

Factors Linked to Nurses' Understanding of and Appreciation of Evidence-Based Practices

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Abstract

Background: Evidence-based practice (EBP) is a fundamental approach in modern nursing, aiming to improve patient outcomes by integrating research findings into clinical care. While the benefits of EBP are well-documented, challenges remain in its effective implementation, particularly among nurses who are pivotal in delivering quality healthcare. Understanding nurses' experiences and perspectives on EBP is crucial for overcoming these barriers and fostering its adoption in healthcare settings.

Methods: This study was conducted to explore nurses' experiences and perceptions of EBP in various healthcare settings, including hospitals and primary healthcare centers. Data were collected through eight focus group discussions (FGDs), involving 64 nurses with at least one year of experience in nursing. The discussions focused on nurses' awareness of EBP, its perceived benefits, steps for implementation, and barriers to its practice. The data were analyzed using conventional content analysis to identify key themes.

Results: The findings revealed that nurses had a general awareness of EBP, recognizing its benefits for patients, healthcare professionals, and the healthcare system. However, their understanding of the specific steps involved in EBP implementation was limited. Most nurses relied on Google for information, with minimal use of professional databases. The nurses identified barriers to EBP, including a lack of supportive organizational culture, inadequate training, and resource constraints. They emphasized the importance of ongoing education, leadership support, and accessible, high-quality evidence for successful EBP integration.

Conclusion: While nurses acknowledge the value of EBP, its implementation faces significant challenges, particularly in terms of knowledge, resources, and organizational support. Enhancing nurses' training in EBP, fostering a supportive work environment, and providing access to relevant, high-quality evidence are essential for improving the integration of EBP in clinical practice. Addressing these barriers could lead to better patient outcomes and more efficient healthcare delivery.

Introduction

Evidence-based practice (EBP) has become a cornerstone in modern nursing and healthcare systems, regarded as the benchmark for delivering safe, effective, and cost-efficient care globally (Alqahtani et al., 2020; Kumah et al., 2022). EBP involves translating research findings into routine clinical procedures and patient care (Portney, 2020). Its implementation brings a myriad of advantages, including enhancing nurses' leadership and critical thinking capabilities while promoting the delivery of safe, evidence-supported care (Brunt & Morris, 2023; Ramage & Foran, 2023). Furthermore, it elevates healthcare standards, streamlines costs, and mitigates the risks of medical errors and mortality (Dang et al., 2021). The practice also fosters professional growth and reduces inconsistencies in clinical practices, leading to improved patient outcomes and satisfaction (Chovanec et al., 2021).

Nurses play a pivotal role in shaping the quality of healthcare delivery (Pierce, 2020). As healthcare systems demand increasingly sophisticated nursing care, EBP offers a framework for delivering comprehensive, high-quality care grounded in current research rather than outdated methods or anecdotal advice (Chan et al., 2023). With their expertise in leadership, collaboration, communication, evaluation, and knowledge translation, nurses are essential in implementing EBP and driving sustainable improvements in clinical settings (Ten Ham-Baloyi, 2022).

Despite its benefits, integrating EBP into nursing practice presents challenges. Many nurses face barriers stemming from a lack of knowledge, training, and familiarity with EBP principles. The ability to formulate clinical questions, critically assess information, and apply evidence to patient care requires a broad skill set that many nurses have not fully developed (Michelle & Troseth, 2022). Gaps remain between the availability of research findings and their practical application, highlighting the need for a stronger emphasis on EBP competencies in the nursing profession (Loura et al., 2021).

As frontline healthcare providers, nurses are uniquely positioned to influence care quality through EBP and quality improvement (QI) initiatives. Assessing their current understanding, skills, and attitudes toward these practices is crucial for enhancing their competencies and fostering better patient care outcomes (Hashish et al., 2020). Exploring the factors that enable or hinder EBP adoption can provide valuable insights for nurses and decision-makers, helping to address existing challenges and improve implementation strategies (Hasanpoor et al., 2019).

