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Original Research Article

KNOWLEDGE, ATTITUDE AND SKILLS OF NURSING STUDENTS REGARDING EVIDENCE BASED PRACTICE IN TERTIARY HOSPITALS

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Abstract: *Evidence-based practice (EBP) is essential for improving healthcare outcomes by integrating clinical expertise, patient preferences, and research evidence. However, the adoption of EBP remains challenging, particularly in developing countries like Pakistan.* ***Objective:*** *To assess the knowledge, attitudes, and skills of nursing students regarding EBP in tertiary hospitals in Pakistan.* ***Methods:*** *A descriptive cross-sectional study was conducted among 150 nursing students using purposive sampling. Data were collected through a validated questionnaire and analyzed using SPSS version 26. Descriptive statistics were used to summarize demographic variables and EBP-related responses.* ***Results:*** *The majority of participants (46.2%) were aged 26-30 years, and most held a BSN qualification (43.1%). Knowledge about EBP was limited, with only 28.5% correctly defining it and 46.9% recognizing clinical practice guidelines as the most useful knowledge source. Attitudes were predominantly negative, with only 26.2% agreeing that EBP aids clinical decision-making. Skills assessment revealed that while 66.2% were confident in evaluating scientific articles, only 34.5% could formulate clinical questions for evidence searching.* ***Conclusion:*** *The findings highlight substantial gaps in EBP-related competencies among nursing students in Pakistan. Curriculum enhancements, mentorship programs, and improved access to research resources are urgently needed to address these deficiencies and promote the integration of EBP into nursing practice.*

Keywords: Evidence-Based Practice, Nursing Students, Knowledge, Attitudes, Skills, Pakistan

Introduction

Evidence-based practice (EBP) is a cornerstone of modern healthcare, integrating clinical expertise, patient values, and the best available research evidence to improve healthcare outcomes. Globally, the adoption of EBP has been shown to enhance patient care quality, reduce healthcare costs, and promote clinical excellence (1, 2). However, the integration of EBP into nursing practice remains a challenge, particularly in developing countries like Pakistan, where resource limitations, cultural factors, and gaps in nursing education impede its effective implementation (3, 4). The significance of EBP in nursing education is growing, as it equips nursing students with the skills to critically appraise evidence, make informed clinical decisions, and provide patient-centered care (5).

In Pakistan, nursing education and practice are undergoing a gradual transformation, with an increasing emphasis on integrating evidence-based approaches (6). Despite these advancements, many nursing students in tertiary hospitals face barriers such as inadequate access to research resources, lack of training in critical appraisal, and limited mentorship from senior professionals (7). Studies from similar low- and middle-income countries have highlighted that students often exhibit poor knowledge, negative attitudes, and insufficient skills in EBP (8). Addressing these gaps is critical for ensuring the delivery of high-quality care and improving health outcomes in resource-constrained settings (9).

The implementation of EBP in nursing curricula is essential for fostering a positive attitude towards research utilization and developing critical thinking skills among nursing students (10). By incorporating systematic reviews, clinical practice guidelines, and evidence-based interventions into educational frameworks, nursing educators can empower students to apply research findings in clinical settings (11). However, in Pakistan, there is limited research on the knowledge, attitudes, and skills of nursing students regarding EBP, creating a gap that needs to be addressed through targeted investigations (12).

Methodology

The study employed a descriptive cross-sectional design to evaluate the knowledge, attitudes, and skills of nursing students regarding evidence-based practice (EBP) in tertiary hospitals. The study population consisted of nursing students enrolled in tertiary hospital-based programs. A purposive sampling technique was used to recruit participants, and a sample size of 150 was calculated using Slovin's formula. Ethical approval was obtained from the Nursing Department Ethics Committee at The Superior University Lahore. Participants were assured of the confidentiality of their responses and informed about their right to withdraw at any stage without facing any harm or coercion. Consent was obtained from all participants prior to data collection.

The data were collected using a structured questionnaire specifically adapted to assess the knowledge, attitudes, and skills related to EBP among nursing students. The tool underwent a reliability and validity assessment to ensure its applicability within the context of this study. The questionnaire included demographic variables and items specifically designed to measure knowledge, attitudes, and skills regarding EBP. Data were gathered in person by

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distributing the questionnaire to participants, who completed it independently within a given time frame.

