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KNOWLEDGE, ATTITUDES, AND PRACTICES REGARDING EVIDENCE-BASED PRACTICE AMONG BACHELOR OF SCIENCE IN NURSING STUDENTS: A CROSS-SECTIONAL STUDY

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Abstract

Evidence-Based Practice (EBP) is an important approach in nursing education and clinical practice because it helps nurses provide safe, effective, and patient-centered care by using the best available research evidence. Nursing students need adequate knowledge and positive attitudes toward EBP to apply research findings in future clinical decision-making. The aim of the current study was to assess the level of knowledge of nursing students regarding Evidence-Based Practice and to evaluate their attitudes toward EBP. A quantitative descriptive correlational research design was used to determine the relationship between nursing students' knowledge and attitudes toward EBP. The participants of the study were 58 nursing students who were selected through a non-probability convenient sampling technique. Data were collected through a structured self-administered questionnaire developed on the basis of the study objectives and relevant literature related to Evidence-Based Practice. The tool assessed students' knowledge about EBP and their attitudes toward its application in nursing education and clinical practice. Ethical considerations were ensured by obtaining permission from the concerned authority, explaining the purpose of the study to participants, maintaining confidentiality, ensuring voluntary participation, and obtaining informed consent before data collection. The findings showed a statistically significant negative association between knowledge and attitude toward EBP, indicating that higher knowledge levels were associated with more unfavorable attitudes among nursing students. It is concluded that although knowledge of

EBP is essential, positive attitudes are equally important for its effective implementation. The study recommends that nursing institutions arrange workshops, seminars, clinical training, and curriculum-based activities to improve both knowledge and attitudes toward Evidence-Based Practice among nursing students.

INTRODUCTION

Evidence-Based Practice (EBP) is an essential part of nursing education today because it helps nurses make clinical decisions based on the best available research evidence, clinical expertise, and patient preferences (Duñgo, 2026). EBP is important in nursing education because students must be able to search for research, evaluate evidence, and apply findings to patient care (Sahay, 2026). Recent studies have highlighted the benefits of EBP in improving patient outcomes and clinical judgement, and decreasing the theory-practice gap (Abu Ejheisheh et al., 2025; Premadasa et al., 2025). However, nursing students often have a moderate level of knowledge and skills regarding EBP, particularly in retrieving, reviewing and applying evidence to clinical practice (Alruwaili et al., 2025; Abram et al., 2025). This implies that while EBP is taught in many nursing programs, students may still have trouble applying it effectively in clinical practice. Knowledge of nursing students on EBP is important as knowledge is the basis for evidence-based decision-making. Students who are trained in research methods, literature searching and critical appraisal are better placed to use scientific evidence in the care of patients (Mokhwelepa, 2026). A recent study among Palestinian nursing students showed that EBP knowledge, attitudes and skills are important competencies but barriers such as limited research training and lack of confidence can affect students' ability to use EBP (Abu Ejheisheh et al., 2025). In a similar study, a multi-center study among Saudi nursing students showed overall positive knowledge and attitude, however, lack of critical appraisal and application of evidence were observed (Alruwaili et al., 2025). The findings suggest that nursing students may know about EBP, but need more preparation to apply it to real clinical situations. Attitude towards EBP is also important because it affects whether nursing students are willing to use research evidence in practice. A positive attitude can promote students to seek evidence, challenge traditional practices and improve patient care (Liang, 2026). Nevertheless, even if students have knowledge, negative or weak attitudes may prevent them from applying EBP. Recent research suggests that students' attitudes to EBP may be affected by academic year, research experience, internet/database skills, EBP training and institutional support (Chu et al., 2025; Premadasa et al., 2025). Hence, assessment of knowledge and attitude is very important to understand the preparedness of the nursing students to provide evidence-based nursing care.

