

INVESTIGATING THE INFLUENCE OF EVIDENCE-BASED NURSING
PRACTICE ON PATIENT SAFETY INDICATORS AND HEALTHCARE
QUALITY OUTCOMES

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DOI: <https://doi.org/10.5281/zenodo.21772301>

Keywords

Evidence-based nursing practice;
patient safety indicators;
healthcare quality; nursing
education; clinical decision-
making; hospital performance;
Pakistan healthcare system

Article History

Received: 05 May 2026

Accepted: 01 June 2026

Published: 31 July 2026

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Abstract

Evidence-based nursing practice (EBNP) has emerged as a fundamental approach for improving healthcare quality by integrating scientific evidence, clinical expertise, and patient preferences into nursing decision-making. Despite its increasing recognition worldwide, many healthcare institutions in developing countries face challenges in implementing evidence-based approaches due to limited resources, inadequate training, and organizational barriers. This study investigates the influence of evidence-based nursing practice on patient safety indicators and healthcare quality outcomes in selected healthcare institutions of Lahore, Pakistan. The objective of the study was to examine how the adoption of evidence-based nursing practices affects medication safety, infection prevention, clinical decision-making, patient satisfaction, and overall healthcare quality. A quantitative research design was employed, and data were collected through a structured questionnaire from 120 nurses working in public and private hospitals in Lahore. The collected data were analyzed using descriptive statistics, correlation analysis, and regression analysis to determine relationships between evidence-based nursing practice and healthcare outcomes. The findings revealed a significant positive association between evidence-based nursing implementation and improved patient safety indicators, including reduced medication errors, enhanced infection control practices, and improved patient care outcomes. The study concludes that strengthening evidence-based nursing culture through professional training, institutional support, and continuous clinical education can significantly enhance healthcare quality. The findings provide practical implications for hospital administrators, nursing educators, and policymakers seeking to improve patient safety standards in Pakistan's healthcare system.

Introduction

It is now becoming a more common objective for healthcare systems around the world to enhance patient safety with systematic and research-informed practices to improve quality outcomes. Nursing is the largest group of healthcare providers and a key component in providing safe, effective, and patient-centered care. In today's complex healthcare landscape, nurses need to shift away from relying solely on past experience to evidence-based nursing practice (EBNP), a method that combines the highest quality research evidence with clinical knowledge and patient values (Melnyk & Fineout-Overholt, 2023).

Evidence-based nursing practice is the framework of clinical decision making that helps the nurse find relevant evidence, interpret and analyze the findings from research, and implement effective interventions in a healthcare setting. A previous study showed that there was a decrease in adverse events, improved patient outcomes, and increased efficiency in health care in hospitals that adopted evidence-based nursing practices (Dang & Dearholt, 2022). Specifically evidence-based interventions are linked to better infection prevention, medication administration accuracy, fall prevention and reduction of complications acquired in the hospital.

Patient safety has emerged as a significant global healthcare issue, especially in countries with limited healthcare resources and facilities, as well as in developing countries where healthcare institutions are frequently faced with staff shortages. The World Health Organization (WHO, 2021) reports that unsafe health care practices are a major cause of preventable patient harm, thus there is need for effective quality improvement strategies in health care organizations.

Medical institutions in Pakistan are facing increased demand for better service as patient demand for healthcare also rises, and with the introduction of new technologies and standards in healthcare globally, medical institutions in Pakistan are required to meet the rising expectations of its patients. The concepts of evidence-based practice have been introduced slowly into nursing education but are not

consistently implemented in the hospital. Lack of scientific research training and access to databases and organizational encouragement have made it difficult for many nurses to rely on up-to-date scientific evidence and research findings (Ahmed et al., 2022).

Lahore is one of the healthcare hubs of Pakistan, there are a wide range of specialized medical services that are available in the city, both public and private hospitals. But differences in the ways patients are cared for, institutional policies, and professional development influence the effectiveness of patient safety initiatives. The study of the role of evidence-based nursing practice in this regard can offer guidance on strategies to enhance the outcomes of healthcare quality improvement.

