

Research Article

Assessment of Knowledge and Practices of Evidence-Based Nursing Among Clinical Nurses

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A B S T R A C T

Background: Evidence-Based Practice (EBP) has become a fundamental component of modern nursing, enabling clinicians to deliver safe, effective, and patient-centered care. Despite widespread acknowledgment of its importance, the translation of EBP into routine clinical practice remains inconsistent across healthcare settings, particularly in developing countries.

Objective: This study aimed to assess the knowledge and practices of evidence-based nursing among clinical nurses and to identify factors influencing its implementation in hospital settings.

Methods: A descriptive cross-sectional study was conducted among 200 clinical nurses working in tertiary healthcare institutions. Data were collected using a structured questionnaire adapted from the Evidence-Based Practice Questionnaire (EBPQ), covering domains of knowledge, attitudes, and practices. Descriptive and inferential statistics were used to analyze the data.

Results: The findings revealed that while nurses demonstrated moderate levels of knowledge and positive attitudes toward EBP, the actual implementation in clinical practice was relatively low. Significant associations were observed between EBP knowledge and factors such as educational qualification, years of experience, prior training, and research involvement. Major barriers identified included lack of time, insufficient access to resources, and organizational constraints.

Conclusion: Although awareness of EBP is growing among clinical nurses, its practical application remains suboptimal. Targeted interventions such as continuous education, institutional support, and improved access to research resources are necessary to bridge the gap between knowledge and practice.

Keywords: Evidence-Based Practice, Nursing Knowledge, Clinical Nurses, Healthcare Quality, Patient Outcomes

Introduction

Healthcare systems worldwide are undergoing rapid transformation due to technological advancements, increasing patient expectations, and the growing burden

of chronic diseases. In this evolving landscape, Evidence-Based Practice (EBP) has emerged as a cornerstone for delivering high-quality, safe, and cost-effective healthcare. EBP integrates the best available research evidence with

clinical expertise and patient preferences to guide decision-making in clinical settings.

Nursing, as a vital component of healthcare delivery, plays a central role in implementing EBP. Nurses are often the primary caregivers and are directly involved in patient assessment, planning, intervention, and evaluation. Therefore, their ability to apply evidence-based knowledge is critical to improving patient outcomes.

Despite its importance, several studies have reported a persistent gap between EBP knowledge and its implementation among nurses. While many nurses express positive attitudes toward EBP, they often lack the necessary skills, resources, and institutional support to integrate it into routine practice.¹ This gap is particularly evident in low- and middle-income countries, where healthcare systems may face additional challenges such as limited access to research databases and insufficient training opportunities.

Furthermore, the increasing complexity of patient care, particularly in chronic disease management, necessitates the use of evidence-based interventions. Without proper implementation of EBP, patient care may rely on outdated practices, leading to suboptimal outcomes.

This study aims to assess the level of knowledge and practices of evidence-based nursing among clinical nurses and to identify factors influencing its adoption. Understanding these aspects is essential for developing targeted strategies to promote EBP and enhance the quality of nursing care.

Review of Literature

The concept of EBP has gained significant attention over the past two decades, with numerous studies highlighting its importance in improving healthcare outcomes. Research indicates that nurses generally have positive attitudes toward EBP but face challenges in its implementation.

A cross-sectional study found that nurses demonstrated moderate knowledge of EBP but reported difficulties in applying research findings due to time constraints and lack of institutional support.¹ Similarly, another systematic review emphasized that insufficient training and limited access to research resources are major barriers to EBP adoption.²

The development of tools such as the Evidence-Based Practice Questionnaire (EBPQ) has facilitated the assessment of EBP competencies among nurses. Studies using this tool have consistently reported a gap between knowledge and practice, suggesting the need for continuous education and organizational support.³

Recent studies have also highlighted the role of organizational culture in promoting EBP. Hospitals that provide access to research databases, conduct regular training programs,

and encourage interdisciplinary collaboration tend to have higher levels of EBP implementation.⁴

In addition, factors such as educational level, years of experience, and participation in research activities have been identified as significant predictors of EBP knowledge and practice. Nurses with higher qualifications and research exposure are more likely to integrate evidence into their clinical decision-making.⁵

Methodology

Study Design

A descriptive cross-sectional research design was employed to assess the knowledge and practices of evidence-based nursing (EBN) among clinical nurses. This design was considered appropriate as it allows for the collection of data at a single point in time and facilitates the examination of relationships between demographic variables, knowledge levels, and clinical practice behaviors related to evidence-based nursing.

