

# Bridging knowledge and practice: nurses' experiences with evidence-based care in almaty healthcare settings

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## ABSTRACT

### Background

Evidence-based practice (EBP) is essential for high-quality, safe, and cost-effective nursing care. However, its implementation remains limited in many healthcare systems, particularly in low- and middle-income countries. In Kazakhstan, research exploring nurses' experiences with EBP is scarce, especially from qualitative perspectives.

### Aim

This study aimed to explore nurses' experiences, perceptions, and challenges in implementing EBP within healthcare settings in Almaty, Kazakhstan.

### Methods

A qualitative descriptive design was employed. Semi-structured interviews were conducted with 74 registered nurses from hospitals and primary healthcare centres. Data were analysed using thematic analysis following Braun and Clarke's framework. Methodological rigor was ensured through triangulation, audit trails, and collaborative coding.

### Results

Four main themes emerged: (1) understanding and knowledge of EBP, (2) attitudes toward EBP, (3) barriers to EBP implementation, and (4) facilitators and strategies for improvement. Nurses generally recognized the benefits of EBP but reported limited knowledge, heavy workloads, restricted access to evidence resources, and insufficient leadership support. Facilitators included managerial support, protected time for EBP activities, regular training, and standardized clinical guidelines.

### Conclusions

While nurses in Kazakhstan value EBP, multilevel barriers hinder its integration into routine practice. Strengthening organizational support, improving access to scientific evidence, and investing in EBP-focused education are critical to advancing evidence-based nursing. **Implications for Practice:** Healthcare organizations should prioritize structural, educational, and leadership strategies to support nurses in applying EBP. These include protected time for research and EBP activities, access to scientific databases, continuing professional development, and the implementation of standardized clinical guidelines.

### Keywords

Nurses' experiences; Evidence-based practice; Qualitative descriptive study; Healthcare settings; Kazakhstan; Nursing practice

## INTRODUCTION

Evidence-based nursing practice has become an essential element of clinical decision-making and contemporary healthcare delivery, and is widely regarded as the standard for ensuring safe, high-quality, and cost-effective care globally<sup>12</sup>. Evidence-based practice (EBP) involves the systematic integration of research evidence into routine clinical processes and patient care activities<sup>3</sup>.

The adoption of EBP in nursing has been associated with enhanced leadership competencies, improved critical thinking skills, and the delivery of safe and reliable care<sup>45</sup>. Furthermore, EBP contributes to better healthcare outcomes and cost efficiency by minimizing clinical errors and reducing mortality rates<sup>6</sup>. It also supports professional development, promotes the standardization of clinical practices, and improves patient satisfaction<sup>7</sup>.

Despite these benefits, existing evidence suggests that many nurses continue to demonstrate limited knowledge and insufficient competency in implementing EBP in clinical settings.

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Skills such as formulating clinical questions, analysing data, critically appraising research and applying findings in practice require a broad skill set that is not consistently developed among nurses. Despite the availability of new research and publications capable of improving care quality, nursing practice often remains inadequately evidence-based (Michelle & Troseth, 2022). The complexity of EBP implementation is further reflected in the ongoing gap between “what evidence recommends” and “what is practised clinically” (Loura et al., 2021). Because EBP and quality improvement (QI) are now regarded as essential competencies for all healthcare professionals—and particularly for nurses—it is vital to assess nurses’ current knowledge, skills and attitudes in these areas. Such assessments can inform efforts to enhance patient care, strengthen professional competence and contribute to overall improvements in healthcare systems (Hashish et al., 2020). Identifying factors that influence nurses’ adoption of EBP is vital for both practitioners and healthcare policymakers (Hasanpoor et al., 2019)<sup>4</sup>. While quantitative research has examined nurses’ beliefs and attitudes toward EBP in Kazakhstan, qualitative evidence remains scarce. This study therefore seeks to explore nurses’ experiences and perceptions regarding EBP implementation within Kazakhstani healthcare settings, addressing a notable gap in the literature. The insights gained are expected to expand the existing knowledge base and inform the development of future initiatives aimed at promoting EBP.

## Aim

This study aims to explore nurses’ experiences and perspectives regarding the implementation of evidence-based practice in healthcare settings in Almaty, Kazakhstan.

## Study design

A qualitative descriptive study design was employed to explore nurses’ experiences and perspectives regarding the implementation of evidence-based practice (EBP). This approach was selected as it allows for a comprehensive and practice-oriented description of participants’ experiences while remaining close to the data and minimising theoretical interpretation. Qualitative descriptive designs are well suited to implementation-focused research in nursing and healthcare contexts.

