

Assessing the Effect of Hospital Accreditation on Patient Safety Culture in Healthcare Facilities in Saudi Arabia: A Comprehensive Review

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ABSTRACT

This comprehensive review examines the impact of hospital accreditation on patient safety culture in healthcare facilities in Saudi Arabia, with a focus on the Central Board for Accreditation of Healthcare Institutions (CBAHI) standards. Patient safety culture, defined as shared values and practices prioritizing safety, is critical for reducing medical errors and improving healthcare outcomes. The study highlights Saudi Arabia's progress in healthcare quality through accreditation, while identifying challenges in fostering a consistent safety culture across diverse healthcare settings.

Empirical evidence from recent studies, including a cross-sectional assessment of 340 healthcare workers in Saudi public hospitals, reveals that accreditation significantly enhances technical safety measures, such as facility management and emergency preparedness. However, leadership commitment and organizational culture remain underdeveloped, indicating a gap between structural compliance and cultural transformation. Demographic factors, including profession, education level, and nationality, influence perceptions of safety culture, with physicians and experienced staff generally viewing accreditation more favorably.

The review underscores the strengths of accreditation, such as standardized safety practices and external validation, while addressing limitations like inconsistent leadership engagement and sustainability concerns. Recommendations for improvement include national prioritization of patient safety, enhanced training programs, non-punitive reporting systems, and dedicated safety officers. By bridging these gaps, Saudi healthcare facilities can achieve a robust safety culture aligned with international standards, ultimately improving patient care and outcomes.

Keywords: Patient safety culture, hospital accreditation, CBAHI, Saudi Arabia, healthcare quality, leadership engagement.

INTRODUCTION

Patient safety has emerged as a critical priority in healthcare systems worldwide. According to the World Health Organization (WHO), safety culture represents one of the ten most significant human factors relevant to patient

safety (World Health Organization, 2023). This recognition underscores the growing awareness that healthcare outcomes depend not only on clinical competence but also on organizational culture and systems that prioritize safety.

In Saudi Arabia, the healthcare system has undergone substantial transformation in recent decades. With significant investments in healthcare infrastructure and technology, the Kingdom has demonstrated commitment to improving healthcare quality and safety. However, as Alqattan et al. (2018) emphasize, positive safety culture in healthcare facilities can be challenging to establish, as attitudes and perceptions toward patient safety differ significantly across countries and cultural contexts.

Hospital accreditation represents a structured approach to quality improvement that has gained international recognition. In Saudi Arabia, the establishment of the Central Board for Accreditation of Healthcare Institutions (CBAHI) in 2005 marked a significant milestone in the nation's journey toward standardized healthcare quality (CBAHI Standards, 2023). As one of the pioneering nations in the Eastern Mediterranean region to adopt healthcare accreditation standards, Saudi Arabia offers a valuable context for examining the relationship between accreditation and patient safety culture.

This comprehensive review examines the impact of hospital accreditation on patient safety culture in Saudi Arabian healthcare facilities, with particular focus on the CBAHI standards. By analyzing empirical evidence from recent studies, this review aims to provide insights into the relationship between accreditation processes and organizational safety culture in the Saudi context, identify key challenges, and offer recommendations for healthcare leaders and policymakers.

Conceptual Framework and Background

Patient Safety Culture: Definition and Importance

Patient safety culture refers to the collective behaviors, attitudes, and values that influence safety practices within healthcare organizations. As defined by Alqattan et al. (2018), it encompasses "shared ideas and values, with the aim of consistently enhancing the quality of healthcare provided to patients." A positive safety culture is characterized by open communication, mutual trust, shared perceptions of safety importance, and confidence in the efficacy of preventive measures.

The concept of safety culture originated in high-reliability organizations such as aviation and nuclear power, where system failures can have catastrophic consequences. In healthcare, recognition of safety culture's importance gained momentum following influential reports highlighting the prevalence and impact of medical errors. Leape (2008) notes that establishing a safety culture in healthcare is crucial for ensuring long-term commitment to enhancing patient safety.