Though healthcare delivery has improved, patient safety incidents, medication errors, healthcare-associated infections (HAIs), and poor quality of care (PQC) continue to be serious problems in Pakistani hospitals. Evidence-based nursing practice, as an effective method to better achieve health care outcomes is known, but not yet widely practiced in local health care institutions. The lack of nursing cultures that are firmly grounded in evidence can have a negative impact on clinical judgment, patient safety measures, and health outcomes. Thus, the research topic, "A study on correlation of evidence-based nursing practices and patient safety outcomes among the nurses of healthcare settings in Lahore" was selected.

Research Objectives:

The study aims to:

1. Examine the level of evidence-based nursing practice implementation among nurses working in Lahore hospitals.
2. Investigate the relationship between evidence-based nursing practice and patient safety indicators.
3. Analyze the influence of evidence-based nursing practice on healthcare quality outcomes.
4. Identify organizational and professional factors affecting the implementation of evidence-based nursing practices.

5. Provide recommendations for strengthening evidence-based nursing systems in Pakistani healthcare institutions.

Research Questions:

1. What is the current level of evidence-based nursing practice among nurses in Lahore healthcare institutions?
2. How does evidence-based nursing practice influence patient safety indicators?
3. What relationship exists between evidence-based nursing practice and healthcare quality outcomes?
4. What barriers affect the implementation of evidence-based nursing practices?

This study is important for healthcare quality improvement as it emphasizes the need for evidence-based nursing practice for better patient safety and clinical results. The results might be helpful to hospital professionals and policy makers in designing professional training programs, nursing policy development and setting evidence-based clinical guidelines. In addition, the conclusions provided here could be utilized by nursing educators to enhance the evidence-based practice competencies of nursing students and health care practitioners.

Policy implications include that investment in nursing research capacity, continuing professional development and institutional structures that foster evidence-based practice of health care delivery should be supported by this research. Evidence-based nursing practice can be a significant part of providing safer, efficient, patient-centered healthcare services, especially in developing healthcare systems like Pakistan.

Literature Review

Evidence-based nursing practice (EBNP) is the use of the best evidence available, clinical expertise and patient preferences to inform nursing decisions and interventions. It allows nurses to step away from practice based on their experience and use scientifically based methods to enhance the care that they provide to their patients (Melnik & Fineout-Overholt, 2023). EBNP encourages clinical procedures to be standardized, improves the accountability for practitioners, and provides

support to continue healthcare improvements (Dang & Dearholt, 2022).

Although there are many advantages to evidence based nursing, in developing healthcare systems, the implementation of evidence based nursing is still a challenge, which is related to the lack of research skills, training inadequacy, limitation of scientific resources and organizational barriers (Saunders & Vehviläinen-Julkunen, 2019). So, it is critical to recognize its implications in the local health care environments to enhance nursing practice.

Patient safety is an essential part of healthcare quality, emphasizing the prevention of avoidable harm in the provision of healthcare. Medications management, infection control, clinical monitoring, and compliance with health care protocols all play a role in patient safety that is of significant contribution by the nurse (World Health Organization, 2021).

Evidence-based nursing practices enhance patient safety by promoting the adoption of evidence-based clinical guidelines and procedures. Studies have shown that nurses with higher EBP skills are more likely to follow safety guidelines, fewer medication errors, and fewer HAI (Kim et al., 2020). Likewise, EBIC and patient surveillance measures have been associated with a decrease in adverse events and clinical outcomes (Haque et al., 2021).

Quality health care is linked to effective, safe, efficient and patient-centered health care. Evidence-based nursing helps to improve the quality of healthcare, because it helps to make sure that nursing care practices are based on valid and reliable scientific evidence, not on routine (Polit & Beck, 2021).

Research has demonstrated that EBP nursing practices are associated with positive patient outcomes, including improved patient satisfaction, decreased complications, shorter hospital stays, and improved recovery (Melnik et al., 2022). Evidence-based nursing also enhances patient-centered care and fosters trust between patients and health care workers, by integrating the patient's values into clinical decisions (Hoffmann et al., 2021).

