PERCEPTIONS AND BARRIERS REGARDING IMPLEMENTATION OF EBP AMONG NURSES WORKING IN TERTIARY CARE HOSPITAL PESHAWAR KP

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Abstract

Background: Evidence-Based Practice (EBP) is fundamental to improving the quality of healthcare by integrating clinical expertise, patient values, and the best available research evidence. However, barriers exist in its widespread implementation, included limited access to research materials, insufficient time, lack of knowledge and skills, and inadequate support from healthcare administrators hinder the seamless integration of research findings into clinical decision-making.

Aim/Objective: This study aims to explore the relationship between nurses' challenges, confidence, motivation, of the successful implementation of Evidence-Based Practice (EBP) in tertiary care hospital Hayatabad medical complex Peshawar KP Pakistan.

Methodology: A cross-sectional descriptive study design was employed, targeting 50 nurses selected through convenience sampling. Data were collected via a structured questionnaire assessing demographics, formal training in EBP, resources, organizational support, and perceptions of EBP challenges.

Results: The sample included nurses of age between 22 to 50 years, with a gender distribution of 48% male and 52% female. A significant proportion (68%) of the nurses had received formal training in EBP. Regarding challenges, 58% of nurses reported that resources for EBP implementation were adequate, while 42% disagreed. Over half (56%) of the respondents reported receiving consistent support from management. However, several barriers to EBP implementation were identified, including insufficient access to research articles (36%), limited time for research (32%), and difficulty understanding statistical analyses (34%). Additionally, 50% of nurses felt they lacked the authority to alter patient care practices, and 64% felt the study findings were not applicable to their practice. Notably, 48% of nurses cited physician non-collaboration as a significant barrier to EBP adoption.

Conclusion: This study underscores the critical challenges nurses face in implementing EBP, including inadequate resources, lack of formal training, and

insufficient organizational support. To improve EBP integration, hospitals should focus on providing adequate resources, enhancing training programs, fostering inter-professional collaboration, and promoting a supportive organizational culture that encourages evidence-based care. Addressing these issues is vital for improving patient outcomes and enhancing the overall effectiveness of nursing practice in public hospitals.

1. Introduction

Barriers to evidence-based practice (EBP) in nursing include limited support, inadequate training, and resource constraints. Individual challenges like insufficient knowledge and negative attitudes also hinder adoption. Strengthening both organizational support and individual skills is crucial for successful EBP implementation. [1] However, organizational barriers, such as heavy workloads, staffing shortages, resource shortages and lack of managerial support, further exacerbate the difficulty in adopting EBP in public hospital and community settings [2]. Moreover, when hospital administrators fail to prioritize EBP integration, nurses may feel unsupported in their efforts to implement research-based interventions [3]. In addition, a shortage of skilled mentors and preceptors further hinders nurses' ability to apply research findings in clinical practice [4].

Unless these obstacles are addressed, the adoption of EBP will remain challenging. Therefore, several strategies have been proposed, including enhancing educational programs to focus on EBP competencies, providing continuous professional development opportunities, and fostering interdisciplinary collaboration. Furthermore, strong leadership commitment and the establishment of EBP champions within healthcare teams can facilitate a cultural shift toward embracing EBP [5]. Education and training are pivotal in bridging the gap between research and practice. Research indicates that equipping nurses with critical appraisal skills and fostering a culture of inquiry can enhance their confidence in utilizing research findings [6]

While a recent study highlighted that nurses and midwives often lack the necessary support and resources to implement EBP effectively, leading to the underutilization of research findings in clinical decision-making [7], it is evident that despite its recognized benefits, the adoption and implementation of EBP in nursing practice face numerous challenges. For instance, barriers such as limited access to research materials, insufficient time, lack of knowledge and skills, and inadequate support from healthcare administrators hinder the seamless integration of research findings into clinical decision-making [8].

