OPEN ACCESS

Patient Satisfaction With Nursing Care In Ministry Of Health Hospitals In Saudi Arabia

Ayasmeen Eid Ali Al-Atawi[1],Sulaiman Qasem Salim Alatawi[2],Heba Essa Hamed Al-Balawi[3],Turki Ahmed Mohammed Al-Qahtani[4],Mohammed Sulaiman Salman Alatawi[5],Abdulhameed Ahmed Abdulghani Al-Qadi[6],Wala Ghalib Fasil Alrukhaimi[7],Saleh Yousef Althikerallah[8],Eidah Khalaf Alrashdi [9],Muhammad Mahdi Hussein Al-Yami[10],Mohammed Abdulaziz Alrajeh[11],Yasser Joher Al Joher[12]

[1]Senior Nursing Specialist King Fahad Specialist Hospital In Tabuk , Tabuk Health Cluster
[2]Nurse Specialist King Fahad Specialist Hospital In Tabuk , Tabuk Health Cluster
[3]Nurse Specialist King Fahad Specialist Hospital In Tabuk , Tabuk Health Cluster
[4]Nurse Specialist King Fahad Specialist Hospital In Tabuk , Tabuk Health Cluster
[5]Nurse Specialist Bajdah Primary Healthcare Center , Tabuk Health Cluster
[6]Nurse Technician Medical Authority , Ministry Of Health , Tabuk Branch
[7]Nurse Specialist King Khalid Majmah Hospital , Riyadh Second Health Cluster
[8]Nurse Specialist King Fahad Hospital Of University In Khobar
[9]Nurse Specialist Maternity And Children's Hospital In Hafr Al Batin , Hafr Al Batin Health Cluster
[10]Nursing Health Assistant Alhamar Healthcare Center In Najran , Najran Health Cluster
[11]Nurse Specialist Alahsa Psychiatric Hospital , Alahsa Health Cluster
[12]Nurse Technician Erada Hospital For Mental Health , Al-Ahsa Health Complex

Abstract

Introduction: Patient satisfaction is a significant indicator of quality and effective outcomes for the health care delivery system, especially in the area of nursing and the quality of nursing care provided. The MOH controls and manages the majority of the public hospitals in Saudi Arabia; therefore, nursing care is a crucial component of the overall experience for the most patients. To implement the Vision 2030 program's health care reform plan, it is essential to comprehend the current levels of patient satisfaction among the MOH hospitals.

Research Objective: The primary purpose of the present systematic review is to assess patients' experience with Nursing Care at the Ministry of Health (MOH) Hospitals in Saudi Arabia; additionally, this study will identify how these experiences are affected by various factors such as Communication, Empathy, Responsiveness, Cultural Sensitivity, and Professional Competence.

Research Methods: A systematic review was performed according to PRISMA guidelines. A comprehensive search of the electronic databases (PubMed, Scopus, Web of Science, and Google Scholar) was conducted for empirical articles from 2015 to 2025. The keywords employed were "patient satisfaction," "nursing care," "Saudi Arabia," and "Ministry of Health hospitals." The articles chosen for inclusion were based on empirical studies and focused on measuring patient satisfaction with nursing care provided in the MOH Hospitals.

Conclusion: According to the findings of this systematic review, patients in MOH Hospitals express moderate to high levels of satisfaction with nursing care; communication and level of empathy, as well as cultural sensitivity and the reception of care, are the strongest predictors of a positive patient experience. However, systemic issues such as staffing shortages, increased workloads and variations across regions are likely to negatively impact patient satisfaction with nursing care.

Keywords: Patient Satisfaction, Nursing Care, Nurse-Patient Relationship, Ministry of Health, Government Hospitals, Saudi Arabia.