Proper educational training and institutional support is essential for successful implementation of evidence-based nursing. Nurses must possess skills in the search and critical appraisal of the literature as well as skills in applying the results of research to practice (Melnik & Fineout-Overholt, 2023). When nurses undertake continuous professional training, they can enhance their confidence and competence in the effective application of evidence-based interventions (Brown et al., 2021).

Organizational factors such as leadership support, resources, and research orientation are important factors that impact the adoption of evidence-based practice. Hospitals that promote evidence-based nursing practice show better collaboration among team members, clinical innovation and better patient outcomes (Dang & Dearholt, 2022).

While research in other countries demonstrates the beneficial impact of evidence-based nursing practice on patient safety and healthcare quality, there is little empirical evidence of its impact on healthcare institutions in Pakistan. Current studies are primarily concerned with the knowledge and attitudes of the nurse and do not specifically address the link between evidence based nursing practice, patient safety indicators and outcomes of healthcare quality. Hence, this study explores this correlation amongst nurses in Lahore of health care institutions in Pakistan.

Research Methodology

Research Design

This study employed a quantitative cross-sectional research design to investigate the influence of evidence-based nursing practice on patient safety indicators and healthcare quality outcomes. A quantitative approach was selected because it allows statistical measurement of relationships among variables and provides objective evidence regarding the impact of evidence-based nursing practices in healthcare settings.

Study Setting and Population

The study was conducted in selected public and private healthcare institutions in Lahore, Pakistan. Lahore was selected because it represents one of the largest healthcare centers in the country,

containing diverse hospitals with varying levels of nursing services and healthcare facilities.

The target population consisted of registered nurses working in clinical departments, including medical wards, surgical units, intensive care units (ICUs), emergency departments, and specialized healthcare units.

Sample Size and Sampling Technique

A sample of **120 nurses** was selected for the study. A convenience sampling technique was used to recruit participants based on availability and willingness to participate. Nurses with at least one year of clinical experience were included because professional experience was considered important for evaluating evidence-based nursing practices.

Inclusion Criteria

- Registered nurses working in Lahore-based healthcare institutions
- Nurses with minimum one year of clinical experience
- Nurses involved in direct patient care activities
- Participants willing to provide informed consent

Exclusion Criteria

- Nursing students or interns
- Administrative nursing staff without clinical responsibilities
- Nurses unavailable during the data collection period

Research Instrument

Data were collected using a structured questionnaire developed from previous evidence-based nursing practice studies (Melnik & Fineout-Overholt, 2023; Dang & Dearholt, 2022). The questionnaire consisted of four sections:

Section A: Demographic Information

This section collected information regarding:

- Age
- Gender
- Educational qualification
- Years of professional experience

- Hospital sector (public/private)

Section B: Evidence-Based Nursing Practice

This section measured nurses' use of evidence-based approaches, including:

- Searching and applying research evidence
- Use of clinical guidelines
- Integration of patient preferences
- Evidence-based clinical decision-making

Section C: Patient Safety Indicators

This section assessed:

- Medication safety practices
- Infection prevention practices
- Reduction of clinical errors
- Patient monitoring procedures

Section D: Healthcare Quality Outcomes

This section evaluated:

- Patient satisfaction
- Quality of nursing care
- Clinical effectiveness
- Continuity of care

Responses were measured using a **five-point**

Likert scale ranging from:

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neutral
- 4 = Agree
- 5 = Strongly Agree

3.5 Variables of the Study

The study included the following variables:

Independent Variable:

Evidence-Based Nursing Practice

Indicators:

- Research utilization
- Evidence-based decision-making
- Clinical guideline implementation
- Professional competency

Dependent Variables:

Patient Safety Indicators

- Medication error prevention
- Infection control
- Patient monitoring

- Clinical risk reduction

Healthcare Quality Outcomes

- Patient satisfaction
- Care effectiveness
- Service quality
- Nursing performance

Reliability and Validity of Instrument

The reliability of the questionnaire was assessed through Cronbach's alpha coefficient. The instrument demonstrated acceptable internal consistency with a reliability value above 0.70, indicating that the questionnaire items consistently measured the intended constructs.

Content validity was ensured through expert review by nursing educators and healthcare professionals. Their feedback was incorporated to improve clarity, relevance, and appropriateness of questionnaire items.