Since Evidence-Based Practice (EBP) is a fundamental approach in modern nursing that integrates the best available evidence, clinical expertise, and patient preferences to improve healthcare outcomes [9], it is crucial to address these challenges. Additionally, EBP aims to enhance patient outcomes by integrating the best available research evidence with clinical expertise and patient preferences. Yet, despite its importance, implementing EBP among nurses in public hospitals remains a significant challenge due to various organizational, individual, and resource-related barriers [10]. As a result, in contemporary nursing, EBP is fundamental for enhancing care quality, reducing healthcare costs, and fostering professional autonomy among nurses [11]. Nonetheless, many nurses struggle with interpreting research findings and translating them into clinical practice due to insufficient training and exposure [12].

1.1 Rationale of the Study

This study was conducted to explore and understand the factors affecting the implementation of Evidence-Based Practice (EBP) among nurses in public hospitals. It aimed to examine how challenges, confidence, and

motivation influence nurses' ability and willingness to integrate EBP into clinical practice. By identifying these factors, the study provides valuable insights into the barriers and facilitators of EBP adoption. The findings can help guide future strategies and interventions to improve EBP implementation, ultimately enhancing the quality of patient care.

1.2 Problem Statement

Evidence-Based Practice (EBP) is important for improving patient care; nurses in public hospitals often find it difficult to apply in their daily routines. They face problems such as limited access to current research, lack of proper training, low confidence in using research findings, and insufficient encouragement or support from their workplaces. Along with these, busy work schedules and time limitations make it even harder to use EBP effectively. These challenges highlight the need to explore how nurses' motivation, confidence, and workplace difficulties affect their ability to implement EBP in public healthcare settings.

1.3 Objectives

➢ To identify the challenges, knowledge levels, and practices of nurses in implementing Evidence-Based Practice (EBP) in public hospitals.

➢ To explore how confidence, motivation, and organizational factors influence the adoption of EBP in clinical settings.

1.4 Significance of the Study

This study holds significant value in the context of improving healthcare practices, particularly the implementation of Evidence-Based Practice (EBP) in public hospitals. By examining the relationship between nurses' challenges, confidence, motivation, and the successful implementation of EBP, this research contributes valuable insights to the nursing profession.

2. Literature review

Alatawi et al. (2020) conducted to identify barriers to implementing evidence-based practice (EBP) in nursing. The barriers include a lack of

time, insufficient knowledge and training, resistance to change, limited access to resources, and inadequate institutional support. Findings also revealed that nurses face challenges in critically appraising research and often rely on traditional practices. And also organizational support, leadership involvement, and continuous education are essential to overcoming these barriers. Addressing these issues can enhance EBP adoption, leading to improved patient care and nursing outcomes. [13] However a scoping review conducted within the **Joanna Briggs Institute (JBI) framework** analyzed studies from **(January 2018 to March 2023,)** identifying these key influences across diverse nursing settings.

The findings underscore the need for strategic interventions to foster environments that support EBP integration into professional nursing practice. Despite efforts to minimize bias, the subjective nature of categorization remains a study limitation. [14] Similarly Healthcare professionals' behaviors play a vital role in delivering evidence-based care, yet gaps persist between recommended and actual practices (Patey et al. (2020). Factors such as knowledge, social influences, and resource constraints impact their ability to provide optimal care. Studies show that 30% of patients do not receive necessary care, while 20–25% undergo unnecessary interventions. Implementation science offers strategies to address these gaps, improving adherence to best practices and enhancing patient outcomes. (Andrea M. Pateya et al (2022), Moreover, a study by ("Farokhzadian J"et al (2015) examined nurse leaders' attitudes toward EBP, their self-efficacy in EBP skills, and their training needs. Findings revealed that most participants had unfavorable attitudes toward EBP, low self-efficacy in EBP skills, and a moderate demand for training in all EBP areas. Notably, 82.86% had not attended any specific training on EBP implementation, and 80% had not been involved in research activities. [16] Likewise, a study by Lopez et al. (2021) found that EBP-driven pain management protocols reduced opioid use in post-surgical patients by 18% without compromising pain relief. [17] In addition, a longitudinal study by Patel et al.