The purpose of the current study is to assess the knowledge of nursing students on EBP and their attitudes towards EBP. This is important as students are future nurses and will be responsible for delivering safe, effective and high quality care. Poor EBP knowledge or attitudes of students may be associated with their inability to use research findings in clinical practice. Recent studies have suggested that nursing institutions should strengthen EBP education through structured teaching, mentorship, research activities, and clinical integration (Abram et al., 2025; Falahati-Marvast et al., 2025; Ye et al., 2026). Thus, this study is important as it determines the level of knowledge and attitudes of nursing students towards EBP currently and investigates if there is a relationship between the two variables.

Problem Statement

EBP is an integral part of nursing education as it prepares the future nurses to make safe, effective and research informed clinical decisions (Sarıköse, 2026). Recent research suggests that EBP enhances the quality of nursing care, patient outcomes, and clinical decision-making, but gaps persist in EBP knowledge, skills, and application among nursing students (Alruwaili et al., 2025; Qtait, 2025). Despite the recognition of the importance of EBP, many students still struggle with finding evidence, evaluating research and applying findings to clinical practice (Abram et al., 2025; Abu Ejheisheh et al., 2025).Student attitudes towards EBP are important as students with positive attitudes are more likely to use research evidence in future practice. However, recent studies suggest that nursing students' EBP knowledge and attitudes may differ based on academic year, research experience, previous EBP education, and

institutional support (Yousefi & Couper, 2025; Alruwaili et al., 2025). Other studies have shown that barriers such as limited training, lack of confidence, weak research skills, and lack of mentorship may reduce students' readiness to practice EBP effectively (Abram et al., 2025; Mehammed-Ameen & Abdulla, 2026).

Therefore, it is important to assess the knowledge level and attitude of the nursing students towards EbP. Knowledge and attitude are important to know because inadequate knowledge or negative attitudes may affect the students' ability to apply evidence-based care in the clinical setting. This study will help identify existing gaps and provide useful information for nursing educators to improve EBP teaching, training and support among nursing students (Abu Ejheisheh et al., 2025; Indonesian Nursing Journal of Education and Clinic, 2025).

Research Objectives

1. To assess the level of knowledge of nursing students regarding Evidence-Based Practice.
2. To evaluate the attitudes of nursing students toward Evidence-Based Practice.

Research Questions

1. What is the level of knowledge of nursing students regarding EBP?
2. What are the attitudes of nursing students toward EBP?

Hypothesis:

H0: There is no significant association between nurses' knowledge regarding EBP and their attitude towards EBP

H1: There is significant association between nurses' knowledge regarding EBP and their attitude towards EBP

Literature Review:

Recent literature indicates that EBP is a core competency in nursing education and practice. Abu Ejheisheh et al. (2025) assessed the knowledge, attitudes and skills of Palestinian nursing students toward EBP, and reported that students need more preparation to improve EBP competency. Their study stressed that EBP encompasses research evidence, clinical expertise and patient preferences. However, students may encounter barriers such as lack of confidence, limited research experience and difficulty in applying evidence. This supports the need for assessment of nursing students' EBP knowledge and attitudes in different educational settings.Alruwaili et al. (2025) carried out a multicenter cross-sectional study of Saudi nursing students, and found that students had positive EBP knowledge and attitudes in general, but there were deficiencies in evidence retrieval, critical appraisal, and practical application. The study is relevant to the current research as it demonstrates that knowledge alone is not sufficient; students need practical skills, institutional support, and mentorship to effectively apply EBP. Similarly, Abram et al. (2025) also studied master's degree nursing students and found that EBP knowledge, attitudes, and skills were important for improving nursing education and patient care, and that curriculum improvements were still needed.Chu et al. (2025) performed a systematic review and found that the average level of EBP knowledge among nursing students was moderate, and students' attitude was significantly related to their academic year, research education, and exposure to evidence-based learning. Finally, the review concluded that nursing schools should enhance research methodology courses and encourage student participation in research activities. Moderate EBP competency was also found among undergraduate nursing students in Sri Lanka by Premadasa et al. (2025), with attitude scoring higher than skills related to retrieving and reviewing evidence. They concluded that while students may value EBP, they may not have the technical competency to use databases and appraise research.

