



Assessment of Nurses' Knowledge towards Implementation of Evidence-Based Practices (EBPs).

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ABSTRACT

Evidence-based practice (EBPs) are the combination of the best available evidence, nursing competence and the values and preferences of the persons, families and communities receiving the services. Despite its potential reputation, incorporating EBPs into routine nursing procedures has been difficult due to lack of resources, time and organizational support. Therefore, the current study was conducted with the

Objective; to assess nurses' knowledge about EBPs and to determine its implications for evidence-based nursing practice in tertiary care hospital settings.

Methodology: A descriptive cross-sectional study was conducted. Sample Size: Sample size (196) was calculated by World Health Organization (WHO) formula. Sampling Technique: purposive sampling technique was used. Data Collection Tool: Data were gathered using an adopted evidence-based practice questionnaire (EBPQ) on a Likert scale to assess the level of nurses'



knowledge regarding evidence-based practice. A Statistical Package for the Social Sciences (SPSS) version 25 was used to analyze the data.

Results showed that 28% nurses have poor, 42% have average and 30% nurses have good knowledge regarding Evidence-Based Practices.

Conclusion: Health care professionals have been more interested in evidence-based practices (EBPs) worldwide because it sparked quality assurance activities and is widely acknowledged in contemporary healthcare. The outcomes of the current study exposed that most of the nurses had a normal level of understanding about EBPs. The findings of this study could have a substantial impact on the nursing profession as a whole, patients, nursing staff, research, education, and practices, as well as on curricula now in place for nurses. These findings highlight actionable steps to enhance nurses' knowledge towards implementation of evidence-based practices.

Key Words: Evidence-Based Practice, Knowledge, Nurses' Knowledge of EBPs, Nurse, Evidence-Based Nursing.



Introduction

Healthcare is one of the most dynamic human disciplines, and large amounts of money is spent annually on high-quality and sophisticated research, resulting in an exponential growth in healthcare literature. Regularly, new and more effective medicines, medical devices, and procedures are invented. One major objective behind all these efforts is to help healthcare professionals to provide the best possible care and treatment to patients. In addition to using traditional and well-established procedures and practices, health care practitioners are adopting innovative interventions that are based on best practices as well as research-based evidence (Sehar and Shahzad, 2021).

Globally, healthcare institutions are striving to adopt evidence-based practices (EBPs). The nursing profession also faces multiple obstacles in implementation of evidence-based practice including lack of time, insufficient computer knowledge, lack of financial and human resources, organizational support and nurses training. Moreover, in the healthcare organizations certain complex terms such as integrated care, clinical pathways, and patient-centered care in everyday conversations require nurses to be equipped with evidence-based knowledge. Besides, the change in vertical to horizontal management also demands joint accountability. Thus, the leadership/management of healthcare organizations and hospitals in particular, is expected to show readiness to adopt this change (Amparore et al., 2020).



The concept of nurses' knowledge of evidence-based practices is central to improving patient outcomes and the quality of care delivered. Knowledge of EBPs equips nurses with the ability to critically appraise and utilize research findings in their clinical decision-making. A condition of being knowledgeable and ready to act, both mentally and physically, is fundamental for evidence-based nursing (Persson et al., 2022). Nurses' knowledge of EBPs can be examined at the individual, group, and organizational levels, and is influenced by contextual circumstances including educational background, professional development, and access to research resources (Pitsillidou et al., 2022).

In this changing situation, hospital compliance with national or supranational institution regulations is often based on coercive similarities. Hospitals must adjust in order to accommodate required external indications. Hospitals, however, can also take the initiative to facilitate nurses' knowledge of EBPs through providing environment and resources such as latest research literature, staff education regarding research utilization into practice by hiring research managers that monitor and provide SOPs for the implementation of evidence-based practices (EBPs) (Gabutti, 2022).

According to Sigma Theta Tau International (STTI), an honorary nursing society, evidence-based practices (EBPs) are the combination of the best available evidence, nursing competence, and the values and preferences of the persons, families, and communities receiving the services. Many nursing programs have included evidence-based practice (EBPs) into their curricula; however,



there is little information available on how to teach experienced nurses to apply EBPs (Bakr and Mukhtar, 2020).