(2022) demonstrated that continuous professional development programs increased nurses' EBP engagement by 40% over two years. [18]

Furthermore, a study by Adams et al. (2023) found that incorporating artificial intelligence tools into nursing workflows improved the efficiency of research retrieval and decision-making by 35%. [19] However, another study by Stokke et al. (2017) found that only 35% of nurses regularly accessed research evidence due to limited organizational encouragement. [20] Meanwhile, "Influencing Factors in the Utilization and Integration of Evidence-Based Practice in Nursing" challenges faced by nurses in adopting EBP. Many struggle with accessing research (21%) and finding it applicable (19%). Issues with understanding statistical analyses (24%) and perceived irrelevance of studies (25%) further hinder adoption. Additionally, time constraints (26%) and limited facilities (23%) pose significant barriers. Concerns about generalizability (29%) and a lack of authority to implement findings (36%) also discourage the integration of research into practice "Afsha bibi et al" (2023) [21] Similarly, ("Al Khalaileh, RN, PhD" et al(2016) A survey of 239 Jordanian nurses from various healthcare settings revealed that a majority of respondents were male, with over half under the age of 30.

The high mean score of 2.97 (SD) on the Barriers to Research Utilization questionnaire indicates substantial obstacles in applying research findings to practice. Notably, the primary barriers identified include the perception that research results lack generalizability to local settings and insufficient authority to implement changes in patient care. [22]

In contrast, ("Yoo JY" et al(2019) In a hospital in Korea, researchers studied clinical nurses to evaluate their knowledge, beliefs, organizational readiness, and implementation of evidence-based practice (EBP). The findings showed that although the nurses had a positive attitude towards EBP, their actual knowledge and implementation levels were lacking. There were significant positive relationships between EBP knowledge, beliefs, organizational readiness, and implementation. The study concluded that EBP knowledge and organizational readiness were crucial factors influencing implementation, accounting for 22.2% of the variation in EBP practices. This emphasizes the need for improvements in EBP training and support within healthcare settings. [23] Furthermore ("D'Souza, P"., et al. (2021) conducted a randomized controlled trial to assess the effectiveness of an EBP training program on nurse educators' knowledge, attitude, practice, and competency. The study involved 51 nurse educators, with the intervention group receiving a 30-hour EBP training program. [24]. **Finally,** a study by "Rodriguez" et al. (2022) also found that implementing EBP in infection control protocols reduced hospital-acquired infections by 27%, demonstrating the widespread benefits of research-based practices. [25].

3. METHODOLOGY

3.1 Study Design

This study utilized a descriptive cross-sectional research design to examine the relationship between nurses' challenges, confidence, motivation, and the implementation of Evidence-Based Practice (EBP) in public sector hospitals. This design was selected as it enables the collection of data at a single point in time, providing a comprehensive snapshot of the current practices and perceptions among nurses regarding EBP.

A descriptive approach was appropriate for identifying and analyzing the existing conditions and characteristics of the study population without influencing the environment. The cross-sectional nature of the study allowed for the simultaneous assessment of multiple variables, facilitating the identification of associations and trends related to EBP implementation. This design proved effective in exploring the complexities surrounding nurses' engagement with EBP in real-world clinical settings.

3.2 Study Setting

This research was conducted in the nursing department of HMC hospital Peshawar KP. These healthcare facilities were selected due to

their accessibility, the presence of registered nursing staff, and their representation of typical working conditions in rural public hospitals.

The researcher chose these hospitals not only for their relevance to the study objectives but also for practical reasons such as proximity and the feasibility of data collection. These settings offered an appropriate environment for exploring the challenges, confidence, and motivation of nurses in implementing Evidence-Based Practice (EBP), as they reflect common realities faced by nurses working in the public healthcare sector of Pakistan.

3.3 Study Duration

The study was conducted over a 6-month period according to institute policy.

3.4 Study Population

The target population for this study comprised registered nurses currently working at HMC hospital Peshawar KP Pakistan. The selected nurses were directly involved in patient care and were assumed to have a working familiarity with the principles of Evidence-Based Practice (EBP).