Introduction

Context of Nursing Quality in KSA

Patient satisfaction is universally accepted as one of the primary indicators of the quality of the health services and closely associated to patient loyalty and adherence to the treatment procedures. Nursing care, especially, tends to be the most influential factor of the overall hospital experience of a patient since nurses remain in the closest and longest contact with inpatients. Nursing care quality is a multidimensional variable, which includes technical skills, interpersonal skills, and the efficiency of the processes of care delivery. In the case of health systems being undergoing significant structural change, Patient Satisfaction with Nursing Care (PSNC) monitoring and benchmarking can offer both the health system and clinical practice with a critical, short-term feedback mechanism on the effectiveness of clinical practice and organizational policy implementation. [3] Although it is important, the research that specifically examines PSNC in Saudi Arabia is rather scant, and the tool tends to concentrate on the wider clinical outcomes or the measures of organizational performance. [5]

The Saudi Vision 2030 is a national transformation plan that is being implemented by the Kingdom of Saudi Arabia (KSA) to enhance the lives of its residents. The Healthcare Sector Transformation Program is core in this strategy. The program is required to transform the health system of the Kingdom into a more comprehensive, effective and integrated one, with the focus on innovation, financial sustainability, and, most importantly, better quality of care. [7] Modernization of facilities, the growth of healthcare infrastructure (adding 26 000 to 43 000 hospital beds by 2030), and the implementation of high tech digital health technologies like Artificial Intelligence (AI) and e-health solutions including the opening of the SEHA Virtual Hospital can be included in the strategic imperative.   [4], [11]

To guarantee that these towering investments are translated into measurable changes in the patient experience, the Ministry of Health (MOH) has inculcated stringent quality assurance provisions. The shift towards an actual patient-centric approach requires meeting the international standards and putting much focus on continuous quality improvement. [12], [8] Therefore, the systematic measurement of patient experience, especially with regard to the nursing staff, who form the foundation of daily care, will be instrumental in measuring the effectiveness of the change efforts and placing the country at the forefront of healthcare quality in the region. [4]

The MOH Patient Experience Measurement Program

The Ministry of Health has institutionalized its commitment in terms of quality improvements by instituting the Patient Experience Measurement Program (PEMP). The initiative is a national initiative that intends to empower beneficiaries (patients and their families) to play a role in improving the quality of their satisfaction through measuring their satisfaction to the quality of different health services in MOH facilities such as primary care centers and hospitals. [11], [13]

One of the primary strategic actions of the MOH that guarantees the validity and reliability of its quality data is the collaboration with an independent third party, which is Health. Links/Press Ganey, a world leader in measuring patient experience. This partnership will mean that MOH surveys are externally controlled, which will reduce the institution bias in measurement and enable internal benchmarking and comparison with other international standards. [5], [8]

The PEMP framework in particular incorporates the areas of nursing that are congruent with the high-scoring components of this systematic review, including the friendliness/courtesy of the nurse, the interest displayed by the nurse in the problem of the patient, and the quality of listening that the nurse exhibited. Although the MOH is doing the right thing by auditing these areas of relational domains, the review findings indicate that the process framework of PEMP needs to be enhanced to involve a vigorous audit of process areas that score low. Clear metrics that measure the rate of proactive check-in, the time needed to engage in the personalized interaction, and the responsiveness of the response time are required to motivate the change in the structural gaps that are presented in the published literature. [8], [3], [2]

Health Cluster Accountability and Decentralization

The Saudi healthcare system is structured into Health Clusters which are regional groupings that coordinate and provide comprehensive care. The results of such clusters that differ greatly with regard to estimated population coverage, bed density and urban/rural mix are critical towards achieving Vision 2030 objectives. [12], [6], [3] An example is the Riyadh Province with an average of three clusters with a bed density of 2.8-3.5 per 1,000 that serves about 8.2 million people as compared to the Northern Borders region with one cluster that serves 0.37 million people with a lower bed density at approximately 1.5 per 1,000. [8] The large difference in PSNC quality verified between Saudi provinces implies that these regional infrastructural differences such as the resource distribution differences (e.g., decrease in bed density in particular clusters) are directly playing their role in the uneven quality of the nursing services. Quality improvement strategies cannot be the same to meet the gap identified in this review. MOH needs to use the PEMP data to give personalized and cluster-specific quality targets. Health Clusters with a poorer PSNC score, especially in those process areas, need to be given strategic grounding in staffing model, infrastructural modernization (hospital beds, to be planned in the Vision 2030) and advanced e-health implementation to support the localized needs of their respective populations and harmonize the patient experience throughout the Kingdom. [9], [10]