EBPs in nursing has evolved from the (EBM) evidence-based medicine movement that is an application of valid, relevant, and research-based information in decision-making. It could be said that Florence Nightingale, who gathered information to inform the British Military Hospital during the Crimean War, is credited with starting the use of EBPs in nursing (Vanhelst et al., 2024). Utilizing a range of information sources, including patient experiences and preferences, professional skills, and scientific evidence, is necessary when applying evidence-based practice, or EBPs (Khan et al., 2020).

Material and Methods

This unit explains the study approach that has been planned for research. The research methodology consists of the target population, selection criteria, sampling strategy, ethical issues, number of samples; collecting information methods, data collection tools, and information interpretation are all included in the study design.

3.1 Study Design:

For this research, a descriptive cross-sectional study approach was adopted.

3.2. Study Setting:



The research was conducted at the University of Health Sciences along with three Tertiary care Hospitals of Punjab, Lahore. The tertiary care hospitals in which this study was conducted were Jinnah Hospital Lahore, Lady Willingdon Hospital Lahore and Govt Teaching Hospital Shahdara Lahore.

3.3 Study Duration:

After the synopsis was approved, this study concluded in 12 months, from July 2023 to July 2024.

3.4 Study Population:

Participants of this study were the registered nurses working in 3 selected tertiary care hospitals, Lahore.

3.5 Sample size

The population number was calculated using the procedure below, assuming a 95% confidence level and a 5% margin of uncertainty. According to formula $n = (196)$

3.6.1 Sample size formula:

The population number was determined using a procedure given below.

Hypothesized % frequency of knowledge of EBP among Nurses = 52.5% (Gipe, 2018)

Confidence level as 95%.



Margin of error: 7%

E (Margin of error) = 2.49

Total population = 1700

According to formula sample size = 196

3.7 Sampling Technique:

Purposive sampling was employed in the current research to choose subjects based on eligibility and exclusion requirements.

Sample Selection:

Potential participants of this study were those who fulfilled the below mentioned criteria.

3.7.1 Inclusion Criteria:

The inclusion criteria included:

- Registered BSN 4 year and BSN (Post RN) 2 year degree program nurses working in tertiary care hospitals Lahore.
- Nurses involved in direct patient care.
- Registered nurses of both genders.



3.7.2 Exclusion Criteria:

- Registered nurses who had attended any workshop, seminars on EBP.
- Registered nurses who had worked in foreign countries.

3.8. Data Collection Tools/Instruments

In the present research, an adopted questionnaire was used to assess the level of nurses' knowledge regarding evidence-based practice. The questionnaire was adopted from a study conducted by Yoo et al. in 2019, and was available on open access. It consisted of two sections. Section one comprised of demographics and section two comprised of the Nurses Knowledge Questionnaire.

3.8.1 Section I: Demographic Data:

This section comprised of personal information of study participants. Total 6 questions were asked in order to collect their demographic information that included professional qualification, experience, research course, biostatistics course and training regarding Evidence Based Practice (EBP).

3.8.2 Section II:

Part A: Nurses Knowledge Questionnaire. This part of the instrument consists of 14 questions about nurses' knowledge regarding EBP. The knowledge was assessed on a Likert scale in which options are given as highly agree, accept, impartial, disagreement and severely disapprove. After



having the responses of the participants, different numbers were assigned to the responses as Strongly agree (SA), Agree (A), Neutral (N), Disagree (DA) and Strongly Disagree (SDA) are represented by the numbers 1 through 5 in the questionnaire.

3.9 Scoring System.

3.9.1: Scoring of nurse's knowledge

Range of Nurses Knowledge scores were measured as Minimum 14 to Maximum 70.

Score = Obtain Score / Maximum score = 35 / 70 = 50% (Yoo et al., 2019).

Status of Knowledge	Percentage	Score
Poor	0 TO 50%	0 to 35
Moderate	51 TO 70%	36 to 49
Good	>71%	>49

Table 3.1

3.10 Data Collection Procedure:

The data was obtained from the designated hospital within three months of institutional clearance, following approval by the University of Health Sciences Lahore's synopsis review committee,



ethical review committee (ERC), and advanced studies research board (ASRB). Written permission was provided for research subjects that satisfied the inclusion requirements and expressed their willingness to take part. Each person's confidentiality and anonymity were protected. The subjects were informed of the study's purpose. The study subjects were chosen by the purposive sampling method, and they were instructed to complete every portion of the assessment. The Helsinki ethical principles served as the study's standards. The primary findings were made available to each subject.