The study aimed to provide a snapshot of current EBN competency among nurses working in real clinical environments, thereby identifying gaps between knowledge and actual implementation in practice.

Study Setting

The study was conducted in selected tertiary care hospitals, which provide advanced healthcare services and serve as major referral centers for patients with complex medical conditions. These hospitals included multiple departments such as medical wards, surgical units, emergency departments, and intensive care units (ICUs).

These settings were chosen due to the high involvement of nurses in direct patient care and decision-making processes, making them ideal for assessing evidence-based nursing practices in clinical environments.

Sample Size and Sampling Technique

A total of 200 clinical nurses were included in the study. The sample size was determined based on feasibility, population availability, and statistical adequacy for descriptive and inferential analysis.

A convenience sampling technique was used to recruit participants who were readily accessible and met the inclusion criteria. While this method enhances practicality and speed of data collection, it may limit generalizability to broader populations.

Inclusion and Exclusion Criteria

Inclusion Criteria

- Registered nurses actively working in clinical practice settings
- Minimum of 6 months of clinical work experience

- Nurses involved in direct patient care activities
- Willingness to participate and provide informed consent

Exclusion Criteria

- Nurses working exclusively in administrative, managerial, or academic roles
- Student nurses and interns without independent clinical responsibilities
- Nurses on long-term leave during the study period

Data Collection Tool

Data were collected using a structured, self-administered questionnaire designed to assess three major domains:

Demographic and Professional Characteristics

Age, gender, educational qualification, years of experience, and prior EBP training

Knowledge of Evidence-Based Practice (EBP)

Understanding of EBP concepts, research utilization, and clinical decision-making

Practices of Evidence-Based Nursing

Frequency and extent of applying research evidence in clinical decision-making

The questionnaire was adapted from the validated Evidence-Based Practice Questionnaire (EBPQ), which has been widely used in nursing research to measure EBP knowledge, attitudes, and implementation behaviors.³ Minor modifications were made to suit the local clinical context while maintaining content relevance.

Validity and Reliability

Content validity of the instrument was established through expert review by a panel of nursing educators, clinical experts, and researchers in evidence-based practice. Feedback from experts was incorporated to improve clarity, relevance, and comprehensiveness of the tool.

Reliability testing was conducted using Cronbach's alpha coefficient, which demonstrated strong internal consistency (>0.80) across all sections of the questionnaire. This indicates that the instrument was reliable for measuring knowledge and practice of evidence-based nursing among participants.

Data Collection Procedure

Data collection was carried out over a period of four weeks. Prior to data collection, ethical approval was obtained from the institutional review committee of the respective hospitals.

Participants were approached during duty hours, and the purpose of the study was explained in detail. Written informed consent was obtained from all participants before administering the questionnaire. Confidentiality and anonymity were strictly maintained throughout the study.

The questionnaires were distributed and collected on the same day or within a short time frame to ensure a high response rate and minimize data loss.

Data Analysis

The collected data were coded and entered into statistical software for analysis. The following statistical methods were used:

- **Descriptive statistics:** frequency, percentage, mean, and standard deviation were used to summarize demographic data and EBP levels
- **Inferential statistics:** chi-square test was used to determine associations between demographic variables and EBP knowledge levels
- **Correlation analysis:** used to examine the relationship between knowledge and practice of evidence-based nursing

A p-value of less than 0.05 was considered statistically significant.

