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EVIDENCE-BASED PRACTICE (EBP) AWARENESS AND UTILIZATION AMONG NURSES: A CROSS SECTIONAL STUDY

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ABSTRACT

Evidence-Based Practice (EBP) is a fundamental approach in modern nursing that integrates clinical expertise, patient preferences, and the best available research to improve healthcare outcomes. This study examines the awareness, knowledge, and implementation of EBP among nurses in Pakistan, identifying challenges and opportunities for its adoption.

A cross-sectional study was conducted with 239 nurses using a structured questionnaire to assess their knowledge, attitudes, and barriers to EBP. The results revealed significant gaps in EBP comprehension, with only 18.4% of participants accurately defining EBP and fewer than 30% demonstrating proficiency in key areas such as clinical question formulation and literature review. Interestingly, higher education alone did not correlate with better EBP knowledge, whereas practical experience significantly influenced understanding and application.

Several barriers to EBP adoption were identified, including limited access to research materials, inadequate mentorship, and institutional constraints. The findings highlight the need for integrating EBP training into nursing curricula, implementing structured mentorship programs, and enacting policy reforms to foster an evidence-based culture in healthcare.

This study underscores the importance of structured education, professional training, and policy initiatives to bridge the knowledge-practice gap. Strengthening EBP adoption will enhance patient care quality, improve healthcare efficiency, and reduce costs. Future research should explore targeted interventions and institutional support mechanisms to empower nurses in effectively implementing EBP, ultimately ensuring safer and higher-quality patient care.

Keywords: *Evidence-Based Practice, Nursing Education, Patient Care, Clinical Decision-Making, Healthcare Quality.*

INTRODUCTION

The capacity of health services to enhance the probability of attaining the intended medical results in alignment with contemporary professional knowledge" is how the Institute of Medical Sciences defines quality of care. The concept of patient safety, which is defined as the prevention of injury, also became a major area of professional attention at the same. There are two challenges facing modern healthcare systems: using evidence-based practice (EBP) to reduce healthcare costs and improving employee job satisfaction. Effectiveness, safety, adaptability, efficacy, and equity are indicators of the adoption of patient-centered approaches by healthcare professionals, and EBP improves both the quality of care and patient safety (Alotabi, 2024).

Evidence based practice (EBP) is a strategy to problem-solving that takes into account patients' choices and values, physicians' skills, and the best available evidence. It is the duty of nurses to stay current in order to provide the highest quality of care. In order to enhance clinical practice and treatment quality, clinicians who use Sacket's EBP model might benefit from structure and direction when they consciously implement it in their work. Physicians can assist guarantee the best possible treatment for their patients by using the EBP model to their clinical decisions in a methodical manner. Sacket's paradigm consists of the following steps: frame or ask clinical questions. (Megersa Y. , 2023)

As the need for high-quality healthcare grows around the world, nursing is crucial to delivering it. When it comes to nursing, evidence-based practice (EBP) emphasizes providing comprehensive care based on the most recent research rather than just using personal beliefs or received wisdom. EBP is implemented in large part by nurses due to their leadership, teamwork, and communication skills, all of which are essential for integrating evidence into practice.

But several barriers, including those related to the patient, the organization, and the individual, often impede the successful application of EBP. It is crucial to understand these challenges in order to enhance the quality of nursing care and ensure better patient outcomes.. (Rasha A. Mohamed, 2023)

Technique of Evidence based practice the integration of patient preferences, professional expertise, and the best available research information is emphasized by evidence-based practice (EBP), a crucial nursing method. This technique, which moves away from traditional methods and subjective beliefs towards a more scientific and research-based approach, is essential for delivering high-quality treatment and enhancing patient outcomes. Implementing EBP requires nurses to be knowledgeable about the most recent research and capable of applying it in clinical settings. EBP has gained international attention in recent years due to several studies that highlight its value in nursing practice and education.(Saad Ur Rahman, 2024)

Patient care and Health outcomes of Evidence based practice nurses must adopt evidence-based practice (EBP) to enhance patient care and health outcomes. EBP combines patient values, professional competence, and the best available research data to guarantee that healthcare decisions are well-informed and effective. In recent years, EBP has gained widespread recognition for its significance, particularly in nursing practice and education. However, problems still exist, especially in developing countries like Pakistan where implementing EBP is often hampered by a lack of resources and experience. Nursing students' critical thinking and decision-making skills can only be enhanced by fostering an EBP culture, despite these challenges. The knowledge and skills aspiring nurses possess to implement EBP will ultimately result in safer and more compassionate patient care. (Tahira Yasmin, 2023) The Evidence-Based Practice instructional materials and training led to improved patient satisfaction along with cost savings. (Alemayehu, 2021)

Methodology:

Study design:

A descriptive cross-sectional study was conducted, targeting registered nurses from Rawal General and Dental Hospital and Holy Family Hospital in Rawalpindi. The study involved nurses who were actively providing evidence-based nursing care and had at least one year of professional experience. Participants were selected using a convenient sampling method, leading to a final sample size of 239 nurses.

