An-Najah National University

Faculty of Graduate Studies

NURSES' PERCEPTIONS OF KNOWLEDGE, PRACTICE, ATTITUDES, AND PERCEIVED BARRIERS TOWARDS EVIDENCE-BASED PRACTICE (EBP) IN NABLUS CITY HOSPITALS

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This Thesis is Submitted in Partial Fulfillment of the Requirements for the Degree of Master Public Health Management, Faculty of Graduate Studies, An-Najah National University, Nablus - Palestine.

2024

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Dedication

This thesis is dedicated to my family, whose unwavering support and encouragement have been the foundation of my journey. Their love and belief in me have inspired every step of this work.

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Acknowledgements

First, I give all the glory to God, the source of my strength, for granting me both the mental and physical endurance to complete this monumental task. Then, I would like to Thank all participant that has been spending their time and knowledge to helping me for completion of our study.

Also I would like to thank all of these hospitals Rafidia, Al-Watani Governmental and An-Najah National University hospital, Al-Arabi and Nablus Non-Govermental Hospitals for their cooperation and leniency during the distribution of questionnaires which enabled us to finish the study without any obstacles.

To Dr. Suha Hammshari my advisor, I extend special thanks and gratitude to you for your assistance, encouragement, and support. And to Dr. Hamzeh Al-Zabadi and thank you for believing in me and for your constant support and encouragement throughout this project.

Thanks to my entire family, especially my loving mom, for her love, understanding, and support.

To my father, may God have mercy on him, I know you proud of me now.

To everyone who gave me the financial and moral support for the completion of this task, Thank you

.

Declaration

I, the undersigned, declare that I submitted the thesis entitled:

NURSES' PERCEPTIONS OF KNOWLEDGE, PRACTICE, ATTITUDES, AND PERCEIVED BARRIERS TOWARDS EVIDENCE-BASED PRACTICE (EBP) IN NABLUS CITY HOSPITALS

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.

Student's Name: **Tamara Raheeb Yassin**

Signature: **Tamara Yassin**

Date: **09/10/2024**

List of Contents

List of Tables

List of Appendices

NURSES' PERCEPTIONS OF KNOWLEDGE, PRACTICE, ATTITUDES, AND PERCEIVED BARRIERS TOWARDS EVIDENCE-BASED PRACTICE (EBP) IN NABLUS CITY HOSPITALS

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Abstract

Introduction: The importance of evidence-based practice in nursing is a genuine consideration in the provision of quality nursing care. This research study was assess the level of knowledge, attitude toward, and practice of EBP among nurses and the challenges experienced in implementing this level of practice in selected hospitals in Nablus City, Palestine.

Methods: A total of 275 nurses completed the structured interview with questionnaires designed to obtain demographic information, attitude toward EBP, knowledge level and barriers to research use in nursing practice.

Results: The results showed that most of the participants (82.2%) possessed a level of knowledge on EBP which was rated as high with a median score of knowledge being 76.00. In spite of this encouraging level of knowledge, however, challenges in the effective use of EBP was noted where 41.1% of respondents indicated moderate challenges while 33.5% indicated high challenges. In statistical terms, positive EBP attitudes were significantly related to knowledge levels ($r = .451$, $p < .001$) while negative EBP attitudes correlates to research usage barriers ($r = -.486$, $p < .001$).

Conclusion: The study presents knowledge as an essential facilitator for the promotion of EBP participation, emphasizing the need for appropriate educational measures to be put in place to overcome the challenges which have been identified already. In addition, the study shows that understanding the attitude of nurses towards scientific research helps to understand the problems they encounter. This is important for health care institutions that

seek to improve the quality of patient care through the use of evidence-based practices. Nevertheless, in the subsequent studies, emphasis should be given to longitudinal studies which evaluate the effect of the implementation of educational programs on EBP and the results of patients over time.

Keywords: Knowledge, Attitude, Practice, Evidence-Based Practice (EBP), BRU, Nurses.

Chapter One
Introduction

1.1 Background

In nursing, evidence-based practice has become increasingly popular, and the definitions vary across-the-board. Research findings, basic science knowledge, clinical knowledge, and expert opinion are all considered “evidence”; however, the use of the practices that are based on research findings has been proven to be the most successful in the pursuit of the patient's health gains across the various settings and locations in the world. The wellspring of evidence-based practice is found in payor and healthcare facility pressures for cost containment, more information availability, and even consumers have become technologically sassy about treatment and care choices. Evidence-based practice requires a shift in the education of students, more research that is relevant to practice, and better communication and interaction between clinicians and researchers. The introduction of the practice of evidence-based care is creating the space for nursing care to pay increased attention to the personal individuals, not the diseases, to be more effective, efficient, and agile, and to utilize the capacity of clinical judgment (Youngblut & Brooten, 2001).

Health policy makers, practitioners, researchers and regulators have now acknowledged that evidence-based practice (EBP) bestows a safe as well as compassionate care on healthcare seekers worldwide (Brown et al., 2009; Malik et al., 2015). EBP is regarded as central element for enhancing health care services and attaining best patient healthcare outcomes (AbuRuz et al., 2017a). Also involves combining the best available evidence from systematic research that has been empirically tested and found to be reliable with clinical experience, expertise, values, by a physician as well as patient's own values (Sackett et al., 1996). The contribution of registered nurses in terms of “providing quality and continuity care to clients” (Adib-Hajbaghery, 2009). cannot be overemphasized. The International Council for Nurses (ICN) has long urged nurses to ensure the creation of a body of nursing knowledge based on research and that this evidence be used in daily practice - i.e., EBP.