The largest health care provider in Saudi Arabia is the Ministry of Health (MOH) that runs most of the state-owned hospitals and health centers in the country. As the population of the country grows steadily and healthcare demands grow, the MOH has made patient-centered care one of its reforms in Vision 2030. [9] The reforms focus on better healthcare delivery, better patient experiences and international standards in the provision of services. In this context, nursing care is important in influencing patients perceptions of services in hospitals. The quality of interactions between nurses and patients, their cultural sensitivity, the skill to deliver timely and caring care are important determinants affecting levels of satisfaction. [5], [16]

Even though the significance of nursing care cannot be overstated, the issue of nurse shortage, excessive workload, and healthcare disparities across the regions still exists in Saudi Arabia. Such problems may have an adverse impact on patient experiences and satisfaction results. In addition, cultural and religious factors that are peculiar to Saudi society also imply the requirement of empathy, respect, and good communication skills on behalf of nurses. The systematic review intends to collect the existing evidence on patient satisfaction with nursing care in hospitals across Saudi Arabia in the MOH, define the main determinants, and outline the elements that should be improved. The review can be used in the nursing practice, hospital management, and healthcare policy in the Kingdom by bringing together the results of various studies, which will help to inform the field.

Study Objective

The primary purpose of the present systematic review is to assess patients' experience with Nursing Care at the Ministry of Health (MOH) Hospitals in Saudi Arabia; additionally, this study will identify how these experiences are affected by various factors such as Communication, Empathy, Responsiveness, Cultural Sensitivity, and Professional Competence.

Research Methodology

Research Question

Main research questions of the present study are:

Q1. What are patients' satisfaction levels regarding the quality of nursing care they receive while they are being treated in a Saudi Arabian Ministry of Health (MOH) Hospital(s)?

Q2. What are the primary factors that contribute the most to patients' satisfaction levels with the quality of nursing care received while receiving care from MOH Hospital?

Q3. What challenges and/or barriers (for example: staffing shortages, heavy workloads, and/or geographical disparities) relate to the impact of patient satisfaction with quality of nursing care in Saudi Arabia?

Research Design

The research will follow the systematic review design, with the Preferred Reporting Items of Systematic Reviews and Meta-Analyses (PRISMA) framework that provides the guidelines to be followed. The design will be based on a systematic and transparent process that involves identifying, screening, and synthesizing the relevant studies that will examine the patient satisfaction levels with the nursing care in the Ministry of Health (MOH) hospitals in Saudi Arabia. The review will only be conducted on studies that are directly related to the research objectives because predefined inclusion and exclusion criteria will be used to identify the studies that meet the objectives.

Search Strategy

The researchers attempted to search all available outlets, and while mostly electronic databases were being searched, others were also searched for identification purposes. Some of the electronic databases are:

- PubMed
- Web of Science
- SCOPUS
- Saudi Digital Library
- Saudi Medical Journals related to patient safety and their rights
- Google Scholar (for Grey literature and related reports)

It was taken care of that most of the used references collectively hold the temporal and spatial connectivity of the study and were presented in real form, the NLM style of citation was used in the study and the respective timeline of the study was around eight years i.e. from 2015 to 2025.

Types of Studies Included

The systematic review included the empirical research works that focused specifically on patient satisfaction with nursing services in the Ministry of Health (MOH) hospitals in Saudi Arabia. The selected literature included cross-sectional surveys, descriptive studies, and observational research designs since they are the most prevalent methods of research designs to evaluate the level of patient perceptions and satisfaction in a healthcare environment. Research needed to present some quantitative or qualitative data about patient satisfaction outcomes, patient satisfaction determinants, or aspects that impacted nursing care quality. Studies in non-MOH or outside Saudi Arabia were excluded to ensure that the research had focused on the MOH system.