- **Inclusion Criteria:** Registered nurses employed at HMC hospital with a minimum of one year of continuous work experience who voluntarily agreed to participate.
- **Exclusion Criteria:** Nurses who declined to participate or were unable to provide informed consent were excluded from the study.

3.5 Sample Size

The total sample size for this study consisted of 50 registered nurses. Participants were selected based on their availability and voluntary consent during the data collection period. This sample size was determined in consideration of the scope of the study, the available time for data collection, and access limitations at the study sites. Although the sample size was relatively small, it was deemed sufficient to provide meaningful insights into the key variables under investigation: nurses' challenges, confidence, motivation, and the implementation of Evidence-Based Practice (EBP) in public sector hospitals.

3.6 Sampling Technique

A non-probability convenience sampling method was used to choose participants for this study. It was suitable for getting a basic understanding of the challenges, confidence, motivation, and use of Evidence-Based Practice (EBP) among nurses at these hospitals.

3.7 Research Tool

The primary instrument used for data collection in this study was a structured questionnaire, name **"Relationship Between Nurses' challenges, Confidence, Motivation, and Evidence-Based Practice Implementation"** Questionnaire consist of 30 Items using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

3.8 Data Collection Procedure

The data for this study were personally collected from HMC hospital Peshawar KP, Pakistan. The process began by obtaining permission from the hospital administration. The data collection process was carefully planned to ensure minimal disruption to the nurses' work schedules.

Written informed consent was obtained from each nurse before the distribution of the questionnaire papers. Participants were fully informed about the study's purpose, procedures, and their right to withdraw at any time without consequence. Ethical approval for this study was obtained from the relevant institutional authorities at HMC hospital Peshawar before data collection commenced. The ethical principles guiding this study included respect for participants' autonomy, confidentiality, and voluntary participation.

3.8 Data Analysis

The data were analyzed using **IBM SPSS Version 26**. A structured approach was applied to ensure accuracy and clarity in the analysis process. **Descriptive statistics**, including **frequencies**, **percentages**, and **cumulative percentages**, were used to summarize the demographic data such as age, gender, educational qualification, and years of experience, providing a clear profile of the participating nurses. Furthermore, the key

variables of the study. **Challenges**, **confidence**, **motivation**, and **implementation of Evidence-Based Practice (EBP)** were evaluated using **Likert-scale responses**. For each domain, scores were calculated and categorized into levels of agreement: **disagree**, **neutral**, or **agree**. This systematic analysis helped assess the degree of challenges faced by nurses, their level of confidence and motivation, and the extent to which they apply EBP in their clinical practice.

4. Results

Table 1 displays the demographic and professional profiles of the study participants.

Among them, 52% were female and 48% were male. The majority (50%) were aged between 31 and 40 years, followed by 30% in the 20–30 age group, 16% between 41 and 50 years, and 4% above 50 years. In terms of educational background, most participants (68%) held a diploma, while 32% had a bachelor's degree. Regarding clinical experience, 8% had less than one year of experience, 44% had between 1 to 5 years, 12% had 6 to 10 years, and 34% had more than 10 years. Additionally, one participant (2%) did not report their experience.

Table 1: Demographic Characteristics of the Participants (n = 50)

Variable	Category	Frequency	Percent (%)
Age	20–30 years	15	30.0
	31–40 years	25	50.0
	41–50 years	8	16.0
	Above 50 years	2	4.0
Gender	Male	24	48.0
	Female	26	52.0
Years of Experience	Less than 1 year	4	8.0
	1–5 years	22	44.0
	6–10 years	6	12.0
	More than 10 years	17	34.0
	Missing/Other	1	2.0
Level of Education	Diploma	34	68.0
	Bachelor's Degree	16	32.0

The sample consisted of nurses aged 20–50+ years, with a gender distribution of 48% male and 52% female. A significant proportion (68%) of the nurses reported receiving formal training in EBP. Regarding resources, 58% agreed that adequate resources were available for EBP implementation, while 42% remained neutral.

