Arab American University

Faculty of Graduate Studies

Knowledge, Attitudes, and Practice of Evidence-Based Practice Among Emergency Department Nurses in Hospitals in Palestine: A Cross-Sectional Study

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Thesis Approval

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Declaration

I, Ashraf Ziyad Sameeh Qotmosh the undersigned, declare that I submitted the thesis entitled: Knowledge, Attitudes, and Practice of Evidence-Based Practice Among Emergency Department Nurses in Hospitals in Palestine: A Cross-Sectional Study

I declare that the work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification.

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Dedication

My study is dedicated to my loving parents, who have always been a source of motivation and inspiration for me, and who have given me the strength and commitment to work with enthusiasm and determination on every task. I dedicate my study to my supervisor Dr. Mohammed Al-Jallad and all of my family members as a mark of their support.

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Abstract

Background:

Evidence-Based Practice (EBP) is a cornerstone of modern nursing, enhancing patient safety and quality of care. However, its adoption remains inconsistent, particularly in conflict-affected and resource-limited contexts such as Palestine.

Aim:

This study aimed to assess the knowledge, attitudes, and practice (KAP) of EBP among emergency department (ED) nurses in hospitals across Palestine, and to examine how sociodemographic characteristics are associated with these variables.

Methods:

A cross-sectional descriptive design was conducted in September 2025 across emergency departments in Palestine. Data were collected using the culturally adapted Arabic version of the Evidence-Based Practice Questionnaire (EBPQ). A total of 250 nurses were approached to participate, and 152 completed the questionnaire, resulting in a response rate of 60.8%. Statistical analysis included descriptive measures, Mann–Whitney U, Kruskal–Wallis H, and Spearman's rho tests using SPSS version 25.

Results:

Findings revealed moderate levels of knowledge (M = 4.96, SD = 0.96) and practice (M = 4.97, SD = 1.02), along with generally positive attitudes (M = 5.00, SD = 1.09) toward EBP. Knowledge,

attitudes, and practice were positively associated ($\rho = 0.78–0.83$, $p < 0.001$). Education, role, and years of experience were also associated with higher EBP engagement.

Conclusion:

This study found moderate to positive levels of knowledge, attitudes, and practice toward EBP among nurses, with these variables positively associated. Higher knowledge corresponded with more positive attitudes and greater reported EBP engagement. Education, role, and experience were also associated with differences in KAP. Given the cross-sectional design and self-report nature of the data, these findings reflect associations rather than causal relationships.

Keywords: Evidence-Based Practice, Emergency Nursing, Knowledge, Attitudes, Practice, Palestine, Cross-Sectional Study

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List of Definitions of Abbreviations

Abbreviation	Explanation
IRB	Institutional Review Board
AAUP	Arab American University Palestine
ED	Emergency Department
EBP	Evidence-Based Practice
KAP	Knowledge, Attitude, Practice
EBPQ	Evidence-Based Practice Questionnaire
SPSS	Statistical Package Of Social Science
M	Mean
SD	Standard Deviation
MOH	Ministry of Health
WHO	World Health Organization
RCSH	Red Crescent Society Hospital
TPB	Theory of Planned Behavior
MeSH	Medical Subject Headings
EJHN	East Jerusalem Hospitals Network

Chapter One

1.Introduction

1.1 Background

Patient care is continuously evolving as a result of rapid advancements in medical and nursing research, which aim to refine clinical decision-making and improve patient outcomes. Healthcare systems worldwide have increasingly invested in research-driven practices to ensure that care delivery is safe, effective, and of high quality. Within this context, evidence-based practice (EBP) has emerged as a fundamental pillar of modern healthcare, particularly in nursing, where clinical decisions have a direct and sustained impact on patient safety and quality of care (Majid et al., 2011; World Health Organization [WHO], 2016).

The concept of EBP is deeply rooted in the history of nursing, dating back to the pioneering work of Florence Nightingale in the nineteenth century, who emphasized the systematic use of data to improve patient care. Over time, EBP has evolved into a structured approach that integrates the best available research evidence with clinical expertise and patient values. In contemporary nursing practice, EBP serves as a critical link between theory and practice, supporting informed, transparent, and accountable clinical decision-making (Troseth, 2016). Nurses who actively engage in EBP are better equipped to evaluate emerging evidence, adapt clinical guidelines, and respond to complex patient needs in dynamic healthcare environments (Malik et al., 2015).

Despite its recognized importance, the integration of EBP into routine nursing practice remains inconsistent across healthcare settings. Numerous studies have reported that nurses often face substantial challenges when attempting to apply research evidence in clinical care, including limited time, insufficient organizational support, inadequate access to research resources, and varying levels of research literacy (Ammouri et al., 2014; Melnyk et al., 2012). These challenges

highlight that the successful implementation of EBP is not solely a function of available evidence but is strongly influenced by nurses' knowledge, attitudes, and practical competencies related to EBP.

Theoretical models provide useful frameworks for understanding how nurses adopt and apply EBP. The Theory of Planned Behavior suggests that professional behaviors are guided by behavioral intentions, which are shaped by individual beliefs, attitudes, and perceived social norms within the workplace. Within the context of EBP, this theory implies that nurses who possess stronger EBP knowledge and more positive attitudes are more likely to intend to engage in evidence-based activities and to integrate evidence into their clinical practice (Holt et al., 2010; Qiao et al., 2018). Strengthening nurses' competencies in research appraisal and evidence utilization has therefore been associated with reduced barriers to EBP implementation and improved engagement with evidence-informed care (Zhou et al., 2016).

Globally, assessing nurses' knowledge, attitudes, and practice related to EBP has become increasingly important as healthcare organizations expect nurses to actively participate in evidence-informed decision-making and quality improvement initiatives. Previous research has demonstrated considerable variability in EBP competencies among nurses across different clinical settings and healthcare systems, underscoring the need for context-specific evaluation (Belden et al., 2012; Brown et al., 2010; Moch et al., 2010; Mohamed et al., 2019). Such assessments are essential for identifying gaps in EBP competencies, informing targeted educational interventions, and guiding organizational strategies aimed at strengthening EBP integration.

In high-pressure clinical environments such as emergency departments, the implementation of EBP may be particularly challenging due to workload intensity, time

constraints, and exposure to occupational stress. These contextual factors can further influence nurses' capacity to engage with research evidence and apply it consistently in practice. Understanding the status of EBP knowledge, attitudes, and practice among emergency department nurses is therefore crucial for designing effective support mechanisms that align with the realities of clinical work.

Accordingly, the present study seeks to provide a comprehensive assessment of emergency department nurses' knowledge, attitudes, and practice related to evidence-based practice, identify factors associated with EBP engagement, and explore opportunities to enhance its integration within clinical settings in Palestinian hospitals.

1.2 Problem Statement

Evidence-Based Practice (EBP) provides a basis on the use of quality care in incorporating research practices, especially within the nursing profession, to facilitate improved patient outcomes (White-Williams, 2013; Dearholt & Dang, 2012). Despite the significance of Evidence-Based Practices, many nurses often experience challenges in applying this practice concept from their own knowledge, as well as from the nursing-specific Evidence-Based Practices guidelines available within organizations (Ahmad et al., 2025).

A similar pattern is also observed in Palestine, where the ED nurses are also experiencing challenges in the form of manpower shortages, lack of quality medical equipment, and high levels of occupational stress, which may hamper the integration of EBP (Salameh et al., 2023). The present study fills significant gaps in existing literature by examining a demographic and environment that have been relatively understudied to date. There has been relatively little work on Palestinian emergency room evidence-based practice issues, particularly in settings of limited

resources, less-than-optimal healthcare personnel, and elevated workplace stress. The present study examines emergency department nurses' KAP in Jerusalem and West Bank hospitals. It enriches our knowledge of the unique issues in adopting EBP.

1.3 EBP in Conflict-Affected Settings

Adoption of evidence-based practice in conflict zones like Palestine has a unique set of challenges, which in themselves deviate from high-resource, stable settings. Political and military instabilities and economic constraints all affect the underlying healthcare infrastructure, workforce capabilities, and access to clinical resources essential to successful implementation of EBP.

Resource scarcity is perhaps the greatest challenge. Most of the Palestinian healthcare facilities face the situation of restricted funding, sporadic power, and limited access to current clinical databases or literature (Alkhatib et al., 2020). Due to the scarcity of infrastructures, nurses and other practitioners face challenges in accessing, interpreting, and utilizing the current evidence in practice.

Deficits or burnout among the workers are also common. Because of the disruption caused by the conflict, there could be a gap in qualified healthcare personnel, particularly in units with high needs such as emergency units. The rest are faced with heavy workloads, long working hours, and poor psychosocial working conditions, which contribute to their lack of competency in practicing reflective or EBP (Crawford et al., 2023).

Furthermore, care in the acute/trauma setting is, by definition, time-sensitive, with the immediacy created in the conflict environment likely pushing care toward stabilization, with less focus on the application of EBP supported by the scientific process (El Achi et al., 2020).

Despite taking into account all these challenges, the integration of EBP in these contexts is possible, in addition to the fact that it is necessary. Tailor-made strategies, including off-line literature access, the application of local clinical guidelines, and developing EBP champions, can be made to help bridge the gap between EBP application and its practice. The consideration of these barriers to practicing EBP informs the construction of doable descriptive or CPA notions of EBP, possibly reducing the pressure on nurses in the midst of the Palestine war zones.

1.3 Aims of the Research

To assess the level of EBP knowledge, attitudes, and practice (KAP) among ED nurses in Palestinian hospitals and explore the relationships between these variables and demographic characteristics.

1.4 Objectives of the Research

1. Assess current knowledge of EBP among ED nurses in Palestine.
2. Evaluate attitudes toward EBP.
3. To measure and describe the extent of EBP implementation in clinical practice.
4. Analyze the relationship between demographic variables (e.g., age, education, experience, gender) and EBP knowledge, attitudes, and practice.
5. Explore the correlation between EBP and KAP.

1.5 Research Questions

1. What is the level of knowledge towards EBP among ED nurses in Palestine?
2. What is the level of attitude of ED towards EBP among nurses in Palestine?
3. What are the relationships among knowledge, attitudes, and practice related to evidence-based practice among emergency department nurses in Palestine?

4. How do demographic factors (Gender, Position, Education, Experience) influence these aspects?
5. How are knowledge and attitudes associated with evidence-based practice implementation?

1.6 Hypothesis

H_{01}: There is no relationship between demographic data and the level of knowledge, attitude, and implementation of evidence-based practice.

H_{02}: There is no relationship between the level of knowledge, attitude, and implementation of evidence-based practice.

1.7 Significance of the Research

Even though EBP has been demonstrated to positively affect patient outcomes as well as the safety of care, it has not been implemented consistently because of misconceptions, lack of time, insufficient support from administration, as well as resource constraints (Melnyk,et al., 2018). It is, therefore, important to evaluate the skills of the nurses in the Palestinian EDs concerning EBP.

Attitudes are very important in the implementation of Evidence-Based Practices, and they can be affected by the person's background, experiences, and workload (AbuRuz, Al Jawaldeh, & Al AbdulGader, 2017). The results of this research will contribute to improving Evidence-Based Practices in the Palestinian emergency sector. The results of this research will help improve four areas.

In relation to education, it will be possible for the findings from this research to point to areas in which knowledge gaps and misconceptions have been identified in regard to nurses

working within the emergency department, making it possible to specifically design future training programs on EBP. It will also be viable to make suggestions within nursing schools concerning the implementation of relevant EBP knowledge within the context of working within an emergency department scenario, as Palestine contextually indicates. Improved EBP education will equip nurses to think critically about applying knowledge.