Tool:

A pre-validated questionnaire titled (Evidence Based Nursing Knowledge and Attitude Questionnaire EBN-KA-Q). The questionnaire was structured into two main sections. Section 1 evaluated the Knowledge of Staff Nurses regarding Evidence-Based Practice and was further divided into three parts: Part 1 covered the Concepts and Steps of Evidence-Based Practice with 13 items; Part 2 explored the Purposes and Barriers of

Evidence-Based Practice with 4 items; and Part 3 focused on Evidence-Based Practice in Nursing Research, comprising 8 items. Section 2 assessed the Attitude of Staff Nurses towards Evidence-Based Practice and included 20 items in total.

Data Analysis:

Data analysis was performed using SPSS (Statistical Package for Social Sciences), version 27. Descriptive data were reported as percentages with a 95% confidence interval (CI). A p-value of <0.05 was regarded as the threshold for statistical significance. To explore the factors influencing knowledge and attitude scores, as well as the mean knowledge score, the analysis involved the use of Chi-square tests, independent sample t-tests, and multiple regression.

Ethical Consideration:

Ethical approval for the study was obtained from the Institutional Review Board (IRB) of the Rawal Institute of Health Sciences, Islamabad (RIHS/IRB/22/2025). Before the study began, participants were required to provide informed consent and were clearly informed of their right to withdraw from the study at any time without facing any consequences. To safeguard participants' privacy, data confidentiality was meticulously maintained through secure data storage and anonymization methods.

Results

Demographic

According to the study's findings, of the 239 participants who actively engaged in the research using a structured questionnaire, most of whom were early-career nurses; more than half (**57.3%**) were between the ages of 20 and 29, (**32.2%**) were between the ages of 30 and 39, (**6.7%**) were between the ages of 40 and 49, and (**3.8%**) were between the ages of 50 and 59; the gender distribution was almost equal, with (**48.5%**) of respondents being male, (**51.0%**) female, and a small percentage (**0.4%**) identifying as other; (**36.0%**) of respondents had a diploma, (**33.9%**) had a Bachelor of Science in Nursing, (**24.3%**) had finished post-B.Sc. nursing education, and (**5.9%**) had earned a Master's in Nursing. The sample was largely inexperienced, with (**27.2%**) having less than a year's experience, (**39.3%**) having one to five years, (**20.5%**) having six to ten years, (**10.9%**) having eleven to fifteen years, and only (**2.1%**) having more than fifteen years.

Table 1. Participant Demographics (n = 239)

Variable	Category	Percentage (%)
Age	20–29	57.3
	30–39	32.2
	40–49	6.7
	50–59	3.8
Gender	Male	48.5
	Female	51.0
	Other	0.4
Highest Level of Education	Diploma	36.0
	Bachelor's Degree in Nursing	33.9
	Post B.Sc Nursing	24.3
	Master's Degree in Nursing	5.9
Years of Nursing Experience	Less than 1 Year	27.2
	1–5 Years	39.3
	6–10 Years	20.5