Although quantitative studies have examined nurses' perceptions of EBP, there is limited qualitative research capturing their experiences and perspectives in-depth. This gap underscores the importance of understanding their lived experiences to inform future initiatives and research in this domain. The findings of such studies can expand the knowledge base, support the development of targeted interventions, and contribute to advancing EBP adoption in nursing practice.

Methodology

This research utilized a qualitative descriptive approach to explore nurses' experiences and perspectives regarding the implementation of evidence-based practice (EBP) in healthcare. The qualitative method was chosen for its ability to provide an in-depth understanding of nurses' knowledge and viewpoints on EBP (LoBiondo-Wood & Haber, 2021). The study was conducted in diverse healthcare settings, including hospitals and primary healthcare centers (PHCs), spanning several facilities offering a range of services, from emergency and inpatient care to maternal health

and chronic disease management. Data collection occurred over four months, ensuring a comprehensive exploration of participants' experiences.

Nurses meeting the following criteria were included in the study: active employment in selected healthcare facilities for at least one year, possession of a bachelor's degree in nursing, willingness to share their work experiences, and consent to participate. Exclusions applied to nurses with less than six months of experience and interns. Using purposive sampling, 64 nurses were recruited to ensure relevance and richness of data until saturation was achieved. Participants were selected with the method of homogeneous sampling, ensuring sufficient knowledge of the discussion topic. Focus group discussions (FGDs) were held, with each group comprising six to ten participants, emphasizing diversity in age, gender, education, and clinical experience. Most participants were involved in direct patient care, making clinical decisions based on assessments and interventions.

Data Collection

Permission for data collection was obtained through official communication with the relevant administrative authorities. Participants were invited verbally, facilitated by nurse managers. A semi-structured guide with open-ended questions was developed, adapted from a previous study by Elsayd et al. (2019) with permission. The questions were translated and piloted to ensure clarity, cultural appropriateness, and reliability, resulting in minor adjustments.

The FGDs addressed topics such as understanding EBP, its benefits, implementation steps, knowledge sources, and perceived barriers. Participants also shared demographic and occupational details like age, gender, education, experience, and prior exposure to EBP training.

Discussions were conducted in a private, distraction-free environment, scheduled for participants' convenience. Ground rules were established to ensure confidentiality and respect among participants. FGDs were moderated by one researcher, with three co-moderators taking field notes and summarizing discussions for participant feedback. Each session lasted 30–45 minutes, with data collection concluding after eight FGDs when thematic saturation was reached.

Field notes complemented audio recordings, capturing non-verbal cues and contextual details. Discussions encouraged open and honest participation, with researchers maintaining a neutral stance to avoid influencing responses. Participants were prompted with follow-up questions to ensure comprehensive data collection.

Research Rigor

To enhance reliability, the study adhered to established criteria of credibility, transferability, dependability, and confirmability (Lindgren et al., 2020). Credibility was achieved through member checks, detailed methodological descriptions, and illustrative quotations in the findings. Transferability was ensured by providing context-rich descriptions and selecting diverse participants. Dependability and confirmability were addressed through transparent documentation and triangulation of analysis by multiple researchers.

The research team, comprising individuals with varied expertise in nursing, medical sciences, and qualitative research, maintained reflective practices to minimize biases. Rigorous training and iterative analysis processes were implemented to ensure reliability and depth in data interpretation.

