



**PERSPECTIVES OF HEALTH ASSISTANTS AND NURSING TECHNICIANS ON SAFE AND HIGH QUALITY PATIENT CARE IN SAUDI ARABIA: A MIXED METHODS STUDY**

**Authors:**

**Radhi Alawi Saoaib Aldhafeeri, Naif Salman Khabour Aldhafeeri, Fahad Eid Nughaymish Aldhafeeri, Tahani Munawir Moklef Aldhafeeri, Abdaaziz Dugaim Salim Aldhafeeri, Fadhela Faraj Fares Aldhafeeri**

**Abstract**

Health assistants and nursing technicians fulfill indispensable roles in healthcare delivery, yet their perspectives are rarely elicited in Saudi Arabia. This convergent parallel mixed methods study aimed to examine the views of these frontline providers on elements enabling safe, high quality patient care in their settings. Surveys and semi-structured interviews were conducted with 75 health assistants and nursing technicians at 3 hospitals. Quantitative results indicated that strong teamwork and communication were rated as having the most substantial impact on safe, quality care delivery. Qualitative themes that emerged emphasized needs for sufficient staffing, manageable workloads, continuing education on evidence-based practices, supportive leadership, and engagement of assistants and technicians in quality improvement initiatives in order to optimally provide care. Integrated findings highlight key strategies to strengthen the capacities of health assistants and nursing technicians through robust training programs, fostering collaborative team practice, implementing workflow improvements, and promoting greater involvement of these allied health professionals in care enhancement efforts.

**Introduction**

Health assistants and nursing technicians fulfill indispensable roles within the healthcare workforce in Saudi Arabia, providing the majority of routine and fundamental direct patient care services under registered nurse and physician supervision across settings (MOH, 2019). As frontline providers, their diligent efforts and clinical knowledge are essential for delivering safe, high quality care. However, the valuable perspectives of these professionals are rarely elicited or incorporated in health system quality improvement initiatives, representing a concerning gap as their insights could meaningfully strengthen care (Alboliteeh et al., 2021).

Mixed methods combining quantitative surveys and qualitative interviews allow for integrative examination of research problems, harnessing the strengths of both breadth from numeric measures and depth from individual experiences and narratives (Halcomb & Hickman, 2015). Applying this approach to assess Saudi health assistants' and nursing technicians' views on



All the articles published by Chelonian Conservation and Biology are licensed under a [Creative Commons Attribution-NonCommercial4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/) Based on a work at <https://www.acgpublishing.com/>

elements enabling or hindering exceptional care can provide critical insights to inform education, training, practice and policy for supporting these vital roles. However, minimal research has utilized mixed methods to explore the experiences of these allied health professionals.

This study aimed to fill these gaps by utilizing a convergent mixed methods design to evaluate perspectives of health assistants and nursing technicians on factors impacting safe, high quality care delivery in their Saudi healthcare settings. Findings can guide initiatives to optimize training, practice environments, team collaboration, care processes and resource allocation to best strengthen the capabilities of this indispensable workforce.

## **Background**

### **Safe, High Quality Care**

Safe, high quality care that achieves optimal patient outcomes is a foremost priority and guiding mission across healthcare systems (Al-Sawai, 2013). Core components include delivering evidence-based, clinically effective, patient-centered care while preventing avoidable errors and minimizing risks of harm, known as patient safety (Mitchell et al., 2012). Safe care also encompasses appropriately controlling infections, falls, medication side effects and other potential hazards for patients, families and providers. High quality care fulfills patients' wants, needs and preferences in an equitable, timely, efficient, and person-centered manner (AHRQ, 2022).

Achieving consistent, excellent care requires systems-level commitments along with diligent efforts of all members of the healthcare team, including those in supporting roles (Schwendimann et al., 2018). Frontline workers like health assistants and nursing technicians directly impact these processes and outcomes.

### **Roles of Health Assistants and Nursing Technicians**

In Saudi Arabia, health assistants provide fundamental services including obtaining patient histories, vital signs, performing basic diagnostic tests and treatments, sanitation, transport, and documentation duties (MOH, 2019). Nursing technicians have additional training to take on expanded responsibilities such as wound care, specimen collection, treatments, and patient education under registered nurse supervision (MOH, 2019). These professions are critical components of the healthcare workforce enabling care delivery.

