patient's expectations [24-31]. Among the five dimensions, two studies found that empathy was the highest rated in KSA public hospitals followed by tangible dimension and responsiveness [2,29]. Therefore, the five articles conclude that the quality of services delivered by public hospitals was unsatisfactory and this negatively affected the performance [24-28].

Regarding the issues faced in helping meet the quality and performance requirements, four articles identified various issues faced by public hospitals about meeting the quality criteria [25-28]. The study by El-Jardali et al. showed the main issue faced by public hospitals was related to staffing, ineffective communication, and hospital non-punitive response to error [25]. The study by Alamri showed a lack of knowledge with less than one-third (29.2%) of the residents noting that they had received necessary training on issues such as palliative care which might affect the quality of care [27]. A study by Alatawi, Niessen, & Khan, showed that 75.8% of public hospitals as technically inefficient in addition to having a shortage of health services production which contributes to inefficiency [30]. This was supported by Alatawi et al. whose findings showed that there were inefficient services in the public hospitals due to factors linked to community, facility,

and the wider health system [1]. They identified main factors such as Ineffective hospital management, weak administrative leadership, and lack of strategic planning. This as noted by Alumran et al. are some of the factors that have made private hospitals to be more efficient in-service delivery [24].

Two of the studies reviewed also showed patient satisfaction which also contributes to understanding of quality levels and the issues faced. Atallah et al. noted high satisfaction levels with the nursing care provided but the patients were not satisfied with availability [28]. Almomani, Al-Ghdabi, & Banyhamdan, showed that many of the patients were not satisfied and 65% of the variation of hospital performance and satisfaction in many public hospitals in KSA was explained by health service quality. Hence, Health service quality had a positive effect on performance [9].

In general, most public hospitals in the KSA need to continue to improve their performance, and this is what is happening currently, especially with the new plans that seek to achieve huge leaps in the health sector to emulate the best health services provided globally.

## Discussion

The results of the analysis showed that the expectations of the quality of healthcare services provided in public hospitals were not within expectations and perceptions. In

all the measured dimensions including reliability, tangibility, assurance, responsiveness, and empathy, the perception of the patients regarding service quality indicated low satisfaction levels.

The study by Al-Momani, showed that there were negative gaps for all service quality dimensions and hence the need to improve the quality of care [9]. This shows that patients were not satisfied with the service quality provided. This is also supported by Alghamdi, whose findings showed that the low satisfaction levels on the five quality dimensions had a significant effect on the performance of the public hospitals in KSA [2]. The findings showed that Empathy had the greatest effect, followed by tangible dimension and responsiveness. This is also in line with studies such as Yadav et al. and Almomani, Al-Ghdabi, & Banyhamdan, which showed a larger gap in responsibility and reliability dimension [17,9]. Negative gaps mean that the expectations of the patients for the quality provided by the hospitals have not been met. The findings of the study as reported by Alghamdi, showed that there was a smaller gap between the expectations of patients and their perception of empathy and tangibility dimension [2]. This can be interpreted to mean that the management and policymakers in KSA public hospitals have been more focused on empathy and tangibility and in line with KSA Vision 2030, they have taken measures to ensure good equipment and facilities.

When compared to the private sector, the reviewed literature which made comparisons showed that the service quality and performance differed in all the measured dimensions with the private hospitals scoring higher in all five dimensions. For example, the study by Alumran et al. conducted to compare public and private hospitals in KSA in regard to service quality in KSA eastern region showed that Private hospital patients perceived a higher level of quality of the health care services ( $t=3.390$ ,  $p<0.01$ ) compared to those at the public hospitals in KSA [24]. These findings support the reviewed literature results from different regions such as Turkey and Saudi Arabia [32]. The findings of these studies reported that private hospitals can provide higher quality services compared to public hospitals, especially in the dimension of responsiveness and tangibles. This might be due to the non-private nature of many public hospitals which is not a major incentive for managers to focus more on quality improvement.

The findings of the analysis as seen in the research by Almomani, R., Al-Ghdabi, R & Banyhamdan, K. and Atallah et al. showed that many of the patients were not satisfied with the quality of services provided in the public hospitals and it is higher in private hospitals. Therefore, overall, the level of quality of care provided in public hospitals in KSA need to continue to improve their performance [9,28].

The review of the literature also showed that the quality

and performance of public healthcare organizations in KSA are affected by several issues and challenges. Despite the achievements realized by the country's public hospitals with the help of the KSA Vision 2030. Some of the main issues identified by El-Jardali et al. are related to staffing, Ineffective communication, and Hospital non-punitive response to errors [25]. The issue of staffing and communication is in line with the study by Attallah et al. which showed that many physicians focus only on illness rather than only on real interests in patients and their complaints and this translates to Ineffective communication [28]. Also, the study by Aryankhesal et al. showed that many healthcare workers have a low perception of patient-centered care which agrees with the reviewed study by Alamri, which showed lack of knowledge due to a lack of up-to-date training [33,27]. Therefore, the study recommended the need for offering continued training programs in interaction and communication skills to be aware of the emerging problems that affect the quality of care.

The results of this review as noted by Alatawi, Niessen, & Khan, (2020) and Alatawi et al. (2022) report the need to enhance the quality of care, especially in terms of patient safety and the need to improve management as some of the issues can be linked to failures of leadership due to factors such as Ineffective hospital management, weak administrative leadership, and lack of strategic planning [30,1]. This is in line with the study findings by Hussein which noted that failures of leadership and the need to have good management in public hospitals are needed [34].

The systematic review shows the need for KSA to work towards improving the quality of care in public hospitals. It should be noted that the needs of patients are increasing each day, and this affects their satisfaction regarding the quality of care. The reviewed studies have shown that many studies have been conducted based on the Servqual method and have shown that there has been a gap in terms of reliability, tangibility, assurance, responsiveness, and empathy. The findings of the analysis of the five dimensions showed that many of them were negative and this indicates that patients in KSA public sector are not fully satisfied with the level of quality care provided. Therefore, there is a need for major improvements in the public sector to enhance the quality of care which can be improved by dealing with some of the issues identified such as issues related to staffing, Ineffective communication, and Hospital non-punitive response to errors, lack of up-to-date training and failures of leadership due to factors such as Ineffective hospital management, weak administrative leadership and lack of strategic planning. This means that the expectations of the patients are higher than what they perceive of the public hospital's healthcare. In regard to the gap between the patient perceptions and their expectations, it can be concluded that the performance of KSA public hospitals is poor as health quality dimensions are major and significant predictors of performance.

## Conclusion

The review showed that MOH has been investing in healthcare quality in KSA but findings show that they are yet to achieve their goals. Hence, the management of public hospitals should come up with monitoring services to improve patients' perspectives. The effect of the service quality dimensions as seen in the review on patients' perception and hospital performance provides direction to come up with a model of quality management in public hospitals.

## Recommendation

Future studies should focus on identifying and discussing patient-centered approaches and solutions to enhance the quality of care in public hospitals.

- Further studies focusing on patient-centered solutions to improve the quality of services in the desired areas seem to be necessary
- Further studies focusing on the period after the adoption of Vision 2030, in which it is expected that there will be a significant and noticeable development in performance, quality, and beneficiary satisfaction.
- The study only focused on the quality of care and performance of public hospitals in KSA. Future studies should be conducted on the larger Middle East region which will help to provide comparisons and learn from each other. Also, a similar study should be conducted in the private sector to compare it with the public sector in KSA.

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