Participants

The subjects in the studies that were included in the present systematic review were patients who were hospitalized at the Ministry of Health (MOH) hospitals in Saudi Arabia, with different demographic and clinical backgrounds. The majority of the studies targeted the adult patients that either underwent inpatient or outpatient care, using either small groups of patients in single hospitals or larger surveys in more facilities. This generally involved both gender patients (male and female) representing the cultural and social diversity of Saudi people.

Keywords

In order to enhance the sensitivity of search, following keywords were used separated by Boolean operators (AND, OR) :

"Patient Satisfaction" OR "Patient Experience" OR "Patient Perception" AND "Nursing Care" OR "Nursing Services" OR "Nurse-Patient Relationship" AND "Ministry of Health" OR "MOH Hospitals" OR "Government Hospitals" AND "Saudi Arabia" OR "Kingdom of Saudi Arabia" OR "KSA".
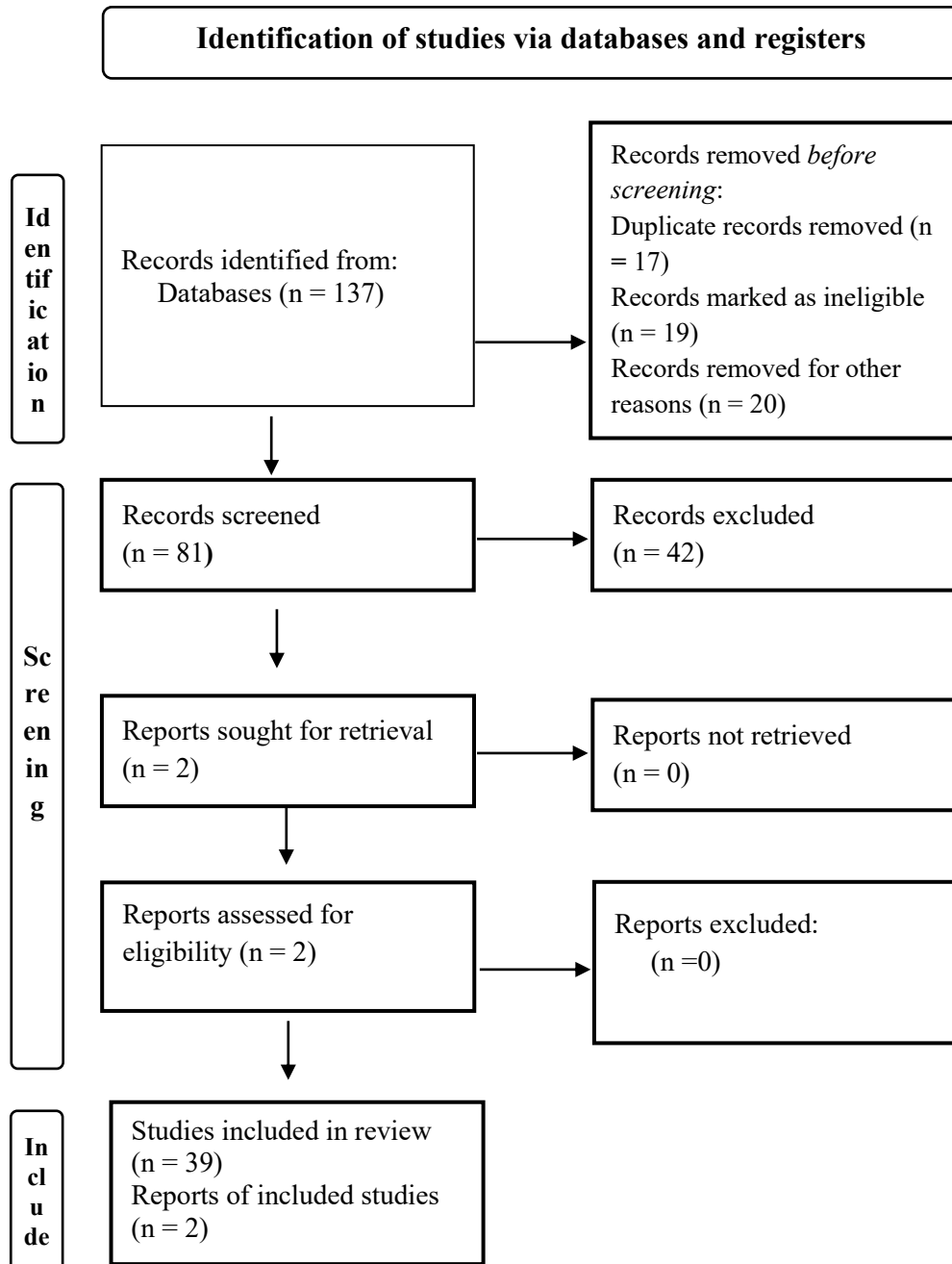
Data Management