Data were entered into SPSS version 26 for statistical analysis. Descriptive statistics, including frequencies and percentages, were used to summarize demographic data and responses to knowledge, attitude, and skill-related questions. Normality tests were performed to determine the distribution of the data, and appropriate statistical methods were applied to analyze the results. Ethical considerations were rigorously adhered to, ensuring participant anonymity and data protection throughout the study process.

Results

This study evaluated the knowledge, attitudes, and skills of nursing students regarding evidence-based practice (EBP) in tertiary hospitals. A total of 150 participants were included, with their demographic characteristics summarized in Table 1. The majority (46.2%) were aged between 26-30 years, with slightly more females (51.5%) than males (48.5%). Most respondents were single (57.5%), had 6-10 years of work experience (52.3%), held a BSN qualification (43.1%), and worked in medical wards (38.5%).

The assessment of knowledge revealed that a significant proportion of participants had limited understanding of EBP. As shown in Table 2, only 28.5% correctly defined EBP as integrating best research evidence, clinical expertise, and patient values. Approximately 46.2% recognized "knowledge transformation" as a critical EBP skill in critical appraisal, and only 33.1% identified systematic reviews as the strongest basis for clinical decision-making. Furthermore, 46.9% regarded clinical practice guidelines as the most useful form of knowledge in clinical settings, and 48.5% considered CINAHL as the most efficient database for locating clinical practice guidelines.

Attitudes towards EBP, summarized in Table 3, revealed mixed responses. Only 26.2% agreed that EBP helps in making clinical decisions, while 46.9% expressed confidence in critically evaluating the quality of scientific articles. A total of 38.5% of participants supported including time for scientific reading and critical appraisal in nursing contracts. Positive recognition of EBP's role in improving patient outcomes was noted in 30.8% of respondents.

As detailed in Table 4, the evaluation of skills indicated areas for improvement. Only 34.5% agreed they could formulate clinical questions to begin searching for scientific evidence, while 66.2% were confident in critically evaluating the quality of scientific articles. In contrast, 46.9% felt able to analyze the practical utility of a scientific study, but 36.9% were neutral regarding their ability to validate the results of a study.

These results highlight the need for enhanced training to improve knowledge, attitudes, and skills in evidence-based practice among nursing students.

Table 1: Demographic Characteristics of Participants

Variable	Category	Frequency (%)
Age	21-25 years	37 (28.5%)
	26-30 years	60 (46.2%)
	31-35 years	33 (25.4%)
Gender	Male	63 (48.5%)
	Female	67 (51.5%)
Marital Status	Single	75 (57.5%)
	Married	55 (42.3%)
Experience	1-5 years	21 (16.2%)
	6-10 years	68 (52.3%)
	11-15 years	41 (31.5%)
Qualification	Midwifery	36 (27.7%)
	Diploma in Nursing	38 (29.2%)
	BSN	56 (43.1%)
Department	Emergency Room	17 (13.1%)
	Surgical Ward	18 (13.8%)
	Medical Ward	50 (38.5%)
	Others	45 (34.6%)

Table 2: Knowledge of Evidence-Based Practice

Question	Correct Response (%)
EBP is defined as integrating evidence and values	37 (28.5%)
Critical appraisal involves knowledge transformation	60 (46.2%)
Systematic reviews as strongest basis for decisions	43 (33.1%)
Most useful knowledge in practice: Guidelines	61 (46.9%)
Efficient database for guidelines: CINAHL	63 (48.5%)

Table 3: Attitudes towards Evidence-Based Practice

Question	Positive Response (%)
EBP helps clinical decision-making	39 (26.2%)
Confidence in evaluating scientific articles	61 (46.9%)
Time for EBP reading in nursing contracts	50 (38.5%)
EBP improves patient outcomes	46 (30.8%)

Table 4: Skills in Evidence-Based Practice

Question	Positive Response (%)
Ability to formulate clinical questions	52 (34.5%)
Confidence in critical evaluation of articles	86 (66.2%)
Analyze practical utility of studies	61 (46.9%)
Ability to validate study results	55 (36.9%)

Discussion

This study assessed the knowledge, attitudes, and skills of nursing students regarding evidence-based practice (EBP) in tertiary hospitals in Pakistan. The findings revealed significant gaps in knowledge and negative attitudes and skills among the participants. These results are consistent with prior studies conducted in similar settings, emphasizing the need for targeted interventions to improve EBP-related competencies among nursing students.