### **Elements Impacting Safe, Quality Care**

Evidence has demonstrated key elements that enable frontline healthcare professionals to successfully provide exceptional safe care with positive outcomes, including (Schwendimann et al., 2018; Alboliteeh et al., 2021):

- Collaborative teamwork and communication
- Adequate staffing levels and manageable workloads

- Leader support and healthy organizational climate
- Appropriate resources and functioning equipment
- Training and education to stay updated on best practices
- Engagement in analyzing and enhancing care processes

Yet these elements are often suboptimal, contributing to safety risks, deficiencies in quality, and provider burnout (Sethi et al., 2017). There has been limited study specific to the Saudi setting on these domains.

### **Study Aims and Rationale**

This study aimed to:

- Assess perspectives of Saudi health assistants and nursing technicians regarding elements enabling the provision of safe, high quality patient care
- Identify key challenges and barriers faced in delivering optimal care
- Obtain recommendations to strengthen capacities to provide exceptional care
- Integrate complementary findings to inform educational, training, organizational and health system initiatives

Gathering both numeric ratings and narrative experiences from these Saudi allied health professionals can yield critical insights to guide enhancements.

### **Conceptual Framework**

This study was informed by Donabedian's quality framework, which recognizes that favorable structures (inputs) and processes are needed to achieve desired health outcomes (Donabedian, 1988). Exploring assistants' and technicians' views on structural elements like staffing and resources as well as care processes like teamwork and communication can provide context-specific understandings to inform improvement efforts.

### **Methods**

#### **Study Design**

A convergent parallel mixed methods design was used, applying concurrent quantitative surveys and qualitative interviews with participants (Creswell & Creswell, 2018). Quantitative and qualitative strands were integrated during interpretation.

#### **Settings and Participants**

Participants were health assistants and nursing technicians at three large Ministry of Health hospitals in Saudi Arabia. Convenience sampling was used to recruit participants. Inclusion criteria were being currently employed as a health assistant or nursing technician at a participating hospital.

#### **Data Collection and Analysis**

## **Quantitative**

Paper-based surveys were distributed during training sessions at each facility. The survey contained:

- Demographics: age, gender, years of experience, education, profession
- 28 Likert scale items rating elements that enable safe, quality care from strongly disagree (1) to strongly agree (5). Items were identified from literature.

Descriptive statistics were calculated using SPSS software.

## **Qualitative**

Semi-structured one-on-one interviews lasting approximately 45 minutes were conducted with a sub-set of willing participants exploring perspectives on:

- Enablers of safe, quality care in their settings
- Barriers and challenges faced
- Recommendations for improvements

Interviews were audio-recorded and transcribed. Data were analyzed using thematic analysis to identify key patterns (Braun & Clarke, 2006).

## **Integration**

Results were integrated by comparing and consolidating complementary quantitative and qualitative findings.

## **Rigor**

Strategies included pilot testing, multiple data sources, member checking, and peer debriefing (Creswell & Creswell, 2018).

## **Ethical Considerations**

Institutional approval and informed consent were obtained. Participation was voluntary. Confidentiality was maintained.

## **Results**

### **Participant Demographics**

75 participants completed surveys, including 40 health assistants and 35 nursing technicians. 10 health assistants and 10 nursing technicians were interviewed. Demographic characteristics are displayed in Table 1.

**Table 1. Participant Demographics**

Characteristic	Health Assistants (n=40)	Nursing Technicians (n=35)	Total (N=75)
<b>Age (Years)</b>			
20-30	25	19	44
31-40	12	13	25
>40	3	3	6
<b>Gender</b>			
Male	14	10	24
Female	26	25	51
<b>Experience (Years)</b>			
<5	16	15	31
5-10	18	12	30
>10	6	8	14

**Quantitative Results**

Table 2 displays mean Likert scale ratings for elements enabling safe, quality care. The highest rated elements were good communication/teamwork (4.61), competent knowledgeable staff (4.52), and adequate nurse staffing (4.51). Lowest ratings were for involving frontline staff in improvements (3.98) and manageable workloads (3.91). No differences emerged based on demographic factors.

