



ELEVATING NURSING CARE STANDARDS: A COMPREHENSIVE CRITICAL REVIEW

AL Shammari, Anoud Salamah Ayed^{1*}, AL Anazi, Awatif Dukhi Baqi², AL Anazi, Seham Dukhi Baqi³, AL Anazi, Kholod Dukhi Baqi⁴, AL Anze ,Brdor Alanori⁵, AL Shammry, Suad Abdullah⁶

^{1*}Ministry of Health, Saudi Arabia, anouda@moh.gov.sa

²Ministry of Health, Saudi Arabia, awatifda@moh.gov.sa

³Ministry of Health, Saudi Arabia, sehama@moh.gov.sa

⁴Ministry of Health, Saudi Arabia, kdalenezi@moh.gov.sa

⁵Ministry of Health, Saudi Arabia, baalanze@moh.gov.sa

⁶Ministry of Health, Saudi Arabia, soalshammry@moh.gov.sa

***Corresponding Author:** AL Shammari, Anoud Salamah Ayed

*Ministry of Health, Saudi Arabia, anouda@moh.gov.sa

Abstract

This comprehensive critical review seeks to explore and evaluate the multifaceted components that contribute to the quality of nursing care within healthcare systems. By examining the current state of nursing practices, including patient-centered care, evidence-based practices, technological integration, and the pivotal role of nursing education, this review identifies key areas where improvements can significantly impact patient outcomes and satisfaction. Through a critical examination of various quality improvement initiatives and their outcomes, the review highlights successful strategies and common pitfalls encountered in the pursuit of excellence in nursing care. Case studies are utilized to illustrate both effective approaches and lessons learned from less successful endeavors. Furthermore, the review delves into emerging trends and innovations that hold promise for the future of nursing, while also addressing the persistent challenges and barriers that hinder progress in this field. The findings underscore the importance of leadership, interdisciplinary collaboration, and continuous adaptation to technological advancements in elevating nursing care standards. The review concludes with actionable recommendations aimed at nursing professionals and healthcare organizations, advocating for a holistic and sustained approach to quality improvement. The insights garnered from this critical review are intended to inform and inspire ongoing efforts to enhance the quality of nursing care across healthcare settings.

Keywords: Nursing Care Quality, Patient-Centered Care, Evidence-Based Practice, Quality Improvement Initiatives, Technological Integration in Nursing, Nursing Education and Training, Interdisciplinary Collaboration, Nursing Care Challenges

Introduction

In the realm of healthcare, the quality of nursing care stands as a cornerstone, profoundly influencing patient outcomes, satisfaction, and overall health system efficiency. Nurses, who are at the forefront of patient care, play a pivotal role in ensuring safety, providing compassionate care, and facilitating recovery, making their contribution indispensable to healthcare delivery (American Nurses

Association, 2021). The complexity of modern healthcare systems, characterized by rapid technological advancements and evolving patient needs, necessitates a continual reevaluation and enhancement of nursing practices to uphold and improve care standards (Institute of Medicine, 2010). The purpose of this critical review is to meticulously assess the current landscape of nursing care, identifying areas of strength and those requiring improvement. By scrutinizing various dimensions of nursing practice, including but not limited to patient-centered approaches, adherence to evidence-based guidelines, and the integration of innovative technologies, this review aims to highlight effective strategies and pinpoint gaps that may hinder the delivery of high-quality nursing care (Bridges, et al., 2020).

Moreover, the scope of this review extends to examining the impact of nursing education and ongoing professional development in fostering a workforce capable of meeting the demands of contemporary healthcare environments. The correlation between well-educated nurses and improved patient outcomes has been well documented, emphasizing the critical need for advanced training and education in the nursing profession (Aiken, et al., 2014).

Challenges such as staffing shortages, burnout, and resource limitations, which have been exacerbated by recent global health crises, further complicate the quest for quality improvement in nursing care. These issues not only affect the well-being of nursing professionals but also pose significant risks to patient safety and care quality, underscoring the urgency of addressing these challenges through comprehensive strategies and policy interventions (Kutney-Lee, et al., 2016).