All the information extracted out of the included studies was systematically arranged in a structured extraction form. The most important details like study design, sample size, participants, measurement tools, and the key findings which were related to satisfaction of the patients with nursing care were noted. Various researchers were involved in the independent review of data to achieve accuracy and consistency and subsequently cross-check the data before synthesizing. The screening process eliminated duplicate records and only those studies that were eligible to the inclusion criteria were retained.

Results

A total of 137 research studies and two reports were identified, all of them were based on the research material available on patient satisfaction with nursing care in ministry of health hospitals in Saudi Arabia. Out of these identified studies, 17 were removed because of duplication of records, references and location and 19 studies were marked as ineligible, as not including the above stated concept and 20 for some other unavoidable conditions. Further 81 records were saved for screening, then in the screening process 42 records were further removed on the basis of exclusion criteria. Total studies finalized for review were 39. Two reports were also included in the study.

The results of the studies reviewed show that patient satisfaction with nursing services in ministry of health (MOH) hospitals in Saudi Arabia are relatively moderate and high. Patients always mentioned that positive experiences were the most strongly affected by the effective communication, empathy, and responsiveness of the nurses. [16], [17] With some studies noting that patients were much more likely to be trusting and more satisfied with the care they received when the nurses were clear, respectful, and culturally sensitive. Hospital wards and the general environment were also clean, which also contributed to the perception of quality of nursing. Along with these positive trends, it was possible to find problems in the literature. Shortages of staff and excessive workloads were also mentioned as some of the obstacles to the best patient care and resulted in many instances of delayed responsiveness and less time to devote to care on a more individual level. [18], [4], [7]

Identification of studies via databases and registers

Identification

Records identified from:
Databases (n = 137)

Records removed *before screening*:
Duplicate records removed (n = 17)
Records marked as ineligible (n = 19)
Records removed for other reasons (n = 20)

Screening

Records screened
(n = 81)

Records excluded
(n = 42)

Reports sought for retrieval
(n = 2)

Reports not retrieved
(n = 0)

Reports assessed for eligibility (n = 2)

Reports excluded:
(n =0)

Included

Studies included in review
(n = 39)
Reports of included studies
(n = 2)

Source: Page MJ, et al. BMJ 2021;372:n71. doi:

10.1136/bmj.n71https://creativecommons.org/licenses/by/4.0/

There were also some regional differences in which the urban hospitals tended to report higher levels of satisfaction than the rural facilities because of the fact that resources and staffing were lower in rural facilities. [3] Moreover, other research indicated that patients wanted to participate more in the process of decision-making and receive more emotional support on a regular basis by nurses. On the whole, the presented evidence indicates that nursing care in MOH hospitals is valued because of its professionalism and cultural sensitivity, and systemic problems, including workforce shortage and resource disparity, remain to impact patient satisfaction. The results highlight the necessity to introduce intervention-specific approaches that focus on enhancing the quality of nurse-patient communication, bettering the staffing

ratios, and unifying patient satisfaction measurement in all hospitals of the MOH in Saudi Arabia. [16], [17]