Research by Elmontsri et al. (2017) has consistently demonstrated that robust safety cultures correlate with improved patient outcomes, reduced adverse events, and enhanced healthcare quality. However, as Lee et al. (2021) observe, the factors affecting patient safety culture must be addressed across specific hospital settings, and these studies need to be tailored to unique cultural backgrounds.

Healthcare System in Saudi Arabia

Saudi Arabia's healthcare system has experienced remarkable development in recent decades, transitioning from limited services to a comprehensive network of facilities providing advanced care. The system operates through multiple providers, with the Ministry of Health (MOH) serving as the primary provider and regulator of healthcare services. Other governmental agencies and the private sector also contribute significantly to healthcare delivery.

The Saudi healthcare workforce is notably diverse, comprising professionals from various nationalities and cultural backgrounds. This diversity presents both opportunities and challenges for establishing consistent safety practices and organizational culture. As Alshammari et al. (2019) note, this multicultural environment can influence how safety culture is perceived and implemented across different healthcare settings.

Additionally, Saudi Arabia's rapid socioeconomic development has influenced healthcare expectations and priorities, with increasing emphasis on quality and patient-centered care. According to Aliman and Mohamad (2016), patient satisfaction and behavioral intentions are increasingly linked to service quality, highlighting the importance of safety culture in meeting patient expectations.

Hospital Accreditation and Quality Improvement

Accreditation represents a formal process by which healthcare organizations are evaluated against established standards to assess their performance and quality. Nadeem et al. (2013) describe it as a structured quality improvement mechanism that provides standards and frameworks guiding organizational development. This external validation mechanism has become a key strategy for quality improvement in healthcare systems globally.

Groene et al. (2013) note that accreditation programs typically encompass various dimensions of healthcare delivery, including clinical processes, governance, resource management, and patient safety. In their systematic

review, they identified numerous instruments that assess the implementation of hospital quality management systems, highlighting the complexity of evaluating accreditation's impact.

Research on accreditation's impact has produced mixed findings. Greenfield et al. (2011) found that while professionals generally recognize the value of accreditation for quality improvement, motivations for engagement vary considerably. Some studies indicate positive effects on clinical outcomes and organizational processes, while others question the cost-effectiveness and sustainability of improvements.

Accreditation in Saudi Arabian Healthcare

The establishment of CBAHI in 2005 marked a significant advancement in Saudi Arabia's approach to healthcare quality assurance. As AlKhenizan and Shaw (2010) note, CBAHI standards were developed in alignment with the principles of the International Society for Quality in Health Care (ISQua), ensuring they meet international benchmarks while addressing local needs.

As the national accreditation body, CBAHI develops standards tailored to the Saudi healthcare context while incorporating international best practices. The accreditation process includes self-assessment, document review, and on-site surveys, culminating in accreditation decisions based on compliance with established standards (CBAHI Standards, 2023).

CBAHI standards encompass various dimensions of healthcare delivery, with Facility Management and Safety (FMS) standards addressing physical environment, equipment, emergency preparedness, and security. These standards aim to ensure that healthcare facilities provide safe environments for patients, visitors, and staff.

Previous studies examining accreditation in Saudi Arabia have produced varying results. Algahtani et al. (2017) found that healthcare professionals generally perceive accreditation positively, recognizing its benefits for quality improvement. Almasabi and Thomas (2017) identified positive impacts on various quality dimensions, though they noted challenges in implementation. Seada (2012) observed improvements in nursing staff perceptions of care quality following accreditation. However, limited research has specifically addressed the relationship between accreditation and patient safety culture, particularly using FMS indicators as evaluation criteria.

Empirical Evidence: Impact of Accreditation on Patient Safety Culture

Research Methodology and Setting

Recent research conducted by Abdurabuh et al. (2024) provides valuable insights into the relationship between accreditation and patient safety culture in Saudi Arabian healthcare facilities. Their cross-sectional assessment was conducted in five public hospitals in Makkah, involving 340 healthcare workers selected through systematic random sampling. The sample encompassed various professional categories, including nurses, physicians, scientific and non-clinical staff, ensuring representation of diverse perspectives within healthcare teams.