In light of these considerations, this review critically examines the multifaceted aspects of nursing care quality, drawing on a broad spectrum of literature and empirical studies to offer a nuanced understanding of the current state of nursing practices. Through this analysis, the review seeks to contribute to the ongoing discourse on nursing care quality improvement, providing insights and recommendations that may inform policy, practice, and future research in this vital area of healthcare.

The Current State of Nursing Care

The landscape of nursing care is a dynamic and evolving field, deeply influenced by the rapid advancements in healthcare technologies, changing patient demographics, and the increasing complexity of healthcare needs. As the backbone of healthcare systems worldwide, nursing care quality directly impacts patient outcomes, safety, and overall healthcare experiences. This section delves into the current state of nursing care, exploring patient-centered care, evidence-based practice, technological integration, and the role of nursing education and training, while highlighting the challenges and limitations faced by the nursing profession.

Patient-Centered Care

Patient-centered care has become a pivotal aspect of nursing practice, emphasizing respect for patients' values, preferences, and expressed needs. It involves active collaboration between patients and healthcare professionals to ensure that decisions respect patients' wants, needs, and preferences, thereby fostering a partnership where the patient's voice is integral to care planning and delivery. The Institute of Medicine (IOM) underscores the importance of patient-centered care as one of the essential elements for improving healthcare quality (Institute of Medicine, 2001). Research demonstrates that patient-centered approaches in nursing not only enhance patient satisfaction but also lead to better patient outcomes, including improved quality of life and decreased healthcare utilization (Rathert, Wyrwich, & Boren, 2013).

Evidence-Based Practice

Evidence-based practice (EBP) in nursing involves integrating clinical expertise with the best available evidence from systematic research and considering patients' values and preferences. This approach ensures that nursing interventions are grounded in the most reliable evidence, leading to improved patient care and outcomes. Despite its recognized importance, the implementation of EBP in nursing faces several challenges, including a lack of time, inadequate access to quality research, and insufficient training and skills among nursing staff (Melnik et al., 2012). However, studies have

shown that when EBP is effectively implemented, it leads to significant improvements in healthcare quality and patient safety (Melnyk, Gallagher-Ford, Long, & Fineout-Overholt, 2014).

Technological Integration

The integration of technology into nursing care has transformed many aspects of practice, from patient documentation to the delivery of care. Electronic Health Records (EHRs) have become ubiquitous, improving the accuracy of patient information and facilitating more efficient care coordination. Telehealth has also emerged as a vital tool, particularly in remote and underserved areas, expanding access to care and allowing for continuous patient monitoring outside of traditional healthcare settings. Despite these advances, the rapid pace of technological change poses challenges for nurses in terms of keeping skills up-to-date and managing the complexities of digital healthcare environments (Honey & Kirshbaum, 2020).

Nursing Education and Training

The quality of nursing care is intrinsically linked to the level of education and training that nurses receive. Higher education levels among nurses have been associated with better patient outcomes, including lower mortality rates and fewer medication errors (Aiken, Clarke, Cheung, Sloane, & Silber, 2003). The demand for more highly educated nurses is growing, driven by the complexity of care and the need for advanced practice roles in healthcare teams. However, there are barriers to achieving higher education levels, including financial constraints, limited access to educational programs, and the challenges of balancing work, life, and study commitments (Kovner, Brewer, Fairchild, Poornima, Kim, & Djukic, 2007).

Challenges and Limitations

Nursing care quality is hampered by a range of challenges, including staffing shortages, burnout, and resource constraints. Staffing shortages, in particular, have been linked to increased workloads, higher levels of job dissatisfaction, and, consequently, lower quality of patient care (Aiken et al., 2002). Burnout among nurses not only affects their well-being but also leads to decreased patient satisfaction and potentially compromises patient safety (Dall'Ora, Ball, Reinius, & Griffiths, 2020). Additionally, resource constraints in healthcare settings can limit the availability of necessary supplies and equipment, further impacting the quality of nursing care.

The current state of nursing care is marked by both achievements and challenges. While advancements in patient-centered care, evidence-based practice, and technology have enhanced many aspects of nursing, significant obstacles remain. Addressing these challenges requires a concerted effort from healthcare institutions, educational bodies, and policy-makers to support nursing professionals in their critical role within the healthcare system.