3.11 Validity & Reliability of the Questionnaire/Tool

An expert panel consisting of nurse specialists, nurse educators, English lecturers, bio-statisticians, and renowned academics has agreed that this survey is genuine. To guarantee the tool's dependability in the Pakistani setting and get rid of linguistic and cultural discrimination, pilot testing was conducted. Nurses working in various departments were given a sample of twenty-one (21) questionnaires, representing ten percent (10%) of the total number of people. After the questionnaires were completed, the Cronbach's Alpha statistical test was used to assess the questionnaire's reliability. The results showed that the tool was reliable for the current study, with a measured inner uniformity value of 0.91 for nurses' knowledge.

3.12 Data analysis:

All gathered information were entered into a computer; version 25 of the statistical packages for social sciences (SPSS) was used for analysis. Simple percentage, mean, and standard deviation are



examples of descriptive statistics that were employed to evaluate the socioeconomic status of the subjects. Following assessment, the information was shown as tables, figures, percentages, and frequencies.

Results

Background:

This unit narrates the results of the study, which investigated the level of nurses' knowledge of EBPs. The findings are offered in a clear and concise way using tables, figures, and text to facilitate understanding and clarification.

Section – A

Demographic Data:

In this section, analysis of the demographic profile including level of education, experience (in years) as a Nurse, working departments, Research Course, Biostatistics Course and training regarding Implementation of Practices was done.

Level of Education:

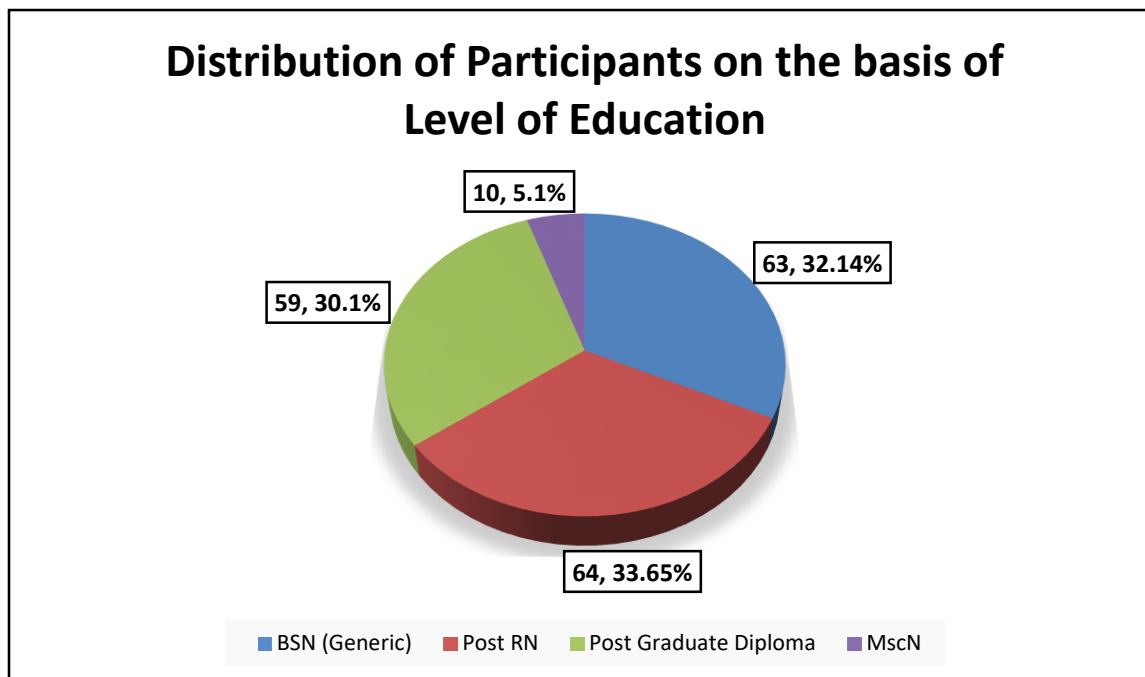


Fig.