## Setting

The study was conducted in healthcare facilities across Almaty, Kazakhstan, including tertiary hospitals and primary healthcare centres. These settings were chosen to capture diverse nursing experiences across different levels of care and organisational contexts.

## Participants and sampling

Purposive sampling was used to recruit registered nurses with varied clinical backgrounds, years of experience, educational levels, and exposure to evidence-based practice. Inclusion criteria required participants to be registered nurses currently engaged in clinical practice and willing to share their experiences. A total of 74 nurses participated in the study. The relatively large sample size is consistent with qualitative descriptive research aiming to capture a broad range of perspectives across multiple healthcare settings.

## Data collection

Data were collected through semi-structured, face-to-face interviews conducted in private rooms within the participating healthcare facilities. An interview guide with open-ended questions explored nurses’ understanding of EBP, attitudes toward its use, perceived barriers and facilitators, organisational support, and access to scientific resources. Interviews lasted approximately 30–40 minutes and were audio-recorded with participants’ consent. Field notes were taken to document contextual observations and enhance data interpretation.

## Data analysis

Audio recordings were transcribed verbatim and analysed using thematic analysis following Braun and Clarke’s six-phase framework. The analysis involved familiarisation with the data, initial coding, development of categories, and refinement of themes that captured shared patterns across participants’ experiences. Two researchers independently reviewed the coding process and emerging themes, and discrepancies were resolved through discussion to achieve consensus.

## Trustworthiness

Methodological rigor was ensured through multiple strategies. Credibility was enhanced through researcher triangulation and iterative review of the data. Dependability was supported by maintaining an audit trail documenting analytical decisions. Confirmability was strengthened by collaborative coding and reflexive

discussions among the research team to minimise individual bias.

### Ethical Clearance

Ethical approval was obtained from the relevant institutional ethics committee. All participants received verbal and written information about the study and provided written informed consent prior to participation. Confidentiality and anonymity were strictly maintained by removing all identifying information from interview transcripts and securely storing the data in protected files accessible only to the research team. Participants were free to withdraw at any time without any consequences.

## RESULTS

Interviews with 74 nurses working in hospitals and primary healthcare centres in Almaty revealed four key themes reflecting their experiences with evidence-based practice (EBP): (1) understanding and knowledge of EBP, (2) attitudes toward EBP, (3) barriers to EBP implementation, and (4) facilitators and strategies for improvement. Participant quotes are presented to illustrate these themes.

### Understanding and Knowledge of EBP

Most participants reported limited familiarity with the concepts and processes of EBP. While many had heard the term “evidence-based practice,” they expressed uncertainty about applying it in clinical settings. Participant 12 noted, “*I have heard about evidence-based practice, but I am not sure how to use it in my daily work.*” Only a minority of nurses could describe the steps of EBP, such as formulating clinical questions, searching for evidence, and integrating research findings into practice.

Participants who had attended research-focused workshops or had access to scientific literature demonstrated stronger knowledge of EBP. Participant 45 explained, “*After attending the workshop, I realized that evidence-based practice helps improve patient outcomes and reduces unnecessary procedures.*” Nurses in this group highlighted that EBP contributes to enhanced patient safety, informed decision-making, and overall quality of care.

### Attitudes Toward EBP

Participants generally expressed positive attitudes toward EBP, recognising its potential benefits for patients, nurses, and healthcare organisations. EBP was

perceived as a tool to support accurate clinical decision-making and cost-effective care. Participant 7 shared, “*Using evidence-based practice makes our decisions more confident and helps patients get better care.*”

Despite these positive perceptions, many nurses described EBP as challenging to implement in routine practice. Time constraints, high workloads, and limited organisational support were frequently cited barriers. Participant 33 noted, “*I want to use evidence-based practice, but the workload is too high, and there is little guidance from management.*”

### Barriers to EBP Implementation

Participants described barriers at organisational, individual, and patient levels. Organisational barriers included heavy workloads, lack of protected time, limited access to online resources and scientific databases, and insufficient managerial support. Participant 21 stated, “*We usually just search on Google because we don't know how to use scientific databases, and access is restricted.*”

Individual-level barriers included limited formal EBP education, low confidence, and restricted opportunities for professional development. Younger nurses and those with higher educational qualifications reported greater motivation and confidence in applying EBP. Participant 56 observed, “*I feel more confident applying evidence-based practice because I recently completed my Master's degree and learned about research methods.*”