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The knowledge assessment showed that only 28.5% of participants correctly defined EBP, and 46.9% identified clinical practice guidelines as the most useful knowledge source. Similar findings were reported by Labrague et al., where nursing students demonstrated limited knowledge and understanding of EBP principles, citing a lack of formal training as a primary barrier (13). In another study conducted by Blackman and Giles, less than 40% of graduating nurses reported confidence in applying evidence-based knowledge in clinical settings (14). This underscores the global challenge of integrating EBP concepts into nursing curricula, especially in resource-constrained settings like Pakistan.

The attitudes of nursing students toward EBP were predominantly negative, with only 26.2% agreeing that EBP helps in clinical decision-making. This aligns with findings by Belowska et al., who reported that negative attitudes among nursing students were linked to a lack of understanding and organizational support (15). However, a more recent study by Yoo et al. found that tailored educational programs significantly improved attitudes towards EBP, suggesting that curriculum enhancements could be an effective strategy in the Pakistani context (16).

Regarding skills, while 66.2% of participants expressed confidence in critically evaluating scientific articles, only 34.5% felt capable of formulating clinical questions for evidence searching. This discrepancy mirrors results from a study by Kumah et al., which highlighted that while nursing students may possess some analytical skills, they often struggle with the practical application of EBP principles (17). Additionally, Sharplin et al. identified limited mentorship and inadequate exposure to clinical research as significant barriers to skill development in EBP (18). These barriers are likely exacerbated in Pakistan due to resource limitations and the lack of integration between academia and clinical practice.

Our findings underscore the importance of incorporating EBP-focused training modules into nursing curricula to address these gaps. As recommended by Haller et al., fostering a culture of EBP through structured educational interventions and mentorship programs can significantly enhance students' knowledge, attitudes, and skills (19). Furthermore, establishing access to research databases and providing hands-on training in critical appraisal techniques can empower nursing students to apply evidence-based approaches effectively (20).

In conclusion, the results of this study highlight the need for targeted interventions to improve EBP-related competencies among nursing students in Pakistan. Aligning nursing education with international EBP standards, while addressing local barriers, is crucial for developing a competent nursing workforce capable of delivering high-quality, evidence-based care.

Conclusion

This study highlights significant gaps in knowledge, attitudes, and skills regarding evidence-based practice (EBP) among nursing students in tertiary hospitals in Pakistan. Despite some positive indications, such as confidence in evaluating scientific articles, the overall findings suggest a pressing need for curriculum enhancements and structured educational interventions. Addressing these gaps through mentorship, access to research resources, and hands-on training can equip nursing students to effectively implement EBP in clinical settings, ultimately improving patient care outcomes.

Declarations

Data Availability statement

All data generated or analyzed during the study are included in the manuscript.

Ethics approval and consent to participate

Approved by the department Concerned. (IRBEC-SNU-023/24)

Consent for publication

Approved

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Conflict of interest

The authors declared absence of conflict of interest.

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Conception of Study, Development of Research Methodology Design, Study Design, Review of manuscript, final approval of manuscript.
Conception of Study, Final approval of manuscript.
SYEDA SIDRA TASNEEM
Manuscript revisions, critical input.
Coordination of collaborative efforts.
Data acquisition, analysis.

References

1. Emparanza JI, Cabello JB, Burls A. Does evidence-based practice improve patient outcomes? An analysis of a natural experiment in a Spanish hospital. J Eval Clin Pract. 2015; 21(6):1059-1065.
2. Levin RF, Fineout-Overholt E, Melnyk BM, Barnes M, Vetter MJ. Fostering evidence-based practice to improve nurse and cost outcomes in a community health setting: a pilot test of the advancing research and clinical practice through close collaboration model. Nurs Adm Q. 2011; 35(1):21-33.
3. Labrague LJ, McEnroe-Pettite D, Tsaras K, D'Souza MS, Fronda DC, Mirafuentes EC, et al. Predictors of evidence-based practice knowledge, skills, and attitudes among nursing students. Nursing Forum. 2019; 54(2):179-187.
4. Belowska J, Panczyk M, Zarzeka A, Iwanow L, Cieślak I, Gotlib J. Promoting evidence-based practice–perceived knowledge, behaviours and attitudes of Polish nurses: a cross-sectional validation study. Int J Occup Saf Ergon. 2020; 26(2):293-305.