**Table 2. Ratings of Elements Enabling Safe, Quality Care**

<b>Element</b>	<b>Mean Rating</b>
Good communication/teamwork	4.61
Competent, knowledgeable staff	4.52
Adequate nurse staffing	4.51
Appropriate supplies/equipment	4.47
Supportive leadership	4.46
Safety-focused organizational culture	4.41
Ongoing education/training	4.40
Team morale	4.37
Recognition for good work	4.29
Staffing policies	4.21
Reasonable daily tasks	4.17
Provider input on decisions	4.10
Staff health/wellness promotion	4.02
Involving frontline staff in improvements	3.98
Manageable workloads	3.91

## Qualitative Findings

Four major themes emerged:

### Teamwork is Key for Safety and Quality

Effective collaboration and communication among the care team was seen as the most vital element enabling high quality care, catching potential mistakes:

"We have to work as a real team... it makes care safe when we look out for each other." (P52, Nursing Technician)

### Adequate Resources and Staffing are Essential

Participants frequently expressed that staffing shortages, high patient loads, lack of functioning equipment, and limited time negatively affected care:

"We're overwhelmed trying to care for so many patients at once...it's not safe." (P37, Health Assistant)

### Ongoing Training on Best Practices is Needed

Respondents emphasized that continuing education was critical for delivering evidence-based care. This was seen as currently insufficient:

"After we graduate, there aren't a lot of chances for more training. We need updates on new procedures and standards." (P17, Nursing Technician)

### Engage Frontline Staff in Enhancing Care

Participants voiced wanting to be included more in decisions about care processes, quality improvement projects, and policies to contribute their perspectives:

"No one asks the assistants what we think could improve safety or quality. We see issues daily that managers don't." (P28, Health Assistant)

## Discussion

This mixed methods study provides valuable insights into Saudi health assistants' and nursing technicians' perspectives on enabling safe, high quality care. Integrated quantitative and qualitative findings emphasized interprofessional teamwork, communication, and adequate nurse staffing as most impactful for achieving care quality and safety. Participant narratives highlighted needs to improve resourcing, manageable workloads, continuing education, leadership support, and engagement of frontline staff in care enhancement efforts.

Prioritizing teamwork aligns with literature demonstrating its positive effects on reducing errors and harm (Schwendimann et al., 2018). Calls for increased staffing and resources reflect known associations between nursing shortages and care deficiencies (Alboliteh et al., 2021). Needs for

ongoing training and inclusion in improvements parallel evidence that continuing education and staff empowerment improve care and retention (Sethi et al., 2017).

As a small sample at select hospitals, findings may not fully generalize. Nonetheless, results provide critical insights and recommendations which healthcare organizations and nursing administrations can apply to strengthen training, practice environments, and capabilities of these vital allied health roles.

## Conclusion

This mixed methods study makes an important contribution by eliciting the perspectives of Saudi nursing assistants and technicians regarding needs to enable safe, high quality care delivery. Integrated quantitative and qualitative findings highlight key strategies to support these professionals through fostering collaborative team practice, sufficient resourcing, continuing education, manageable workloads, leadership development, and meaningfully engaging assistants and technicians in efforts to enhance care. Attention to these areas can optimize health system functioning.

## References

- Agency for Healthcare Research and Quality (AHRQ). (2022). Six domains of health care quality. <https://www.ahrq.gov/>
- Alboliteeh, M., Magarey, J., & Wiechula, R. (2021). The leadership role of nurse unit managers in quality and safety in Saudi Arabian hospitals: Where are we now and where do we need to be?. *Australian Journal of Advanced Nursing*, 38(2), 15-23.
- Al-Sawai, A. (2013). Leadership and clinical management for quality care. *Oman Medical Journal*, 28(4), 284-287.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Creswell, J.W. & Creswell, J.D. (2018). *Research design: Qualitative, quantitative and mixed methods approaches* (5th ed.). SAGE Publications.
- Donabedian, A. (1988). The quality of care: How can it be assessed?. *JAMA*, 260(12), 1743-1748.
- Halcomb, E., & Hickman, L. (2015). Mixed methods research. *Nursing Standard*, 29(32), 41-47.
- Ministry of Health, Kingdom of Saudi Arabia (MOH). (2019). Healthcare workforce. <https://www.moh.gov.sa/>
- Mitchell, P. H., Heinrich, J., Moritz, P., & Hinshaw, A. S. (2012). Steps toward safe health care: a safety imperative to prevent harm. *Journal of health services research*, 47(1), 9-39.



Schwendimann, R., Blatter, C., Dhaini, S., Simon, M., & Ausserhofer, D. (2018). The occurrence, types, consequences and preventability of in-hospital adverse events – a scoping review. *BMC health services research*, 18(1), 1-13.

Sethi, D., Obremskey, W. T., Navailh, R., & Jahangir, A. A. (2017). Orthopaedic trauma protocols improve quality and decrease cost. *Journal of Orthopaedic Trauma*, 31, S77-S82.