Discussion

MOH Patient Satisfaction Strategic Alignment

The Ministry of Health has institutionalized their quality enhancement effort by creating the Patient Experience Measurement Program (PEMP). This is a national program designed to help beneficiaries (patients and their families) to be actively involved in the process of quality improvement through measuring their satisfaction on different health services offered in MOH facilities such as primary care centers and hospitals. [12] One of the strategic actions that the MOH might have undertaken to guarantee the validity and reliability of its quality data is the partnership with an independent third party, Health.Links/Press Ganey, which is a worldwide leader in measuring the patient experience. [13] Through this partnership, the MOH surveys will be externally controlled reducing institutional measurement bias and enabling the internal benchmarking and comparison with the international standards. [14]

The high scoring areas identified in this systematic review, including friendliness/courtesy of the nurse, the level of concern displayed by the nurse regarding the problem of the patient, and quality of listening, are especially included in the PEMP framework. Though the MOH appropriately audits these relational domains, the results of this review indicate that the PEMP framework necessitates further development in order to monitor the domains with low scores of the processes aggressively. [17] Clearer measures that analyze the rate of proactive check-in, the duration of customized engagement, and the timeliness of reaction timelines are needed to facilitate enhancement in the organizational breaches that are seen in the published literature. [16]

Accountability in Health Clusters

Saudi healthcare system is structured into Health Clusters, which are geographical clusters that organize and provide all-inclusive care. [6], [18] The achievement of these clusters that differ widely in terms of estimated population coverage, bed density, and urban/rural mix plays a significant role in the achievement of Vision 2030. As an example, Riyadh Province has three clusters that accommodate around 8.2 million people with a bed density of 2.8 to 3.5, which is very low when compared to Northern Borders area which has only one cluster with a population of 0.37 million people and a bed density of about 1.5. [19] The high variability in PSNC quality as verified throughout Saudi provinces indicates that these regional infrastructural differences such as unequal distribution of resources (e.g., the smaller bed density in certain clusters) is having a direct role in causing unequal quality of nursing care. [20]

Quality improvement strategies must not be homogeneous to effectively solve the gaps that have been noted in this review. The MOH needs to use the data of the PEMP to issue quality targets that are individual and cluster-specific. [21] Lower PSNC scores and especially in process-based categories imply that Health Clusters should get preferential strategic investments in staffing patterns, modernization of the infrastructure (excluding the number of hospital beds, as projected in the Vision 2030), and a higher level of e-health integration to accommodate the local needs of the respective populations and equalize the experience of the patients throughout the Kingdom. Policy Implications

The most vivid conclusion made in the course of this systematic synthesis is the polarization of the strong relational/technical performance of the nursing staff and the low scores obtained concerning the satisfaction in terms of temporal and structural processes. [22]

The manners, courtesy, and competence of nurses as highlighted by high scores indicate committed and competent workforce. Nevertheless, the poor scores in relation to the frequency of proactive care and time spent with patients refer to the systemic failure to resource and structure nursing practice properly. [23], [6] This organizational shortcoming undermines the objective of patient-centered care. In the event of overworking or ineffective work processes, nurses are unable to provide proactive and personalized care,

no matter how technically skilled they are. This is demonstrated in the much lower levels of satisfaction in the high-demand Surgical wards and in single patients where they highly depend on staff to accompany and support them. Consequently, the only way that the overall PSNC, and, subsequently, the progress towards the Vision 2030 standards of quality could be truly enhanced is to ensure that the MOH is no longer a nurse training facility but focuses on the fundamental reorganization of nurse staffing ratios and workflow support using technology. [7], [8] The existing literature on PSNC in KSA though informative has a number of limitations with regard to the methods used.