Data Analysis

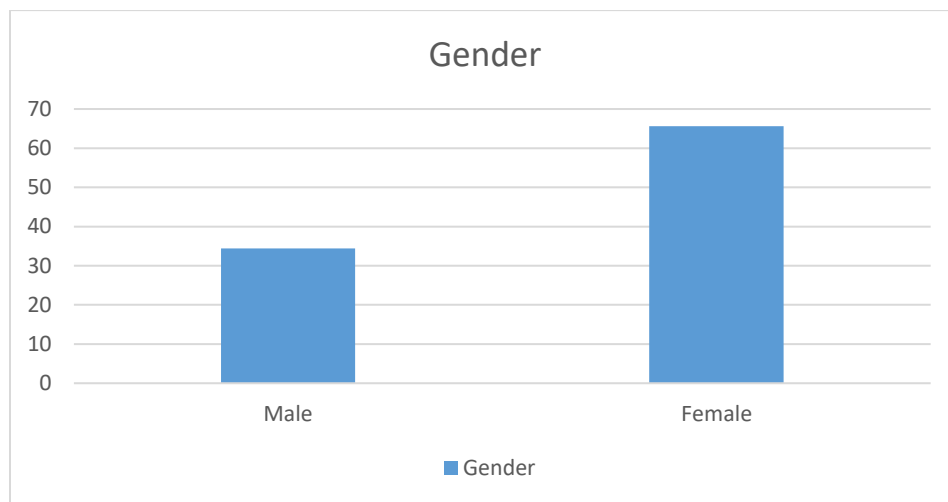
Data were analyzed using conventional content analysis, following an inductive approach to derive codes, categories, and themes directly from the data (Kiger & Varpio, 2020). Three researchers independently reviewed and coded the data, resolving discrepancies through discussion. Codes were grouped into subthemes and themes, verified by external qualitative experts for validity. The analysis revealed two main categories: nurses' experiences and perspectives on EBP.

Results

The average age of the participants was 30.31 ± 4.61 years, with a distribution of 22 male and 42 female participants. Among them, 42 held a bachelor's degree in nursing, 13 had postgraduate qualifications, and 9 possessed a nursing diploma. Regarding their work settings, 40 participants worked in hospitals, while 24 were employed in healthcare centers. In terms of professional experience, 9 participants had less than 5 years of experience, 15 had 5 to less than 10 years, 34 had 10 to less than 15 years, and 6 had between 15 and 20 years. Notably, 48 participants had not participated in any training programs related to Evidence-Based Practice (EBP).

Table 1: Demographic Characteristics of Participants

Characteristic	Category	Frequency (n)	Percentage (%)
Age (Mean \pm SD)	30.31 \pm 4.61	-	-
Gender	Male	22	34.4
	Female	42	65.6
Educational Qualification	Nursing Diploma	9	14.1
	Bachelor's Degree	42	65.6
	Postgraduate	13	20.3
Work Setting	Hospitals	40	62.5
	Healthcare Centers	24	37.5



