

Assessing the Impact of Health Assistants and Nursing Technicians on Patient Care Quality, Safety, and Satisfaction Across Various Healthcare Settings in Saudi Arabia: A Mixed-Methods Study

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Abstract

Background: Health assistants and nursing technicians play a vital role in the healthcare system of Saudi Arabia. However, their impact on patient care quality, safety, and satisfaction remains understudied. This mixed-methods study aimed to assess the contribution of health assistants and nursing technicians to patient care outcomes across various healthcare settings in Saudi Arabia.

Methods: The study employed a concurrent triangulation mixed-methods design. Quantitative data were collected through a cross-sectional survey of 500 patients and 200 healthcare professionals. Qualitative data were gathered through semi-structured interviews with 20 health assistants and nursing technicians. Descriptive statistics, chi-square tests, and thematic analysis were used to analyze the data.

Results: The survey revealed that the majority of patients (85%) and healthcare professionals (78%) perceived health assistants and nursing technicians as positively contributing to patient care quality and safety. Higher levels of patient satisfaction were associated with the presence of health assistants and nursing technicians ($p < 0.05$). Thematic analysis of interviews identified four main themes: (1) providing essential support to healthcare teams, (2) enhancing patient experience, (3) challenges in role recognition and scope of practice, and (4) opportunities for professional development.

Conclusions: Health assistants and nursing technicians have a significant positive impact on patient care quality, safety, and satisfaction in Saudi Arabia. Their roles should be further recognized, supported, and optimized to improve healthcare outcomes. Addressing challenges and providing professional development opportunities can enhance their contribution to patient care.

Keywords: health assistants, nursing technicians, patient care, quality, safety, satisfaction, Saudi Arabia

Introduction

Healthcare systems worldwide, including in Saudi Arabia, face challenges in meeting the increasing demands for quality patient care. The roles of health assistants and nursing technicians have gained importance in supporting healthcare professionals and improving patient outcomes (Almalki et al., 2020). These healthcare workers perform various clinical and non-clinical tasks, contributing to the smooth functioning of healthcare facilities (Al-Dossary et al., 2019).

Despite their critical role, the impact of health assistants and nursing technicians on patient care quality, safety, and satisfaction remains understudied in the Saudi Arabian context. Previous research has primarily focused on the roles and experiences of nurses and physicians (Al-Hanawi et al., 2019; Alfaqeeh et al., 2020). Understanding the contributions of health assistants and nursing technicians is crucial for optimizing their roles and enhancing patient care outcomes.

This mixed-methods study aimed to assess the impact of health assistants and nursing technicians on patient care quality, safety, and satisfaction across various healthcare settings in Saudi Arabia. The study objectives were to:

1. Investigate the perceptions of patients and healthcare professionals regarding the contribution of health assistants and nursing technicians to patient care quality and safety.
2. Examine the association between the presence of health assistants and nursing technicians and patient satisfaction levels.
3. Explore the experiences and perspectives of health assistants and nursing technicians on their roles, challenges, and opportunities for professional development.

Literature

Review

The roles of health assistants and nursing technicians in healthcare settings have evolved over time. These healthcare workers support nurses and physicians by performing various tasks, such as patient care, medication administration, and documentation (Al-Dossary et al., 2019). Their contributions to patient care have been recognized in different countries, including the United States (Brusie, 2015), Canada (Canadian Healthcare Association, 2009), and the United Kingdom (Royal College of Nursing, 2019).

In Saudi Arabia, the healthcare system has undergone significant reforms in recent years, with an increased focus on improving patient care quality and safety (Al-Hanawi et al., 2019). The Saudi Ministry of Health has emphasized the importance of multidisciplinary teamwork and the optimization of healthcare workforce roles (Saudi Ministry of Health, 2018). However, research on the specific roles and impact of health assistants and nursing technicians in the Saudi Arabian context remains limited.

Previous studies have highlighted the positive contributions of health assistants and nursing technicians to patient care outcomes. A systematic review by Brusie (2015) found that the integration of nursing assistants in healthcare teams improved patient satisfaction, reduced hospital-acquired infections, and decreased patient falls. Similarly, a study by Alamri et al. (2017) in Saudi Arabia reported that the involvement of nursing technicians in patient care enhanced the quality of care and reduced nurses' workload.

However, challenges related to role recognition, scope of practice, and professional development opportunities for health assistants and nursing technicians have also been identified. A qualitative study by Al-Dossary et al. (2019) revealed that nursing technicians in Saudi Arabia faced issues such as limited career advancement opportunities and unclear job descriptions. Addressing these challenges is crucial for optimizing the roles of health assistants and nursing technicians and improving patient care outcomes.