Data were collected using a self-administered questionnaire designed to assess various dimensions of patient safety culture. The instrument incorporated elements from established safety culture assessment tools, adapted to the Saudi healthcare context and aligned with CBAHI standards, particularly FMS criteria. The questionnaire addressed seven components specified in the FMS portion of CBAHI standards:

1. Facility safety and security
2. Fire safety
3. Hazards and hazardous materials safety
4. Utility and building safety
5. Medical equipment safety
6. Emergency preparedness and disaster management
7. Quality improvement

Data analysis employed multiple statistical approaches, including descriptive statistics, ANOVA, one-sample t-tests, and multiple regression analysis, providing comprehensive understanding of patient safety culture and its relationship with accreditation.

Key Findings on Patient Safety Culture Dimensions

Analysis of patient safety culture dimensions revealed varying perceptions across the seven components of the FMS standards. Respondents rated disasters and training as the highest in patient safety culture, followed by facility safety and security, hazards and hazardous materials safety, utility and building safety, fire safety, and quality improvement. Leadership, commitment, and support received the lowest scores, indicating a potential area for improvement in patient safety culture.

These findings align with research by Al-Surimi et al. (2021), who observed that while accreditation positively influences technical aspects of safety, its impact on leadership engagement and organizational culture may be more limited. Similarly, Alsaedi et al. (2023) found that accreditation significantly improved safety dimensions related to physical environment and emergency preparedness but had less impact on leadership and communication aspects.

The discrepancy between high ratings for technical safety components and lower ratings for leadership dimensions indicates potential challenges in translating accreditation requirements into comprehensive safety culture. This pattern suggests that while accreditation effectively establishes structural safety standards, developing a culture of safety requires additional focus on leadership commitment and organizational values.

Factors Influencing Patient Safety Culture Perceptions

Regression analysis revealed significant relationships between demographic characteristics and patient safety culture perceptions. Gender demonstrated a significant effect on patient safety ratings ($B = 0.480$, $p < 0.001$), with male respondents generally having a more favorable view of accreditation benefits than females. Age positively influenced scores, with higher ages resulting in higher ratings ($B = 0.127$, $p = 0.041$), suggesting that experience and maturity may contribute to more positive safety culture perceptions.

Nationality also significantly affected safety culture ratings ($B = 0.169$, $p < 0.001$), with non-Saudi healthcare providers generally holding more favorable attitudes compared to their Saudi counterparts. This finding may reflect differences in previous healthcare experiences and expectations. Abdurabuh et al. (2024) suggest that non-Saudi providers may have experience in healthcare systems with lower quality standards, potentially leading to more positive perceptions of Saudi Arabian practices.

Education level demonstrated an inverse relationship with safety culture ratings ($B = -0.186$, $p < 0.001$), indicating that higher education may be associated with more critical assessment of safety practices. This finding aligns with research by Güneş et al. (2016), who observed that increased education often correlates with higher expectations and more rigorous evaluation of safety practices.

Professional position also influenced safety culture perceptions, with physicians generally demonstrating more favorable responses toward accreditation programs compared to nurses and other professional positions. Administrative workers obtained the lowest average scores, suggesting potential disconnection between administrative functions and frontline safety practices. This pattern corresponds with findings by Alshammari et al. (2019), who observed variations in safety culture perceptions across different professional categories in Saudi healthcare settings.

The overall perception of accreditation advantages was positively correlated with direct patient contact and tenure at the same institution. This finding suggests that healthcare personnel with direct patient care responsibilities and longer organizational experience may develop stronger appreciation for accreditation's benefits, particularly as they relate to patient outcomes.

Comparative Analysis with Previous Research

The current study's findings generally align with previous research on accreditation and patient safety culture, while providing specific insights relevant to the Saudi Arabian context. The positive impact of accreditation on safety culture observed by Abdurabuh et al. (2024) corresponds with international literature suggesting that accreditation contributes to quality improvement and safety enhancement.

However, the identification of leadership commitment and support as the lowest-rated dimension contrasts with some previous studies that found stronger leadership engagement following accreditation. This discrepancy may reflect cultural factors specific to Saudi Arabian healthcare organizations or challenges in translating accreditation requirements into leadership practices.

