RJNMSR
Review Journal of Neurological & Medical Sciences Review

Volume 3, Issue 3, 2025

EFFECT OF EVIDENCE-BASED PRACTICE (EBP) TRAINING ON RESEARCH UTILIZATION IN UNDERGRADUATE NURSING ASSIGNMENTS

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DOI: https:/doi.org/10.5281/zenodo.15860948

Received	Accepted	Published
04 April, 2025	25 June, 2025	11 July, 2025

ABSTRACT

Background: *Evidence-Based Practice (EBP) is essential in nursing education, equipping students with the skills to integrate current research into clinical and academic work. However, many undergraduate nursing students struggle to utilize research effectively in their assignments due to gaps in training and support. Structured EBP education may help bridge this gap and enhance research utilization skills.*

Aim: *The study aimed to evaluate the effect of structured EBP training on research utilization in undergraduate nursing assignments among final-year BSN students in Swat, Pakistan.*

Methods: *A quasi-experimental pre-test and post-test design was used. The study was conducted across various nursing colleges in Swat with a sample of 60 final-year nursing students selected through simple random sampling. A two-week structured EBP training program was implemented, focusing on developing clinical questions, literature searching, critical appraisal, and evidence integration. A validated research utilization assessment tool and assignment evaluation checklist were used for data collection. Pre- and post-intervention data were analyzed using SPSS version 27 with paired sample t-tests applied to determine significance.*

Results: *The mean pre-test score was 56.2, which increased to 74.9 post-intervention. Assignment evaluations also showed marked improvements in the use of peer-reviewed literature, evidence integration, referencing, and critical appraisal. The paired t-test showed statistically significant improvement ($p < 0.001$).*

Conclusion: *Structured EBP training significantly enhanced research utilization in undergraduate nursing assignments. Integrating EBP education into nursing curricula is crucial for developing evidence-informed future professionals.*

Keywords: *Evidence-Based Practice, research utilization, nursing education, undergraduate students, academic writing, assignment quality.*

INTRODUCTION

Evidence-Based Practice (EBP) simply denotes the responsible application of the finest contemporary evidence, together with clinical experience and patient desires to form healthcare decisions (Godshall, 2024). Research utilization refers to the application of the results of scientific research in a clinical or academic scenario to an improved practice or outcome (Armoundas et al., 2024). Undergraduate nursing assignments refer to any type of scholarly activity that is aimed at shaping the clinical thinking, analytic, and research skills of a particular student (Bangun & Pragholapati, 2021). The EBP training offers the skills to locate, appraise and incorporate scholarly evidence in

academic work and future clinical decision-making (Alrashedi et al., 2024).

Increasing significance of EBP in contemporary healthcare demonstrates the necessity to prepare nursing students properly with the principles and methods of EBP. Although EBP is highly acknowledged, numerous studies have revealed that quite a number of nursing students find it challenging to integrate research findings into their work (Hines et al., 2021). Such a study as by Baixinho et al. (2022) found that not more than 40 % of final-year nursing students could demonstrate proficient application of EBP principles in written assignments. The experience amongst many people all over the world is normally the same meaning that the knowledge-practice gap is still a common issue. This gulf effectively undermines the academic integrity of nursing education as well as the preparedness of the graduates to be evidence-informed practitioners.

Training in EBP being incorporated in undergraduate nursing programs is held in high regard as the way to fill this gap. Formal EBP training enhances the skills of students in literature search, critically evaluate the quality of research studies, and synthesize evidence in their coursework (Purabdollah et al., 2024). Implemented as part of the curriculum at an earlier stage, EBP training can foster the culture of inquiry and develop critical thinking. It also promotes the lifelong learning culture, whereby nurses will be motivated to seek and use best evidence throughout their professional life. Consequently, this improves the real-world clinical practice in terms of the quality and safety of patient care overall (Cardoso et al., 2021).

Some educational interventions have been used to bring out the competency of EBP among nursing students. Research demonstrated that EBP training included in workshops, simulation, case-based learning, and incorporated into research course, can meaningfully enhance knowledge and beliefs about research utilization among students (Kumah et al., 2022). To illustrate, Abu-Baker et al. (2021) conducted a study in which they revealed that students of nursing schools who went through official teaching in EBP were more confident in utilizing research articles and their critical evaluation of sources. Such gains also translated to quality and depth of their academic assignments.