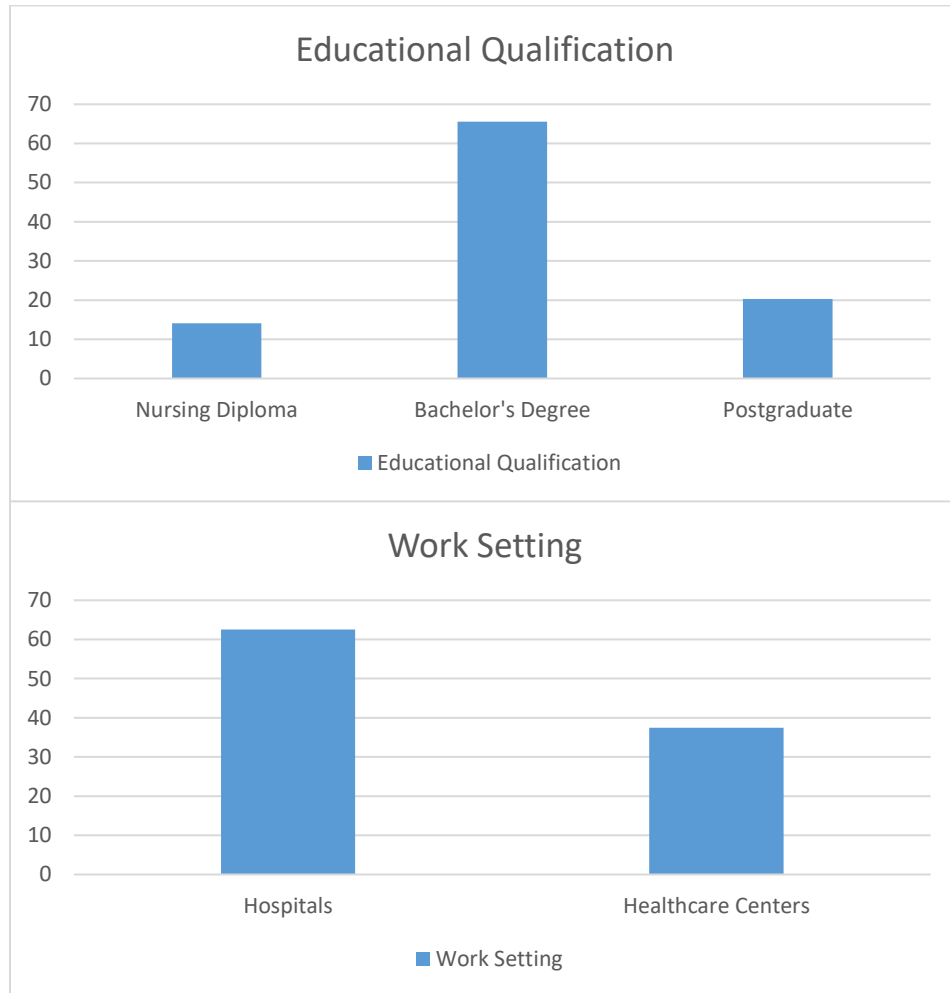
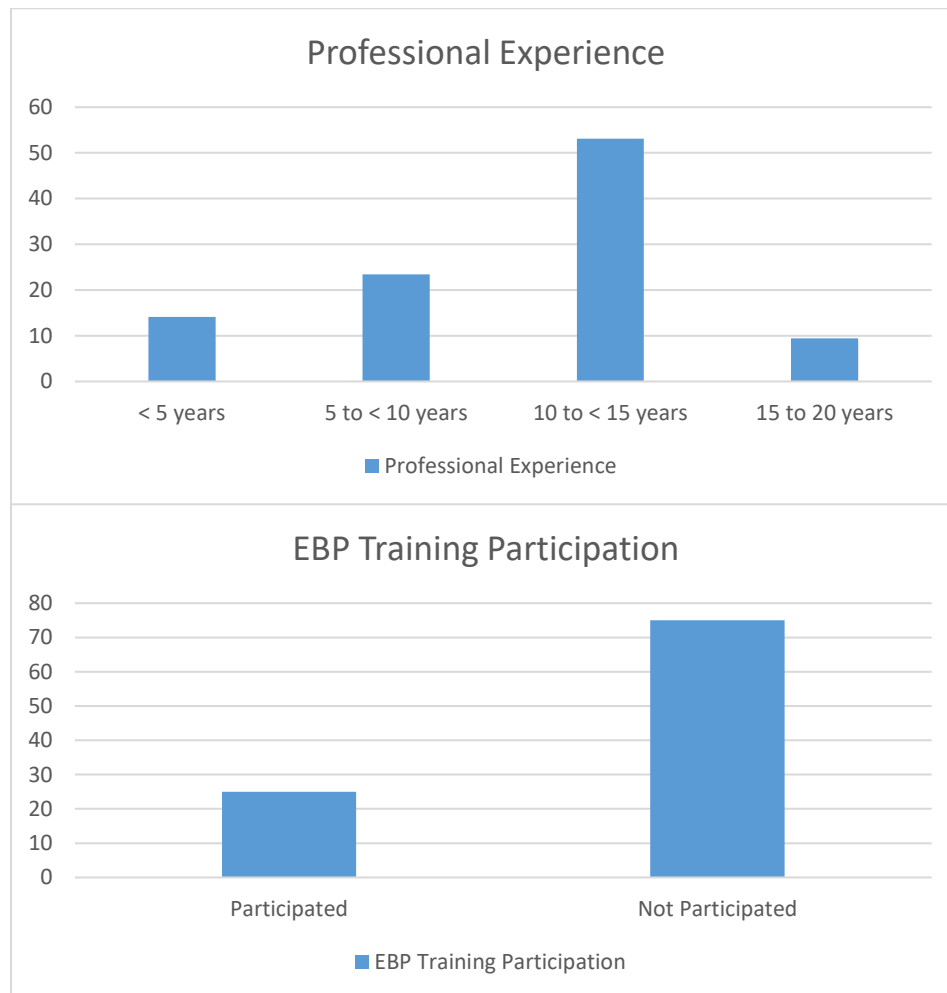


Table 2: Professional Experience and Training

Characteristic	Category	Frequency (n)	Percentage (%)
Professional Experience	< 5 years	9	14.1
	5 to < 10 years	15	23.4
	10 to < 15 years	34	53.1
	15 to 20 years	6	9.4
EBP Training Participation	Participated	16	25.0
	Not Participated	48	75.0



Following the data analysis, key findings emerged under two main themes: experiences and perspectives regarding EBP. Both themes were further divided into four sub-themes, which are detailed below with direct quotes from the participants.