In relation to policy, findings from this research can inform the development of a set of guidelines for integrating EBP within the context of the Palestinian health care system. In fact, recommendations from this research can assist officials in the Palestine Ministry of Health, as well as administrators, to justify spending on infrastructure related to EBP implementation. The findings would help, for example, to persuade officials within the Palestine Ministry of Health to make EBP competencies a requirement within licensing, evaluations, and promotions of nurses.

In practice, it can be expected that the research will emphasize both individual and organizational barriers, as well as how EBP can be implemented, especially within high-stress environments. In fact, this information can be utilized to inform a strategy, such as a champion, mentorship approach, or even a protected EBP round, as it can have a positive impact on standardizing patient care. Its ultimate goal could be a positive impact on patient safety.

Coming to research, this study bridges an important regional research gap as it provides empirical evidence on the levels of EBP KAP among nurses in the Palestinian emergency department, a common setting rarely considered in international research. The results can be taken as a baseline in future intervention research, regional comparison studies, as well as long-term evaluations of EBP implementation. In addition, it allows making a contribution to the knowledge domain of implementation science about the adaptation of EBP implementation to low resource, politically instable, as well as high demand health care situations.

1.8 Conceptual Definitions

1. Evidence-Based Practice (EBP): Integration of the best research evidence with clinical expertise and patient values (Straus et al., 2019).
2. Knowledge: Nurses' understanding of EBP principles and ability to critically apply research (Majid et al., 2011).
3. Attitude: Nurses' beliefs and willingness to engage in EBP (Yoo et al., 2019).
4. Practice: Actual use of EBP in clinical decision-making and adherence to guidelines (Kaseka & Mbakaya, 2022).

1.9 Operational Definitions

1. EBP Implementation: Frequency of EBP-related activities such as identifying evidence gaps, applying evidence, and evaluating outcomes (Melnyk et al., 2021; Upton & Upton, 2006).
2. Attitudes Toward EBP: Measured by willingness, openness, and perceived value of EBP in clinical settings (Upton & Upton, 2006).
3. Knowledge and Skills in EBP: Self-assessed competence in research, critical appraisal, and evidence application on a 7-point Likert scale (Upton & Upton, 2006).

1.10 Theoretical and Conceptual Framework

This research is founded on the Theory of Planned Behavior, proposed by Ajzen (1991), which acts as the theoretical framework, and is guided by the ACE Star Model of Knowledge Transformation, proposed by Stevens (2004), which acts as the conceptual framework. The two frameworks act as a toolset for a comprehensive exploration of the behavioral, cognitive, as well as practical dimensions of the implementation of evidence-based practice among emergency department nurses.

The Theory of Planned Behavior is a well-known psychological model, explaining how people form intentions, which can ultimately lead to the adoption of a given behavior. In TPB, behavior is assumed to be directly affected by behavioral intention, which is in turn affected by three different constructs, namely, attitudes towards the behavior, subject norms, and perceived control over behavior. In the proposed research, a nurse's attitude is considered a personal assessment of EBP, for example, the positive impact it has on patient results.

Subjective norms involve perceived social pressures from peers, supervisors, or the organization, which may either support or discourage the use of EBP. Perceived behavioral control reflects the nurse's confidence and perceived ability to apply EBP in practice, taking into account available resources, time, skills, and institutional support. These three elements collectively influence the intention to use EBP, which in turn predicts whether the nurse will actually implement it in clinical practice **(Figure 1.1)**.

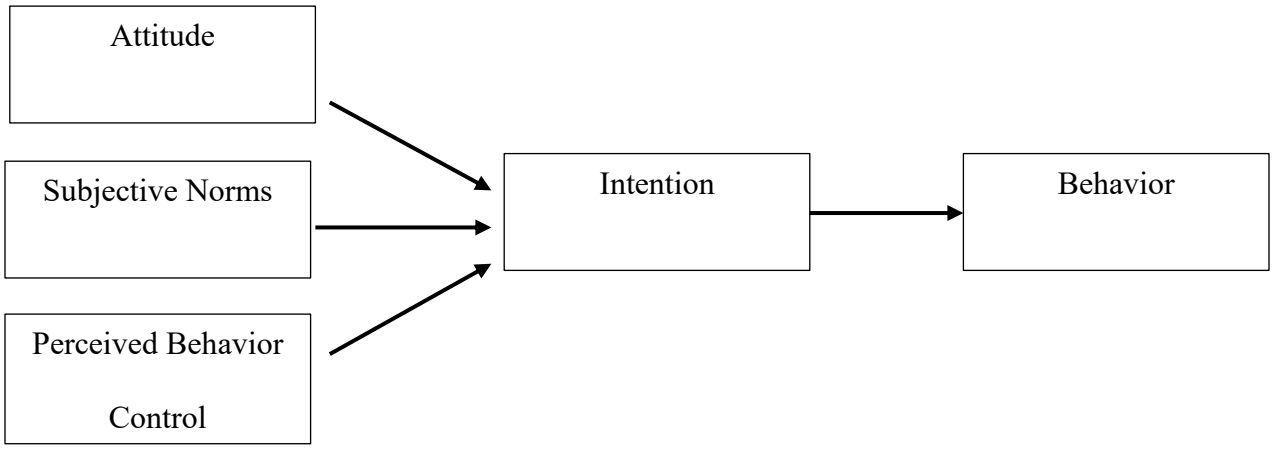

Figure 1.1: The Theory of Planned Behavior (Ajzen, 2019)

TPB is particularly apt in relation to the current study because it is directly linked to the main constructs of knowledge, attitude, and implementation. Knowledge plays a role in determining perceived control, while the construct of attitude stands at the heart of TPB. Implementation of EBP is directly linked to both behavioral intention and actual behavior, making

TPB a useful tool to determine how the intention to act on evidence-based practice is implemented by emergency nurses.

In order to provide another perspective on TPB, the research also employs the ACE Star Model of Knowledge Transformation, as a model of study, as depicted in **Figure 1.2**. The ACE Star model establishes a systematic, process-oriented approach to understanding the transformation of scientific knowledge from research to practice. The ACE Star Model depicts a series of five steps, namely: Step 1, knowledge discovery, explained as the development of novel research outcomes; Step 2, evidence summary, encompassing the translation of research findings into coherent summaries; Step 3, translation into practice recommendations, explained as the transformation of research findings to practice-changing recommendations; Step 4, integration into practice, indicated as the application of recommendations, step 3, within practice; and Step 5, evaluation of outcomes, explaining the measurement of practice-changing impact of implemented evidence-based interventions.

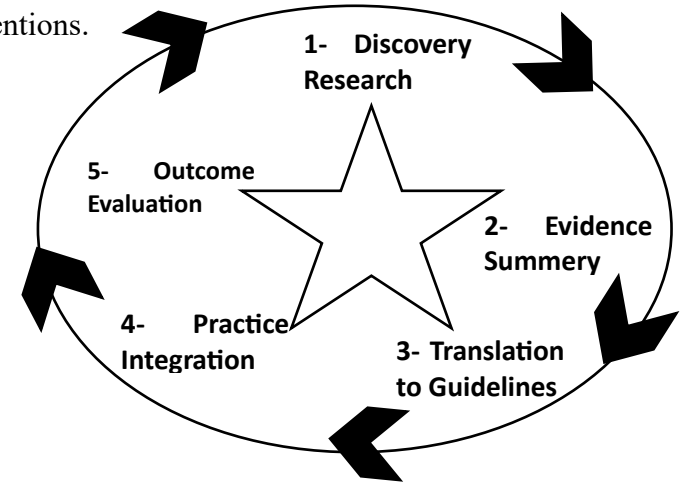

Figure 1.2: Adapted from Stevens, K. R. (2004). ACE Star model of EBP: Knowledge transformation. San Antonio, TX: Academic Center for Evidence-Based Practice, The University of Texas Health Science Center at San Antonio. Retrieved from nursing.uthscsa.edu/onrs/starmodel/institute/su08/starmodel.html. © Stevens, 2015. Used with expressed permission.

Theory of Planned Behavior (TPB) helps understand the psychological as well as the motivational reasons for which nurses practice EBP, while the ACE Star Model provides a means of knowledge translation from discovery to implementation. By integrating these two theories, a more comprehensive perspective on EBP implementation can be achieved. TPB allows understanding as to why nurses implement EBP practice or don't, according to their beliefs, intentions, as well as social pressures, while the ACE Star Model denotes how EBP implementation occurs within a healthcare setting, transforming knowledge. Both theories combined would enable the research to comprehend the reasons from both the individual, as well as the system level, as to why nurses implement EBP practice.

1.11 Summary

Nurses form the backbone of the Palestinian healthcare system and must be equipped to apply EBP to enhance patient outcomes (Khaled, 2024). Although EBP has been introduced in nursing over two decades ago, it continues to face significant challenges in clinical application, especially in high-pressure environments such as emergency departments (Dogherty et al., 2013; Melnyk et al., 2012). The proposed research intends to evaluate the KAP level of EBP practice for nurses working within the emergency departments within Palestine, while considering the selected factors. The research focuses on a very demanding working setting, within a context where limited resources define a healthcare environment subject to immense strain, thereby constituting a significant knowledge gap within available research, especially concerning the use of EBP in the context of Arab countries.

The findings of this study are expected to make a valuable contribution to a deeper understanding of frontline nurses' use of EBP in unexplored settings. The context, purpose, aims, and definitions have been introduced in this chapter. Chapter Two will follow with a review of literature. Chapter Three will cover the proposed methodology. Chapter Four, Five, and Six will cover results, discussion of results, conclusions, recommendations, respectively. Introduction, purpose, context, definitions, aims, rationales, significance, delimitation, and scope have been introduced. The next chapter, Chapter Two, introduces a review of literature.

Chapter Two

2.Literature Review

2.1 Introduction

In building on the previous overview, this chapter provides a comprehensive literature review on the subject matter of nurses' Knowledge, Attitude, and Practices regarding Evidence-Based Practices. The chapter is introduced with a discussion on the literature search approach, followed by a discussion on knowledge, attitudes, as well as the implementation of EBP in the nursing discipline.

Evidence-Based Practice (EBP), a vital concept in modern healthcare, connects the best available research, practice expertise, and values to achieve improved results. The use of this concept, which involves a systematic process of consistently advocating worldwide for enhancing the quality of care, assures that nursing practice remains based on solid research findings. Nevertheless, despite being well recognized as valuable, a significant difference remains between the promotion of Evidence-Based Practices within the nursing fraternity and implementation on the ground, especially in resource-constrained areas, as mentioned in a 2025 publication by Alsadaan & Ramadan. The reasons may be lack of research accessibility, lack of support from organizations, as well as a lack of training as per Evidence-Based Principles, as suggested in a 2022 publication by Degu et al.

In many Eastern Mediterranean nations, the fact that biomedical research publications are very limited, as well as knowledge translation within health policies, further makes the development of high-quality EBP competencies difficult (Ayoubian, Talebian, & Nikbiranvand, 2020). In light of this, the current research aims to investigate the status of knowledge, attitudes, as well as implementations on EBP among emergency department nurses working within Palestinian hospitals, thereby fulfilling a research gap concerning the implementation status of

EBP within the region. The implementation of high-quality EBP can significantly improve nursing practice quality, as well as advance patient outcomes, within the context of making well-informed decisions, particularly within emergency departments where making rapid decisions based on evidence is a high priority (Qtait, 2025).

2.2 Literature Search Method

A comprehensive search of the literature over the period 2013-2025 was conducted to find available literature on the Knowledge, Attitudes, and Practices of nurses concerning Evidence-Based Practices, particularly within the context of the emergency department. The search utilized a variety of search engines such as PubMed, CINAHL, Scopus, ScienceDirect, as well as Google Scholar, combining the use of Medical Subject Headings as well as keywords such as “Evidence-Based Practice,” “Knowledge,” “Attitudes,” “Implementation,” “Emergency Nursing,” “Emergency Department,” “Palestine,” and “Middle East.” Boolean connectors ‘AND’ & “OR” were used.