Data Collection Procedure

Data were collected from nurses working in selected Lahore hospitals after obtaining institutional permission. Participants were informed about the purpose of the study, confidentiality procedures, and voluntary participation. Questionnaires were distributed physically and collected after completion.

Data Analysis

The collected data were analyzed using statistical software. The following analytical techniques were applied:

- **Descriptive statistics** (frequency, percentage, mean, and standard deviation) were used to summarize demographic characteristics and study variables.
- **Pearson correlation analysis** was conducted to determine relationships between evidence-based nursing practice, patient safety indicators, and healthcare quality outcomes.
- **Regression analysis** was performed to examine the predictive influence of evidence-based nursing practice on patient safety and healthcare quality.

A significance level of $p < 0.05$ was considered statistically significant.

Ethical Considerations

Ethical principles were maintained throughout the research process. Participants were informed about the objectives of the study, and their participation was voluntary. Confidentiality and anonymity were ensured by avoiding collection of personally identifiable information. The collected data were used only for academic research purposes.

Results and Data Analysis

The study collected data from **120 nurses** working in public and private healthcare institutions in Lahore. The demographic analysis provided an overview of participants' age, gender, educational qualification, professional experience, and workplace sector.

Table 1**Demographic Characteristics of Respondents (n = 120)**

Demographic Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	38	31.7
	Female	82	68.3
Age	21-30 years	42	35.0
	31-40 years	51	42.5
	Above 40 years	27	22.5
Education	Diploma in Nursing	34	28.3
	BS Nursing	70	58.3
	MSN/Master Level	16	13.4
Experience	1-5 years	46	38.3
	6-10 years	43	35.8
	Above 10 years	31	25.9
Hospital Sector	Public Hospitals	54	45.0
	Private Hospitals	66	55.0

The demographic findings indicate that the majority of participants were female nurses (68.3%). Most respondents belonged to the 31-40 years age group (42.5%), indicating adequate clinical maturity among participants. Regarding education, more than half of the nurses possessed a Bachelor of Science in Nursing degree (58.3%),

reflecting the increasing professionalization of nursing education in Pakistan.

Participants were asked about their implementation of evidence-based nursing practices, including research utilization, clinical guideline application, and evidence-based decision-making.

Table 2**Descriptive Statistics of Evidence-Based Nursing Practice**

Evidence-Based Nursing Practice Indicators	Mean	SD
Use of clinical guidelines during patient care	4.18	0.71
Application of research evidence in nursing decisions	3.96	0.82
Considering patient preferences in care planning	4.21	0.68
Participation in evidence-based training programs	3.74	0.91

Critical evaluation of healthcare information	3.88	0.79
Overall Evidence-Based Nursing Practice	3.99	0.78

The results demonstrate that nurses reported a relatively high level of evidence-based nursing practice. The highest mean score was observed for considering patient preferences during care planning ($M = 4.21$), suggesting that nurses recognized the importance of patient-centered approaches. However, participation in evidence-based training programs received comparatively lower scores ($M = 3.74$), indicating limited professional development opportunities.

These findings support previous research emphasizing that continuous education and institutional support are essential for strengthening evidence-based nursing competencies (Melnik & Fineout-Overholt, 2023).

The influence of evidence-based nursing practices on patient safety was assessed through medication safety, infection prevention, clinical monitoring, and reduction of healthcare errors.

Table 3
Patient Safety Indicators among Nurses

Patient Safety Indicators	Mean	SD
Following medication safety protocols	4.32	0.65
Maintaining infection prevention practices	4.28	0.70
Monitoring patient conditions effectively	4.25	0.73
Reporting and preventing clinical errors	3.91	0.84
Implementing standardized safety procedures	4.16	0.76
Overall Patient Safety Score	4.18	0.74

The findings indicate that evidence-based nursing practices were strongly associated with improved patient safety indicators. Medication safety protocols received the highest mean score ($M = 4.32$), suggesting that nurses considered evidence-based medication procedures highly important for preventing adverse events.

The results are consistent with previous studies indicating that evidence-based nursing

interventions improve medication management, infection control, and patient monitoring practices (Kim et al., 2020; Haque et al., 2021).