Critical Review of Nursing Care Quality Improvement Initiatives

The quest for quality improvement in nursing care is a continuous journey, shaped by the evolving landscape of healthcare needs, policies, and technologies. Quality Improvement (QI) initiatives in nursing are designed to systematically improve the processes and outcomes of patient care. This critical review examines various QI initiatives, their impacts on nursing care standards, patient safety efforts, the role of interdisciplinary collaboration, and the influence of policy and regulation changes on nursing care quality.

Quality Improvement Programs

Quality Improvement programs in nursing are multifaceted, targeting various aspects of care delivery to enhance patient outcomes and safety. Initiatives such as the Magnet Recognition Program have been identified as effective in fostering environments that support professional nursing practice and patient care, leading to higher job satisfaction among nurses and lower rates of patient mortality (Kramer & Schmalenberg, 2008). Another notable example is the Plan-Do-Study-Act (PDSA) cycle, widely used in healthcare settings to implement and test changes rapidly. Studies have shown that

when nursing teams engage in PDSA cycles, there are marked improvements in care processes and patient outcomes (Taylor et al., 2014).

Patient Safety Initiatives

Patient safety is a critical component of nursing care quality, with initiatives aimed at reducing medical errors and adverse events. The implementation of safety huddles, for instance, has been shown to improve communication among healthcare team members, leading to a reduction in preventable patient harm (Goldenhar et al., 2013). Furthermore, programs like the Comprehensive Unit-based Safety Program (CUSP) have been effective in enhancing safety culture within nursing units, thereby decreasing rates of healthcare-associated infections (Clancy, 2011).

Interdisciplinary Collaboration

Interdisciplinary collaboration is essential for effective quality improvement in nursing care. Initiatives that promote collaboration between nurses, physicians, and other healthcare professionals have been associated with enhanced patient outcomes and care efficiency. For example, the implementation of Interprofessional Education (IPE) programs, where nursing students train alongside other healthcare professionals, has been linked to improved teamwork and patient care after graduation (Reeves et al., 2013).

Policy and Regulation Changes

Changes in healthcare policy and regulation can have a significant impact on nursing care quality. Policies aimed at increasing nurse staffing levels in hospitals, for example, have been linked to better patient outcomes, including lower mortality rates and shorter hospital stays (Aiken et al., 2010). Additionally, regulations that support the adoption of Electronic Health Records (EHRs) and other health information technologies have been shown to improve the accuracy of patient information and the efficiency of care coordination, contributing to enhanced quality of nursing care (DesRoches et al., 2013).

Challenges and Limitations

Despite the potential benefits of QI initiatives, there are challenges and limitations to their implementation and effectiveness. One of the primary challenges is resistance to change, often due to cultural factors within healthcare organizations or a lack of engagement from staff (Ovretveit, 2011). Additionally, the sustainability of improvements remains a concern, with some initiatives showing initial success but failing to maintain long-term gains (Braithwaite et al., 2018).

Quality Improvement initiatives play a crucial role in advancing nursing care standards. Effective QI programs, patient safety efforts, interdisciplinary collaboration, and supportive policies and regulations can lead to significant improvements in the quality of nursing care. However, the success of these initiatives requires a supportive organizational culture, engagement from all levels of staff, and a commitment to sustaining improvements over time.

Case Studies: Successes and Failures

In the ongoing endeavor to enhance nursing care quality, numerous case studies have emerged, illustrating both successful outcomes and instructive failures. These cases provide valuable insights into the factors that contribute to the effectiveness of quality improvement initiatives and the common pitfalls that can lead to their shortfall. By examining these examples, healthcare professionals can glean lessons that inform future strategies for elevating nursing care standards.

Successes

Case Study 1: Reduction in Hospital-Acquired Infections A large academic medical center implemented a multifaceted quality improvement program aimed at reducing the incidence of hospital-acquired infections (HAIs), particularly central line-associated bloodstream infections (CLABSI) and catheter-associated urinary tract infections (CAUTIs). The program included staff

education, standardized protocols for catheter insertion and maintenance, and regular feedback on infection rates. Over two years, the hospital witnessed a significant reduction in HAIs, with CLABSI rates decreasing by 70% and CAUTI rates by 50% (Pronovost et al., 2006).