4.1:

Distribution of Participants according to Level of Education

The above figure (Fig. 4.1) shows that 63 (32.14%) of the total participants possessed qualification of BSN (Generic) while 64 (33.65%) participants had done Post RN, whereas 59 (30.1%) participants were having Post Graduate Diploma. Only 10 (5.1%) participants had a Master's Degree.



Experience (in years) as a Nurse:

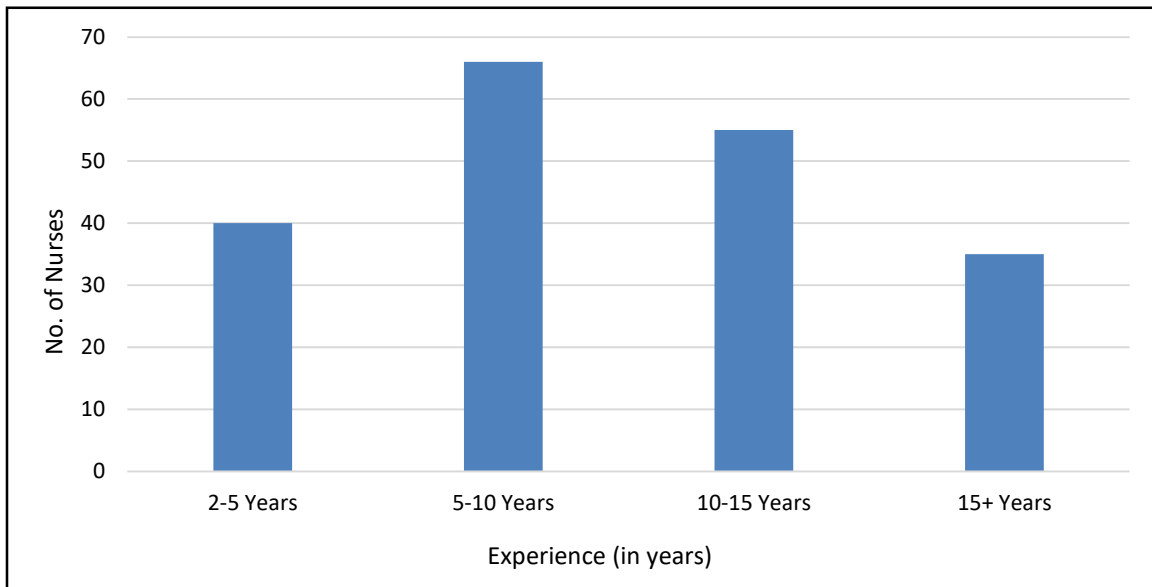


Fig. 4.2: Distribution of Participants according to their Experience as a Nurse

The above figure (Fig. 4.2) reveals that 40 (20.4%) nurses had an experience of 2-5 years. Most of the nurses 66 (33.67%) had an experience of 5-10 years while 55 (28.06%) nurses had an experience of 10-15 years. Only 35 (17.85%) nurses had an experience of more than 15 years.

Working Department:

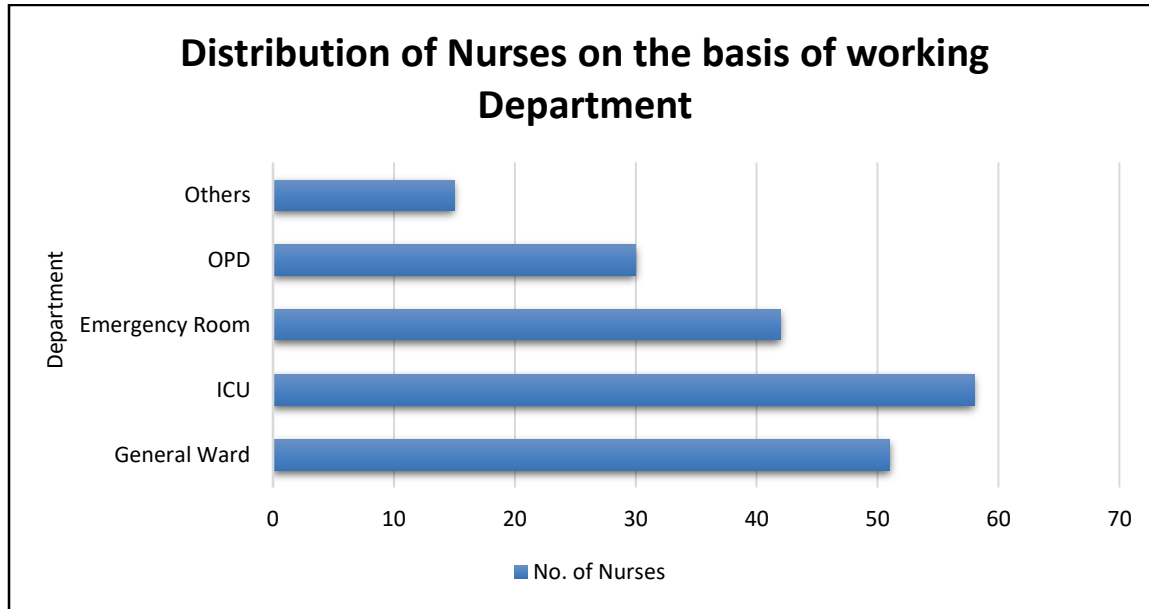


Fig. 4.3: Distribution of Participants on the basis of Working Department

The above figure (Fig. 4.3) shows that 51 (26.0%) nurses worked in General Ward, 58 (29.6%) nurses in ICU, 42 (21.4%) nurses in Emergency Room and 30 (15.3%) nurses worked in OPD Department. Remaining 15 (7.7%) nurses worked in Other Departments.

Research Course, Bio Statistics Course & Course of Implementation of Knowledge:

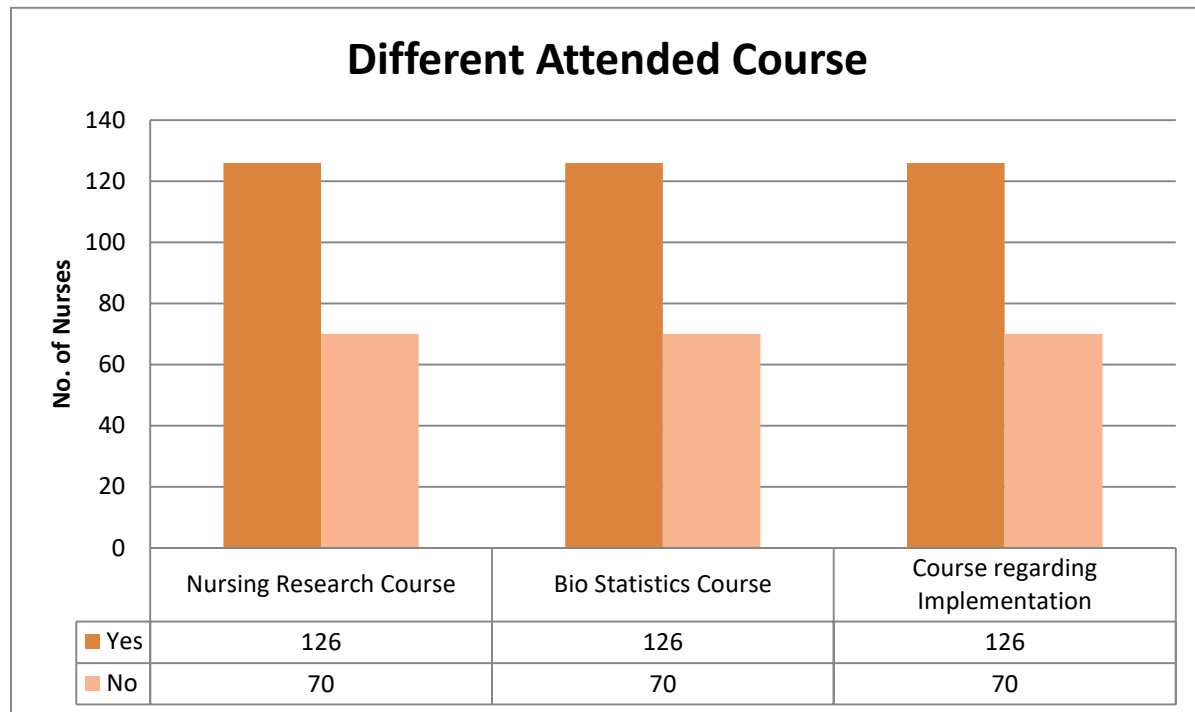


Fig. 4.4 Distribution of participants according to any formal education regarding Nursing Research Course, Bio Statistics Course & Course of Implementation of Best Practices

The above figure (Fig. 4.4) shows that majority 126 (64.3%) of participating nurses had completed while 70 (35.7%) had not completed any Nursing Research Course, Bio Statistics Course & Implementation of best practices yet.