The inclusion criteria were peer-reviewed articles, published in English between 2013 and 2025, focusing on nurses/nursing practice, dealing with at least one of the KAP model components about EBP, and done in a hospital setting, ideally in an emergency department. The search results were limited to articles not being opinion pieces, editorials, non-empirical submissions, not related to nursing, non-hospital based, and not available in full text. The initial search retrieval produced 258 records, from which the duplicates were removed, following which the search results were screened based on their relevance. The full text of potentially relevant articles was evaluated against the criteria, as well as further studies accessed from reference lists. The result formed the basis of the discussion in the next sections.

2.3 Evidence-Based Practice (EBP) in Nursing: Global, Regional, and Specialty Perspectives

Across the nursing profession, evidence-based practice is both a shared aspiration and an uneven reality. Whether examined through the lens of global trends, localized national experiences, or specialty-specific environments, research reveals a recurring pattern: nurses frequently express positive attitudes toward EBP, yet face persistent challenges in translating these attitudes into consistent clinical behaviors. The following review moves from the broad global landscape, to the unique context of Palestine, and finally to the specialized field of emergency nursing, drawing connections across these levels to highlight common barriers, facilitators, and opportunities for change.

2.3.1 International context

The findings from a plethora of global as well as regional research clearly reveal the nurses' views towards evidence-based practice have been positive, but the level of implementation has been suboptimal. This has been identified in well-resourced settings such as those within Magnet-status healthcare organizations in the United States, where nurses were informed about positive applications of EBP to improve patient care, though a lack of time, difficulty of accessing resources, poor use of the skill of critical appraisal of research, as well as lack of support within the organization, were some of the challenges faced. Similar findings have been identified in the Gulf nations of Oman, United Arab Emirates, and Saudi Arabia, where the levels of knowledge were moderate, awareness positive, but implementation suboptimal. The level of implementation has been identified to be high within those having more advanced levels of education, having undergone training in EBP, as well as those working as administrators. Thus, Ammouri, AbuQamar, & Abu-Zenah, 2014; AbuRuz, Alameddine, & Alameddine, 2017; Al-Maskari &

Patterson, 2018; Al-Busaidi, 2019; Al-Busaidi, Al-Busaidi, Al-Busaidi, Al-Busaidi, & Al-Busaidi, 2019; Alblooshi, Al-Rosafi, & Alblooshi, 2022; Alkhateeb, Alk

In other parts of Asia, including Malaysia, South Korea, and Turkey, studies revealed variable knowledge levels but confirmed that even in the presence of positive attitudes, routine integration of EBP into nursing care was hindered by organizational constraints and limited institutional readiness (Bashar, 2019; Yoo et al., 2019; Karakoç-Kumsar et al., 2020; Ahmad et al., 2024). Research from African contexts, such as Ghana and Nigeria, suggested that a considerable proportion of nurses demonstrated good EBP knowledge, yet practice was still restricted by high workloads, resource shortages, and institutional barriers (Atakro et al., 2020; Jacob et al., 2024).

In resource-challenged environments, such as Nepal, Kosovo, and some Arab states, results have often indicated poor knowledge, practice, and sometimes a negative view of EBP, especially within contexts where training, research, and evidence accessibility are not affordable or readily available (Maskey, 2019; Taganoviq, 2022; Amr, 2024). There have been synthesis studies undertaken, for example, integrative, scoping, or systematic reviews, which have substantiated the notion that the apparent positive view versus poor practice of EBP is a challenge not limited to a geographical designation but has been a universal issue. Moreover, a lack of available time, unrefined research appraisal skills, limited database availability, as well as a lack of organizational support have been identified within these synthesis studies as some of the persisting barriers. Zammar, 2022; Adombire, 2024).

In total, this set of findings supports an understanding of the significant facilitators of EBP implementation as advanced education, specified training, high levels of practice experience, as

well as strong organizational support, while the barriers continue to encompass limited time, resource constraints, lack of skill, as well as a lack of supportive organizational environment. The challenge of closing the persisting 'attitude–practice gap' demands a comprehensive approach encompassing education, resource development, as well as structural changes.

2.3.2 Local Level – Context of Palestine

Evidence from Palestine mirrors global trends, showing that while nurses often express positive attitudes toward EBP, knowledge and practice levels vary, and multiple barriers hinder implementation. In the northern West Bank, a multi-hospital study found that nurses' attitudes toward EBP were stronger than their knowledge and practice, with insufficient time to search for and apply evidence identified as the most prominent barriers. Higher educational attainment, prior EBP training, and older age were significantly associated with improved scores across all domains (Dabak et al., 2024).

Similarly, research conducted in the Gaza Strip reported generally positive attitudes but moderate knowledge and limited practice. Key challenges included restricted access to updated research resources, lack of institutional support, and heavy workloads, while higher education and EBP training predicted better knowledge and more frequent practice (Qtait et al., 2021). In Nablus City, findings indicated that the majority of nurses possessed high knowledge of EBP, yet substantial implementation difficulties persisted, with attitudes strongly linked to knowledge and negatively correlated with perceived barriers. The study emphasized that knowledge acts as a primary enabler for EBP adoption (Yassin, 2024).

Across these Palestinian contexts, common facilitators include advanced education, training, and professional experience, while recurrent barriers span time constraints, limited

resource access, and insufficient organizational support. These findings underscore the need for sustained educational programs and the development of institutional cultures that actively promote and facilitate EBP integration into nursing practice.

2.3.3 EBP in the Context of Emergency Department (ER) Nurses

Research into EBP in emergency nursing shows that although emergency nurses tend to manifest positive attitudes and sufficient basic knowledge, these characteristics are not easily transferred into behavior. In Finland, mean values prior to an educational intervention showed that emergency nurses' attitude, self-efficacy, knowledge, and skills tended to be above average, yet Mean Behavior Score values for EBP-related behavior tended to fall below average. Younger nurses who had been trained more recently tended to show more favorable attitudes to nursing changes and to possess minimal professional experience to which adjustments result. Neither gender nor education background nor prior exposure to EBP influenced these (Koota et al., 2020).

Subsequent evaluation of a multifaceted educational program in the same Finnish context revealed that such interventions can yield immediate and sustained improvements in self-efficacy, knowledge, and skills, yet did not significantly change attitudes or EBP behaviors over time. The findings suggest that educational initiatives, while effective in enhancing certain competencies, may need to be paired with organizational and structural supports to achieve long-term behavioral change (Koota et al., 2022).

Evidence from a lower-resource setting in Northwest Ethiopia similarly highlighted the importance of training and infrastructure in facilitating EBP. Over half of the participating ER nurses demonstrated good knowledge and positive attitudes, yet fewer than half reported good EBP practice. Prior EBP training, internet access at the workplace, and good knowledge were

significant predictors of better practice, while common barriers included lack of training, high patient loads, and limited access to updated evidence sources (Kassie et al., 2025).

Across these studies, the pattern is consistent: ER nurses often possess favorable attitudes and reasonable knowledge levels, but without targeted training, adequate resource access, and supportive organizational environments, these strengths do not reliably translate into sustained EBP behaviors in clinical practice.

2.3.4 Summary Table of Reviewed Studies

Author (Year)	Country	Aim	Design	Tool	Result	Limitation
White-Williams et al. (2013)	USA	Explore nurses' perceptions, beliefs, and barriers to EBP	Cross-sectional survey	EBPQ & barrier tools	Positive attitudes; valued EBP; barriers: time, resources, skills, support; higher engagement with advanced degrees/training	Self-reported; limited to Magnet® hospitals
Ammouri et al. (2014)	Oman	Assess knowledge, attitudes, and practice of EBP	Cross-sectional	Validated EBP survey	Positive attitudes; moderate knowledge; low practice; improved with postgraduate education/training/admin roles	Single-site; self-reported
Carlone & Igbirieh (2014)	Qatar	Measure EBP attitudes and knowledge	Cross-sectional	Attitude & knowledge questionnaire	Attitudes correlated with knowledge; higher education/specialty improved knowledge use	Single-site; self-reported
AbuRuz et al. (2017)	Jordan	Assess nurses' KAP toward EBP	Cross-sectional	Validated questionnaire	Attitudes highest; practice lowest; ICU, master's degree, private hospitals had better scores	Urban-only sample; self-reported
Al-Maskari & Patterson (2018)	Oman	Explore attitudes and barriers to EBP	Cross-sectional	EBNAQ, DEBP	Positive attitudes; leaders reported more barriers (resources/support)	Convenience sample; English-only; self-reported
Al-Busaidi et al. (2019)	Oman	Assess nurses' KAP toward EBP	Cross-sectional	Validated questionnaire	Positive attitudes; moderate knowledge; slightly lower practice; experience improved all domains	Regional focus; self-reported
Bashar (2019)	Malaysia	Examine attitudes, knowledge, and practice of EBP	Cross-sectional	EBPQ	Positive attitudes; good knowledge; poor practice; attitudes/knowledge correlated	Single-site; self-reported
Yoo et al. (2019)	South Korea	Explore EBP knowledge, beliefs, readiness, and implementation	Cross-sectional	Structured questionnaires	Positive beliefs; low knowledge/readiness/implementation; knowledge & readiness predicted practice	Single-site; self-reported
Maskey et al. (2019)	Nepal	Assess KAP toward EBP	Cross-sectional	Upton EBP questionnaire	Low knowledge; negative attitudes; poor practice; research participation improved practice	Small sample; single-site; self-reported
Karakoç-Kumsar et al. (2020)	Turkey	Assess attitudes toward EBN	Cross-sectional	AEBNQ	Positive attitudes; higher in females, internal medicine, ICU staff	Single-site; self-reported
Atakro et al. (2020)	Ghana	Assess KAP and barriers to EBP	Mixed-methods	Modified EBPQ + interviews	High knowledge, positive attitudes, good practice; barriers: training, institutional constraints	Single-site; modest sample
Salah & Abu-Moghli (2020)	Jordan	Assess KAP in critical care units	Cross-sectional	Validated questionnaire	Satisfactory knowledge/practice; strong attitudes; higher with education/training	Self-reported
Koota et al. (2020)	Finland	Assess ER nurses' EBP attitudes, self-efficacy, knowledge, skills, and behaviors	Baseline descriptive study (RCT part)	EBPQ-FI, EBP Beliefs Scale, EBP Implementation Scale, knowledge test	Above-average attitudes/knowledge; below-average behavior; younger nurses more positive	Small sample; 2 hospitals; self-reported