Other recent work has examined the effect of training and clinical exposure. Virtual training can enhance nursing students' intention to engage in EBP, indicating that educational interventions may augment students' readiness to use evidence (Falahati-Marvast et al., 2025). Ye et al. (2026) conducted a qualitative study and found that undergraduate nursing students faced challenges in the application of EBP during clinical internship, especially with limited guidance from clinical instructors. Qtait (2025) also revealed that nurses' educational background and institutional support influence their knowledge, attitudes, and implementation of EBP. These findings suggest that the development of EBP requires classroom education and supportive clinical environments.

The knowledge of nursing students about EBP was moderate and their attitude was variable according to the literature. Recent studies agree that EBP education should start early in nursing programs and continue throughout clinical training. Other studies indicate that students' knowledge and attitudes towards EBP can be affected by factors such as academic year, EBP training, research participation, access to databases, mentorship, and organizational culture (Alruwaili et al., 2025; Premadasa et al., 2025; Qtait, 2025). Therefore, the current study is supported by the recent literature as it explores the level of knowledge and attitudes towards EBP among nursing students and determines if there is a significant relationship between the two variables.

RESEARCH METHODOLOGY

Research Design

The current study is a quantitative descriptive correlational research design used to assess nursing students' knowledge about Evidence-Based Practice (EBP) and attitudes toward EBP. A cross-sectional approach was considered appropriate as data was collected from participants at one point in time to assess the existing levels of knowledge and attitudes and to establish the association between the study variables.

Sampling Technique:

Participants were selected by non-probability convenient sampling technique. The study participants were nursing students who were available and willing to participate at the time of data collection. The convenience sampling was chosen because of the easy access to the participants of the chosen nursing institution and the ability to collect data on time. The study sample consisted of 58 nursing students who met the inclusion criteria set by the researcher. To capture different responses to knowledge and attitudes towards EBP, participants of different academic years were included.

Research Instrument:

Data collection was carried out through a structured self-administered questionnaire developed based on the study objectives and relevant literature on Evidence-Based Practice. The questionnaire was divided into two parts. The first section included demographic information (age, gender, academic year, GPA, participation in research activities, and previous EBP training). The second section evaluated the knowledge and attitude of the participants towards EBP using close-ended questions. The instrument was designed to assess the participants' knowledge of concepts of evidence-based practice and their attitudes towards the implementation of evidence-based practice in nursing care. The questionnaire was given to the participants in a simple and understandable format to get the accurate responses.

Ethical Considerations

Ethical principles were strictly followed in the study. Prior to data collection, permission to conduct the research was obtained from the relevant nursing institution. All participants were informed about the purpose, objectives and importance of the study and provided informed consent prior to participation. Participation was voluntary and participants were informed that they had the right to refuse to participate or to withdraw from the study at any time without penalty. Confidentiality and anonymity of the participants was ensured by not recording any personal identifying information on the questionnaire. All data collected were used only for research purposes and were secured during the study.

Table 1:Descriptive Statistics

	N	Minimum	Maximum	Mean		Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
Age	58	1	3	1.60	.069	.528	-.061	.314	-1.205	.618
Gender	58	1	2	1.17	.050	.381	1.781	.314	1.212	.618
AY	58	1	5	2.90	.177	1.347	-.296	.314	-1.477	.618
CurrentGPA	58	1	3	2.84	.054	.410	-2.710	.314	7.258	.618
Have you participated in any research activity?	58	1	3	1.50	.090	.682	1.032	.314	-.132	.618
Have you received any training in Evidence-Based Practice (EBP)?	58	1	3	1.59	.085	.650	.661	.314	-.530	.618
Knowledge	58	7.00	41.00	27.0000	1.01233	7.70964	-.369	.314	-.307	.618
Attitude	58	4.00	16.00	7.0517	.38137	2.90446	1.188	.314	1.387	.618
Practice	58	10.00	29.00	20.3966	.54885	4.17990	-.397	.314	-.176	.618
Support	58	6.00	13.00	8.4655	.21473	1.63531	.924	.314	.614	.618
Valid N (listwise)	58									