Awareness and Benefits of EBP

Although participants recognized the term "evidence-based practice," their understanding of EBP varied significantly. Their general understanding involved integrating scientific research and clinical trials into daily practice. EBP was commonly viewed as a systematic approach to clinical care that follows established scientific principles and guidelines, aiming to provide high-quality patient care with minimal cost and effort.

Some participants defined EBP as a clinical practice based on scientific research outcomes, such as experimental studies and clinical trials.

Participants highlighted three key benefits of EBP for patients, healthcare professionals (HCPs), and the healthcare system as a whole:

Patient Benefits

EBP was seen to enhance disease progression and improve patient satisfaction. Participants believed that EBP helps prevent medical errors and harms, while also reducing the length of hospital stays.

Healthcare Professional Benefits

The participants emphasized that EBP, when applied, provides access to up-to-date and reliable knowledge, enhances professional skills, and boosts nurses' self-esteem and confidence. They saw EBP as a tool to reduce uncertainty and maintain consistency in practice.

Healthcare System Benefits

From an organizational perspective, participants believed that EBP could reduce unnecessary healthcare costs and improve treatment outcomes. They also noted that it could enhance the reputation of healthcare organizations and provide legal backing, making the nursing profession more credible and valued.

Steps in EBP Implementation

The steps involved in EBP were not frequently discussed by the participants, but they often linked them to research proposal processes. Many participants were unfamiliar with different types of research questions, only mentioning intervention questions. Most participants used Google as their primary information source, with limited use of professional databases like PubMed and Medline.

Methods for Disseminating EBP

Participants identified various channels for sharing EBP knowledge, such as clinical practice guidelines, targeted distribution of materials, scientific journal publications, educational training programs, and online platforms. Most participants agreed that official work hours for attending sessions with experts were the most common way new evidence was disseminated.

Sources of Knowledge about EBP

Participants mentioned several sources for acquiring EBP knowledge, including educational seminars, experiences shared by peers, supervisors, and clinicians, as well as social media and the internet. They considered the information obtained from social media to be accurate and trustworthy. However, they were not familiar with Cochrane Collaboration as a significant EBP knowledge source.

Nurses' Perspectives on EBP

The nurses expressed that the atmosphere towards EBP in their workplace was generally not supportive. However, they identified several factors that could facilitate EBP implementation, including integrated and collaborative training, resource allocation, and motivation. They emphasized the need for ongoing training, transparent leadership, and access to high-quality evidence in the form of clinical guidelines and protocols.

EBP in Clinical Practice

Nurses viewed EBP as a valuable and multifaceted approach to patient care. However, they acknowledged that its implementation presented challenges, including the need for skilled personnel and supportive organizational environments. They emphasized that EBP would evolve the clinical procedures and improve overall care as it became more widely applied.

Barriers to the Application of Evidence-Based Practice (EBP)

Barriers to the adoption of Evidence-Based Practice (EBP) were identified more frequently than the advantages. These barriers were categorized into individual, patient-related, and organizational factors. The most commonly mentioned challenges included skepticism towards new evidence and resistance to change. Nurses reported a preference for traditional practices, difficulties in understanding and accessing research findings, and a lack of EBP knowledge and skills. Personal factors such as limited information technology skills, restricted access to research articles, and the absence of research in accessible languages were also noted. Moreover, participants struggled to differentiate between high-quality research studies.

One nurse remarked, "We wish we could practice EBP more effectively, but it's challenging to fully implement it right now. While some evidence may benefit certain patients, it may not be applicable universally. We often prefer sticking to methods we learned in nursing school or those that align with established routines."