Qtait et al. (2021)	**Palestine – Gaza**	**Assess KAP of EBP**	**Cross-sectional**	**Structured validated questionnaire**	**Positive attitudes; moderate knowledge; low practice; barriers: access, support, workload**	**Cross-sectional; self-reported; Gaza only**
Alkhateeb et al. (2021)	Saudi Arabia	Assess knowledge, perception, and attitudes toward EBP	Cross-sectional	Validated scales	High knowledge; mostly negative attitudes; education linked to knowledge	Single-site; self-reported
Zammar (2022)	Global review	Synthesize global EBP KAP studies	Integrative review	Review of 8 studies	Positive attitudes; low knowledge/practice; barriers: time, skills, access, support	Small study pool; no meta-analysis
Taganoviq et al. (2023)	Kosovo	Assess EBP knowledge, attitudes, and use	Cross-sectional	Structured survey	Low use & attitudes; higher knowledge; nurses > physicians in use	Self-reported
Koota et al. (2022)	Finland	Evaluate educational intervention for ER nurses' EBP	Cluster-RCT	EBPQ-FI, EBP Beliefs Scale, EBP Implementation Scale, knowledge test	Improved knowledge/self-efficacy; no change in attitudes/behavior	Small sample; contamination risk; self-reported
Alblooshi et al. (2022)	UAE	Assess EBP knowledge, attitudes, and implementation nationally	Cross-sectional	EBPQ + EBP Implementation Scale	Highly positive attitudes; moderate knowledge/implementation; barriers: time, workload, skills	Self-reported
Kassie et al. (2025)	Ethiopia	Assess ER nurses' KAP toward EBP	Cross-sectional	Structured questionnaire	Good knowledge: 54.9%; positive attitudes: 55.6%; good practice: 48.1%; predictors: training, internet, knowledge	Cross-sectional; self-reported; no training quality assessment
Adombire et al. (2024)	LMICs review	Review EBP in LMICs	Scoping review	Review of 53 studies	Low-moderate knowledge/skills; positive beliefs; poor-moderate implementation	English-only; self-reported
Amr et al. (2024)	Egypt	Assess knowledge and attitudes toward EBP	Cross-sectional	Local questionnaire + EBPAS	34.5% satisfactory knowledge; 37.9% negative attitudes; knowledge linked to attitudes	Single-site; self-reported
Jacob et al. (2024)	Nigeria	Assess EBP KAP in children's wards	Cross-sectional	Self-developed questionnaire	Good knowledge; negative attitudes; poor practice; barriers: time, resources, workload	Single-state; non-standard tool
Ahmad et al. (2024)	Malaysia	Assess EBP KAP and socio-demographic factors	Cross-sectional	EBPQ	Moderate knowledge/practice; positive attitudes; training improved knowledge	Single-site; self-reported
Dabak et al. (2024)	Palestine – West Bank	Assess ICU nurses' KAP and barriers to EBP	Cross-sectional	EBPQ + barrier tools	Attitudes highest; barriers: time for searching/implementing; higher education, training, age improved scores	Cross-sectional; self-reported; regional scope
Yassin (2024)	Palestine – Nablus	Assess KAP and barriers toward EBP	Cross-sectional	Structured interviews + questionnaires	82.2% high knowledge; implementation challenges; attitudes linked to knowledge/barriers	Cross-sectional; self-reported; single city

2.4 Synthesis and Research Gap

Across global, regional, and specialty contexts, the literature consistently shows that nurses generally hold positive attitudes toward evidence-based practice , yet knowledge levels vary and implementation in clinical practice remains suboptimal. This "attitude–practice gap" is evident in both high-resource and resource-limited settings, with common facilitators including advanced

education, prior EBP training, clinical experience, and supportive organizational cultures, while recurrent barriers involve time constraints, heavy workloads, limited access to updated evidence resources, insufficient research appraisal skills, and lack of institutional support. Palestinian studies mirror these trends, revealing positive attitudes but inconsistent knowledge levels and persistent challenges in practical application, compounded by restricted access to resources and varying institutional capacities.

In the emergency nursing context, evidence from both high-income (Finland) and low-resource (Ethiopia) settings indicates that training can improve knowledge and self-efficacy but does not necessarily lead to sustained behavioral change without concurrent organizational and structural interventions. Despite the breadth of literature on EBP in nursing, there is a notable absence of research focusing specifically on ER nurses in Palestine, a group facing unique clinical pressures and decision-making demands.

Moreover, very few studies incorporate knowledge, attitude, practice, and barriers simultaneously in a framework that allows understanding between them, whereas there has been no assessment made to date to explore the adaptability of efficient global intervention approaches to the Palestinian ER environment. The majority of extant researches are cross-sectional in nature, enabling observations to be made merely at a point in time but raising queries related to implementing enduring behavioral shifts concerning EBP in emergency settings with limited resources. The issue presented would be explored to allow creating context-specific understanding to address interventionist strategies to improve EBP implementation in emergency**.**

2.5 Critical Reflections and Implications

A critical examination of the existing literature on evidence-based practice in nursing reveals both substantive contributions and notable limitations. While the body of research provides

valuable insights into nurses' knowledge, attitudes, and practices across diverse contexts, the predominance of cross-sectional, descriptive designs limits the ability to establish causal relationships or track changes over time. Reliance on self-reported measures—common across nearly all reviewed studies—raises concerns about social desirability and recall bias, particularly in cultures where positive self-presentation is valued. Furthermore, although most studies use validated tools, differences in instruments, operational definitions, and scoring systems hinder direct comparison and meta-analytic synthesis, potentially obscuring nuanced variations between contexts.

Geographically and contextually diverse literature exists, but inequity in representation is evident, with a focus largely relegated to general nursing populations in well-resourced settings and fewer studies conducted in lower-resource or highly politicized settings like Palestine. Regardless of geographic or contextual diversity representation, there exists a need to specifically address nursing specialties like emergency room (ER), which function in conditions that are drastically different compared to other hospital departments. The need to address these differences within nursing specialties like ER nurses takes on great importance because these nurses function within highly stressful conditions where best evidence implementation can potentially directly influence patient outcomes.

A further important limitation lies in the fact that intervention studies are predominantly focused on knowledge outcomes and self-efficacy gains after educational interventions. In this respect, both Finnish and Ethiopian studies on ER nurses show that there was improvement after intervention but that improved behavior was not sustained if organizational structures are not provided to ensure maintenance. In other words, there is a need for research that considers a multi-level approach to create favorable conditions around EBP.

Finally, there appears to be a gap in methodology and conceptualization surrounding research related to knowledge, attitudes, practices, and barriers that are treated relatively independently. Very little scholarly investigation encompasses a systems approach in analyzing how these elements interrelate dynamically across various spans of time and within particular cultures. The need to close this represents a crucial step in creating tailored approaches to dispense with the attitude-to practice gap found to continue across varying conditions.

2.6 Summary

Evidence-based Practice (EBP), considered a crucial approach in optimizing patients' outcomes, remains a challenge to incorporate into nursing across global healthcare systems. In magnet hospitals across the United States, which represent high-resource healthcare settings, or in mid-resource Gulf states or developing states around the world, nurses are found to view EBP favorably but are less likely to engage due to barriers like lack of time, lack of resources to access evidence, insufficient skills to evaluate the evidence, or lack of organizational support. Improving access to education, education or training in EBP, experience, or organizational support are found to be facilitators.

In Palestine, research mirrors these global patterns. Studies from the West Bank, Gaza Strip, and Nablus consistently report more favorable attitudes than knowledge or practice levels. Predictors of better EBP engagement include higher education, specialized training, and professional experience, while key barriers involve time constraints, resource shortages, and weak institutional backing.

Specialty-specific evidence from emergency nursing highlights similar dynamics. In Finland and Ethiopia, ER nurses often display adequate knowledge and positive attitudes but show gaps in consistent practice. Training programs can improve self-efficacy, knowledge, and skills,

yet sustained behavioral change typically requires accompanying structural and organizational reforms.

Overall, evidence from global, regional, and specialty perspectives underscores a persistent "attitude–practice gap" in nursing. Bridging this divide demands multi-level strategies—integrating targeted education, infrastructure development, leadership support, and organizational culture change—to ensure that EBP becomes a sustained standard of care.

Chapter Three

3. Research Methodology

3.1 Introduction

Expanding on the previous chapter's in-depth review of literature concerning nurses' knowledge, attitudes, and engagement with evidence-based practice, this chapter provides a detailed analysis of the research design and methodological framework adopted to achieve the study's aims and objectives.

The data-gathering instrument and technique are well-documented, allowing for easy replication. The outlined procedure includes the reliability and validity of the data-collecting instrument and data gathering for both the pilot and main studies. The chapter finishes with an explanation of the data analysis process utilized in this study, followed by a chapter summary.

3.2 Research Setting

This study was carried out in the State of Palestine, specifically within the EDs of hospitals located in the northern West Bank, East Jerusalem, and selected private healthcare institutions. The public hospitals affiliated with the Ministry of Health (MOH) included Dr. Khalil Suliman Hospital (Jenin), Rafedia Surgical Hospital and Al-Watani Hospital (Nablus), Thabit Thabit Hospital (Tulkarm), Palestine Medical Complex (Ramallah), and Darwesh Nazal Hospital (Qalqilyah). The study also encompassed private hospitals such as Ibn Sina Hospital (Jenin), An-Najah National Hospital and Specialized Arab Hospital (Nablus), Istishari Arab Hospital (Ramallah), UNRWA Hospital (Qalqilyah), and Al-Israa Specialty Hospital (Tulkarm). Additionally, data were collected from hospitals within the East Jerusalem Hospitals Network (EJHN), which includes Makassed Islamic Charitable Hospital, Augusta Victoria Hospital, St. John Eye Hospital, St. Joseph's Hospital, the Red Crescent Society Hospital.

3.3 Research Design

A descriptive, explorative, quantitative research design is selected for this research. A mindful quantitative investigation includes a well-developed evidence base, precise data-gathering tools, and a representative sample (Almeida et al., 2017) . Siedlecki (2020) performed descriptive studies in nursing research aim to identify, describe, investigate, explain, and predict or control. Sarfo et al. (2022) added that a descriptive study design facilitates the identification, observation, and description of practice problems while also justifying practice through the collection of data on the fundamental features of the field of study.

Quantitative research is defined as an official, objective, and organized procedure for describing variables, examining their relationships, and testing cause-and-effect relationships among variables (K. Grove, 2015).

3.4 Target Population

The target population comprised all registered nurses employed in hospitals ED across Palestine, including those working in both Ministry of Health institutions and private sector facilities and East Jerusalem Hospitals Network (EJHN) and counted 250 registered nurses.

3.5 Sampling Procedure and Sample Size

This study employed convenience sampling; a non-probability sampling technique commonly used in quantitative research. This method was chosen due to the accessibility and availability of participants across the selected hospitals. However, a recognized limitation of convenience sampling is its restricted generalizability to the broader population. The researcher ensured that inclusion and exclusion criteria were applied consistently to select eligible participants.

Based on a G*Power analysis using a significance level of $\alpha = 0.05$, power of 0.80, and a medium effect size, the required minimum sample size was determined to be 152 participants. To account for non-responses and enhance representativeness, a total of 250 RNs were approached across the participating hospitals.

3.6 Inclusion Criteria

1. Registered nursing staff assigned to the emergency department who agree to be involved in the study will be included despite their education level.
2. Registered nurses who have been working for at least 12 months in ED.

3.7 Exclusion Criteria

1. Registered nurse, who does not want to be a participant in this research.
2. Registered nurse, who works less than 12 months in ED.

3.8 Data Collection Instrument

For the purpose of data collection, this study employed the Evidence-Based Practice Questionnaire (EBPQ), developed by Upton and Upton (2006), after obtaining the necessary authorization from the original authors. The EBPQ is a rigorously tested, validated and self-administrated tool to measure nurses' involvement with evidence-based practices on practice, attitudes, and knowledge/skill dimensions (Appendix A). It is a 24-item scale with three subscales: practice of evidence-based practices (6 items), attitudes toward evidence-based practices (4 items), and knowledge/skill with respect to evidence-based practices (14 items). It uses a 7-point likert-type scale. The scoring reveals more favorable perceptions about evidence-based practices, more implementation of evidence-based practices in practice areas, and better knowledge and understanding about effectiveness in higher scores. It is one of the commonly used tools in nursing literature for assessing effectiveness in evidence practices.

Once permission to translate was granted by the original author (Appendix C), cultural equivalence and clarity in translation and content relevance for Arabic-speaking participants in particular were addressed by adapting the translated questionnaires. The translation process began with a forward translation by a proficient bilingual translator from English to Arabic.

A separate multilingual translator, who had no prior exposure to the original tool, completed an independent back-translation to evaluate the accuracy and consistency of the forward translation. The research team compared the original English version with the back-translated version to identify any discrepancies. Minor adjustments were made to maintain conceptual equivalence and ensure grammatical clarity while preserving the intent of the original items.