Most of the published studies use cross-sectional convenience samples and this limits the extrapolation of results. Moreover, systemic challenges in determining the specific institutional environment (MOH or private or military hospital) of most of the older academic literature restrict the possibility of isolating the performance of the public sector with uncompromising confidence. [23], [24] The future direction of PSNC studies must focus on the use of strong data on the national level. In the future, scholars must aim to acquire the access to the large, verified data produced by the PEMP of the MOH, run by Press Ganey, to be able to carry out the comparative analysis over time. [17] This would help to make a required transition between fragmented and academic-specific measures to standardized and policy-relevant quality measures. Longitudinal studies are also required to follow the effects of the current program of changing the face of the Healthcare Sector, infrastructure investments and technology adoption (e-health) on patient satisfaction results. [25], [26]

Conclusion

The systematic review shows a generally high level of nursing-patient satisfaction among the Saudi Arabian population, which reflects the competency and excellent interpersonal relationships among the nurses. While this is a very positive finding, the high level of nursing-patient satisfaction may also obscure some important systemic limitations regarding the level and frequency of nurse-patient interactions. The underlying cause of this is likely due to the structurally limited capacity of the nursing profession due to an imbalanced workload distribution, and lack of adequate financial and human resources to meet the increasing demands of patient care, as demonstrated by the low scores on nurse-patient satisfaction in the areas of time-sensitive care and in high-acuity care environments. The Ministry of Health in Saudi Arabia needs to actively work towards overcoming the nursing profession's current structural limitations in order to meet the patient-centered objectives set forth in the Saudi Vision 2030 healthcare strategy. Doing so will create a work environment that allows nurses to effectively utilize their relationship-building and technical competencies.

Future Scope of Study

Future research regarding Patient Satisfaction with Nursing Care MOH Hospitals in Saudi Arabia should not be limited to Cross-Sectional Surveys; rather, longitudinal studies and mixed-methods research would allow for analysis of changes in Patient Satisfaction over time and to determine which elements affect Patients' total experience of receiving services. More importantly, future research can facilitate comparison of the MOH Hospitals with Private Facilities as a means to share and learn Best Practices between these Healthcare Systems. Moreover, we must also examine the effects of Digital Health Initiatives on patient satisfaction as these will be emphasized as part of Vision 2030 in Saudi Arabia.

References

1. Elshaer BN, Abd Elwahab RA. Systematic Review and Meta-Analysis of Patient Satisfaction with Nursing Care Quality (PSNCQ) Worldwide from 2000 to 2022. Biomed Res Int. 2024;2024:12164770.
2. Alharbi F, Alshammari F. Assessment of Patient Experience of Care in Primary Health Care Centers in Northern Saudi Arabia. Healthcare (Basel). 2023;11(22):2973.
3. PRISMA. PRISMA Statement [Internet]. PRISMA; [cited 2025 Nov 26]. Available from: https://www.prisma-statement.org/.

4. Joanna Briggs Institute. JBI Critical Appraisal Tools [Internet]. The University of Adelaide; [cited 2025 Nov 26]. Available from: https://jbi.global/critical-appraisal-tools.

5. Alotaibi A, Alruwaitie A, Alrashidi S, Alshammari F, Alharbi A, Alsubaie S, et al. Hospital Patient Satisfaction With Nursing Care in Saudi Arabia. J Clin Med Res. 2024;16(5):346–352.

6. Alotaibi A, Alruwaitie A, Alrashidi S, Alshammari F, Alharbi A, Alsubaie S, et al. Hospital Patient Satisfaction With Nursing Care in Saudi Arabia. J Clin Med Res. 2024;16(5):346–352.

7. Alharbi F, Alshammari F. Assessment of Patient Experience of Care in Primary Health Care Centers in Northern Saudi Arabia. Healthcare (Basel). 2023;11(22):2973.