Patient-related barriers were also noted, including reluctance to accept innovative treatment approaches, financial constraints, low awareness of evidence-based care, and limited involvement in decision-making. Participant 3 commented, “*Some patients prefer traditional treatments and are hesitant to follow new recommendations, even if they are proven to work.*”

### Facilitators and Strategies for Improvement

Participants identified several facilitators to support EBP adoption. Key enablers included leadership support, protected time for EBP activities, regular training, and access to technological resources. Participant 68 suggested, “*If management allocates time for us to read research and attend training, it will be much easier to use evidence-based practice.*”

The use of standardised clinical guidelines and protocols was highlighted as a practical strategy to support evidence-based decision-making and reduce

variability in care. Participant 39 explained, “*Having clear guidelines helps us apply the best evidence consistently, even during busy shifts.*”

The main themes, subthemes, and illustrative quotes identified from the interviews are presented in Table 1.

**Table 1. Themes, Subthemes, and Illustrative Quotes from Nurses’ Experiences with Evidence-Based Practice (EBP)**

Theme	Subthemes	Description	Illustrative Quotes
Understanding and Knowledge of EBP	Limited conceptual understanding; Variable exposure to EBP education	Most nurses reported limited familiarity with EBP concepts and uncertainty about how to apply it in practice. Nurses with prior training or access to literature showed stronger understanding and recognized benefits.	«I have heard about evidence-based practice, but I am not sure how to use it in my daily work.» (P12) “After attending the workshop, I realized that evidence-based practice helps improve patient outcomes and reduces unnecessary procedures.” (P45)
Attitudes Toward EBP	Positive perceptions; Implementation challenges	Nurses generally had positive attitudes toward EBP and recognized its benefits for patients and care quality. However, high workload and limited organizational support made implementation difficult.	“Using evidence-based practice makes our decisions more confident and helps patients get better care.” (P7) “I want to use evidence-based practice, but the workload is too high, and there is little guidance from management.” (P33)
Barriers to EBP Implementation	Organizational barriers; Individual barriers; Patient-related barriers	Barriers existed at multiple levels: organizational (workload, limited access, low managerial support), individual (limited EBP training, low confidence), and patient-related (reluctance, financial constraints, low awareness).	“We usually just search on Google because we don’t know how to use scientific databases, and access is restricted.” (P21) “I feel more confident applying evidence-based practice because I recently completed my Master’s degree and learned about research methods.” (P56) “Some patients prefer traditional treatments and are hesitant to follow new recommendations.” (P3)
Facilitators and Strategies for Improvement	Leadership support; Education/training; Standardized guidelines	Key enablers included managerial support, protected time, training, access to resources, and standardized clinical guidelines to support consistent EBP.	“If management allocates time for us to read research and attend training, it will be much easier to use evidence-based practice.” (P68) “Having clear guidelines helps us apply the best evidence consistently, even during busy shifts.” (P39)

## DISCUSSION

Evidence-based practice (EBP) competencies are essential skills that nurses need in order to make informed clinical decisions. The ability to selectively and critically obtain high-quality scientific evidence is crucial for guiding practice. Nurses who are proficient in EBP can efficiently identify the most relevant and rigorous evidence when encountering new clinical challenges, enabling a more rapid and scientifically grounded response to public health events (Zhou et al., 2022). Despite its importance, the integration of research evidence into nursing practice remains slow due to barriers such as insufficient EBP knowledge, misconceptions or negative perceptions about research, limited time and resources, and organisational restrictions including inadequate support and incentives (Melnik & Raderstorf, 2019).

Given that EBP is still relatively new within the healthcare system of Kazakhstan, this qualitative study examined nurses’ perceptions and experiences regarding its implementation. Findings indicate that nurses perceived limited organisational support for EBP and expressed negative views toward its application, primarily due to barriers linked to organizational, personal and patient-related factors. These challenges appear to stem from restricted access to scientific information and a lack of motivation to engage with evidence-based approaches. Similar results have been reported by Elsayd et al. (2019) and Valizadeh et al. (2020). These findings also align with Zammar (2022), who noted that many nurses remain unaware of the significance of EBP in their profession. However, these outcomes differ from those of Kaseka and Mbakaya (2022), who reported that although nurses generally viewed EBP positively, they lacked organisational

backing and the competence required to implement it effectively.