Healthcare quality outcomes were measured through patient satisfaction, nursing performance, effectiveness of care, and continuity of healthcare services.

Table 4
Healthcare Quality Outcomes

Healthcare Quality Indicators	Mean	SD
Improved patient satisfaction	4.15	0.72
Enhanced quality of nursing care	4.27	0.66
Better clinical decision-making	4.19	0.70

Improved continuity of care	4.12	0.75
Increased professional confidence	4.22	0.69
Overall Healthcare Quality Score	4.19	0.70

The findings reveal that evidence-based nursing practice positively influenced healthcare quality outcomes. Enhanced quality of nursing care achieved the highest mean score ($M = 4.27$), followed by increased professional confidence among nurses ($M = 4.22$).

These results indicate that nurses who apply evidence-based approaches demonstrate improved

clinical competence, better decision-making abilities, and stronger commitment to patient-centered care.

Pearson correlation analysis was conducted to determine the relationship between evidence-based nursing practice, patient safety indicators, and healthcare quality outcomes.

Table 5

Correlation between Study Variables

Variables	1	2	3
Evidence-Based Nursing Practice	1		
Patient Safety Indicators	.68**	1	
Healthcare Quality Outcomes	.72**	.75**	1

Note: $p < 0.01$

The correlation analysis indicates a strong positive relationship between evidence-based nursing practice and patient safety indicators ($r = .68$, $p < .01$). Similarly, evidence-based nursing practice showed a strong positive relationship with healthcare quality outcomes ($r = .72$, $p < .01$).

These findings suggest that higher implementation of evidence-based nursing

practices is associated with improved patient safety and enhanced healthcare quality.

Regression analysis was conducted to determine whether evidence-based nursing practice significantly predicts patient safety indicators and healthcare quality outcomes.

Table 6

Regression Analysis Predicting Healthcare Outcomes

Predictor	Dependent Variable	β	p-value
Evidence-Based Nursing Practice	Patient Safety Indicators	0.68	<0.001
Evidence-Based Nursing Practice	Healthcare Quality Outcomes	0.72	<0.001

The regression findings demonstrate that evidence-based nursing practice significantly predicts both patient safety indicators and healthcare quality outcomes. The results indicate that improvements in evidence-based nursing

implementation contribute to measurable improvements in healthcare performance.

Summary of Findings

The major findings of the study include:

1. Nurses in Lahore healthcare institutions demonstrated a high level of evidence-based nursing practice.
2. Evidence-based nursing practice showed a significant positive relationship with patient safety indicators.
3. Evidence-based nursing practice significantly improved healthcare quality outcomes.
4. Professional training and organizational support were identified as important factors influencing evidence-based nursing implementation.
5. Strengthening evidence-based nursing systems can contribute to safer and higher-quality healthcare delivery in Pakistan.

Discussion

The present study aimed to find the effect of evidence-based nursing practice on patient safety indicators and healthcare quality outcomes of 120 nurses in healthcare institutions of Lahore, Pakistan. Results showed that evidence-based nursing practice has a significant effect on improving patient safety measures and improving the quality of healthcare results. The correlation analysis showed strong positive correlations between evidence-based nursing practice and patient safety indicators ($r = .68$, $p < .01$), and healthcare quality outcomes ($r = .72$, $p < .01$). These results reveal that nurses who use research-based evidence, clinical guidelines and patient-centred approaches regularly are likely to provide safer and higher quality care to patients.

The results showed that evidence-based nursing practice has a positive effect on clinical decision making, which corroborates previous studies that have focused on the benefit of using evidence-based interventions in clinical practice rather than relying on traditional methods. Evidence-based practice enhances nursing competence by fostering critical thinking, professional accountability, and continual improvement, as suggested by Melnyk and Fineout-Overholt (2023). Likewise, Dang and Dearholt (2022) noted that healthcare organizations that adopted evidence-based frameworks achieved better health

outcomes, minimized the clinical variations and improved nursing performance.