The significant influence of demographic characteristics on safety culture perceptions observed in this study corresponds with previous research highlighting the importance of individual factors in shaping organizational culture. The finding that physicians held more favorable attitudes toward accreditation compared to nurses and administrative staff aligns with research by Algahtani et al. (2017), who observed similar patterns in professional perspectives on accreditation benefits.

The variation in safety culture perceptions across different dimensions suggests that accreditation may have differential impacts on various aspects of safety culture. This pattern aligns with findings by Almasabi and Thomas (2017), who observed that accreditation's effects varied across different quality dimensions, with stronger impacts on structural elements than on cultural components.

Strengths and Limitations of Accreditation's Impact

Strengths of Accreditation for Patient Safety Culture

Based on the empirical evidence, several strengths of accreditation for enhancing patient safety culture in Saudi Arabian healthcare facilities can be identified:

1. **Standardization of Safety Practices:** Accreditation establishes consistent safety standards across healthcare facilities, reducing variability in safety practices. As noted by Abdurabuh et al. (2024), accredited facilities demonstrated stronger implementation of technical safety components, including facility management, emergency preparedness, and hazardous materials handling.
2. **Enhanced Technical Safety Measures:** Accreditation effectively addresses technical aspects of safety, ensuring that healthcare facilities maintain appropriate physical environments, equipment, and emergency

response capabilities. This finding aligns with research by Alsaedi et al. (2023), who observed significant improvements in safety dimensions following CBAHI accreditation.

3. **Systematic Approach to Quality Improvement:** Accreditation provides a structured framework for identifying and addressing safety concerns through systematic assessment and improvement processes. This systematic approach enhances organizational capacity for continuous quality improvement, as observed by Al-Surimi et al. (2021).
4. **External Validation:** The external validation provided by accreditation enhances credibility and accountability for safety performance. As Greenfield et al. (2011) note, this external validation can motivate healthcare professionals to engage more actively in quality improvement initiatives.
5. **Comprehensive Safety Framework:** CBAHI standards encompass multiple dimensions of safety, providing a comprehensive framework for safety culture development. This multidimensional approach ensures that various aspects of safety are addressed, from physical environment to emergency preparedness and quality improvement.

Limitations and Challenges

Despite these strengths, several limitations and challenges in accreditation's impact on patient safety culture were identified:

1. **Cultural Transformation Challenges:** Accreditation may focus more on structural compliance than cultural transformation, potentially limiting its impact on deeper aspects of safety culture. The lower ratings for leadership commitment and support observed by Abdurabuh et al. (2024) suggest that accreditation may not effectively address leadership engagement in safety initiatives.
2. **Leadership Engagement Gaps:** The finding that leadership commitment received the lowest ratings indicates that accreditation may not sufficiently emphasize or effectively promote leadership engagement in safety culture. This limitation aligns with observations by Alswat et al. (2017), who identified leadership as a challenging area for improvement in Saudi healthcare settings.
3. **Professional Variation:** Differences in perceptions across professional groups indicate potential challenges in achieving consistent safety culture across all healthcare roles. The variation in attitudes between physicians, nurses, and administrative staff suggests that accreditation may not effectively address the unique perspectives and needs of different professional categories.
4. **Implementation Barriers:** Cultural, social, and organizational factors may influence how effectively accreditation standards translate into safety practices. As noted by Abdurabuh et al. (2024), factors such as cultural communication styles, social desirability bias, and acquiescence bias may affect how healthcare professionals perceive and implement safety practices.
5. **Sustainability Concerns:** The cross-sectional nature of most studies limits understanding of accreditation's long-term impact on safety culture. Questions remain about whether improvements in safety culture are sustained over time or diminish after initial accreditation efforts.