More than half (56%) reported receiving support from management. However, several barriers to EBP implementation were noted. These included limited access to research articles (36% agreed), lack of time to read research (32% agreed), and difficulty understanding statistical analyses (34% agreed). Additionally, 50% of nurses disagreed

with having enough authority to alter patient care practices, and 64% disagreed that study findings were applicable to their practice. Furthermore, 48% of nurses disagreed that physicians supported EBP implementation, indicating a significant collaboration gap.

5. DISCUSSION

Evidence-Based Practice (EBP) in nursing represents an integrated framework that unites clinical expertise with the most reliable, research-based evidence to optimize patient care. Beyond individual treatment benefits, EBP contributes to lowering healthcare expenditures, standardizing clinical decision-making, and improving overall care quality. Despite its acknowledged value, the actual implementation of EBP in clinical settings remains suboptimal, largely due to various individual and systemic barriers.

This study was designed to assess the challenges, levels of confidence, motivation, and the extent of EBP implementation among nurses working in HMC hospital Peshawar KP, Pakistan. The findings revealed that, although nurses generally expressed favorable attitudes and motivation toward adopting EBP, a wide array of organizational and personal obstacles significantly hampered their ability to practice it effectively.

The demographic profile of the respondents indicated that the majority were female nurses holding diplomas and possessing between one to ten years of clinical experience. This is reflective of the current nursing landscape in Pakistan's public sector, especially in rural and semi-urban areas. As highlighted by **Ahmed et al. (2021) [26]**, diploma-level nurses in Pakistan often lack exposure to essential research and analytical skills, which may hinder their ability to interpret and apply evidence effectively in clinical settings.

A prominent observation in this study was the low actual implementation of EBP, even among those who had previously undergone EBP-related training. While 68% of nurses reported having received some form of EBP training, practical application was minimal. Participants frequently cited challenges such as difficulty in accessing updated research literature (38%), the unavailability of dedicated resource centers (36%), and difficulty understanding statistical terminology (34%). These findings align with **Khan et al. (2022) [27]**, who reported that training programs in public hospitals are often insufficient in content and not supported with practical follow-up, leaving nurses ill-equipped to apply what they have learned.

The study also highlighted time constraints, high workloads, and the absence of allocated time for reviewing or integrating research into clinical practice. Approximately 32% of nurses indicated they lacked the time to engage in scholarly reading or evidence appraisal. These findings are consistent with the work of **Gul and Raza (2023), [28]** who emphasized that nurses in the public healthcare sector often face excessive patient volumes, leaving little room for continuous education or professional development related to EBP.

Moreover, the study found a noticeable lack of institutional support and poor interprofessional collaboration. About 42% of participants felt unsupported by their hospital administration, and 38% reported inadequate collaboration with other healthcare professionals. This resonates with the findings of **Iqbal et al. (2023),[29]** who stressed that leadership and administrative backing are essential for cultivating a supportive environment for EBP. Without such reinforcement, initiatives to integrate evidence into practice may fail to gain momentum.

Nevertheless, despite the challenges, the majority of nurses in this study expressed a positive mindset toward the value of EBP. Many disagreed with statements like "EBP is not applicable in our setting" or "Research findings are irrelevant," showing that the fundamental interest and motivation were present. This indicates that the main issue lies not in nurse attitudes, but in the lack of supportive infrastructure. **Mahmood et al. (2022) [30]** similarly reported that with appropriate systems such as access to research databases, mentorship, and organizational encouragement, nurses are more likely to actively engage in EBP.

Another concern identified in the study was the limited confidence among nurses in interpreting and utilizing research findings. This lack of

confidence was largely attributed to inadequate academic preparation and the absence of ongoing professional development. **Rasheed et al. (2021) [31]** pointed out that many nursing programs in Pakistan do not place sufficient emphasis on research interpretation and critical thinking, thus limiting graduates' capacity to integrate evidence into practice.