Case Study 2: Enhancing Patient Safety through Interprofessional Collaboration A community hospital introduced an interprofessional collaboration initiative that brought together nurses, physicians, pharmacists, and other healthcare workers to discuss patient safety concerns and develop joint strategies for improvement. This collaborative approach led to the implementation of standardized handoff procedures, medication reconciliation processes, and a non-punitive error reporting system. As a result, the hospital experienced a 40% decrease in medication errors and a significant improvement in staff satisfaction and patient safety culture (Manser, 2009).

Failures

Case Study 1: Unsuccessful Implementation of a Nursing Staffing Model A regional hospital attempted to implement a flexible nursing staffing model designed to adjust nurse-to-patient ratios based on patient acuity and unit census. Despite the theoretical benefits of this model, the initiative failed due to inadequate staff training, resistance from nursing staff due to perceived increased workload, and a lack of real-time data to effectively adjust staffing levels. Consequently, the hospital did not see the expected improvements in patient outcomes or staff satisfaction, and the initiative was eventually abandoned (Buchan & Aiken, 2008).

Case Study 2: Failed Technology Adoption in Nursing Care Another case involved a tertiary care hospital's attempt to integrate a new electronic health record (EHR) system with advanced features for nursing documentation, medication administration, and care coordination. The project faced significant challenges, including poor user interface design, insufficient training for nursing staff, and a lack of integration with existing hospital systems. These issues led to frustration among the nursing staff, decreased efficiency, and even temporary increases in medication errors. The hospital had to undertake a costly revision of the EHR implementation strategy to address these issues (Koppel et al., 2005).

Lessons Learned

From these case studies, several key lessons emerge. Successful initiatives tend to have strong leadership support, clear communication channels, and active involvement from frontline staff. Continuous education and training are crucial to ensure staff are equipped with the necessary skills and knowledge. Moreover, successful programs often incorporate regular monitoring and feedback mechanisms to track progress and make adjustments as needed.

Conversely, the unsuccessful initiatives highlight the importance of thorough planning and consideration of the practical challenges that may arise during implementation. Resistance to change is a common obstacle that can be mitigated by engaging staff in the planning process and addressing their concerns early on. Additionally, the failures underscore the need for realistic resource allocation and the potential pitfalls of technology adoption without sufficient user input and testing.

The case studies of successes and failures in nursing care quality improvement initiatives offer valuable lessons for healthcare organizations aiming to enhance nursing care standards. They underscore the complexity of implementing change in healthcare settings and the necessity of a comprehensive approach that includes stakeholder engagement, adequate training, and adaptability to feedback and challenges.

Emerging Trends and Innovations in Nursing Care

The field of nursing care is continually evolving, shaped by advances in technology, shifts in patient demographics, and emerging healthcare needs. This dynamic landscape has given rise to several trends and innovations that promise to redefine nursing practice and improve care quality. From the integration of digital health technologies to the adoption of holistic care models, these developments are paving the way for a future where nursing care is more efficient, personalized, and accessible.

Digital Health and Telemedicine

One of the most significant trends in nursing care is the increasing adoption of digital health technologies, including telemedicine, mobile health apps, and wearable devices. Telemedicine, in particular, has seen a surge in use, enabling nurses to provide care remotely, conduct virtual consultations, and monitor patient health in real-time. This shift not only expands access to care, particularly in underserved areas, but also enhances patient engagement and self-management of chronic conditions (Smith & Baur, 2016). Wearable devices and health apps further empower patients by providing them with immediate feedback on their health status, facilitating a proactive approach to wellness and disease prevention.

Artificial Intelligence and Machine Learning

Artificial Intelligence (AI) and machine learning are beginning to make inroads into nursing care, offering powerful tools for data analysis, decision support, and patient monitoring. AI-driven algorithms can analyze vast amounts of patient data to identify patterns, predict health outcomes, and recommend personalized care plans (Davenport & Kalakota, 2019). Machine learning models are also being used to develop early warning systems for acute events, such as sepsis, enhancing the ability of nurses to intervene promptly and prevent adverse outcomes.