Table 1 shows the descriptive statistics of the study variables of 58 nursing students. The mean age category was 1.60 ± 0.53, which reflects that most of the respondents were in the younger age group. The mean gender score was 1.17 ± 0.38, indicating a greater representation of one gender category compared to another.The mean for academic year was 2.90 ± 1.35 indicating that students were distributed in different academic levels. The mean GPA category was 2.84±0.41 which indicated that most students were in the higher GPA category.As for research exposure, the mean score of participating in research activity was 1.50 ± 0.68 and the mean score of receiving EBP training was 1.59 ± 0.65. This suggests that many students had little training in research and EBP.

The mean knowledge score on Evidence-Based Practice was 27.00 ± 7.71 . This indicates that the EBP knowledge level is moderate. The mean attitude score was 7.05 ± 2.90 indicating a low to moderate attitude towards EBP. The mean practice score was 20.40 ± 4.18, indicating a moderate level of EBP practice. The average support score was 8.47 ± 1.64, indicating a moderate level of perceived support for EBP.Overall, the results indicated that nursing students had moderate knowledge, Practice and support for EBP but their attitude towards EBP was relatively low to moderate.

Table 2:Correlations

		Knowledge	Attitude
Knowledge	Pearson Correlation	1	-.474
	Sig. (2-tailed)		.000
	N	58	58
Attitude	Pearson Correlation	-.474	1
	Sig. (2-tailed)	.000	
	N	58	58

. Correlation is significant at the 0.01 level (2-tailed).

The correlation of nursing students' knowledge about Evidence-Based Practice (EBP) with their attitude towards EBP is shown in Table 2. The results showed a statistically significant moderate negative correlation between knowledge and attitude ($r = -0.474$, $p = 0.000$) of the 58 participants. Because the p-value is less than 0.01, the correlation is significant at the 0.01 level (2-tailed). This suggests that the attitude score was generally decreased with the increase of the knowledge score. So, the null hypothesis (H0) which states that there is no significant association between nurses' knowledge regarding EBP and their attitude toward EBP is rejected and the alternative hypothesis (H1) is accepted. The findings indicate that in this study population knowledge about EBP was significantly associated with the students' attitude towards EBP.

Discussion:

The aim of this study was to determine the knowledge of nursing students about Evidence-Based Practice (EBP) and their attitudes in relation to EBP. The results revealed that the knowledge level of the nursing students on EBP was moderate with a mean knowledge score of 27.00 ± 7.71. This finding is consistent with recent studies that found moderate EBP knowledge among undergraduate nursing students due to increased exposure to research courses and evidence-based learning during nursing education (Abram et al., 2025; Abu Ejheisheh et al., 2025). Likewise, Alruwaili et al. (2025) reported that most nursing students possess an acceptable theoretical understanding of EBP, but still experience difficulties in applying research evidence in clinical settings. The moderate level of knowledge in this study may be related with students' limited participation in research activities and the lack of formal training in evidence-based practice. Previous studies have demonstrated that students who receive structured education in EBP and participate in research activities tend to have a better understanding and application of evidence-based care (Qtait, 2025).The findings also revealed that nursing students had low to moderate attitude toward EBP with a mean attitude score of 7.05 ± 2.90. This suggests that while students may recognize the importance of EBP, they may not have the confidence or motivation to implement it in clinical practice. Wang et al. (2025) reported similar results and concluded that nursing students had positive awareness of EBP, but their confidence in interpreting and applying scientific evidence was limited. Mehammed-Ameen and Abdulla (2026) also highlighted that the absence of mentorship, inadequate institutional support, and limited opportunities for applying EBP in practice negatively affect students' attitudes toward evidence-based care. The rather low attitude scores found in this study may therefore reflect barriers in the nursing education and clinical training environments.