Although the study utilized a cross-sectional design and was restricted to a relatively small sample from two healthcare facilities, its results are consistent with existing national and global literature, thereby reinforcing its validity. The findings underscore the urgent need for targeted interventions, such as improving the quality and reach of EBP training programs, providing nurses with protected time for professional learning, strengthening managerial support, and promoting interprofessional collaboration within healthcare teams.

Limitations of the Study

Firstly, the findings of this study may not be generalizable to private healthcare settings or hospitals outside the selected areas. Data were collected using self-reported questionnaires, which are subject to response bias and social desirability bias, where participants may provide answers they believe are socially acceptable rather than entirely truthful.

The study utilized a convenience sampling method, which may limit the representativeness of the sample. Although efforts were made to include a diverse group of nurses, the sample may not reflect the broader nursing population of KP Pakistan.

The sample size (n=50) may not be large enough to fully represent the broader nurse population in the hospitals across Sindh. Additionally, the study's geographic focus on hospitals in KP may restrict the applicability of its findings to other regions of Pakistan.

Finally, as a cross-sectional study, this research examines relationships between variables at a single point in time. While it provides valuable insights, it does not establish cause-and-effect relationships but only identifies associations between the variables studied.

6. Conclusion

This study identified key challenges that hinder the implementation of Evidence-Based Practice (EBP) among nurses, including limited access to research materials, insufficient training, time constraints, and lack of managerial support. Despite nurses' positive attitudes and motivation towards EBP, their confidence in applying research findings remains low. Organizational barriers, such as a lack of resources and interprofessional collaboration, further impede EBP adoption. To enhance EBP implementation, hospitals must focus on improving access to research, providing targeted training, fostering a supportive culture, and ensuring managerial and collaborative support. Addressing these challenges can lead to better patient care outcomes.

7. Recommendations

1. **Improve Access to Research Resources**: Hospitals should ensure that nurses have easy access to up-to-date research articles, journals, and Evidence-Based Practice (EBP) guidelines. A centralized digital or physical library of relevant resources can help nurses stay informed and apply current research effectively in their practice.

2. **Offer Practical EBP Training**: Nurses face challenges in understanding research data and evaluating the quality of studies. Ongoing training workshops should be provided, focusing on how to interpret research findings and apply them to real-world clinical situations. This will help nurses gain confidence in using evidence in their practice.

3. **Allocate Time for EBP Activities**: Many nurses reported not having enough time to read research or apply new ideas at work. Hospital administrations should consider providing designated time during shifts for activities such as reading research, reflecting on findings, and discussing EBP in team meetings. This would allow nurses to engage more fully with EBP.

4. **Involve Nurses in Decision-Making**: Half of the nurses felt they lacked the authority

to change patient care practices. Hospital management should actively involve nurses in decisions related to policy-making, care protocols, and care planning. Empowering nurses in these areas will help build confidence and accountability in implementing EBP.

5. **Encourage Collaboration Among Healthcare Professionals**: Many nurses reported a lack of support from physicians and other healthcare professionals. Hospitals should foster better teamwork by holding regular interdisciplinary meetings and collaborative training sessions. This can improve communication and ensure that EBP is integrated across all healthcare roles.

6. **Promote a Culture of Openness to Change**: Resistance to new ideas and lack of support from colleagues hinder EBP adoption. Hospital leadership should create a positive environment that encourages innovation. Rewarding staff for engaging in evidence-based practices and supporting new ideas will help foster a culture of openness to change.

7. **Appoint EBP Champions or Mentors**: Designating experienced nurses or educators as EBP mentors can provide crucial support for staff. These mentors can guide colleagues through the process of understanding and applying research, helping to reduce uncertainty and increase confidence in using evidence in practice.

8. **Continuous Evaluation and Feedback**: Regular assessments should be conducted to identify barriers, staff perceptions, and ongoing training needs related to EBP. Establishing feedback mechanisms will allow hospitals to evaluate the effectiveness of their EBP initiatives and make improvements based on the feedback received.

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