In relation to nurses' understanding of EBP, this study found that many participants were not familiar with the concept itself—an outcome consistent with Alshehri et al. (2017). In contrast, nurses who had been exposed to scientific resources and EBP training demonstrated better conceptual understanding (Claudino et al., 2019). Participants in the current study also reported that EBP promotes positive patient outcomes, enhances safety, reduces time spent on procedures and lowers overall treatment costs. Dang et al. (2021) documented similar observations.

With respect to attitudes toward EBP, nurses in the current study acknowledged its benefits for patients, healthcare professionals and healthcare organisations. This aligns with Al-Maskari and Patterson (2018), who found that most healthcare providers view EBP as essential. Nevertheless, nurses also described EBP as complex and challenging due to insufficient organisational resources, a perspective consistent with Hisham et al. (2016).

Individual-level barriers identified in this study include the absence of EBP training and staff shortages. These limitations appear to contribute to a lack of understanding of EBP concepts and steps, largely due to insufficient training opportunities. This is consistent with prior research showing that lack of EBP education leads to inadequate knowledge and skills (Clarke et al., 2021). Participants also reported that they had not attended any EBP-related training programmes, likely due to workload demands, limited time and financial constraints—findings that align with Alshehri et al. (2017).

Additionally, demographic factors such as age, education level and work experience were found to influence EBP uptake. Younger nurses, those with higher academic qualifications and those with more professional experience demonstrated better understanding of and stronger motivation to apply EBP. Nurses with fewer years of experience and those holding diploma or postgraduate qualifications reported more barriers than nurses with bachelor's degrees. These results are consistent with the studies of Alqahtani et al. (2022), Khoddam et al. (2023), and Pitsillidou et al. (2021).

Patient-related barriers included refusal to accept treatment strategies involving innovation, as well as

financial hesitation influenced by family members concerned about the cost of advanced treatment options. Low patient awareness, minimal involvement in decision-making and poor overall health status were cited as reasons for these challenges. These findings are similar to those of Tacia et al. (2015), who reported patient reluctance to adopt EBP-based care.[33]

As for facilitators, participants emphasised the need for healthcare organisations to provide adequate internet access, protected time for EBP activities, leadership support and collaborative partnerships with patients. Offering financial and moral incentives was also identified as beneficial. Similarly, McNett et al. (2022) highlighted that strong leadership, adequate resources and interprofessional collaboration foster a supportive EBP culture and improve implementation outcomes. Participants also recommended enhancing nurses' competencies through EBP-focused training programmes, a suggestion consistent with Melnyk et al. (2021).

Concerning strategies to support EBP adoption, educational interventions, clinical practice guidelines and structured clinical protocols were identified as effective methods for creating more supportive practice environments and reducing variations in care. These findings align with those of Khoddam et al. (2023).

### Implications for practice

This study highlights key implications for evidence-based nursing in Kazakhstan and similar contexts. Healthcare organisations should provide infrastructure that supports nurses' access to research, including reliable internet, scientific databases, protected time for EBP, and leadership support. Investment in EBP education and training is essential to strengthen nurses' skills and confidence. Implementing standardised clinical guidelines can facilitate routine use of evidence, while integrating EBP competencies into professional development may improve nursing practice and patient outcomes long-term.

## CONCLUSIONS

This qualitative study explores nurses' experiences with evidence-based practice (EBP) in healthcare settings in Almaty, Kazakhstan. Although nurses reported positive attitudes toward EBP and recognised its benefits for patient outcomes and safety, its integration into routine practice remains limited. Key barriers included

insufficient EBP knowledge, heavy workloads, restricted access to scientific resources, and inadequate organisational support. These findings highlight the need for organisational and policy-level strategies to strengthen EBP through targeted education, improved access to evidence, and supportive leadership, thereby reducing the gap between research and nursing practice in Kazakhstan and comparable healthcare contexts.

### Limitations

This study is limited to nurses working in hospitals and primary healthcare centres in Almaty, which may affect generalizability to other regions. Data were self-reported, potentially introducing social desirability bias. Differences across specialties and departments were not explored, and the findings reflect a single cultural and organizational context. Nevertheless, the study offers valuable insights into barriers, facilitators, and perceptions of evidence-based practice in Kazakhstan.

**Funding:** No Funding

**Conflict of Interest:** The authors declare no conflict of interest.

**Ethical clearance:** This study was conducted in accordance with ethical standards. Ethical approval was obtained from the appropriate institutional review board, and informed consent was secured from all participants prior to data collection.

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