One of the most important findings of this study was the statistically significant negative correlation of knowledge and attitude toward EBP ($r = -0.474$, $p < 0.001$). This means that the higher the knowledge scores of the participants, the lower their attitude scores. The results of this study are contrary to some previous studies which found a positive association between EBP knowledge and attitudes (Yousefi & Couper, 2025; Abu Ejheisheh et al., 2025). The negative relationship found in the current study may, however, suggest that students with greater knowledge about EBP may also be more aware of the practical barriers and challenges related to EBP implementation in clinical settings, leading to less favorable attitudes. Another potential explanation is that nursing students may have the theoretical knowledge but lack the opportunities, support and confidence to incorporate EBP into patient care. Therefore,

improving EBP attitudes may require more than the enhancement of knowledge, but also more effective mentorship, clinical exposure, institutional support and hands-on training.
The overall findings of this study highlight the necessity to integrate comprehensive education on EBP in undergraduate nursing programs. Nursing educators should consider using interactive teaching strategies, participation in research, workshops, and clinical mentoring to improve both theoretical knowledge and positive attitudes towards EBP. Strengthening EBP competencies among nursing students is needed to prepare future nurses to provide safe, high-quality, evidence-based patient care.

Conclusion:
The present study aimed to evaluate the knowledge of nursing students concerning Evidence-Based Practice (EBP) and their attitudes towards EBP. The results showed that nursing students had a moderate level of knowledge of EBP . This means that students have a basic understanding of evidence-based concepts and the use of research in nursing care. However, the attitude towards EBP was found to be low to moderate which suggests that many students may not have the confidence, motivation or sufficient support to properly implement evidence-based practice in clinical settings. The findings suggest that nursing education programs may be providing theoretical information about EBP, but more effort is needed to improve students' practical understanding and positive attitudes toward the use of evidence in patient care. In addition, the low involvement in research activities and lack of formal EBP training might have also affected the levels of knowledge and attitudes among the participants.
The study also showed a statistically significant negative association between knowledge and attitude towards EBP, implying that higher knowledge levels were associated with more unfavorable attitudes among nursing students. This finding indicates that theoretical knowledge alone may not be enough to foster positive attitudes towards evidence-based nursing practice. Nursing students may experience barriers including the lack of clinical support, limited mentorship, limited opportunities for practical implementation, and challenges in applying research findings in clinical training. Therefore, nursing institutions should not only improve EBP knowledge but also create supportive educational and clinical environments to foster positive attitudes and practical applications of evidence-based care. To prepare future nurses to provide high-quality, safe, research-based health care, it is necessary to strengthen EBP competencies among nursing students.

Recommendations:
- Nursing colleges should integrate comprehensive Evidence-Based Practice training programs and practical workshops into undergraduate nursing curricula to improve students' knowledge and application skills.
- Nursing educators and clinical instructors should provide mentorship and continuous support to encourage positive attitudes toward Evidence-Based Practice among nursing students.
- Students should be encouraged to participate in research activities, seminars, and evidence-based projects to enhance their confidence and understanding of research utilization in clinical care.
- Further studies with larger sample sizes and different educational settings should be conducted to explore additional factors affecting nursing students' knowledge and attitudes toward Evidence-Based Practice.