Table 1. Demographic Characteristics of Participants (N = 200)

Variable	Category	Frequency (n)	Percentage (%)
Age (years)	21–25	60	30%
	26–30	70	35%
	31–35	40	20%
	>35	30	15%
Gender	Male	40	20%
	Female	160	80%
Educational Qualification	Diploma	50	25%
	B.Sc Nursing	110	55%
	M.Sc Nursing	40	20%

Years of Experience	<1 year	30	15%
	1–5 years	100	50%
	6–10 years	50	25%
	>10 years	20	10%
EBP Training	Yes	70	35%
	No	130	65%

Results

Demographic Characteristics of Participants

The study included 200 clinical nurses working in tertiary care hospitals. The majority of participants were female nurses, reflecting the general workforce distribution in nursing.

Most participants were in the younger age group (21–35 years), indicating a relatively early-career nursing population. In terms of professional experience, a significant proportion had 1–5 years of clinical experience, while only a small number had more than 10 years of experience.

Regarding educational qualifications, most nurses held a Bachelor of Science in Nursing (B.Sc Nursing), while a smaller proportion had postgraduate qualifications. Additionally, only a limited number of participants had received formal training in evidence-based practice, highlighting a potential gap in professional development programs.

Knowledge of Evidence-Based Practice

The findings revealed that the overall knowledge of evidence-based practice among nurses was at a moderate level. While most participants were familiar with basic EBP concepts, such as the importance of research in clinical decision-making, detailed understanding of research appraisal and implementation was limited.

Statistical analysis showed that nurses with higher educational qualifications and those who had previously attended EBP training programs demonstrated significantly better knowledge scores compared to others ($p < 0.05$). This indicates that education and training play a critical role in improving EBP competency.

Practices of Evidence-Based Nursing

Despite having moderate knowledge levels, the actual implementation of evidence-based nursing practices was found to be low to moderate among participants.

Many nurses reported that they frequently relied on routine hospital protocols, senior guidance, and traditional practices rather than directly consulting current research evidence. Time constraints, heavy workload, and limited access to research databases were commonly cited reasons for low utilization of evidence in clinical decision-making.

This gap between knowledge and practice highlights the well-known “know-do gap” in nursing practice.

Barriers to EBP Implementation

The study identified several significant barriers that hinder the effective implementation of evidence-based nursing practice. The most commonly reported barriers included:

- Lack of time due to high patient workload and staffing shortages
- Limited access to research articles and databases, particularly in clinical settings
- Inadequate training and education in evidence-based practice skills
- Lack of organizational support, including insufficient encouragement from leadership and absence of institutional EBP policies

Additional minor barriers included difficulty in understanding statistical research, resistance to change, and limited collaboration between academic and clinical institutions.

Discussion

The results of this study highlight a significant gap between knowledge and practice of EBP among clinical nurses. This finding is consistent with previous studies that report similar challenges in implementing EBP.^{1,4}

One of the key findings is that training plays a crucial role in enhancing EBP knowledge and practice. Nurses who had received formal training were more likely to apply evidence-based interventions in their clinical work. This underscores the importance of continuous professional development programs.

Another important factor is organizational support. Hospitals that promote a culture of research and provide access to resources tend to have higher levels of EBP adoption. Without institutional support, even knowledgeable nurses may find it difficult to implement EBP.

The study also highlights the need for integrating EBP into nursing education. By incorporating EBP into curricula, future nurses can develop the necessary skills and competencies from the early stages of their careers.

Implications for Nursing Practice

The findings of this study have important implications for strengthening evidence-based practice (EBP) in nursing and

improving the quality of patient care in clinical settings. Addressing the identified gaps between knowledge and practice requires targeted interventions at the educational, organizational, and policy levels.

Strengthening Evidence-Based Practice Training Programs

There is a clear need to enhance formal training programs on evidence-based practice for clinical nurses. Nursing curricula and continuing professional development programs should place greater emphasis on research literacy, critical appraisal skills, and application of evidence in clinical decision-making.

Workshops, simulation-based learning, journal clubs, and bedside teaching sessions can be used to improve nurses' competence and confidence in applying research findings to patient care. Strengthening EBP education will help bridge the gap between theoretical knowledge and practical implementation.