Another participant stated, "As a nurse, I find it difficult to find, assess, or apply evidence because of my limited expertise in research. The majority of nursing journals are in English, making the evidence difficult to access and comprehend."

The focus group discussions also highlighted organizational barriers such as management's lack of understanding and commitment to EBP implementation. Other obstacles included an unsupportive work environment, time constraints, heavy workloads, staff shortages, lack of a change culture, and insufficient EBP training. The participants agreed that despite the theoretical support for EBP, changing established norms remains a significant challenge. Some nurses felt that guidelines, when available, lacked practical instructions for real-world application.

A participant expressed frustration, stating, "We are understaffed, and my hospital doesn't support EBP due to time limitations and overwhelming workloads. We are mainly focused on completing the tasks assigned by our leaders to avoid medical errors."

Another nurse shared, "I am not motivated to use new methods because I cannot access most scientific databases. I typically use my phone's internet, but it's expensive to download documents to read."

Patient-related barriers included health conditions, concerns about the cost of care, and communication challenges. In particular, patients' unfamiliarity with new treatments and fear of poor outcomes made nurses hesitant to implement novel practices, particularly with elderly patients and their families. Nurses feared blame and possible abuse if outcomes were unfavorable. As a result, they tended to avoid adopting practices that deviated from standard protocols or appeared costly.

"We tend to be cautious; we avoid using new medications or techniques unless they are widely accepted, because if something goes wrong, patients and their families might blame us," shared one nurse.

Facilitators for EBP Application

To facilitate the implementation of EBP, participants suggested several strategies, including providing free internet access for research purposes and allowing dedicated time for research activities without clinical duties. One participant proposed, "We need a regular EBP training program that includes all healthcare staff."

Another emphasized, "Recruiting more qualified staff will help in the effective application of EBP. Healthcare organizations should focus on hiring professionals who have prior EBP knowledge and skills."

The participants highlighted that effective resource allocation, providing the necessary time for EBP practices, and employing knowledgeable and skilled personnel were essential to successful EBP implementation. Continuous capacity-building through internal and external training programs, along with fostering collaboration, were seen as crucial. They also emphasized that nursing leadership must take an active role in motivating and inspiring staff to engage with EBP, with encouragement following proper training.

Methods for EBP Application

The participants identified educational interventions, clinical practice guidelines, and clinical protocols as the most common strategies for EBP implementation. EBP involves integrating

literature, research findings, and professional expertise in healthcare, with patient involvement in clinical decision-making. Participants mentioned that they routinely followed national guidelines for infection prevention and control as part of their clinical practice.

Discussion

Competency in evidence-based practice (EBP) is essential for nurses to make informed and effective decisions in patient care. It is crucial for nurses to critically and systematically gather scientific data to inform their actions. Nurses with strong EBP skills can quickly identify reliable evidence from available information to implement new strategies, enabling a timely and scientifically informed response to emerging public health situations (Zhou et al., 2022). However, the adoption of EBP in nursing is hindered by multiple challenges, including insufficient knowledge of EBP, misconceptions about its value, a lack of time, resources, and organizational support, such as inadequate incentives and encouragement (Melnyk & Raderstorff, 2019).

EBP is still a relatively new concept in many healthcare settings. The findings from this study suggest that nurses face several challenges in adopting this approach. Many participants reported limited support for EBP implementation, with negative views attributed to organizational, individual, and patient-related barriers. One primary reason for this resistance is the lack of access to necessary information resources, as well as a lack of motivation to adopt EBP practices. These results align with similar findings from studies by Elsayd et al. (2019) and Valizadeh et al. (2020), which also identified insufficient awareness of EBP's importance. Contrastingly, Kaseka and Mbakaya (2022) found that nurses generally had a more positive view of EBP but faced challenges due to the absence of organizational backing and lack of competence.

The study further found that most participants were not familiar with the EBP concept, a trend consistent with findings from Alshehri et al. (2017). However, those with access to scientific resources and training programs had a better understanding of EBP (Claudino et al., 2019). Many participants reported that EBP leads to improved patient outcomes, safer care, more efficient nursing processes, and reduced healthcare costs—findings also supported by Dang et al. (2021).