The forward and backward translation procedures were conducted between July 10 and July 25, 2025. The expert panel consisted of five members: two nursing faculty specializing in evidence-based practice, one emergency nursing specialist, one bilingual methodological expert, and one senior clinical educator. All experts reviewed the translated items for clarity, cultural relevance, conceptual accuracy, and alignment with the Palestinian healthcare context.

A pilot test was conducted with a small group of nurses from the target population to assess the clarity, relevance, and comprehensibility of the translated items. Participants provided feedback on wording, cultural appropriateness, and ease of understanding. The pilot results indicated that the Arabic version was clear, culturally suitable, and aligned with the conceptual intent of the original instrument. Participants involved in the pilot testing were excluded from the main study sample to prevent response contamination. Following these adjustments, the finalized Arabic version of the questionnaire **(Appendix B)** was used for data collection in the primary study.

3.9 Reliability and Validity of the Original Instrument

The instrument effectively provides precise information regarding the attitudes, knowledge, and behaviors of healthcare professionals who base clinical decisions on evidence (Youssef et al., 2023). All of them demonstrated considerable validity, particularly the last one. The survey inquired about three distinct aspects: comprehension of EBP, attitudes on EBP, and the implementation of EBP. All of these shown substantial validity and internal consistency (Upton & Upton, 2006).

3.10 Reliability and Validity of the Modified and Translated Instrument

Following translation and adaptation, the Arabic version of the questionnaire underwent preliminary validity and reliability testing to ensure its suitability for the study context. A panel of subject matter experts assisted us in assessing content validity via expert evaluation. Experts reviewed each component to ensure its relevance, clarity, and cultural appropriateness. The remarks from this panel validated that the translated products A pilot study was conducted with a sample from the target group to assess internal consistency, reliability effectively reflected the intended constructs.

A pilot study using a sample from the target demographic was done to evaluate internal consistency dependability. The subscales of the whole questionnaire and their combined scores were used to determine Cronbach's alpha coefficient. The resulting Cronbach’s alpha values exceeded the commonly accepted threshold of 0.70, indicating a satisfactory level of internal consistency and reliability for the Arabic version. Based on these results, the Arabic version of the questionnaire was deemed valid and reliable for use in the main study."

3.11 Data Collection Procedure

Ethical approval for this research was obtained from the Institutional Review Board (IRB) of the Arab American University numbered reference "R-2025/A/61/N" prior to the commencement of data collection (**Appendix D**). Additionally, permission to conduct the study within both MOH (**Appendix E**) and private hospitals (**Appendix F**). was secured from the respective administrative departments. Following approval, nurses were invited to participate in the study through a signed consent form, and a follow-up process was implemented to ensure that informed consent was obtained. Prior to the distribution of the Evidence-Based Practice Questionnaire (EBPQ), nursing staff were provided with a detailed overview of the study during departmental meetings. The primary objectives of the study were clearly communicated to the participants to ensure their understanding and to maximize the response rate.

A total of 250 nurses were approached to participate in the study, of whom 152 completed the questionnaire, yielding a response rate of 60.8%.

To uphold confidentiality, no personal identifiers were collected. The study invitation and final questionnaire were subsequently distributed to nurses. Data were collected in September 2025 from nurses who met the eligibility criteria through printed self-administered questionnaires, distributed directly at each hospital. Participants were given time to complete the questionnaire out of their shift or break time, many completed forms were collected within the same day. Follow-up reminders were sent to non-respondents two weeks after the initial distribution to improve response rates and minimize non-response bias. All data gathered were recorded using the adapted research tool, excluding any personal information such as names or social security numbers. The collected data were securely stored in a locked cabinet and utilized solely for the purposes of this research.

3.12 Pilot study

The researcher recruited a pilot sample of 10% of the targeted sample, and were asked to answer all items of the questionnaires in preoperative phase. The piloting for this study aimed to identify any barriers or difficulties that may face the nurses during the process of data collection. In addition, it was used to assess the clarity, readability, flexibility, and suitability among the nurses. Pilot study aimed to determine any ambiguous items in the whole questionnaire and it gave the researcher an important information related to the issues that need modification before the start of official process of data collection. Also, the piloting showed the effectiveness of the questionnaire that used in larger sample.

The pilot study included a small target population (n = 15) and aimed to assess clarity, feasibility, and internal consistency. Pilot participants were excluded from the main study sample to prevent duplication and ensure data independence. Cronbach's alpha values for the EBPQ subscales are presented below, demonstrating strong internal reliability of 0.98. Thise result confirm the internal consistency of the translated Arabic version of the instrument, justifying its use in the full study.

3.13 Data Analysis

Data analysis was utilized by using SPSS v.25. Frequency and percentage were obtained for each categorical data. Normality was checked before performing inferential statistics by using the Kolmogorov-Smirnov test. The Non-parametric Mann-Whitney U and Kruskal- Wallis H tests used to investigate the relationship between dependent variables and independent variables. Also, the reliability and internal consistency of nursing knowledge, attitudes and practice scales about evidence-based practice were checked by using Cronbach alpha.

Participants holding educational categories with very small cell sizes (PhD, n = 1) were included in descriptive statistics only and were excluded from inferential tests, as such categories do not permit meaningful statistical comparison.

3.14 Ethical Consideration

The entire research process adhered to the principles of the Declaration of Helsinki for research involving human participants. Prior to data collection, each participant was provided with an Arabic-language informed consent form. This form clearly explained the study's purpose, the content of the questionnaire, and the voluntary nature of participation, along with guarantees of anonymity and confidentiality.

The researcher ensured compliance with key ethical principles, including beneficence and non-maleficence, by minimizing any potential risk or discomfort to participants. Data collection involved only completing a questionnaire. The principle of justice was upheld through fair and inclusive recruitment of participants from diverse backgrounds, ensuring representativeness across the target population.

Participant identities remained anonymous, and all collected data were securely stored and used solely for academic research purposes by the researcher and supervisors. Moreover, participants retained the right to withdraw from the study at any time without providing a reason and without facing any consequences.

3.15 Summary

This chapter described the methodological strategy taken to investigate nurses' knowledge, attitudes, and application of evidence-based practice inside emergency departments in chosen hospitals throughout the northern West Bank and East Jerusalem. Data from 152 registered nurses

using the validated Evidence-Based Practice Questionnaire (EBPQ) was gathered under a descriptive, exploratory quantitative approach. The tool was culturally customized and properly translated into Arabic, then pilot testing was done to guarantee validity and dependability. Data collecting was established in September 2025 after ethical approval and institutional authorization being granted.

Using SPSS (version 25), descriptive and inferential statistics were applied to do data analysis. The thorough approach set out in this chapter guarantees the validity, dependability, and repeatability of the study, therefore creating a strong basis for the presentation and interpretation of data in the next chapter.

Chapter Four

4. Results

4.1 Statistical Analysis

Data analysis was performed by using SPSS v.25. Frequency and percentage were obtained for each categorical data. Normality was checked before performing inferential statistics by using the Kolmogorov-Smirnov test. The Non-parametric Mann-Whitney U and Kruskal- Wallis H tests used to investigate the relationship between dependent variables and independent variables. Also, the reliability and internal consistency of nursing knowledge, attitudes and practice scales about evidence-based practice were checked by using Cronbach alpha, its value was 0.98 for the overall scale, 0.97 for knowledge scale, 0.93 for attitudes scale, and 0.93 for practice scale. Finally, spearman's Rho correlation was used to investigate the correlation between knowledge, attitudes and practice of nurses towards evidence-base practice. Educational categories with extremely small sample sizes (such as PhD, n = 1) were excluded from inferential statistical tests and presented descriptively only.

The level of knowledge was classified to (<4 = low knowledge), (4-5 moderate knowledge) and (6-7 high level of knowledge). For practice the same classification was adopted. Finally, the attitude was classified for positive attitude (>4) and negative attitude (<4).

4.2 Sociodemographic characteristics of sample

The study involved 152 nurses in total. The majority of the participants 67.8% were male, while 32.2% were female. Regarding their level of educational qualifications, the majority of participants 71.1% had a bachelor's degree, followed by 28.3% had a master's degree, and only 0.7% had PHD degree. By position, 72.4% were registered nurses, 18.4% were senior nurses, and

9.2% were head nurses. In term of their work experience, nearly 31.6% of respondents had 4-6 years of work experience, followed by 28.3% had 7 to 10 years.

Table 1: Sociodemographic characteristics (N =152)

Item	Frequency	Percentage
Gender		
Male	103	67.8 %
Female	49	32.2 %
Total	**152**	**100 %**
Highest Educational Qualification		
Bachelor	108	71.1
Master of Science	43	28.3
PHD and Higher	1	0.7
Total	**152**	**100**
Position		
Registered Nurse	110	72.4
Senior Nurse	28	18.4
Head Nurse	14	9.2
Total	**152**	**100**
Experience		
1-3	34	22.4
4-6	48	31.6
7-10	43	28.3
>10	27	17.8
Total	**152**	**100**

4.3 Nurse's practice towards evidence- based.

Nurses reported an average overall practice score of 4.97 (SD 1.02) which mean moderate level of practice, representing approximately 71.1% of the total. The highest-rated practice behavior was integrating evidence with experience (mean = 5.07, SD = 1.19; 72.46%), followed by evaluating outcomes (mean = 5.03, SD = 1.16; 71.90%). Lower scores were observed for formulating questions, sharing information, tracking evidence, and critical appraisal, which ranged from 4.84 to 4.98, representing 69.2 to 71.1% of the total. Other related data shown in table 2.

Table 2. Nurse's Practice towards evidence-based practice.

Rank	Practice item	Mean ± Std Dev	Percentage	Level of practice
1	Integrated the evidence you have found with your expertise	5.07 ± 1.19	72.46 %	Moderate
2	Evaluated the outcomes of your practice	5.03 ± 1.16	71.90 %	Moderate
3	Formulated a clearly answerable question at the beginning of the process towards filling this knowledge gap	4.98 ± 1.20	71.14 %	Moderate
4	Shared this information with colleagues	4.98 ± 1.20	71.14 %	Moderate
5	Tracked down relevant evidence after formulating the question	4.94 ± 1.15	70.59 %	Moderate
6	Critically appraised any literature discovered, using set criteria	4.84 ± 1.16	69.20 %	Moderate
—	**Overall practice score** (average across all six items)	**4.97 ± 1.02**	**71.07 %**	**Moderate**

4.4 Nurse's attitudes towards evidence base

For attitudes, the mean overall attitude score was 5.00 (SD 1.09) which mean overall positive attitude, with percentage 71.4% of the total. The most positive attitude was regarding evidence-based practice as essential (mean = 5.09, SD = 1.24; 72.71%). Other items—such as welcoming questions about practice, being open to changing methods, and prioritizing new evidence over workload—ranged in scores from 4.93 to 5.02, with a difference of 70.4 to 71.7%. Other relevant data shown in table 3

Table 3. Nurse's attitudes towards evidence- based practice.

Rank	Attitude Item	Mean ± Std Dev	Percentage	Level of attitude
1	Evidence-Based Practice (EBP) is a waste of time vs Evidence-Based Practice (EBP) is fundamental to professional practice	5.09 ± 1.24	72.71 %	Positive
2	I resent having my clinical practice questioned vs I welcome questions on my practice	5.02 ± 1.17	71.71 %	Positive
3	I stick to tried and trusted methods vs My practice has changed because of evidence I have found	4.97 ± 1.19	71.01 %	Positive
4	My workload is too great vs new evidence is so important that I make the time	4.93 ± 1.17	70.43 %	Positive
—	**Overall attitude score** (average across all four)	**5.00 ± 1.09**	**71.43 %**	**Positive**

4.5 Nurse's Knowledge towards evidence-based practice

The mean overall knowledge score was 4.96 (standard deviation 0.96), which mean moderate level of knowledge for the total scale and for each individual item. Also, the total

percentage of knowledge was 70.9% of the maximum. Information technology skills scored highest (mean = 5.13±1.13; 73.29%), followed by the ability to review practices (5.05±1.10; 72.14%), and then applying information clinically (5.04±1.04; 72.00%). Areas with lower scores included research formulation (4.83±1.10; 69.00%) and research skills (4.81±1.14; 68.71%). Other relevant data shown in table 4.