Nevertheless, there are ongoing issues in regards to the successful implementation of EBP training. The barriers to EBP implementation involve inexperienced faculty in EBP, inability to access academic databases, time pressure in overcrowded curricula and insufficient clinical application exposures to students (Portela Dos Santos et al., 2022). Moreover, there is a tendency among the students to have a problem translating abstract research findings into workable examples applicable in their coursework. Such challenges need to be mitigated not only by providing the EBP material but also through a permanent mentor, access to online research-based instruments, and assessments that foster the use of evidence in scholarly projects (Shamsaee et al., 2021)

Lack of relevance of EBP training has been even more eminent with recent changes in the present-day nursing education where two opposites, academics and clinical relevance, have to be met. Assignment that portrays evidence-based material is more credible and academically reasonable to be used as a nursing assignment (Velmurugan et al., 2025). Once provided with the skills on EBP, the assignments written by the students present effective arguments supported with references, recent best practices, and critical reasoning, which are some of the foundations of academic excellence. Further, these students are more ready to apply knowledge into practice during clinical rotation and in later work (Walczak & Cellary, 2023).

It is in light of such considerations that this study aims to investigate the impact of EBP training in enhancing research usage in undergraduate nursing assignments. The goal is to check whether structured EBP instruction consists in measurable changes in student capability to locate, interpret, and apply research evidence in their studies. The study will help in contributing to the current work towards enhancing nursing education and training the next generation of nurses so that they are well equipped to practice evidence-based practices.

Methodology

A research study carried out at different nursing colleges in Swat Pakistan and it was meant to test and measure the impact of Evidence-Based Practice (EBP) training in terms of its research utilization in undergraduate nursing assignments. Since it was aimed to examine the effect of well-formatted EBP training on the capacity of students to consider research evidence in their studies, a quasi-

experimental study format with a pre- and a post-test method was used.

Undergraduate nursing students studying the final years of their Bachelor of Science in Nursing (BSN) programs constituted the target population. 60 final-year nursing students (BSN) were recruited through simple random sampling to ensure equal representation and minimize selection bias. The team used G*Power statistical software to calculate the study sample size because researchers depend on this software for precise calculations. These settings were chosen with a Confidence level of 95 % for a statistical significance test set at 5 % effectiveness. The inclusion criteria were the following: students who had taken some courses in research methodology and were working on their coursework that involved allocating academic writing and assignments as a part of it. Students that already had formal training in EBP or were on very long leaves during the course of the study were omitted.

Data collection Procedure

The intervention was a structured EBP training program of two weeks. These were issues on how to develop clinical questions, how to conduct a literature search, critically appraising a research article, and incorporating evidence in scholarly writing, which was involved in the training sessions. They were taken by pre- and post-tests based on a valid research utilization assessment tool, which was used to assess students and their skills in finding, summarizing, and using research evidence to complete assignment tasks.

The assessment tool (Adopted) was distributed to collect data prior to the training (pre-test) and two weeks after training (post-test) was completed. Moreover, a sample of student assignments post-intervention and pre-intervention was considered using a checklist to determine the quality and breadth of research-based evidence implemented. All the participants were obtained through an informed consent, and student information was kept highly confidential during the study.

Interventional Protocols

A two-week structured Evidence-Based Practice (EBP) training was implemented for 60 final-year BSN students in nursing colleges across Swat. The intervention included five key modules: introduction to EBP, formulating clinical questions (PICO), literature searching, critical appraisal, and integrating evidence into academic assignments. Sessions were interactive and delivered in person by trained faculty using lectures, discussions, and practical exercises. Pre- and post-tests measured research utilization skills, and assignment checklists assessed evidence integration. The protocol emphasized reinforcement through quizzes and feedback, with all ethical approvals and informed consents in place.

Data Analysis Procedure

The collected data were analyzed using SPSS version 27. The demographic characteristics were described using descriptive statistics mean, standard deviation and frequency distributions. The paired sample t-test was used in order to compare the pre and post-intervention scores, and a p-value of less than or equal to 0.05 was defined as the statistically significant.

Ethical Considerations

Ethical approval was obtained from the Institutional Review Board (IRB) of Zalan College of Nursing SWAT before the study commenced. All participants were provided with detailed information regarding the purpose, procedures, potential benefits, and risks associated with the study. **Written informed consent** was obtained from each participant, ensuring voluntary participation. Confidentiality and anonymity were maintained by assigning unique codes to each participant and securely storing all data. Participation in the study was entirely voluntary, and students were informed of their right to **withdraw at any stage** without any academic or personal consequences.

Results and Analysis

Demographic Characteristics of Participants

The majority of participants (63.3%) were between 20–23 years of age, while 36.7% were aged 24–27 years. Most of the students were male (65%), and females made up 35% of the sample. All participants (100%) had completed a research methodology course. This ensured a consistent baseline of research knowledge across the study group [Table 1].