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5. Yoo JY, Kim JH, Kim JS, Kim HL, Ki JS. Clinical nurses' beliefs, knowledge, organizational readiness, and level of implementation of evidence-based practice: The first step to creating an evidence-based practice culture. PLoS One. 2019; 14(12):e0226742.
6. Panteli D, Legido-Quigley H, Reichebner C, Ollenschläger G, Schäfer C, Busse R. Clinical practice guidelines as a quality strategy. Improving Healthcare Quality in Europe. 2019; 233:245-251.
7. Mackey A, Bassendowski S. The history of evidence-based practice in nursing education and practice. J Prof Nurs. 2017; 33(1):51-55.
8. Horntvedt M-ET, Nordsteien A, Fermann T, Severinsson E. Strategies for teaching evidence-based practice in nursing education: a thematic literature review. BMC Med Educ. 2018; 18:1-11.
9. Kumah EA, McSherry R, Bettany-Saltikov J, et al. Evidence-informed vs evidence-based practice educational interventions for improving knowledge, attitudes, understanding, and behavior towards the application of evidence into practice: A comprehensive systematic review of undergraduate students. Campbell Syst Rev. 2022; 18(2):e1233.
10. Sharplin G, Adelson P, Kennedy K, et al. Establishing and sustaining a culture of evidence-based practice: an evaluation of barriers and facilitators to implementing the best practice spotlight organization program in the Australian healthcare context. Healthcare. 2019; 7(4):150.
11. Haller K, Berends W, Skillin P. Organizational culture and nursing practice: The magnet recognition program® as a framework for positive change. Rev Med Clin Las Condes. 2018; 29(3):328-335.
12. Zhao FY, Kennedy GA, Cleary S, et al. Knowledge about, attitude toward, and practice of complementary and alternative medicine among nursing students: A systematic review of cross-sectional studies. Front Public Health. 2022; 10:946874.
13. Labrague LJ, McEnroe-Pettite D, Tsaras K, D'Souza MS, Fronda DC, Mirafuentes EC, et al. Predictors of evidence-based practice knowledge, skills, and attitudes among nursing students. Nursing Forum. 2019; 54(2):179-187.
14. Blackman IR, Giles TM. Can nursing students practice what is preached? Factors impacting graduating nurses' abilities and achievement to apply evidence-based practices. Worldviews Evid Based Nurs. 2017; 14(2):108-117.
15. Belowska J, Panczyk M, Zarzeka A, Iwanow L, Cieślak I, Gotlib J. Promoting evidence-based practice–perceived knowledge, behaviours and attitudes of Polish nurses: a cross-sectional validation study. Int J Occup Saf Ergon. 2020; 26(2):293-305.
16. Yoo JY, Kim JH, Kim JS, Kim HL, Ki JS. Clinical nurses' beliefs, knowledge, organizational readiness, and level of implementation of evidence-based practice: The first step to creating an evidence-based practice culture. PLoS One. 2019; 14(12):e0226742.
17. Kumah EA, McSherry R, Bettany-Saltikov J, et al. Evidence-informed vs evidence-based practice educational interventions for improving knowledge, attitudes, understanding, and behavior towards the application of evidence into practice: A comprehensive systematic review of undergraduate students. Campbell Syst Rev. 2022; 18(2):e1233.
18. Sharplin G, Adelson P, Kennedy K, et al. Establishing and sustaining a culture of evidence-based practice: an evaluation of barriers and facilitators to implementing the best practice spotlight organization program in the Australian healthcare context. Healthcare. 2019; 7(4):150.
19. Haller K, Berends W, Skillin P. Organizational culture and nursing practice: The magnet recognition program® as a framework for positive change. Rev Med Clin Las Condes. 2018; 29(3):328-335.
20. Zhao FY, Kennedy GA, Cleary S, et al. Knowledge about, attitude toward, and practice of complementary and alternative medicine among nursing students: A systematic review of cross-sectional studies. Front Public Health. 2022; 10:946874..

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