Table 4. Nurse's Knowledge towards evidence-based practice

Rank	Knowledge items	Mean ± Std Dev	Percentage	Level of Knowledge
1	Ability to review your own practice	5.05 ± 1.10	72.14 %	Moderate
2	IT skills	5.13 ± 1.13	73.29 %	Moderate
3	Ability to apply information to individual cases	5.04 ± 1.04	72.00 %	Moderate
4	Sharing of ideas and information with colleagues	5.03 ± 1.14	71.86 %	Moderate
5	Awareness of major information types and sources	4.95 ± 1.05	70.71 %	Moderate
6	Knowledge of how to retrieve evidence	4.95 ± 1.03	70.71 %	Moderate
7	Ability to determine how valid the material is	4.94 ± 1.01	70.57 %	Moderate
8	Ability to determine how useful the material is	4.93 ± 1.08	70.43 %	Moderate
9	Ability to analyze critically evidence against set standards	4.90 ± 1.08	70.00 %	Moderate
10	Ability to identify gaps in your professional practice	4.92 ± 1.11	70.29 %	Moderate
11	Converting your information needs into a research question	4.83 ± 1.10	69.00 %	Moderate
12	Research skills	4.81 ± 1.14	68.71 %	Moderate
13	Dissemination of new ideas about care to colleagues	4.97 ± 1.09	71.00 %	Moderate
14	Monitoring and reviewing practice skills	4.99 ± 1.106	71.2 %	Moderate
	Overall knowledge/skill score	4.96 ± 0.96	70.85 %	Moderate

4.6 Correlations

The Shapiro-Wilk test, A test was conducted to determine if the data was normally distributed, revealed that the data was not normally distributed *($p < 0.001$)*. Therefore, nonparametric analyses, such as the Mann-Whitney and Kruskal-Wallis tests were used to investigate the correlations between independent and dependent variables. Also, spearman's Rho correlation was used to investigate the correlation between knowledge, attitudes and practice of nurses towards evidence base practice

4.7 Sociodemographic data and nurses practice level toward evidence base correlation

The mean practice score for male nurses (n = 103) was 4.87±1.09, while the mean score for female nurses (n = 49) was 5.19±0.82, with an overall mean of 4.97±1.02 (p = 0.053). Female slightly outperformed men overall but without significant association. Educational level showed significant differences ($p < 0.001$) in which master's degree= 5.41±0.72 had the higher mean followed by bachelor's degree= 4.78±1.05. Practice scores also varied significantly by nurses' position ($p < 0.001$) in which head nurses showed high levels of practice (mean= 5.85±0.54) followed by senior nurses (mean= 5.36±0.62), with lowest level of practice for registered nurses. Experience level was also significant ($p<0.001$): lowest practice was in the 1-3 years' experience period (4.31 ± 1.09), then the mean increased to 5.10, 5.27, and 5.12 for 4-6 years, 7-10 years, and >10 years, respectively. Other relevant data shown in table 5.

Table 5. The association between sociodemographic data and nurses practice level toward evidence- based correlation

Variable	Category	N	Mean ± Std Dev	p-value
Gender	Male	103	4.87 ± 1.09	0.053
	Female	49	5.19 ± 0.82	
	Total	152	**4.97 ± 1.02**	
Education	Bachelor	108	4.78 ± 1.05	<0.001*
	Master of Science	43	5.41 ± 0.72	
	Total	152	**4.97 ± 1.02**	
Position	Registered Nurse	110	4.77 ± 1.06	<0.001*
	Senior Nurse	28	5.36 ± 0.62	
	Head Nurse	14	5.85 ± 0.54	
	Total	152	**4.97 ± 1.02**	
Experience (years)	1–3	34	4.31 ± 1.09	<0.001*
	4–6	48	5.10 ± 0.87	
	7–10	43	5.27 ± 0.62	
	>10	27	5.12 ± 1.31	
	Total	152	**4.97 ± 1.02**	

4.8 Socio- demographic data and nurses attitudes level toward evidence base correlation

Attitude scores did not differ significantly by gender (p=0.112), with males averaging 4.92±1.17 and females 5.18±0.89, with an overall mean of 5.00±1.09. Higher education was also significantly associated (p<0.001): Bachelor = 4.79±1.15, Master of Science = 5.48±0.70.

Attitudes also varied by job position (p<0.001): Head Nurse have higher levels of attitude (mean= 5.91±0.59), then senior nurses with (mean= 5.39±0.74) and the lowest mean was for registered nurses (4.79±1.1). Finally experience showed a significant effect (p=0.007) in which nurses with experience (7-10 years) showed higher levels of attitude with (mean= 5.33±0.68) followed by 4-6 years (mean= 5.13 ± 0.88), experience >10 years with (mean = 4.97±1.38), and the lowest level of attitude was for 1-3 years (mean= 4.43±1.34). Other details shown in table 6.

Table 6. The association between sociodemographic data and nurses attitude level toward evidence- based correlation

Variable	Category	N	Mean ± Std Dev	p- value
Gender	Male	103	4.92 ± 1.17	0.112
	Female	49	5.18 ± 0.89	
	Total	152	**5.00 ± 1.09**	
Education	Bachelor	108	4.79 ± 1.15	<0.001*
	Master of Science	43	5.48 ± 0.70	
	Total	152	**5.00 ± 1.09**	
Position	Registered Nurse	110	4.79 ± 1.14	<0.001*
	Senior Nurse	28	5.39 ± 0.74	

	Head Nurse	14	5.91 ± 0.59	
	Total	152	**5.00 ± 1.09**	
Experience (years)	1–3	34	4.43 ± 1.34	0.007*
	4–6	48	5.13 ± 0.88	
	7–10	43	5.33 ± 0.68	
	>10	27	4.97 ± 1.38	
	Total	152	**5.00 ± 1.09**	

4.9 Sociodemographic data and nurses' knowledge toward evidence- based correlation

The findings revealed the presence of significant association between (gender, educational level, position, and years of experience) and the level of knowledge about evidence- based practice (all p values less than 0.05). In which the highest levels of knowledge were founded for females (mean= 5.16 ± 0.82), nurses with Master of Science (mean= 5.42), head nurses (mean= 5.84 ± 0.52) and finally for nurses who worked for 7-10 years (mean= 5.28 ± 0.63). Other data shown in Table 7 below.

Table 7. The association between sociodemographic data and nurses' knowledge toward evidence- based correlation

Category	**Subgroup**	**N**	**Mean ± Std Dev**	**p-value**
Gender	Male	103	4.86 ± 1.01	0.042*
	Female	49	5.16 ± 0.82	
	Total	152	**4.96 ± 0.96**	

Education	Bachelor	108	4.76 ± 0.95	<0.001*
	Master of Science	43	5.42 ± 0.76	
	Total	152	**4.96 ± 0.96**	
Position	Registered Nurse	110	4.74 ± 0.99	<0.001*
	Senior Nurse	28	5.37 ± 0.55	
	Head Nurse	14	5.84 ± 0.52	
	Total	152	**4.96 ± 0.96**	
Experience (years)	1–3	34	4.28 ± 1.08	<0.001*
	4–6	48	5.18 ± 0.68	
	7–10	43	5.28 ± 0.63	
	>10	27	4.93 ± 1.23	
	Total	152	**4.96 ± 0.96**	

4.10 The correlation between knowledge level, attitudes and practice among nurses towards evidence base practice

After investigation the correlation between knowledge, attitudes and practice evidence base practice by using Spearman's rho correlation, we found a significant strong positive association between attitudes and knowledge ($p < 0.001$). Also, the results indicated there was a strong positive association between nurse's knowledge level about evidence and their practice ($p < 0.001$). additionally, the results revealed there was a strong positive correlation between nursing attitudes and their practice towards evidence base practice ($P< 0.001$). Other related data shown in table 8.

Table 8. The correlation between knowledge level, attitudes and practice among nurses towards evidence base practice.

Variable	Mean	SD	Spearman's ρ	p-value
Attitudes	5.00	1.09	0.791 **	0.000
Knowledge	4.96	0.96	—	—

Variable	Mean	SD	Spearman's ρ	p-value
Knowledge	4.96	0.96	0.782 **	0.000
Practice	4.97	1.02	—	—

Variable	Mean	SD	Spearman's ρ	p-value
Attitudes	5.00	1.09	0.834*	0.000
Practice	4.97	1.02	—	—

Chapter Five

5. Discussion

5.1 Introduction

This chapter will compare the results of the studies that conducted on the same topic, also it will include the recommendations, limitations and conclusion of the study. First, regarding the study's sample and sampling method, although the sample included participants from different hospitals and demographic groups, the use of convenience sampling limits the extent to which the findings can be generalized to all ED nurses in Palestine. Therefore, the results should be interpreted with caution regarding external validity.

5.2 Comparison between the results of this study and previous studies

5.2.1 The levels of knowledge, attitude and practice among nurses toward EBP

Regarding the levels of EBP for KAP, our results revealed moderate level of knowledge, positive attitude and moderate level of practice. Also, previous study conducted in Jordan by AbuRuz et al. (2017) agreed with our results about high level of EBP attitudes and moderate knowledge. But this study reflected low practice levels which mean that the practice was higher in this study. Boths studies used the same design (cross sectional) which may be justify the agreement. But the variation between both studies regarding practice level could be explained by Rogers' Diffusion of Innovations Theory (Thomas and Rogers, 1998) which support that higher levels of practice are usually observed among individuals with stronger knowledge and supportive environments, as suggested by the Diffusion of Innovations Theory and suitable environment, in which these factors can facilitate the movement from awareness to implementation.

Another regional study in Oman, conducted by Al-Busaidi et al. (2019) and showed that nurses reported favorable attitudes (same our findings) but the disagreement was for poor knowledge and practice regarding EBP in the previous study if compared with our findings. The previous study lacks demographic analysis (e.g., by experience or education level), which may affect the results as a confounding variable, so the factors that lead to low levels knowledge and practice regarding EBP weren't obvious. Also based on Benner's Novice to Expert Model (Darbyshire, 1994), the achievement of clinical competence, (in this study for EBP) need a progression from novice to expert, with the focus on both knowledge and experience to play a central role in this level. So, the lack of these variables in the previous study may affected their results.

Our results showed that nurses had moderate knowledge and positive attitude regarding EBP. On other hand, recent study (Marie Mohamed et al., 2024) showed low level of knowledge and negative attitude regarding EBP among nurses. The study included larger sample size (152) compared to previous study (only 100 nurses). Also, various tools for data collection were used which can justify the variation between both studies.

5.2.2 The association between nurses' knowledge and attitude toward EBP

Our results showed significant positive association between nurses' attitudes and knowledge toward EBP which agreed with the findings of study conducted by (Atakro et al., 2020) . On other hand three previous studies (White-Williams et al., 2013; Alblooshi et al., 2022; Alkhatib et al., 2020) showed that while attitudes toward EBP were generally positive, actual levels of knowledge was significantly lower. The variation between previous three studies and this study may be related to the use of various tool for data collection. According to the Theory of Planned Behavior (Ajzen, 1991), higher levels of knowledge are often associated with stronger intentions

to perform desired behaviors. In this context, greater knowledge may contribute to more favorable attitudes and a stronger sense of behavioral control, which in turn can enhance practitioners' intentions to engage in evidence-based practice. This theoretical perspective aligns with and supports the findings of the present study.