The current study revealed that evidence-based nursing practice significantly affected patient safety indicators, including medication safety, infection prevention and clinical monitoring. The mean score for medication safety practices ($M = 4.32$) was high, indicating nurses' awareness of the significance of evidence-based medication procedures. This result aligns with Kim et al. (2020) who found that those with greater evidence-based practice competencies are also more likely to follow safety measures and less likely to make medication errors.

Evidence based nursing practices also had an impact on infection prevention. Hauskauser infection is a global problem especially in the limited resource healthcare system. The results of the present study suggest that nurse adherence to evidence-based guidelines for infection control helps to create a safer health care environment. These results are in line with those of Haque et al. (2021), who highlighted that evidence-based infection prevention strategies are key to reducing HAIs and enhancing patient outcomes.

A positive association between evidence-based nursing practice and outcomes of healthcare was also found in the study. Nurses reported that the patient's satisfaction, quality of care, clinical decisions making and confidence in their profession improved. These results corroborate the recommendations of Hoffmann et al. (2021) that evidence-based strategies enhance patient-centered care by incorporating the individual patient's needs and preferences in the clinical decisions.

The importance of professional education and training in the implementation of evidence based nursing was one of the important findings of this study. While there was good evidence of evidence-based practices, training opportunities scored a lower mark. This means that nurses can identify the value of evidence-based care but need ongoing professional development in building skills in research utilization. In a similar study, Brown et al. (2021) found that evidence-based nursing education also boosted nurses' confidence in

research-evidence searching, evaluation and application.

The results also emphasize the need for organizational support. Successful cultures of evidence-based nursing are more likely to be found in healthcare institutions where research resources, clinical guidelines and professional training and education are available. Melnyk et al. (2022) state that leadership commitment and institutional policies are both vital to the process of making evidence-based practice a standard in an organization.

These findings hold special importance for the healthcare ecosystem in Pakistan, where hospitals are still grappling with issues such as patient safety, resource constraints, and inconsistencies in nursing practices. In spite of the growing emphasis on EBP in nursing education, application of the approach in practice will need more robust institutionalization. To enhance nursing practices in healthcare settings in Lahore and beyond, it is crucial for healthcare administrators to invest in ongoing education, research facilities, and nurturing clinical environments.

Conclusion

The findings of this study reveal that the evidence-based nursing practice has a positive effect on the patient safety indicators and healthcare quality indicators in the healthcare institutions of Lahore. The results reveal that nurses who apply scientific evidence, clinical judgment, and the patient's preference to their practice, are effective in enhancing the safety of medications, reducing the risk of infection, supplying clinical monitoring, and providing overall quality care.

The study points out that evidence-based nursing is not just an individual professional duty, but an organizational duty that involves having supportive policies, leadership support, and ongoing professional development. Creating an evidence-based culture in the hospital can improve patient outcomes, increase healthcare value, and minimize preventable healthcare risks.

In Pakistan, enhancing the evidence-based nursing practice can be a useful approach to enhancing the standards of healthcare. The nursing institutions and health care institutions should pay attention

to providing evidence-based education, clinical training and providing research environments to build nurses for the challenges of the modern health care.

Recommendations

Based on the findings, the following recommendations are proposed:

Nursing education programs should integrate evidence-based practice courses that develop skills in research appraisal, clinical decision-making, and application of scientific evidence.

Healthcare institutions should organize regular workshops, seminars, and clinical training sessions to improve nurses' evidence-based practice competencies.

Hospitals should provide access to research databases, clinical guidelines, and evidence-based resources to facilitate research-informed nursing decisions.

Healthcare organizations should develop standardized nursing protocols based on current research evidence to reduce variations in patient care.

Nurses should be encouraged to participate in research activities and quality improvement projects to strengthen evidence-based healthcare delivery.

The findings of this study have important implications for healthcare administrators, nursing educators, policymakers, and clinical practitioners.

For **hospital administrators**, the results emphasize the importance of creating supportive environments where nurses can access evidence-based resources and participate in professional development activities.

For **nursing educators**, the study highlights the need to strengthen evidence-based practice competencies among nursing students and practicing professionals.

For **healthcare policymakers**, the findings provide evidence for developing national strategies that promote patient safety through evidence-based nursing standards.