Holistic and Integrative Care Models

There is a growing emphasis on holistic and integrative care models that address the physical, emotional, and social aspects of patient health. These models advocate for a more patient-centered approach, where care is tailored to the individual's unique needs and life circumstances. Integrative nursing practices, which may include complementary therapies such as mindfulness, yoga, and acupuncture, are gaining traction as adjuncts to conventional medical treatments, contributing to improved patient outcomes and well-being (Kreitzer & Koithan, 2014).

Emphasis on Interprofessional Collaboration

Interprofessional collaboration is increasingly recognized as a critical component of effective nursing care. By fostering teamwork and communication among nurses, physicians, therapists, and other healthcare professionals, interprofessional collaboration ensures a coordinated approach to patient care, reducing errors and improving outcomes (Reeves et al., 2013). This collaborative ethos is being supported by educational programs that train healthcare professionals in team-based care principles from the outset of their careers.

Emerging trends and innovations in nursing care hold great promise for enhancing the quality and efficiency of healthcare delivery. By embracing digital health technologies, AI, holistic care models, and interprofessional collaboration, the nursing profession can continue to adapt and thrive in the face of changing healthcare landscapes.

Challenges and Barriers to Improving Nursing Care Quality

Improving the quality of nursing care is a complex endeavor, fraught with numerous challenges and barriers that can impede progress. Despite the advancements and innovations in healthcare, several systemic, organizational, and individual factors can stymie efforts to elevate nursing care standards. Understanding these obstacles is crucial for developing effective strategies to overcome them.

Resistance to Change

One of the primary barriers to improving nursing care quality is resistance to change, a phenomenon that can manifest at both individual and organizational levels. Change, especially when it involves new technologies or alterations in established routines, can induce anxiety and skepticism among nursing staff. Factors contributing to resistance include fear of the unknown, perceived threat to professional autonomy, and concerns about increased workload (Oreg, 2006). Overcoming this

resistance requires strong leadership, effective communication, and inclusive change management practices that actively involve nursing staff in the transformation process.

Staffing Shortages and Workforce Issues

Staffing shortages present a significant challenge to improving nursing care quality. Inadequate nurse-to-patient ratios can lead to increased workloads, stress, and burnout among nursing staff, compromising their ability to provide high-quality care (Aiken et al., 2002). Furthermore, workforce issues such as high turnover rates and the aging nursing population exacerbate staffing challenges, creating a cycle of shortages that is difficult to break. Addressing these issues requires comprehensive strategies that include improving working conditions, offering competitive compensation, and investing in nursing education and retention programs.

Resource Constraints

Resource constraints, including limited access to advanced medical equipment, insufficient funding, and inadequate support services, can hinder the implementation of quality improvement initiatives in nursing care. These constraints can be particularly acute in resource-limited settings, where the scarcity of materials and infrastructure can severely restrict nursing practice and innovation (Perry et al., 2017). Bridging the resource gap requires targeted investments in healthcare infrastructure, equitable allocation of resources, and innovative solutions that optimize the use of available assets.

Lack of Continuous Professional Development

Continuous professional development is essential for equipping nurses with the knowledge and skills necessary to adapt to the evolving demands of healthcare. However, opportunities for ongoing education and training can be limited, due to factors such as financial constraints, time pressures, and lack of institutional support (Halcomb et al., 2016). Overcoming this barrier necessitates a commitment from healthcare organizations and educational institutions to provide accessible, relevant, and flexible learning opportunities for nursing staff.

The challenges and barriers to improving nursing care quality are multifaceted, encompassing organizational culture, workforce dynamics, resource availability, and professional development opportunities. Addressing these issues demands a concerted effort from healthcare leaders, policymakers, and the nursing community to create an environment that fosters continuous improvement, innovation, and excellence in nursing practice.

Conclusion and Recommendations

In conclusion, the critical review of nursing care quality illuminates both the strides made and the challenges that persist in the pursuit of excellence in nursing practice. The evolution of patient-centered care, the integration of evidence-based practices, and the adoption of technological innovations have significantly contributed to enhancing the quality of nursing care. However, barriers such as resistance to change, staffing shortages, resource constraints, and gaps in continuous professional development underscore the complexity of achieving sustained improvements in nursing care quality.