5.2.3 The association between nurses' knowledge, attitude and practice regarding EBP

Our findings revealed the presence of significant positive associations between nurses' attitude, knowledge and practice regarding EBP. On other hand, systematic review study Zammar (2022) disagreed with our findings which revealed that positive attitudes accompanied by insufficient knowledge and practice regarding EBP. On other hand previous study Carlone and Igbirieh (2014) agreed with our findings which showed strong correlations between knowledge, attitudes. Our results allied with Knowledge-Attitude-Practice (KAP) Model (Kang et al., 2024), which suggested that the progression for individuals start from gaining knowledge, then to developing attitude, and reaching to adopting practices.

5.2.4 The association between nurses' knowledge and practice toward EBP

The results in the current study revealed significant, positive association between nurses' knowledge and practice regarding EBP. As a comparison, previous study agreed with our results and showed that same findings. While another study conducted by Jacob et al. (2024), revealed opposite findings suggesting that EBP knowledge may not always be associated with higher engagement or practice. The significant association between nurses' knowledge and practice of EBP can be supported by Benner's Novice to Expert Model (Benner, 1982) which highlights that clinical practice enhances with greater knowledge and experience. As nurses strengthen their

foundation in EBP knowledge, they become more proficient and self-assured in utilizing it in clinical environments. The KAP Model (Kang et al., 2024) also supports this, suggesting that knowledge is a crucial factor that guides and facilitates suitable practice behaviors. Consequently, greater EBP knowledge is typically associated with more frequent or confident EBP practice.

5.2.5 Associated factors that affect knowledge, attitude and practice among nurses toward EBP

Our findings and previous research conducted by Ammouri et al. (2014) showed significant association between nurses' education and experience on EBP adoption. Both studies underscore the importance of ongoing professional development and suggest that institutional support and empowerment are often associated with higher alignment between knowledge, attitudes, and practice. Also, the PARIHS framework which mean Promoting Action on Research Implementation in Health Services (Rycroft-Malone, 2010) focus on the suggestion that successful EBP is influenced by a lot of factors such as the interaction of evidence, facilitation and context. So, persistent professional development and support by institution play a key role in empowering nurses to combine their knowledge and attitudes to practice in more effective way.

Our results showed significant association between nurses' education and position on EBP's attitudes and practices. The same findings were indicated by previous study (Mulenga et al., 2017) which showed that the attitudes and practices were affected by nurse's category and qualifications. The Theory of Planned Behavior (Ajzen, 1991) suggests that people with greater educational levels and professional standing tend to exhibit stronger perceived behavioral control and self-efficacy, positively influencing their attitudes and the probability of embracing EBP.

Moreover, elevated positions are generally associated with more positive attitudes and greater engagement in EBP.

The findings of the study revealed the presence of significant association between nurses' knowledge and various sociodemographic finding included (education level, position, years of experience). Also, our results revealed the same significant association between attitude and (education level, position, years of experience) in which all p-values were less than 0.05. On other hand previous study (Marie Mohamed et al., 2024) disagreed with our findings which showed the absence of any significant association between these variables and nurses' knowledge and attitude regarding EBP.

Our results correspond with Benner's Novice to Expert Model (Benner, 1982) suggesting that clinical skill and self-assurance, including the application of evidence-based practice, evolve gradually with enhanced education and professional experience. Furthermore, the Social Cognitive Theory (Schunk et al., 2012) endorses that personal factors (such as education and experience) interact with behavioral and environmental influences, are associated with variations in learning and behavior with more exposure and authority are more inclined to internalize and utilize EBP principles.

5.3 Conclusion

This study highlighted that nurses reported moderate to positive levels of knowledge, attitudes, and practice toward EBP, and these variables were positively associated with one another. Higher knowledge scores co-occurred with more positive attitudes and greater reported engagement in EBP-related practices. Educational level, professional position, and years of experience were also associated with differences in KAP scores. These patterns suggest that

professional development and supportive organizational environments may correspond with higher engagement in EBP. Given the cross-sectional design and reliance on self-report measures, these findings should be interpreted as associations rather than causal relationships.

5.4 Recommendations

5.4.1 Recommendations for future studies:

1. Conduction interventional studies: To evaluate the impact education and training regarding KAP of EBP.

2. Assessment of more sociodemographic and other factors: To determine more factors that affect nurses' knowledge, attitude and practice regarding EBP.

3. Integration of technology: To enhance the engagement and the accessibility for EBP, health related technology could be used such as apps and artificial intelligence.

5.4.2 Recommendations for nurses:

1. Enhance Educational Qualifications: Nurses must seek for increase their educational level by gaining higher educational degrees to enhance their KAP regarding EBP.

2. Gain Clinical Experience: Increase the work in clinical and academic experiences to gain better understanding of EBP.

3. Actively Engage in EBP Training: Participation in courses, seminars, conferences related to evidence-based practice to be attached with most updated evidence.

5.4.3 Recommendations for decision makers (healthcare administrators & policymakers):

1. Support Ongoing Education: Support EBP by financial and resources to encourage nurses to resume higher education to enhance their KAP regarding EBP.

2. Incorporate EBP into organizational policy: The addition of EBP to clinical guidelines and policies to encourage and reinforce nurses to use it.

3. Recognize and reward the efforts toward EBP: increase the recognition for nurses who actively engage in tasks related to EBP such as making research.

5.5 Limitations

1. Political issues: Difficulties in the data collection process and gaining participants' responses related to political issues in Palestine.

2. Use of cross-sectional design: other designs especially interventional studies reflect better findings for evidence-based practice.

3. Self-reported bias: The data was collected based on self-reported questionnaires, which may lead to social desirability bias or incorrect reporting of KAP about EBP.

4. Relatively small sample size: small sample may not represent all characteristics of nurses which may limit the generalization of study's' findings.

5. The use of convenience sampling: the participants were chosen based on convenience sampling which imply high risk for bias and affect the generalizability of the results.

6. Uncontrolled of confounding variables: factors like previous training about EBP, age, workload, type of hospital, time constrain, marital status, income level, access to resources were not assessed, which may influence the KAP about EBP.

7.Small subgroup sizes (PhD, n = 1) limited the use of inferential statistics for certain demographic categories, which were instead reported descriptively.

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Appendices

Appendix A

Evidence Based Practice Questionnaire (EBPQ).

This questionnaire is designed to gather information and opinions on the use of evidence-based practice amongst health professionals. There are no right or wrong answers for we are interested in *your* opinions and *your* own use of evidence in *your* practice.

1. Considering your practice in relation to an individual patient's care over the *past* year, how often have you done the following <u>in response to a gap in your knowledge</u> (please √ or X):

Formulated a clearly answerable question as the beginning of the process towards filling this gap:
Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ **Frequently**

Tracked down the relevant evidence once you have formulated the question:
Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ **Frequently**

Critically appraised, against set criteria, any literature you have discovered:
Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ **Frequently**

Integrated the evidence you have found with your expertise:
Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ **Frequently**

Evaluated the outcomes of your practice:
Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ **Frequently**

Shared this information with colleagues:
Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ **Frequently**

2. Please indicate (by √ or X) where on the scale you would place yourself for each of the following pairs of statements:

My workload is too great for me to keep up to date with all the new evidence	☐ ☐ ☐ ☐ ☐ ☐ ☐	New evidence is so important that I make the time in my work schedule
I resent having my clinical practice questioned	☐ ☐ ☐ ☐ ☐ ☐ ☐	I welcome questions on my practice
Evidence based practice is a waste of time	☐ ☐ ☐ ☐ ☐ ☐ ☐	Evidence based practice is fundamental to professional practice
I stick to tried and trusted methods rather than changing to anything new	☐ ☐ ☐ ☐ ☐ ☐ ☐	My practice has changed because of evidence I have found

3. On a scale of 1 to 7 (with 7 being the best) how would you rate your:

Please circle one number for each statement							
	Poor						**Best**
Research skills	1	2	3	4	5	6	7
IT skills	1	2	3	4	5	6	7
Monitoring and reviewing of practice skills	1	2	3	4	5	6	7
Converting your information needs into a research question	1	2	3	4	5	6	7
Awareness of major information types and sources	1	2	3	4	5	6	7
Ability to identify gaps in your professional practice	1	2	3	4	5	6	7
Knowledge of how to retrieve evidence	1	2	3	4	5	6	7
Ability to analyse critically evidence against set standards	1	2	3	4	5	6	7
Ability to determine how valid (close to the truth) the material is	1	2	3	4	5	6	7
Ability to determine how useful (clinically applicable) the material is	1	2	3	4	5	6	7
Ability to apply information to individual cases	1	2	3	4	5	6	7
Sharing of ideas and information with colleagues	1	2	3	4	5	6	7
Dissemination of new ideas about care to colleagues	1	2	3	4	5	6	7
Ability to review your own practice	1	2	3	4	5	6	7

4. Finally, some information about you:

Your profession:_____ Year qualified:_____

Your position/grade:_____ Your speciality:_____

Please circle the most appropriate answer as it concerns you:

Your sex: Male Female

Your age range: 20-29 30-39 40-49 50-59 60-69

Please use this space to write any comments you wish.

Appendix B

استبيان الممارسة القائمة على الأدلة للمهنيين الصحيين

تم تصميم هذا الاستبيان لجمع المعلومات والآراء حول استخدام الأدلة القائمة على الممارسة بين المهنيين الصحيين. لا توجد إجابات صحيحة أو خاطئة ونحن كذلك مهتمين بآرائك واستخدامك الخاص للأدلة في ممارستك.

1. في خلال السنة الماضية ، كم مرة قمت بما يلي استجابة لفجوة في معرفتك برعاية المرضى (من فضلك ✓أو ✗) :

- **صياغة سؤال يمكن الإجابة عليه بوضوح لسد هذه الفجوة**

  دائما ☐ ☐ ☐ ☐ ☐ ☐ ☐ ابدا

- **تتبع الأدلة ذات الصلة بمجرد صياغة السؤال:**

  دائما ☐ ☐ ☐ ☐ ☐ ☐ ☐ ابدا

- **عمل التقييم النقدي، وفقا لمعايير محددة، لأي مؤلفات قمت باكتشافها:**

  دائما ☐ ☐ ☐ ☐ ☐ ☐ ☐ ابدا

- **دمج الأدلة التي وجدتها مع خبرتك:**

  دائما ☐ ☐ ☐ ☐ ☐ ☐ ☐ ابدا

- **تقييم نتائج ممارستك:**

  دائما ☐ ☐ ☐ ☐ ☐ ☐ ☐ ابدا

- **شاركت هذه المعلومات مع الزملاء:**

  دائما ☐ ☐ ☐ ☐ ☐ ☐ ☐ ابدا

2. يرجى الإشارة (بواسطة ✓or ✗) إلى المكان الذي ستضع نفسك فيه على المقياس لكل زوج من أزواج العبارات التالية:

عبء العمل لدي كبير جدًا بحيث لا أتمكن من مواكبة الأدلة الجديدة .	☐ ☐ ☐ ☐ ☐ ☐ ☐	**الأدلة الجديدة مهمة جدًا لدرجة أنني أخصص لها وقتًا ضمن جدولي العملي**
أنا مستاء من وجود تسائل للمارستي السريرية.	☐ ☐ ☐ ☐ ☐ ☐ ☐	**أرحب بالأسئلة على ممارستي.**
الممارسة القائمة على الأدلة مضيعة للوقت.	☐ ☐ ☐ ☐ ☐ ☐ ☐	**الممارسة القائمة على الأدلة أمر أساسي للممارسة المهنية.**
ألتزم بأساليب مجربة وموثوقة بدلا من التغيير إلى أي شيء جديد.	☐ ☐ ☐ ☐ ☐ ☐ ☐	**لقد تغيرت ممارستي بسبب الأدلة التي وجدتها.**