Table 1: Demographic Characteristics of Participants (n = 60)

Variable	Frequency (n)	Percentage (%)
Age Group (years)		
20–23	38	63.3%
24–27	22	36.7%
Gender		
Male	39	65.0%
Female	21	35.0%
Research Course Completed		
Yes	60	100%
No	0	0%

Pre- and Post-Test Scores

The results showed a noticeable improvement in students' research utilization scores following the EBP training. The mean pre-test score was 56.2, which increased to 74.9 in the post-test. This suggests that the structured EBP training significantly enhanced the students' ability to apply research evidence in their academic assignments [Figure 1].

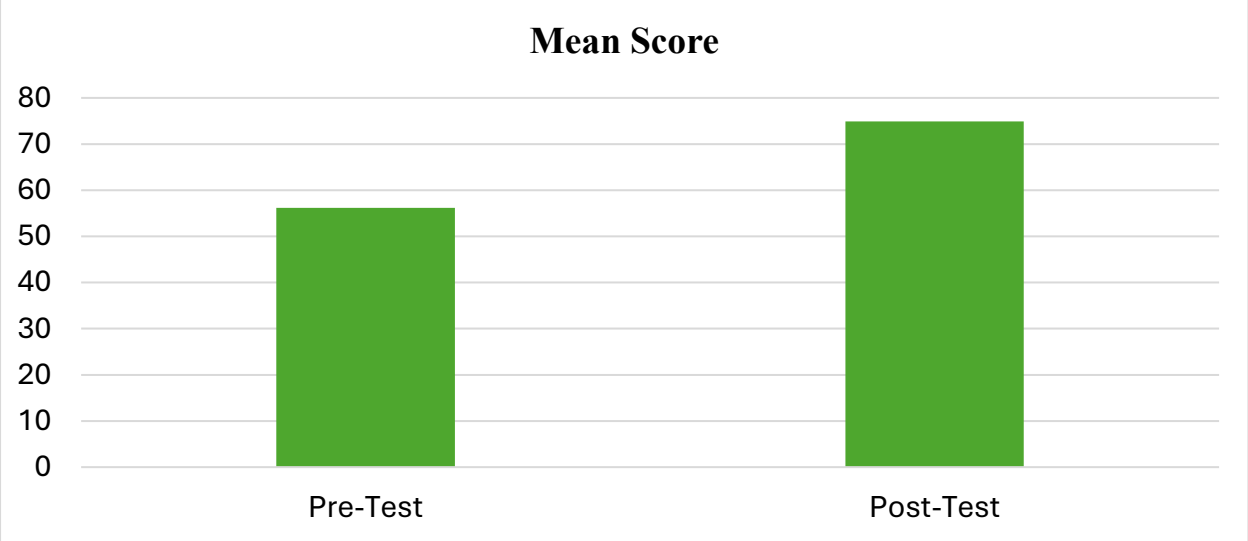

Figure 1: Pre- and Post-Test Scores on Research Utilization (n = 60)

Paired Sample t-Test Results

The paired sample t-test revealed a statistically significant improvement in research utilization scores after the EBP training ($t = -14.87$, $df = 59$, $p < 0.001$). This indicates that the training had a strong positive effect on students' ability to integrate evidence into their academic assignments, confirming the effectiveness of the intervention [Table 2].

Table 2: Paired Sample t-Test Results

Variable	t-value	Df	p-value	Interpretation
Pre-test vs Post-test	-14.87	59	< 0.001	Significant improvement after EBP training

The evaluation of student assignments showed marked improvement across all criteria following the EBP training. The mean score for the use of peer-reviewed articles increased from 2.8 to 4.3, while evidence integration in writing rose from 2.5 to 4.1. Accuracy in referencing improved from 2.9 to 4.4, and critical appraisal reflected in content increased from 2.3 to 4.0. Overall, the total average

score significantly improved from 2.6 (±0.7) to 4.2 (±0.5), indicating a substantial enhancement in the quality and depth of research utilization in assignments after the intervention [Table 3].