Section – B:

This section provides information on nurses' knowledge of EBPs.

LEVEL OF NURSES' KNOWLEDGE OF EBPs

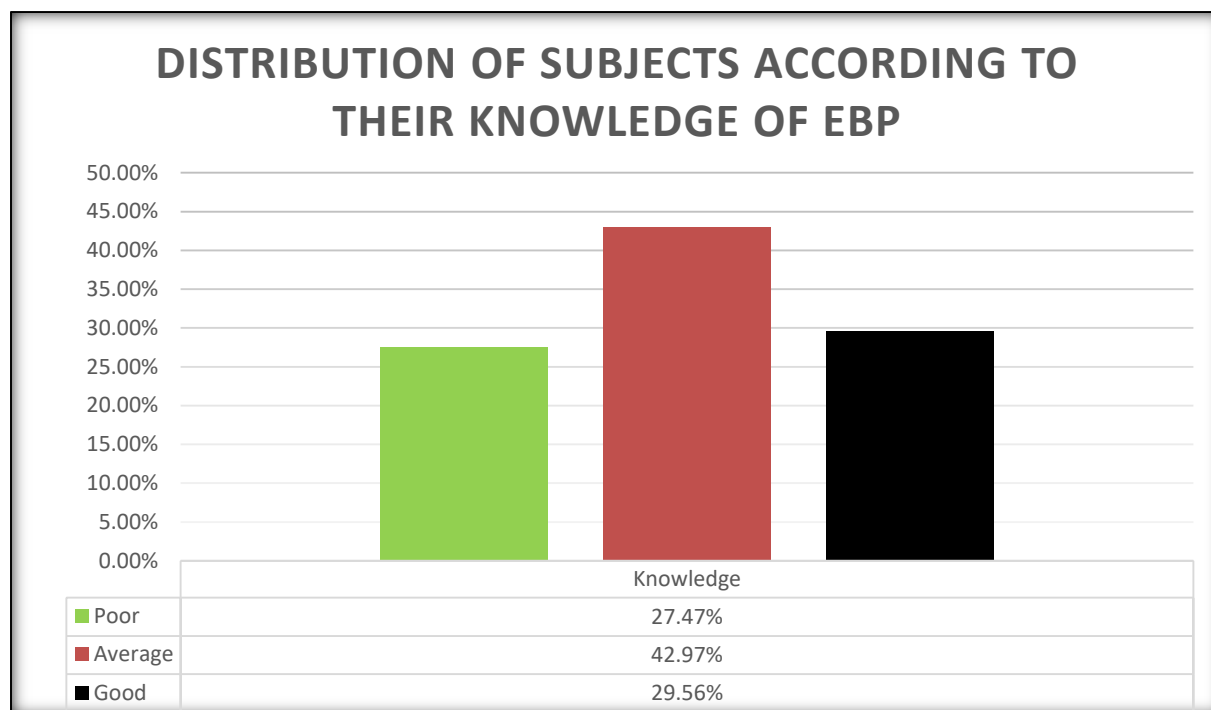


Fig. 4.5 Distribution of participants according to Knowledge regarding Evidence-Based Practice

The above figure (Fig. 4.5) shows that (27.47%) nurses have poor, (42.97%) have average and (29.56%) nurses have good knowledge regarding Evidence-Based Practices.

Discussion

This chapter entails the discussion on research findings, conclusion, implications, recommendations, and limitation of the current research work. This chapter provides information on demographic profile of the participants and discussion on nurses' knowledge regarding EBPs. The findings of the current study are discussed with supporting and controversial literature giving



the ground realities causing disparities in findings of our study. Sociodemographic data related to the participating nurses includes level of education, experience, working departments, research & biostatistics course and training regarding implementation of evidence-based practices.

As for **Education Level** of participant nurses, most of the participants (65.79%) are graduated (BSN Generic & Post RN). These results are same as in a study conducted by (Aynalem et al., 2021) documenting that most of the participants (85.1%) in their study were holding a bachelor's degree. In contrast, a research carried out by (Abu-Baker et al., 2021) reported that most of the participants were diploma holder nurses, this might be due to lack of facilities available by state or lack of interest or awareness about further education.