8. Al-Qaraqleh H, Al-Shboul H. Factors Associated with Patient Satisfaction with Nursing Care: A Cross-Sectional Study in Saudi Arabia. Int J Environ Res Public Health. 2023;20(13):6269.

9. Saudi Arabia Vision 2030. Healthcare Sector Transformation Program [Internet]. Riyadh: Saudi Vision 2030; [cited 2025 Nov 26]. Available from: https://www.vision2030.gov.sa/en/explore/programs/health-sector-transformation-program.

10. Global Health Saudi. How Saudi's Vision 2030 Is Going to Transform the Healthcare [Internet]. Riyadh: Global Health Saudi; [cited 2025 Nov 26]. Available from: https://www.globalhealthsaudi.com/en/news/healthcare-insights/how_saudis_vision_2030_is_going_to_transform_the_healthcare.html.

11. The Joanna Briggs Institute. JBI Critical Appraisal Checklist for Analytical Cross-Sectional Studies [Internet]. The University of Adelaide; 2017. [cited 2025 Nov 26]. Available from: https://jbi.global/sites/default/files/2019-05/JBI_Critical_Appraisal-Checklist_for_Analytical_Cross_Sectional_Studies2017_0.pdf.

12. The Joanna Briggs Institute. JBI Critical Appraisal Checklist for Analytical Cross-Sectional Studies [Internet]. The University of Adelaide; 2017. [cited 2025 Nov 26]. Available from: https://jbi.global/sites/default/files/2019-05/JBI_Critical_Appraisal-Checklist_for_Analytical_Cross_Sectional_Studies2017_0.pdf.

13. Alotaibi A, Alruwaitie A, Alrashidi S, Alshammari F, Alharbi A, Alsubaie S, et al. Hospital Patient Satisfaction With Nursing Care in Saudi Arabia. J Clin Med Res. 2024;16(5):346–352.

14. Ministry of Health (SA). Patient Experience Measurement Program (PEMP) [Internet]. Riyadh: Ministry of Health; [cited 2025 Nov 26]. Available from: https://www.moh.gov.sa/en/Ministry/pxmp/Pages/default.aspx.

15. Alotaibi A, Alshammari S, Althubaiti A. Patient Experience and Loyalty in Saudi Primary Health Care Centers: A Cross-Sectional Study. J Multidiscip Healthc. 2024;17:341–350.

16. Alharbi F, Alshammari F. Assessment of Patient Experience of Care in Primary Health Care Centers in Northern Saudi Arabia. Healthcare (Basel). 2023;11(22):2973.

17. Alshehri H, Almutairi S, Alshammari M, Alqahtani A, Aldahash M, Alarifi A. Factors affecting patients' satisfaction with nursing care during the COVID-19 pandemic in a Saudi general hospital. Front Public Health. 2023;11:1077147.

18. Bawazir A, Al-Othman M, Al-Mazrou A. Health Clusters and Population Health: Saudi Arabia's Healthcare Sector Transformation Program. J Public Health Manag Pract. 2024;30(3):e185–e191.

19. El-Nagger N. Patients' satisfaction with nursing care in a Saudi Arabian hospital. J Clin Nurs. 2013;23(21-22):3020–7.

20. Al-Bishri J. Patients' satisfaction with nursing care at King Saud Medical City, Riyadh, Saudi Arabia: A cross-sectional study. J Saudi Heart Assoc. 2015;27(4):255–63.

21. Elias HE, Fathy WA, Bakar ZM. Patient satisfaction with nursing care quality and associated factors among adult patients in Saudi Arabia. J Healthc Eng. 2022;2022:1568297.

22. Al-Mutairi MA, Al-Ateeq MA, Al-Habeeb AS. Socio-demographic and medical factors associated with patients' satisfaction with nursing care and their perception of pain. Ann Agric Environ Med. 2019;26(2):298–303.

23. Ibraheem WA, Ibraheem AB, Bekibele CO. Socio-demographic predictors of patients' satisfaction. Afric J Med Health Sci. 2013;12:87.