Variable	Category	Percentage (%)
	11–15 Years	10.9
	More than 15 Years	2.1

Knowledge Assessment

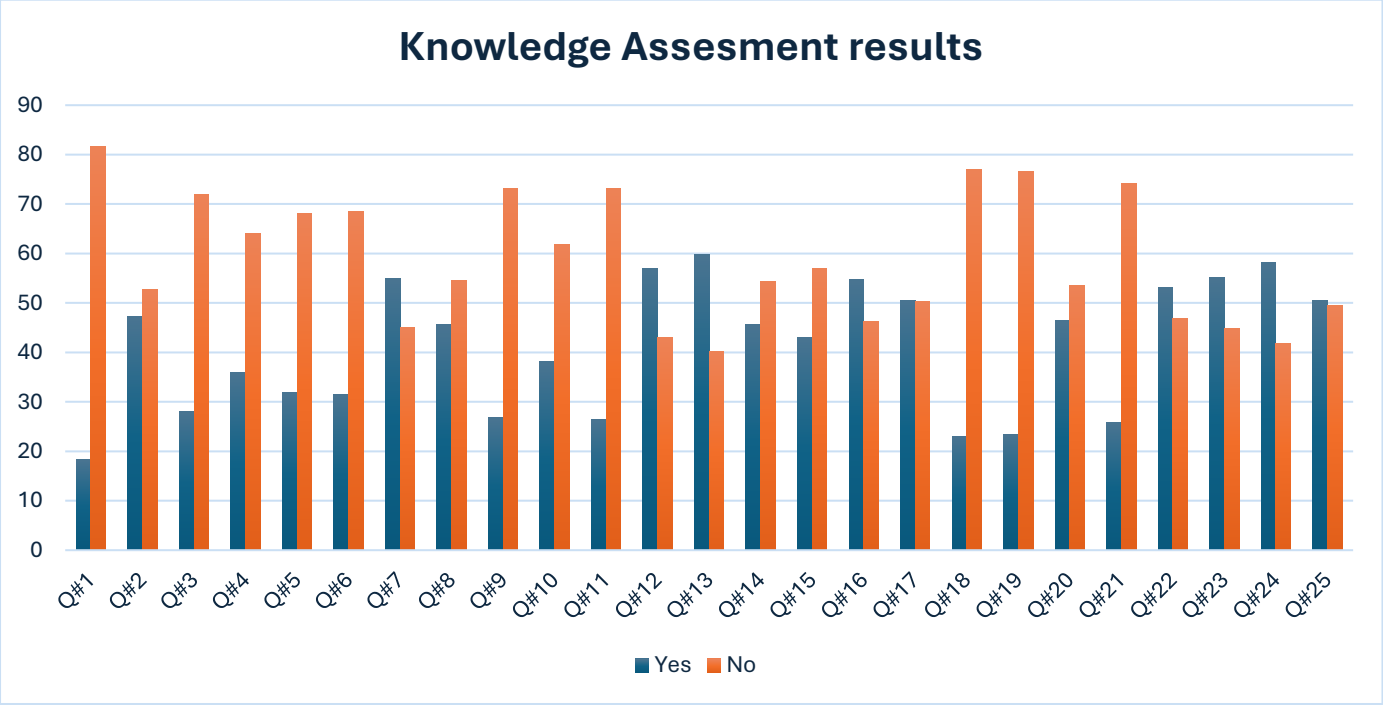
The test findings show that participants' comprehension of the principles of Evidence-Based Practice (EBP) varies significantly. It is noteworthy that the percentage of accurate answers varied from as low as **18.4**% for the definition of evidence-based practice (EBP) to as high as **58.2**% for determining the primary objective of EBP in nursing. Several questions had accurate answer rates below **32**%, indicating areas that require more education. These questions included the main elements of EBP, the function of clinical knowledge, and the process of creating a well-structured clinical question. On the other hand, tasks that dealt with detecting EBP obstacles or non-components had higher percentages of accurate answers (over **55**% in some circumstances). Furthermore, there was a nearly equal distribution of right and wrong responses to some questions, indicating participant hesitancy about particular elements of the EBP procedure. These results highlight the value of focused training in enhancing nurses' clinical practice EBP use and understanding.

Table 2. Knowledge Questionnaire Results

No.	Question	Correct Answer (%)	Incorrect Answer (%)
1	What is Evidence-Based Practice (EBP)?	18.4	81.6
2	Which of the following includes EBP?	47.3	52.7
3	Which of the following is a key component of EBP?	28.0	72.0
4	Why research is vital in EBP?	36.0	64.0
5	What is the role of clinical expertise in EBP?	31.8	68.2
6	Which is Not a limitation to EBP?	31.4	68.6
7	Which one is Not the major component of EBP in Nursing?	55.0	45.0
8	Which is the first step in EBP process?	45.6	54.5
9	Which of the following is an essential component of a well-structured clinical question?	26.8	73.2
10	Which is the next step in the EBP process after formulating a clinical question?	38.1	61.9
11	Which is the next step in the EBP process after reviewing literature?	26.4	73.2
12	Which of the following is Not a step in the EBP process?	56.9	43.1
13	Which among the following is Not one of the steps of EBP?	59.8	40.2
14	What is the significance of critically appraising research articles during the EBP process?	45.6	54.4
15	What is the purpose of conducting a literature review for EBP?	43.1	56.9
16	Which of the following is Not a barrier in EBP?	54.8	46.2
17	Which of the following is a barrier in implementing EBP in nursing practice?	50.6	50.4
18	How can nurses contribute to the development of EBP?	23.0	77.0
19	Which of the following is a way to promote EBP among nursing staff?	23.4	76.6