Recommendations

To navigate these challenges and foster a culture of continuous quality improvement in nursing, the following recommendations are proposed:

- ✓ **Fostering a Culture of Change and Innovation:** Healthcare organizations should cultivate an environment that embraces change and encourages innovation. Leadership should actively involve nursing staff in decision-making processes, provide transparent communication, and support the implementation of new practices with adequate resources and training.
- ✓ **Addressing Staffing Shortages:** Policymakers and healthcare administrators must prioritize strategies to mitigate nursing shortages. This could include offering competitive compensation,

improving working conditions, and implementing flexible staffing models that account for patient acuity and care complexity.

✓ **Investing in Technology and Infrastructure:** Investments in digital health technologies and healthcare infrastructure are crucial for enhancing nursing care quality. Organizations should ensure that technological implementations are user-friendly, interoperable, and supported by comprehensive training programs.

✓ **Promoting Continuous Professional Development:** Continuous education and professional development opportunities should be made accessible to nursing staff. Healthcare institutions, in collaboration with educational bodies, should offer a range of learning modalities, including online courses, workshops, and simulation-based training, to accommodate diverse learning needs and schedules.

✓ **Encouraging Interprofessional Collaboration:** Strengthening interprofessional collaboration can lead to more coordinated and efficient patient care. Training programs that emphasize teamwork, communication, and collaborative problem-solving should be integrated into both pre-licensure education and ongoing professional development.

✓ **Advocating for Supportive Policies:** Advocacy efforts should focus on influencing policies that support nursing practice, such as favorable nurse-to-patient ratios, funding for nursing research, and initiatives that enhance the nursing work environment.

In navigating the future of nursing care, a concerted effort from all stakeholders—nurses, healthcare leaders, policymakers, and educators—is imperative. By addressing the identified challenges and adopting a proactive approach to innovation and quality improvement, the nursing profession can continue to make significant contributions to the health and well-being of populations worldwide.

References

1. American Nurses Association. (2021). *The importance of nursing*. [Link]
2. Aiken, L. H., Clarke, S. P., Cheung, R. B., Sloane, D. M., & Silber, J. H. (2014). Educational levels of hospital nurses and surgical patient mortality. *Journal of the American Medical Association*, 290(12), 1617-1623.
3. Aiken, L. H., Clarke, S. P., Sloane, D. M., Sochalski, J., & Silber, J. H. (2002). Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction. *JAMA*, 288(16), 1987-1993.
4. Aiken, L. H., Sloane, D. M., Cimiotti, J. P., Clarke, S. P., Flynn, L., Seago, J. A., ... & Smith, H. L. (2010). Implications of the California nurse staffing mandate for other states. *Health Services Research*, 45(4), 904-921.
5. Buchan, J., & Aiken, L. (2008). Solving nursing shortages: a common priority. *Journal of Clinical Nursing*, 17(24), 3262-3268.
6. Braithwaite, J., Churrua, K., Long, J. C., Ellis, L. A., & Herkes, J. (2018). When complexity science meets implementation science: a theoretical and empirical analysis of systems change. *BMC Medicine*, 16(1), 63.
7. Bridges, J., Flatley, M., & Meyer, J. (2020). *Best practices in nursing care to older adults*. The Hartford Institute for Geriatric Nursing.
8. Clancy, C. M. (2011). Ten years after To Err Is Human. *American Journal of Medical Quality*, 26(6), 465-469.
9. DesRoches, C. M., Charles, D., Furukawa, M. F., Joshi, M. S., Kralovec, P., Mostashari, F., ... & Jha, A. K. (2013). Adoption of electronic health records grows rapidly, but fewer than half of US hospitals had at least a basic system in 2012. *Health Affairs*, 32(8), 1478-1485.
10. Davenport, T., & Kalakota, R. (2019). The potential for artificial intelligence in healthcare. *Future Healthcare Journal*, 6(2), 94-98.
11. Dall'Ora, C., Ball, J., Reinius, M., & Griffiths, P. (2020). Burnout in nursing: a theoretical review. *Human Resources for Health*, 18(41).
12. Goldenhar, L. M., Brady, P. W., Sutcliffe, K. M., & Muething, S. E. (2013). Huddling for high reliability and situation awareness. *BMJ Quality & Safety*, 22(11), 899-906.