For **clinical nurses**, the study reinforces the importance of integrating scientific evidence with

clinical expertise to provide safe, effective, and patient-centered care.

Limitations of the Study

Although the study provides valuable insights, several limitations should be considered. First, the sample size was limited to 120 nurses from selected healthcare institutions in Lahore, which may restrict generalization to all healthcare settings in Pakistan. Second, data were collected through self-reported questionnaires, which may introduce response bias. Third, the cross-sectional design does not allow examination of long-term changes in evidence-based nursing practice.

Future studies should include larger samples from multiple cities, longitudinal research designs, and mixed-method approaches to explore deeper organizational and professional factors influencing evidence-based nursing implementation.

Future research may explore:

- Comparative analysis of evidence-based nursing practices between public and private hospitals.
- The role of nursing leadership in promoting evidence-based healthcare cultures.
- Impact of evidence-based nursing training programs on patient outcomes.
- Development of national evidence-based nursing frameworks for Pakistan.

REFERENCES

Agency for Healthcare Research and Quality. (2022). *Patient safety and quality improvement: An evidence-based approach*. U.S. Department of Health and Human Services. <https://www.ahrq.gov>

Ahmed, S., Khan, M. A., & Raza, S. (2022). Challenges and opportunities for implementing evidence-based nursing practice in Pakistan: A systematic review. *Journal of Nursing Management*, 30(6), 1845–1854.

Brown, C. E., Ecoff, L., Kim, S. C., Wickline, M. A., Rose, B., Klimpel, K., & Glaser, D. (2021). Multi-institutional study of barriers to and facilitators of evidence-based practice. *Worldviews on Evidence-Based Nursing*, 18(3), 163–171.

Connor, L., Dean, J., McNett, M., Tydings, D. M., & Gorsuch, P. F. (2020). Evidence-based practice improves patient outcomes and healthcare quality: A review of implementation strategies. *Nursing Outlook*, 68(4), 408–417.

Dang, D., & Dearholt, S. L. (2022). *Johns Hopkins evidence-based practice for nurses and healthcare professionals: Model and guidelines* (4th ed.). Sigma Theta Tau International.

Haque, M., McKimm, J., Sartelli, M., Dhingra, S., Labrique, A., & Islam, S. (2021). Healthcare-associated infections: An overview of evidence-based prevention strategies. *Infection and Drug Resistance*, 14, 2439–2451.

Hoffmann, T. C., Montori, V. M., & Del Mar, C. (2021). The connection between evidence-based practice and patient-centered healthcare decision-making. *Medical Journal of Australia*, 214(5), 223–225.

Kim, S. C., Stichler, J. F., Ecoff, L., Brown, C. E., Gallo, A. M., & Davidson, J. E. (2020). Predictors of evidence-based practice implementation, including education, organizational support, and nursing competency. *Worldviews on Evidence-Based Nursing*, 17(4), 283–290.

Melnyk, B. M., & Fineout-Overholt, E. (2023). *Evidence-based practice in nursing and healthcare: A guide to best practice* (5th ed.). Wolters Kluwer.

Melnyk, B. M., Gallagher-Ford, L., Zellefrow, C., & Fineout-Overholt, E. (2022). The state of evidence-based practice in healthcare: Improving outcomes through implementation science. *Worldviews on Evidence-Based Nursing*, 19(1), 5–12.

Polit, D. F., & Beck, C. T. (2021). *Nursing research: Generating and assessing evidence for nursing practice* (11th ed.). Wolters Kluwer.

Saunders, H., & Vehviläinen-Julkunen, K. (2019). Nurses' evidence-based practice beliefs and the relationship with implementation of evidence-based practice: A systematic review. *Worldviews on Evidence-Based Nursing*, 16(1), 35-43.

Saunders, H., Gallagher-Ford, L., & Fineout-Overholt, E. (2022). Evidence-based practice competency and its relationship with healthcare quality outcomes. *Nursing Clinics of North America*, 57(1), 1-14.

World Health Organization. (2021). *Global patient safety action plan 2021-2030: Towards eliminating avoidable harm in health care*. World Health Organization.