No.	Question	Correct Answer (%)	Incorrect Answer (%)
20	How can nurses keep up with the most recent evidence-based techniques in their area of expertise?	46.4	53.6
21	How can nurses help to build the body of evidence?	25.9	74.1
22	Why is it essential for nurses to integrate EBP into their practice?	53.1	46.9
23	When searching for evidence, which source is considered as the highest level of evidence?	55.2	44.8
24	Which of the following is the main goal of Evidence-based Nursing?	58.2	41.8
25	How can nurses access evidence for EBP?	50.6	49.4

Similarly, critical aspects such as identifying a key component of EBP (28.0% correct) and formulating a well-structured clinical question (26.8% correct) garnered low correct response rates, indicating a need for further educational focus. In contrast, some items that involved recognizing what does not belong in the EBP process showed relatively higher correct rates (e.g., 59.8% correct for identifying a non-step of EBP), suggesting that participants have a better grasp of what falls outside the scope of EBP. Questions addressing procedural steps—such as the next steps after formulating a clinical question (38.1% correct) and after reviewing literature (26.4% correct) also reflected notable gaps in detailed procedural knowledge. Furthermore, while questions on the integration of clinical expertise and literature review into EBP were answered correctly by slightly more than half of the participants (with correct percentages ranging from approximately 45% to 55%), questions concerning nurses' roles in developing and promoting EBP, such as how nurses contribute to the development of EBP (23.0% correct) and promote it among staff (23.4% correct), revealed particularly low levels of understanding. These findings underscore the importance of targeted educational interventions to bolster both foundational knowledge and procedural competencies in Evidence-Based Practice among nursing professionals. (Figure 1).



Discussion

This study revealed a significant gap in nurses' awareness and understanding of evidence-based practice (EBP). Among 239 nurses, foundational knowledge of EBP was alarmingly low: only 18.4% could correctly define EBP, and questions addressing critical components (e.g., formulating clinical questions [26.8%], post-literature review steps [26.4%]) had correct response rates below 30%. Notably, respondents struggled most with practical applications of EBP, such as their role in advancing evidence-based care (23.0–25.9% correct). While some areas showed moderate competency (e.g., identifying non-steps in EBP [55–60%]), these strengths were overshadowed by systemic knowledge deficits.

These findings align with global studies highlighting nurses' limited EBP proficiency. For instance, Melnyk et al. (2018) reported that <30% of U.S. nurses could implement EBP effectively, while Al Qadire (2019) found similar gaps among Jordanian undergraduates. The low scores on defining EBP and applying PICO frameworks mirror Patelarou et al. (2017), who identified persistent confusion about EBP's theoretical foundations. However, the current study diverges from Al-Busaidi et al. (2019), where nurses with advanced degrees demonstrated higher EBP competency. This discrepancy may stem from our sample's educational profile: 36% held diplomas, and only 5.9% had master's degrees, suggesting that formal education level strongly influences EBP mastery.

The poor performance on practical EBP components (e.g., clinical question formulation, post-literature steps) likely reflects insufficient integration of EBP into nursing curricula and on-the-job training. Early-career nurses (67% with ≤5 years' experience) may lack mentorship opportunities to bridge theory and practice. Additionally, the dominance of diploma-educated respondents (36%)—a group often trained in task-oriented care—underscores systemic gaps in foundational EBP education. Strengths in identifying non-steps (e.g., Q12, Q13) and higher-level evidence (Q23) suggest nurses can recognize what EBP is not but struggle with how to operationalize it.

Recommendation:

Nursing programs must prioritize EBP modules, particularly for diploma tracks, emphasizing practical skills like PICO development and evidence appraisal.

Hospitals should implement structured EBP mentorship programs, pairing novices with experienced nurses to foster competency.

Regulatory bodies could mandate EBP continuing education credits for licensure renewal, ensuring lifelong learning.

Investigate the impact of diploma vs. bachelor's curricula on EBP competency.

Explore the effectiveness of simulation-based EBP training for early-career nurses.

Validate culturally adapted EBP assessment tools for diverse healthcare settings.

Limitations

Social desirability or misunderstanding of questions may have skewed responses.

Conclusion:

The results suggest a significant gap in EBP knowledge among participants, especially in areas related to research, process steps, and practical application. To bridge these gaps, targeted educational programs, workshops, and resources should be implemented to improve EBP literacy and encourage its application in clinical practice.

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