In exploring nurses' experiences with EBP steps, the study revealed that few participants were able to correctly identify the complete EBP process. This finding is in line with research showing that many healthcare providers lack familiarity with EBP steps (Tolera & Feng, 2017). However, this contrasts with studies where nurses actively engaged in research and EBP practices (Lafuente-Lafuente et al., 2019).

When examining how nurses search for evidence, it was found that most participants rely primarily on Google for information. This reflects a lack of awareness of more specialized scientific databases, a trend confirmed by Zigdon et al. (2020). Some nurses also used PubMed, aligning with Lafuente-Lafuente et al. (2019), who noted that participants were more familiar with databases and had developed research skills.

Nurses' attitudes toward EBP were generally positive, with many recognizing its importance for improving patient care, professional practice, and healthcare outcomes. However, they also perceived EBP as complex and challenging, largely due to the lack of resources within their institutions (Hisham et al., 2016). These findings mirror those of Al-Maskari and Patterson (2018), who noted that most healthcare providers view EBP as valuable but struggle with its implementation due to inadequate support.

The barriers to EBP identified in the study were grouped into three categories: individual, organizational, and patient-related. Organizational barriers included time constraints, heavy workloads, and limited access to technical resources. These findings were similar to those in other research, which identified the lack of generalizability of research findings, insufficient facilities,

and limited physician cooperation as major obstacles to EBP implementation (Alqahtani et al., 2020). Additionally, Anaman-Torgbor et al. (2022) and Clarke et al. (2021) noted that nurses faced numerous challenges in adopting EBP practices. Conversely, Baiomy and Khalek (2015) reported that time constraints were not among the most significant barriers in their study.

Individual barriers identified by participants included a lack of formal EBP training and understaffing. The absence of proper training hindered nurses' understanding of EBP principles and steps, a finding consistent with research by Clarke et al. (2021), which highlighted training deficits as a major barrier. The current study also found that nurses' busy schedules, along with a lack of time and funding, prevented them from attending EBP training sessions, a challenge echoed by Alshehri et al. (2017).

The study also revealed that younger nurses, those with lower educational levels, and those with less work experience encountered more difficulties in applying EBP. Nurses with higher levels of education and more years of service demonstrated a greater understanding of EBP and were more willing to engage with it. These findings align with those from Alqahtani et al. (2022), Khoddam et al. (2023), and Pitsillidou et al. (2021).

From a patient perspective, participants reported that some patients were resistant to adopting new treatment plans based on EBP, particularly when these treatments involved higher costs or were perceived as experimental. Additionally, patients' limited understanding and engagement in healthcare decisions were seen as obstacles. These patient-related challenges were also noted by Tacia et al. (2015), who found that patient reluctance was a significant barrier to EBP adoption.

To overcome these barriers, the study participants recommended that healthcare organizations provide internet access, allocate time for research without clinical duties, offer leadership support, and involve patients more actively in the care process. Financial and moral incentives could also encourage greater participation in EBP initiatives. This aligns with McNett et al. (2022), who emphasized the importance of strong leadership and resource availability in successfully implementing EBP. Furthermore, participants suggested that healthcare organizations invest in EBP training to enhance staff competence, a recommendation supported by Melnyk et al. (2021). Finally, participants identified educational interventions, the adoption of clinical guidelines, and the use of clinical protocols as the most effective strategies for promoting EBP. These methods could improve practice environments and reduce care variability, as also noted by Khoddam et al. (2023).

Conclusion

The findings of this study indicate that participants faced several obstacles in integrating evidence-based practice (EBP) into their clinical decision-making processes. These challenges were largely due to a lack of necessary knowledge and skills for effective EBP implementation, with participants perceiving EBP as a complex approach. The barriers identified were related to individual, organizational, and patient factors, with the absence of organizational support for EBP being a significant hindrance. Given these challenges, it is crucial to promote the adoption of EBP and provide targeted training to address these barriers. The outcomes of this study offer valuable insights for nursing leaders, educators, and healthcare policymakers to help improve the integration of EBP into clinical practice.

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