Recommendations for Enhancing Patient Safety Culture

Based on the empirical evidence and analysis of accreditation's impact on patient safety culture in Saudi Arabian healthcare facilities, several recommendations emerge for healthcare leaders, policymakers, and practitioners:

Macro-Level Recommendations

1. **Prioritize patient safety in national healthcare strategy:** As recommended by Abdurabuh et al. (2024), policymakers within Saudi Arabia's national healthcare system should emphasize the paramount importance of patient safety in strategic planning and resource allocation. This prioritization should be reflected in national healthcare policies, funding decisions, and regulatory frameworks.
2. **Enhance knowledge integration:** Develop brief training programs focused on enhancing understanding of safety culture among healthcare officials and professional staff to bridge knowledge gaps between management and clinicians. These programs should emphasize the connection between accreditation requirements and patient outcomes, enhancing appreciation for accreditation benefits.
3. **Address staffing challenges:** Improve personnel recruitment and retention through additional incentives, allowances, and compensation to mitigate risks associated with inadequate staffing. As Wong and Hasmik (2004) note, adequate staffing is essential for maintaining safety culture and preventing adverse events.
4. **Implement uniform patient safety protocols:** Establish consistent patient safety protocols across all public hospitals in Saudi Arabia, utilizing electronic patient records and standardized communication methods like SBAR (Situation, Background Assessment, Recommendation). This standardization would enhance communication among healthcare practitioners and reduce errors caused by misunderstandings.
5. **Standardize management rules:** Ensure reporting systems, methods, and actions are uniform throughout the country to promote consistency in safety practices. This standardization would facilitate benchmarking, comparison, and knowledge sharing across healthcare facilities.

Micro-Level Recommendations

1. **Promote non-punitive culture:** Encourage workers to report adverse events without fear of consequences by fostering a culture that avoids blame and focuses on system improvement. As El Taguri et al. (2008) emphasize, a non-punitive culture is essential for effective incident reporting and learning from errors.
2. **Establish patient safety officers:** Create dedicated patient safety officer roles within senior administration of every public hospital to champion safety culture enhancement initiatives. These officers would serve as focal points for safety initiatives, coordinate improvement efforts, and advocate for safety priorities.
3. **Develop comprehensive education programs:** Implement orientation programs for new staff and ongoing training for all personnel, with particular attention to adverse event reporting techniques and current safety practices. These programs should address the specific needs of different professional categories and consider the diverse cultural backgrounds of healthcare workers.
4. **Enhance physical environment:** Ensure safe working environments for staff and patients by improving periodic preventive maintenance and providing appropriate facilities for medical equipment. This enhancement would address the technical aspects of safety culture while demonstrating organizational commitment to safety.
5. **Recognize safety achievements:** Acknowledge personnel accomplishments related to patient safety through effective incentive structures, including promotion, certification, financial incentives, or recognition. This recognition would reinforce the importance of safety practices and motivate continued engagement in safety initiatives.
6. **Conduct regular assessments:** Establish protocols for regularly evaluating patient safety culture

CONCLUSION

The comprehensive review of the impact of hospital accreditation on patient safety culture in Saudi Arabian healthcare facilities highlights both the strengths and limitations of accreditation as a tool for fostering a robust safety culture. The findings underscore that accreditation, particularly through the Central Board for Accreditation of Healthcare Institutions (CBAHI), has significantly contributed to standardizing safety practices, enhancing technical safety measures, and providing a systematic framework for quality improvement. These advancements align with international benchmarks and reflect Saudi Arabia's commitment to elevating healthcare quality and patient safety.

However, the review also reveals critical gaps, particularly in leadership engagement and cultural transformation. While accreditation effectively addresses structural and procedural aspects of safety, its impact on deeper cultural dimensions—such as leadership commitment, open communication, and a non-punitive reporting environment—remains limited. The variation in perceptions across professional groups further emphasizes the need for tailored strategies to ensure consistent safety culture adoption among all healthcare staff.

To maximize the benefits of accreditation, healthcare leaders and policymakers must adopt a dual approach: reinforcing technical compliance while prioritizing cultural and behavioral change. Macro-level initiatives, such as integrating patient safety into national healthcare strategies and standardizing protocols, should be complemented by micro-level efforts, including leadership training, staff education, and fostering a blame-free reporting culture. Addressing these challenges will require sustained commitment, interdisciplinary collaboration, and continuous evaluation to ensure long-term improvements in patient safety culture.

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