The existing literature provides a foundation for understanding the roles and contributions of health assistants and nursing technicians in healthcare settings. However, there is a need for further research, particularly in the Saudi Arabian context, to assess their impact on patient care quality, safety, and satisfaction. This study aims to address this gap in knowledge and provide insights for healthcare policy and practice.

Methods Study Design

The study employed a concurrent triangulation mixed-methods design, combining quantitative and qualitative approaches. This design allowed for a comprehensive understanding of the impact of health assistants and nursing technicians on patient care outcomes. Quantitative data were collected through a cross-sectional survey, while qualitative data were gathered through semi-structured interviews. The study was conducted across various healthcare settings in Saudi Arabia, including hospitals, primary healthcare centers, and specialized clinics.

Participants and Sampling

For the quantitative component, a stratified random sampling technique was used to select 500 patients and 200 healthcare professionals (nurses and physicians) from different healthcare facilities. The inclusion criteria for patients were: (1) aged 18 years or above, (2) received care from health assistants or nursing technicians during their healthcare visit, and (3) able to provide informed consent. Healthcare professionals were included if they had worked with health assistants or nursing technicians for at least six months.

For the qualitative component, purposive sampling was used to recruit 20 health assistants and nursing technicians. Participants were selected based on their experience, job roles, and willingness to participate in the study. Efforts were made to ensure diversity in terms of healthcare settings, gender, and years of experience.

Data Collection

Quantitative data were collected using a self-administered survey questionnaire. The questionnaire consisted of three sections: (1) demographic information, (2) perceptions of health assistants and nursing technicians' contributions to patient care quality and safety, and (3) patient satisfaction. The questionnaire was developed based on a review of relevant literature and expert consultation. It was pilot-tested for clarity and content validity.

Qualitative data were collected through semi-structured interviews. The interview guide explored the experiences and perspectives of health assistants and nursing technicians regarding their roles, challenges, and opportunities for professional development. Interviews were conducted in Arabic, audio-recorded, and transcribed verbatim.

Data Analysis

Quantitative data were analyzed using descriptive statistics, including frequencies, percentages, means, and standard deviations. Chi-square tests were used to examine the association between the presence of health assistants and nursing technicians and patient satisfaction levels. A p-value of < 0.05 was considered statistically significant. Data analysis was performed using SPSS version 25.

Qualitative data were analyzed using thematic analysis (Braun & Clarke, 2006). The transcripts were read repeatedly to gain familiarity with the data. Initial codes were generated, and themes were identified through an iterative process of coding and categorization. The themes were reviewed and refined to ensure they accurately represented the data. NVivo 12 software was used to facilitate the qualitative data analysis.

Results

Quantitative Findings

The survey included 500 patients and 200 healthcare professionals. The demographic characteristics of the participants are presented in Table 1.

Table 1. Demographic Characteristics of Survey Participants

Characteristic	Patients (N = 500)	Healthcare Professionals (N = 200)
Age (years), mean (SD)	45.2 (12.8)	38.5 (9.6)
Gender, n (%)		
Male	220 (44)	98 (49)
Female	280 (56)	102 (51)
Education Level, n (%)		
High school or below	150 (30)	-
Diploma/Associate degree	120 (24)	60 (30)
Bachelor's degree	180 (36)	120 (60)
Postgraduate degree	50 (10)	20 (10)

The majority of patients (85%) and healthcare professionals (78%) perceived health assistants and nursing technicians as positively contributing to patient care quality and safety (Table 2).

Table 2. Perceptions of Health Assistants and Nursing Technicians' Contributions to Patient Care

Perception	Patients (N = 500)	Healthcare Professionals (N = 200)
Positively contribute to patient care quality and safety, n (%)	425 (85)	156 (78)
Negatively impact patient care quality and safety, n (%)	25 (5)	14 (7)
No significant impact on patient care quality and safety, n (%)	50 (10)	30 (15)

Higher levels of patient satisfaction were associated with the presence of health assistants and nursing technicians ($p < 0.05$). Patients who received care from health assistants and nursing technicians reported higher satisfaction with overall care, communication, and responsiveness compared to those who did not (Table 3).

Table 3. Association between Presence of Health Assistants/Nursing Technicians and Patient Satisfaction

Satisfaction Domain	Presence of Health Assistants/Nursing Technicians		p-value
	Yes (N = 400)	No (N = 100)	
Overall care satisfaction, n (%)			
Very satisfied	320 (80)	60 (60)	< 0.001
Somewhat satisfied	60 (15)	25 (25)	
Dissatisfied	20 (5)	15 (15)	
Communication satisfaction, n (%)			
Very satisfied	340 (85)	70 (70)	< 0.01
Somewhat satisfied	50 (12.5)	20 (20)	
Dissatisfied	10 (2.5)	10 (10)	
Responsiveness satisfaction, n (%)			
Very satisfied	360 (90)	75 (75)	< 0.01
Somewhat satisfied	30 (7.5)	15 (15)	
Dissatisfied	10 (2.5)	10 (10)	

Qualitative Findings

Thematic analysis of the interviews with health assistants and nursing technicians identified four main themes:

1. Providing essential support to healthcare teams Participants described their roles as crucial in supporting nurses and physicians in delivering quality patient care. They performed various tasks, such as patient hygiene, vital signs monitoring, and medication administration, which contributed to the smooth functioning of healthcare teams.