Encouraging Research Participation Among Nurses

Active involvement of nurses in research activities should be encouraged to foster a culture of inquiry and innovation in clinical practice. Participation in research not only improves understanding of evidence generation but also enhances critical thinking and analytical skills.

Healthcare institutions should support nurses in conducting small-scale clinical research, quality improvement projects, and evidence-based audits. Collaboration between academic institutions and hospitals can further facilitate nurse-led research initiatives and promote knowledge translation into practice.

Providing Access to Online Databases and Scientific Resources

Access to updated scientific literature is essential for implementing evidence-based nursing. Hospitals and healthcare organizations should ensure that nurses have access to online databases, peer-reviewed journals, and clinical guidelines such as PubMed, CINAHL, and Cochrane Library.

Subscribing to institutional databases, providing hospital Wi-Fi, and establishing digital libraries can significantly reduce barriers related to information access. Easy availability of research evidence at the point of care can improve clinical decision-making and patient outcomes.

Promoting a Supportive Organizational Culture

A positive organizational culture is crucial for the successful implementation of evidence-based nursing practice. Healthcare institutions should encourage leadership support, interdisciplinary collaboration, and a non-punitive

environment that values innovation and continuous learning.

Nurse managers and administrators should actively promote the use of research evidence in clinical protocols and decision-making processes. Recognition programs and incentives for evidence-based practice can further motivate nurses to adopt EBP in routine care.

Limitations

Despite the valuable findings of this study, several limitations should be acknowledged, which may influence the interpretation and generalizability of the results.

Limited Sample Size and Setting

The study was conducted among a relatively limited sample of 200 clinical nurses from selected tertiary care hospitals. While sufficient for descriptive analysis, this sample size may not fully represent the broader nursing population across different regions, healthcare systems, or levels of care.

Additionally, the use of a single or limited number of institutions may restrict the generalizability of the findings to other clinical settings, such as rural hospitals or primary healthcare centers.

Use of Self-Reported Data

The study relied on self-reported questionnaires to assess knowledge and practices of evidence-based nursing. Self-reported data may be subject to response bias, including social desirability bias and recall bias, where participants may overestimate their knowledge or practice levels.

This limitation may affect the accuracy of the findings, as actual clinical behavior may differ from reported practices.

Lack of Longitudinal Analysis

The cross-sectional design of the study limits the ability to assess changes in knowledge and practice over time. Longitudinal studies are required to determine whether improvements in EBP knowledge lead to sustained changes in clinical practice.

Conclusion

This study concludes that although clinical nurses demonstrate a moderate level of knowledge regarding evidence-based practice (EBP), the actual implementation of EBP in routine clinical settings remains suboptimal. The findings clearly indicate a persistent gap between theoretical understanding and practical application, highlighting a well-recognized "knowledge-practice gap" in nursing care delivery.

The limited integration of evidence-based nursing into clinical decision-making is influenced by multiple interrelated factors, including insufficient formal training in

EBP, high workload and time constraints, limited access to updated research resources, and inadequate organizational and managerial support. These barriers collectively hinder nurses from consistently applying scientific evidence in patient care, despite their awareness of its importance.

The study further emphasizes that improving EBP adoption requires a multi-level approach. At the individual level, strengthening nurses' competencies through continuous professional development, workshops, and targeted EBP training programs is essential. At the institutional level, healthcare organizations must ensure easy access to research databases, establish clear EBP guidelines, and foster a supportive environment that encourages inquiry, innovation, and clinical research utilization.

Moreover, leadership support from nurse managers and hospital administrators plays a crucial role in promoting a culture of evidence-based care. When nurses are empowered, adequately trained, and supported by their institutions, they are more likely to integrate research findings into clinical practice, resulting in improved clinical decision-making and better patient outcomes.

In conclusion, bridging the gap between EBP knowledge and practice is essential for enhancing the quality of nursing care. Strengthening education systems, improving resource availability, and fostering organizational commitment to evidence-based nursing can significantly improve both nursing practice standards and patient health outcomes in clinical settings.

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