13. Halcomb, E., Salamonson, Y., Davidson, P., Kaur, R., & Young, S. (2016). The evolution of nursing in Australian general practice: a comparative analysis of workforce surveys ten years on. *BMC Family Practice*, 17(1), 38.
14. Honey, M., & Kirshbaum, M. (2020). Evidence-based practice in nursing informatics: concepts and applications. IGI Global.
15. Institute of Medicine. (2010). *The Future of Nursing: Leading Change, Advancing Health*. National Academies Press.
16. Kovner, C. T., Brewer, C. S., Fairchild, S., Poornima, S., Kim, H., & Djukic, M. (2007). Newly licensed RNs' characteristics, work attitudes, and intentions to work. *American Journal of Nursing*, 107(9), 58-70.
17. Kreitzer, M. J., & Koithan, M. (2014). Integrative nursing. Oxford University Press.
18. Kramer, M., & Schmalenberg, C. (2008). Magnet Recognition Program: A comparison of two groups of magnet hospitals. *American Journal of Nursing*, 108(2), 56-60.
19. Koppel, R., Metlay, J. P., Cohen, A., Abaluck, B., Localio, A. R., Kimmel, S. E., & Strom, B. L. (2005). Role of computerized physician order entry systems in facilitating medication errors. *JAMA*, 293(10), 1197-1203.
20. Kutney-Lee, A., Stimpfel, A. W., Sloane, D. M., Cimiotti, J. P., Quinn, L. W., & Aiken, L. H. (2016). Changes in patient and nurse outcomes associated with Magnet Hospital Recognition. *Medical Care*, 54(6), 570-576.
21. Manser, T. (2009). Teamwork and patient safety in dynamic domains of healthcare: a review of the literature. *Acta Anaesthesiologica Scandinavica*, 53(2), 143-151.
22. Melnyk, B. M., Fineout-Overholt, E., Gallagher-Ford, L., & Kaplan, L. (2012). The state of evidence-based practice in US nurses: critical implications for nurse leaders and educators. *Journal of Nursing Administration*, 42(9), 410-417.
23. Ovretveit, J. (2011). Understanding the conditions for improvement: research to discover which context influences affect improvement success. *BMJ Quality & Safety*, 20(Suppl 1), i18-i23.
24. Oreg, S. (2006). Personality, context, and resistance to organizational change. *European Journal of Work and Organizational Psychology*, 15(1), 73-101.
25. Perry, L., Gallagher, R., & Duffield, C. (2017). The health and health behaviours of Australian metropolitan nurses: an exploratory study. *BMC Nursing*, 16(1), 50.
26. Pronovost, P., Needham, D., Berenholtz, S., Sinopoli, D., Chu, H., Cosgrove, S., ... & Goeschel, C. (2006). An intervention to decrease catheter-related bloodstream infections in the ICU. *New England Journal of Medicine*, 355(26), 2725-2732.
27. Reeves, S., Perrier, L., Goldman, J., Freeth, D., & Zwarenstein, M. (2013). Interprofessional education: effects on professional practice and healthcare outcomes (update). *Cochrane Database of Systematic Reviews*, (3), CD002213.
28. Rathert, C., Wyrwich, M. D., & Boren, S. A. (2013). Patient-centered care and outcomes: a systematic review of the literature. *Medical Care Research and Review*, 70(4), 351-379.
29. Smith, A. C., & Baur, L. (2016). Telemedicine in the digital age: The convergence of technology and health. *Health Affairs*, 35(6), 1123-1130.
30. Taylor, M. J., McNicholas, C., Nicolay, C., Darzi, A., Bell, D., & Reed, J. E. (2014). Systematic review of the application of the plan-do-study-act method to improve quality in healthcare. *BMJ Quality & Safety*, 23(4), 290-298.