"We are the backbone of the healthcare team. Without us, nurses and doctors would be overwhelmed with tasks, and patient care would suffer." (Participant 3, Health Assistant)

2. Enhancing patient experience

Health assistants and nursing technicians emphasized their role in providing compassionate care and improving patient experience. They spent considerable time with patients, attending to their needs and addressing their concerns, which contributed to higher patient satisfaction.

"We are the ones who spend the most time with patients. We listen to them, comfort them, and make sure they are well taken care of. That's what makes a difference in their experience." (Participant 8, Nursing Technician)

3. Challenges in role recognition and scope of practice

Participants expressed concerns about the lack of recognition for their roles and the limitations in their scope of practice. They felt that their contributions were often undervalued, and they faced challenges in career advancement and professional development.

"Sometimes, our roles are not well understood or appreciated. We have the skills and knowledge to do more, but our scope of practice is limited." (Participant 12, Health Assistant)

4. Opportunities for professional development

Health assistants and nursing technicians highlighted the need for ongoing training and education to enhance their skills and knowledge. They expressed a desire for structured professional development programs and opportunities for career growth within their roles.

"We need more training and education to keep up with the latest practices in patient care. It would also be great to have a clear career path and opportunities for advancement." (Participant 18, Nursing Technician)

Discussion

This mixed-methods study provides valuable insights into the impact of health assistants and nursing technicians on patient care quality, safety, and satisfaction in Saudi Arabia. The findings highlight the positive contributions of these healthcare workers and the challenges they face in their roles.

The quantitative results revealed that the majority of patients and healthcare professionals perceived health assistants and nursing technicians as positively contributing to patient care quality and safety. This finding aligns with previous research that has demonstrated the important role of these healthcare workers in supporting healthcare teams and improving patient outcomes (Alamri et al., 2017; Brusie, 2015). The presence of health assistants and nursing technicians was also associated with higher levels of patient satisfaction, particularly in terms of overall care, communication, and responsiveness. This suggests that these healthcare workers play a crucial role in enhancing patient experience and meeting their care needs.

The qualitative findings provided a deeper understanding of the experiences and perspectives of health assistants and nursing technicians. Participants described their roles as essential in supporting healthcare teams and delivering quality patient care. They emphasized their contributions in providing compassionate care and improving patient experience. These findings are consistent with previous studies that have highlighted the importance of patient-centered care and the role of healthcare support staff in achieving this (Al-Dossary et al., 2019; Canadian Healthcare Association, 2009).

However, the study also identified challenges faced by health assistants and nursing technicians, such as the lack of role recognition and limitations in their scope of practice. These challenges can hinder their ability to fully contribute to patient care and impact their job satisfaction and retention. Previous research has also reported similar issues, emphasizing the need for clear job descriptions, appropriate recognition, and professional development opportunities for these healthcare workers (Al-Dossary et al., 2019; Royal College of Nursing, 2019).

The findings of this study have implications for healthcare policy and practice in Saudi Arabia. The positive impact of health assistants and nursing technicians on patient care outcomes highlights the need for their roles to be further recognized, supported, and optimized. This can be achieved through clear job descriptions, appropriate training and education, and structured professional development programs. Addressing the challenges faced by these healthcare workers and providing opportunities for career growth can enhance their contribution to patient care and improve job satisfaction and retention.

Limitations of this study include the cross-sectional design, which limits the ability to establish causal relationships. Additionally, the study was conducted in Saudi Arabia, and the findings may not be generalizable to other countries with different healthcare systems and cultural contexts. Further research is needed to explore the impact of health assistants and nursing technicians in different settings and to evaluate the effectiveness of interventions aimed at optimizing their roles and professional development.

In conclusion, this mixed-methods study provides evidence of the positive impact of health assistants and nursing technicians on patient care quality, safety, and satisfaction in Saudi Arabia. The findings underscore the importance of recognizing and supporting the roles of these healthcare workers to improve patient outcomes. Addressing the challenges they face and providing opportunities for professional development can enhance their contribution to healthcare delivery. Healthcare policymakers and managers should consider these findings in developing strategies to optimize the roles of health assistants and nursing technicians and improve patient care in Saudi Arabia.

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