REFERENCES:
Abram, B., Radzimska, O., Janiszewska, J., Świniarska, A., Papierkowska, R., Czapla, M., & Uchmanowicz, I. (2025). Evaluation of knowledge, attitudes, and skills in evidence-based nursing practice among master's degree nursing students. *Nursing Reports, 15*(4), 117. https://doi.org/10.3390/nursrep15040117

Abu Ejheisheh, M., Ayed, A., Aqtam, I., Batran, A., & Farajallah, M. (2025). Assessing knowledge, attitudes, and skills toward evidence-based practice among Palestinian nursing students. *BMC Nursing*. https://doi.org/10.1186/s12912-025-02927-y

Alruwaili, A. N., Abuadas, F. H., Alruwaili, M. M., Alsadaan, N. A., & Baghdadi, N. A. (2025). Examining knowledge, attitudes, and implementation of evidence-based practice among nursing students: A multicenter cross-sectional study. *BMC Nursing*. https://doi.org/10.1186/s12912-025-02963-8

Chu, T. L., Sandanasamy, S., & Couper, A. L. (2025). Nursing students' knowledge and attitude about evidence-based practice: A systematic review. *Journal of Nursing Reports in Clinical Practice, 3*(5), 494–501. https://doi.org/10.32598/JNRCP.2411.1191

Duñgo, D. D. (2026). Evidence-Based Practice in Clinical Decision-Making. *The Spectrum*, *2*(1).

Falahati-Marvast, F., Sabzi, A., Lotfalizadeh, M., & Farokhzadian, J. (2025). Effectiveness of virtual training on nursing students' intentions to engage in evidence-based practice: A case study in Iran. *BMC Health Services Research*. https://doi.org/10.1186/s12913-025-12818-2

Indonesian Nursing Journal of Education and Clinic. (2025). Factors associated with knowledge, attitudes, and practices of evidence-based practice among undergraduate nursing students. *Indonesian Nursing Journal of Education and Clinic*.

Liang, B. J., Chua, J. Y. X., & Shorey, S. (2026). Perceptions of Nurses and Nursing Students Regarding Evidence-Based Nursing: A Qualitative Systematic Review. *Journal of Advanced Nursing*, *82*(4), 2846-2862.

Mehammed-Ameen, O. H., & Abdulla, S. A. (2026). Effect of an educational program on the knowledge, attitudes, and practices of hospital nurses regarding evidence-based practice: A quasi-experimental study. *PLOS ONE*.

Mokhwelepa, L. W., Sumbane, G. O., Baloyi, S., Risenga, S., & Malete, T. (2026). The problem is escalating: Barriers faced by medical students in conducting research; A scoping literature review. *Plos one*, *21*(2), e0343232.

Premadasa, S. S., Weerasooriya, K. M., Withana, V. R., Jayasekara, R., & Amarasekara, T. D. (2025). Evidence-based practice competencies and associated determinants among undergraduate nursing students in Sri Lanka: A cross-sectional study. *BMC Medical Education, 25*, 1669. https://doi.org/10.1186/s12909-025-08283-4

Qtait, M. (2025). Nurses' knowledge, attitudes, and implementation of evidence-based practice comparative study. *SAGE Open Nursing, 11*. https://doi.org/10.1177/23779608251343611

Sahay, A., Adeleye, A., & Lane-Krebs, K. (2026). Nursing students' critical engagement with generative AI in evidence-based practice education: A qualitative descriptive study. *Nurse education today*, 107354.

Sarıköse, S., Sevim, F., Alık, Ş., Karaçay, P., & Yaşar, Ö. (2026). Integrating Insights: A Mixed-Methods Approach to Nurses' Competencies in Evidence-Based Practice and Clinical Decision-Making. *Nursing Open*, *13*(4), e70525.

Wang, X., Li, Y., & Chen, H. (2025). Evidence-based practice attitudes, knowledge and skills of nursing students and nurses: A meta-analysis. *Nurse Education in Practice, 78*, 103998. https://doi.org/10.1016/j.nepr.2024.103998

Ye, Z., Qin, H., & Tang, W. (2026). Undergraduate nursing students' experiences with evidence-based practice during clinical internship: A qualitative study. *BMC Nursing*. https://doi.org/10.1186/s12912-026-04343-2

Yousefi, M., & Couper, J. (2025). Nursing students' knowledge and attitude about evidence-based practice: A systematic review. *Journal of Nursing Research and Clinical Practice*.