Table 3: Quality of Research Evidence in Assignments (Checklist Evaluation)

Evaluation Criteria	Pre-Intervention (Mean ± SD)	Post-Intervention (Mean ± SD)
Use of Peer-Reviewed Articles	2.8 ± 0.9	4.3 ± 0.6
Evidence Integration in Writing	2.5 ± 1.0	4.1 ± 0.7
Accuracy in Referencing	2.9 ± 0.8	4.4 ± 0.5
Critical Appraisal Reflected in Content	2.3 ± 1.1	4.0 ± 0.6
Total Average Score	2.6 ± 0.7	4.2 ± 0.5

Discussion

This study has provided evidence that the early structure of Evidence-Based Practice (EBP) training had a significant boost in research utilization in the academic projects of the undergraduate students of nursing. The results of the pre-test and post-test scores also made it very clear that there was a major increase in the capacity of students to locate, interpret and incorporate research evidence in their written output after the intervention. The findings indicate that the gap between theoretical knowledge and the practical implementation of research in the sphere of education can be closed with special educational programs.

This finding is consistent with the results provided by Li et al. (2025), which reported a positive correlation between EBP training on the one hand and enhanced critical appraisal skills and confidence in the use of scholarly sources among nursing students on the other. On the same note, a research study carried out by Alhejaili (2023) demonstrated that, when provided with a structured evidence search and application training, the academic success of nursing students and the quality of assignments increased. These results suggest religious not only positively, but also on the merits of EBP education as relevant to the development of research-informed thinking as part of nursing education.

Contrary, there have been conflicting reports on the integration of EBP. As an example, Ho et al. (2023) reported that despite the appreciation of research by nurses, a substantial segment of nurses did not possess the abilities to translate the research outcomes effectively into practice, a trend that has been reported among the students who had no prior structured exposure into EBP. These differences might be explained by differences in teaching approach, amount of time spent on the training, or institutional support. The intensive two-week training model, which was used in the current study, possibly played a positive role in the results, which indicates the significance of well-programmed and concentrated interventions.

In addition, the marked observation reflecting improvement in the criteria to evaluate assignments, including the use of peer-reviewed literature, proper referencing, and inclusion of evidence, indicates the change in the academic behavior of students after the training. This discovery confirms the claims of Alhejaili (2023) who argued that EBP competencies lead to more profound learning and writing analytically. It also outlines the importance of EBP in enhancing academic excellence where assignments, which are research-informed, would show critical thinking with regard to the existing data and clinical insightfulness.

Another point worth making is that all the participants were the ones who had already completed the course on research methodology before the training. This background information would have increased the efficacy of the EBP intervention, so that knowledge students had on the subject could be supplemented with further research literacy. According to Fuchs et al. (2023), the best training programs on EBP lie when combined with an existing curriculum that already focuses on research methods, critical thinking, and reflective practice. The layered approach means that students will not only come to know the reason behind the usage of evidence but will also learn how to do so.

Despite the promising results, challenges in EBP adoption remain. Other students experienced challenges in beginning the journey to find appropriate literature and the ability to constructively critique research, which is consistent with a report by Falcó-Pegueroles et al. (2021), who also stated that it was challenging during initial learning phases of EBP. Such barriers highlight a need to further progress these skills in EBP

through continued mentorship and experience through practice. Motivating faculty development and integrating EBP into numerous courses can also enhance its implementation in schools and clinical practice.

To conclude, the study offers powerful evidence that guided EBP training seriously improves the usage of research in undergraduate nursing tasks. The noted improvements justify the wider initiatives to include EBP education in nursing curricula to receive competent, research-informed professionals. To further confirm the effects of such interventions, future researches should investigate the long-term acquisition of these skills and how these academic EBP skills will transfer into the clinical domain.

Conclusion and Recommendations

Result of the study showed that structured Evidence-Based Practice (EBP) training has a strong positive impact on the research utilization skills of undergraduate nursing students. The results indicated that students significantly gained the skills of searching, critically appraising, and integrating flawless research evidence in their academic papers with the help of a two-week training program. This solution was reflected in the improvement of both the scores of the quantities as well as quality of the assignment marks. The findings dictate the need to include the EBP-centered education in nursing programs to teach evidence-based academic work and equip students with evidence-based clinical decision-making during a professional career.

Based on these findings, several recommendations are proposed. To start with, EBP training must be officially integrated in undergraduate nursing education as a required element, with the introduction to EBP training early in the curriculum and strengthened during the academic progression. Second, nursing teachers need to be equipped with skills and information they have to be able to teach the content about EBP in an interactive way and student-focused manner. Third, organizations ought to have an access to digital libraries, research databases, and academic support resources to increase the independent literature searching and analysis abilities of students. Fourth, student work should be evaluated on student work criteria that evaluate the use and combination of evidence to promote the consistent use of EBP skills. Finally, longitudinal studies need to be implemented to test EBP competencies and their transferability between the academic and clinical practice to guarantee long-tern implications of such competencies on the quality of nursing and patients.

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