3. على مقياس من 1 إلى 7 (مع كون 7 هو الأفضل) كيف تقيم ما يلي:

يرجى وضع دائرة حول رقم واحد لكل عبارة							
	ضعيف						الافضل
مهاراتك البحثية	1	2	3	4	5	6	7
مهارات تقنية المعلومات	1	2	3	4	5	6	7
مراقبة ومراجعة مهارات الممارسة العملية	1	2	3	4	5	6	7
تحويل احتياجاتك من المعلومات الى سؤال بحثي	1	2	3	4	5	6	7
الوعي بانواع ومصادر المعلومات الرئيسية	1	2	3	4	5	6	7
القدرة على تحديد الثغرات في ممارستك المهنية	1	2	3	4	5	6	7
معرفة كيفية استرجاع الادلة	1	2	3	4	5	6	7
القدرة على تحليل الأدلة بشكل نقدي وفقا لمجموعة من المعايير	1	2	3	4	5	6	7
القدرة على تحديد مدى صحة المواد العلمية او ان تكون قريبة من الصحة	1	2	3	4	5	6	7
القدرة على تحديد مدى فائدة المواد العلمية القابلة للتطبيق سريريا	1	2	3	4	5	6	7
القدرة على تطبيق المعلومات على الحالات الفردية	1	2	3	4	5	6	7
تبادل الأفكار والمعلومات مع الزملاء	1	2	3	4	5	6	7
نشر أفكار جديدة حول رعاية المرضي للزملاء	1	2	3	4	5	6	7
القدرة على مراجعة ممارستك الخاصة في تقديم الرعاية	1	2	3	4	5	6	7

4. المعلومات الديموغرافية : لطفا ضع دائرة فقط حول ما يمثلك :

المؤهل العلمي : ☐ بكالوريوس ☐ ماجستير ☐ دكتوراه **سنوات الخبرة : ☐ 1-3 ☐ 4-6 ☐ 7-10 ☐ اكثر من 10**

الجنس : ☐ ذكر ☐ انثى **المنصب الوظيفي : ☐ ممرض عادي ☐ ممرض مسؤول ☐ رئيس تمريض**

يرجى استخدام هذه المساحة لكتابة أي تعليقات تريدها:

شكرا لك على وقتك ومشاركتك

Appendix C

UNIVERSITY OF CANBERRA | HEALTH RESEARCH INSTITUTE

CHARLES DARWIN UNIVERSITY AUSTRALIA
You make CDU

Re: Permission to use EBPQ/SEBPQ

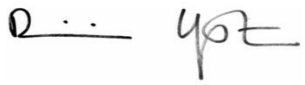
We are happy to grant you permission to use EBPQ or SEBPQ in your study, with the proviso that the authors Prof D Upton and Dr P Upton (EBPQ)/Prof D Upton, Dr P Uptonand Dr L Scurlock-Evans (SEBPQ) are acknowledged in any communication, including publication, in which either questionnaire is used. In accordance with UK and Australian copyright law we would be grateful if you would refer anyone else interested in using EBPQ/SEBPQ to us, rather than distribute copies of the questionnaires to third parties yourself. This will also help us as authors gauge the level of interest in the questionnaires and their application in the clinical/research/educational setting.

We give permission for you to translate the questionnaire into appropriate languages if necessary. Please can you share the translated versions with us when you have completed your study so that we can host them on our website, making them easily available to other scholars. Your work in translating the EBPQ will be acknowledged on the translated questionnaire.

Please register on the questionnaire website, so that you can download the questionnaire and associated materials. There is no cost associated with this registration.

Good luck with your research and do not hesitate to contact us if you have any further queries.

Yours sincerely



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Appendix D

Arab American University
Institutional Review Board - Ramallah

الجامعـــة العربيـــة الأمريكيـــة
مجلس اخلاقيات البحث العلمي – رام الله

IRB Approval Letter

Study Title: "Knowledge, Attitudes, and Implementation of Evidenced-Based Practice Among Emergency Department Nurses in Palestinian Hospitals in the West Bank and Jerusalem: A Cross-Sectional Study".

Submitted by: **Ashraf Ziyad Sameeh Qotmosh**

Date received: 11th August 2025

Date reviewed: 19th August 2025

Date approved: 19th August 2025

Your Study titled **"Knowledge, Attitudes, and Implementation of Evidenced-Based Practice Among Emergency Department Nurses in Palestinian Hospitals in the West Bank and Jerusalem: A Cross-Sectional Study"** with the code number **"R-2025/A/61/N"** was reviewed by the Arab American University Institutional Review Board - Ramallah and it was approved on the 19th of August 2025.

Sajed Ghawadra, PhD
IRB-R Chairman
Arab American University of Palestine

الجامعة العربية الأمريكية - فلسطين
مجلس اخلاقيات البحث العلمي - رام الله
IRB-R
ARAB AMERICAN UNIVERSITY-PALESTINE
INSTITUTIONAL REVIEW BOARD - RAMALLAH

General Conditions:

1. Valid for 6 months from the date of approval.
2. It is important to inform the IRB-R with any modification of the approved study protocol.
3. The Bord appreciates a copy of the research when accomplished.

Appendix E

State of Palestine
Ministry of Health
Education in Health and Scientific Research Unit

دولة فلسطين
وزارة الصحة
وحدة التعليم الصحي والبحث العلمي

Ref.: ………………
Date:………………

الرقـــم: ٢٠٢٢/٤٢٤٩٠
التــاريخ: ٢٠٢٢/٠٨/٠٢

عطوفة الوكيل المساعد لشؤون المستشفيات والطوارئ المحترم،،،
الأخ مدير عام الادارة العامة للمستشفيات المحترم،،،
تحية واحترام،،،

الموضـــوع: تسهيل مهمة بحث

يرجى تسهيل مهمة **الطالب: أشرف زياد سميح قطمش- برنامج ماجستير تمريض الطوارئ/ الجامعة العربية الامريكية**، في عمل بحث تحت اشراف د. محمد الجلاد، بعنوان:

Knowledge, Attitudes, and Implementation of Evidenced-Based Practice. Among Emergency Department Nurses In Palestinian Hospitals in the West Bank and Jerusalem: A Cross-Sectional Study

من خلال السماح للطالب بجمع معلومات من خلال استبانة ، وذلك في:

- مستشفى رفيديا - مستشفى جنين - مستشفى طولكرم

- مستشفى قلقيلية - مستشفى الوطني

- المجمع الطبي

على ان يتم الالتزام باساليب واخلاقيات البحث العلمي، وعدم التعرض للمعلومات التعريفية للمشاركين .
على ان يتم تزويد الوزارة بنسخة PDF من نتائج البحث، التعهد بعدم النشر لحين الحصول على موافقة الوزارة على نتائج البحث.

مع الاحترام،،،

د. عبد الله القواسمي
رئيس وحدة التعليم الصحي والبحث العلمي

نسخة عميد كلية الدراسات العليا المحترمة /الجامعة العربية الامريكية

Telfax.:09-2333901 scientificresearch.dep@gmail.com تلفاكس: 09-2333901

Appendix F

Arab American University
Faculty of Graduate Studies

الجامعة العربية الأمريكية
كلية الدراسات العليا

2025/8/25

إلى من يهمه الأمر

تسهيل مهمة بحثية

تحية طيبة وبعد،

تُهديكم كلية الدراسات العُليا في الجامعة العربية الأمريكية أطيب التحيات، وبالإشارة الى الموضوع أعلاه، تشهد كلية الدراسات العُليا في الجامعة أن الطالب **أشرف زياد سميح قطمش** والذي يحمل الرقم الجامعي 202311850 هو طالب ماجستير في برنامج تمريض الطوارئ ويعمل على رسالة الماجستير الخاصة به بعنوان:

" المعرفة، المواقف، وتطبيق الممارسة المبنية على الادلة بين ممرضي اقسام الطوارئ في المستشفيات الفلسطينية في الضفة الغربية والقدس: دراسة مقطعية" ، تحت إشراف الدكتور محمد الجلاد. نأمل من حضرتكم الإيعاز لمن يلزم لمساعدته للحصول على المعلومات اللازمة للدراسة، علماً أن المعلومات ستستخدم لغاية البحث فقط وسيتم التعامل معها بغاية السرية، وقد أُعطي هذه الرسالة بناءً على طلبه.

وتفضلوا بقبول فائق الاحترام

عميد كلية الدراسات العليا

د. نوار قطب

كلية الدراسات العليا
FACULTY OF GRADUATE STUDIES

Jenin Tel: +970-4-2418888 Ext.:1471,1472 Fax: +970-4-2510810 P.O. Box:240
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E-mail: FGS@aaup.edu ; PGS@aaup.edu Website: www.aaup.edu

ملخص الرسالة

الخلفية:
تُعَدّ الممارسة المبنية على الادلة (EBP) ركيزة أساسية في التمريض الحديث، لما لها من دور في تحسين جودة الرعاية وسلامة المرضى. ومع ذلك، يظل تطبيقها محدوداً في البيئات المتأثرة بالنزاعات وقلة الموارد، مثل فلسطين.

الهدف:
هدفت هذه الدراسة إلى تقييم معارف، ومواقف، وممارسات الممرضين العاملين في أقسام الطوارئ نحو الممارسة المبنية على الادلة في مستشفيات الضفة الغربية والقدس، وكذلك فحص العلاقة بين هذه المتغيرات والخصائص الديموغرافية.

المنهجية:
تم استخدام تصميم مقطعي وصفي في شهر أيلول/سبتمبر 2025 في أقسام الطوارئ في مستشفيات الضفة الغربية والقدس. جُمعت البيانات باستخدام النسخة العربية المكيَّفة ثقافياً من استبانة الممارسة المبنية على الدليل (EBPQ). تم التواصل مع 250 ممرضاً للمشاركة، وأكمل 152 منهم الاستبانة، مما نتج عنه معدل استجابة بلغ 60.8%. شمل التحليل الإحصائي الأساليب الوصفية، واختبار Mann–Whitney U، واختبار Kruskal–Wallis H، واختبار ارتباط سبيرمان (Spearman’s rho) باستخدام برنامج SPSS الإصدار 25.

النتائج:
أظهرت النتائج مستويات متوسطة من المعرفة (M = 4.96, SD = 0.96) والممارسة (M = 4.97, SD = 1.02)، إلى جانب اتجاهات إيجابية عامة نحو الممارسة المبنية على الدليل. كما وُجدت علاقة ارتباطية إيجابية بين المعرفة والاتجاهات والممارسة (ρ = 0.78–0.83، p < 0.001). كذلك ارتبطت كل من المستوى التعليمي، والوظيفة، وسنوات الخبرة بمستويات أعلى من تبنّي الممارسة المبنية على الدليل.

الاستنتاج:
أظهرت الدراسة مستويات متوسطة إلى إيجابية من المعرفة والاتجاهات والممارسة نحو الممارسة المبنية على الدليل بين الممرضين، وكانت هذه المتغيرات مرتبطة ببعضها. كما ارتبطت المعرفة الأعلى باتجاهات أكثر إيجابية وبمستويات أعلى من الانخراط في ممارسات EBP. وظهرت فروق في مستويات KAP تبعاً للمستوى التعليمي والوظيفة وسنوات الخبرة. ونظراً لكون الدراسة مقطعية وتعتمد على بيانات مُبلّغ عنها ذاتياً، فإن هذه النتائج تعكس علاقات ارتباطية لا سببية.

الكلمات المفتاحية :الممارسة المبنية على الادلة، التمريض الطارئ، المعرفة، المواقف، الممارسة، فلسطين، دراسة مقطعية.