Results for **Clinical Experience** in this research showed that (66%) nurses were having 5-10 years of clinical experience. These findings are comparable with the findings of another research carried out by (Hashish et al., 2020) reporting that majority of the nurses in their studies were having 5-10 years of bedside experience. In contrast, a research carried by (Abu-Baker et al., 2021) revealed that most of the participant nurses have less than 5 years of experience.

Moreover, the outcomes in the present research also revealed 64.3% of the participating nurses have attended **Research & Biostatistics Course** for the purpose of enhancing their scholarly abilities. However, a study conducted by Alotaibi et al. (2022) found a very small number (26.5%) of nurses who were enrolled in research & biostatistics courses; this might be due to lack of interest of nurses and lack of professional development initiatives by the organization. Yet these problems



need attention of both parties to address this issue as to prevent hurdles towards the implementation of EBP.

As for **EBPs Implementation Training**, the findings of the present research depicted that (64.3%) of the participating nurses had attended EBM training. Comparable findings are presented by (Cardoso et al., 2021) recognizing that more than 50% of participants had attended classes and demonstrated good ability to implement evidence-based practice. Literature suggests that those nurses who have not attended any EBP implementation training are not able to utilize new research findings into practice. Thus, nurses are required to enroll in such kinds of training/workshops that provide them knowledge to implement EBPs.

Nurses' knowledge of methods based on evidence and its implementation is important to improve the best patient outcomes by enhancing nursing practice. It lessens the gaps between nursing practice, research, and education, and harmonizes nursing practices. It also helps nurses build their own domains of knowledge (Golge et al., 2024).

The results of the present research showed that (72.52%) of the participant nurses have good knowledge about EBPs as they were aware of research skills such as how to retrieve and interpret data and communicate and incorporate findings into nursing practice. Having knowledge about research skills and retrieving evidence is essential for EBPs because it enables nurses to effectively locate, evaluate and utilize the best available evidence for clinical decision making. Our findings are compatible with a previous study conducted by (Kaseka and Mbakaya (2022)) in which 70.6%



nurses had good knowledge about EBPs. In another study, the highest points on knowledge about EBP was 73.5% (Taganoviq et al., 2023). The average knowledge dimension was 60.6% (Li et al., 2022) which is contrary to our findings. Al-Busaidi et al. (2019) and Howe et al. (2021) reported that only 43.4% and 57.4% of the participant nurses possessed good knowledge of EBPs respectively. This discrepancy in findings might be due to nurses' lack of interest in professional development research related activities and/or lack of professional development initiatives by the organization where nurses work.

Knowledge of EBPs is foundational for evidence-based nursing practice, as it enables nurses to effectively search, appraise, and apply the best available research evidence to clinical situations. Studies have consistently highlighted that nurses who demonstrate higher levels of EBP knowledge are better equipped to deliver patient-centered care and make sound clinical decisions (Connor et al., 2023). The results of the current study contribute to the growing body of literature emphasizing the need for targeted educational interventions to strengthen nurses' EBP knowledge base, particularly in resource-limited settings such as tertiary care hospitals in Pakistan.

Moreover, it is important to note that knowledge acquisition is not a static process; it requires continuous professional development, access to current research, and institutional support structures. Nurses who are given opportunities to participate in ongoing training and education demonstrate significantly better EBP knowledge scores compared to those without such opportunities (Cardoso et al., 2021). Hence, the findings of the present study underscore the critical



role of educational institutions and healthcare organizations in fostering a knowledge-rich environment that promotes evidence-based nursing practice.

Conclusion

A quantitative approach was applied in this investigation to assess the level of nurses' knowledge towards implementation of Evidence-Based Practices among nurses of three tertiary care hospitals of Lahore. The outcomes of the current study exposed that most of the nurses had a normal level of understanding about EBPs. Consequently, it is crucial to conduct more research and build capacity for healthcare providers in this domain of practice. In order to provide evidence-based care, health care practices must be backed by high-caliber research data. Additionally, nurses who have advanced their education are more efficient at using their knowledge and demonstrate good abilities regarding EBPs. These findings underscore the need for targeted educational programs and continuous professional development to enhance nurses' knowledge of evidence-based practices in clinical settings.

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