EBP is one of the key nursing practices related to better outcomes of care, higher quality, better safety, cost-effectiveness in the healthcare sector, shorter lengths in hospital stay,

and more feelings of job satisfaction and participation of nurses (Kim et al., 2017; Melnyk & Fineout-Overholt, 2022).

EBP is a problem-solving strategy to clinical decision-making in a health care organization. It integrates the best available scientific evidence with the best available experiential (patient and practitioner) evidence. EBP considers internal and external influences on practice and encourages critical thinking in the judicious application of such evidence to the care of individual patients, a patient population, or a system. The challenge is for health care providers to apply the use of research and non-research evidence in order to implement the best interventions and practices. EBP supports and informs clinical, administrative, and educational decision-making. The integration of research, organizational experience (including quality improvement, program and evaluation data), clinical expertise, expert opinion, and patient preferences assures clinical decisions based on all available evidence. EBP improves efficacy (the capability to achieve a wanted outcome); efficiency (the accomplishment of a wanted outcome with minimal cost of money, time, and energy); and effectiveness (the capability to create wanted outcomes) (Newhouse et al., 2005).

"Individual clinical experience combined with the best available external clinical data from systematic investigations" (Sackett et al., 1996) is the definition of what EBP is. EBP is a culture in which practitioners routinely and naturally take into account the best available research (Dopson et al., 2003). His EBP has been proven clinically in all facets of practice (Dopson et al., 2003). Clinical decision-making with EBP includes combining information from clinical experts. Examining the data in light of the resources at hand, patient preferences and behavior, clinical status, attitudes, and situations. Finding the right balance when weighing scientific findings is difficult in nursing (Haynes et al., 2002). EBP gives nurses authority within the care team, raises their professional standing, and brings them credibility as knowledge workers. In addition, it increases both the quality of care and the satisfaction of the patients, since patients take the view that they know their health and are therefore prepared to 'participate' in the decision-making.

The Sigma Theta Tau International Honor Society of Nursing published its Position Statement on Evidence-Based Nursing in 2003 to advance the development of the society into the world's foremost resource for information and knowledge to enhance evidence-based nursing practice (Thompson, 2005).

Many countries have developed evidence-based nursing centers that provide opportunities for training in the process of using evidence in clinical practice (Ciliska et al., 1999). Clearly measurable best quality treatment is in demand from patients, patient advocacy organizations, and other health-related organizations on clinical nurses. EBP is a requisite for this objective, and the role of nurses is to fill the knowledge gap by promoting quality clinical treatment in accordance with best practice evidence (Ingersoll, 2000).

Factors such as a more educated population, more access to information, altering workplace roles with a focus on efficiency in healthcare, and rising demands for accountability have all contributed to the increasing significance of evidence-based policy and practice. The current task is the effective management of risk and uncertainty in healthcare environments (Davies et al., 2000).

These include the growth of a more educated and conscious population and an increase in the general availability of information; shifting workplace roles, with greater emphasis on efficiency and cost-effectiveness in the health sector; and increased demands for accountability and oversight. The current issue is to change the trend in the management of risk and uncertainty in healthcare settings (Davies et al., 2000).

Evidence-based nursing seeks to equip nurses with the most reliable research resources to improve the quality of care, address healthcare challenges, and surpass established quality benchmarks (Grinspun et al., 2001; Salem, 2013)

In order to meet the growing expectations for excellent treatment, nurses are now required to include research, experience, and patient preferences into their decision-making process, which is referred to as EBP (McSherry et al., 2002). Clinical nurses today are expected to systematically gather the best research, tap into nursing experience, and consider patient preferences in making professional decisions (Ingersoll, 2000). This approach is titled EBP.

1.2 Literature review

EBP in the field of Western modern nursing is developing rapidly, with some success. Major numbers of systematic reviews, evidence summaries, and practice guidelines were searchable in the Cochrane Library and the Joanna Briggs Institute Library. Evidence implementation and dissemination are slowish compared with evidence synthesis and at times receive some resistance (Muhumuza et al., 2015). They do, however, go step by step. Several have reported positive outcomes for patients and caregivers after EBP. These include best practices implemented in support of EBP, which improved hand hygiene among Health Care Workers, HCWs, especially nurses , even in a resource-poor setting in Uganda (Muhumuza et al., 2015).

Also, Schoville et al. did a cost-benefit analysis of his Electronic Clinical Procedural Resource in support of EBP with significant savings reported (Schoville et al., 2014). Furthermore, the evolution of EBP has integrated the aspect of international partnership and founded some of its own professional nursing associations and societies. Currently, our healthcare system is undergoing significant challenges, be it the poor-quality of services, as enumerated most significantly (Bikbov et al., 2020).

Human agents are major causes of poor quality healthcare. Human forces are one leading factor in creating and causing the development and progress of health problems. They have long been emphasized by human development experts as one of the core components of any organization. Organizational goals seem to be very much dependent on the potential of the people within it. Nursing staff in health care are the people who do the direct health care. We live in an age where nurses and, generally, healthcare systems require a great extent of competencies and intelligence in order to achieve clinical responsibilities as expected (Ghrayeb, 2017).

Consequently, nurses should update themselves with new research and increase their professionalism. You must have the competency to build up knowledge (Ghrayeb, 2017).

Nowadays, nurses need to be able to access and interpret a very wide clinical expertise and combine it with the clinical decision-making processes according to the new insights that will let lifelong learning reflect and change the clinical practice. Building research knowledge is important to minimize research-related anxiety in undergraduate nursing student (Ghrayeb, 2017). The nursing profession should, therefore, be advanced by

introducing a culture of research in undergraduate education and a positive attitude toward scientific research. They are strong advocates for becoming generators of new knowledge through nursing research.

Attitude can be described as an intellectual state of values, feelings, or beliefs that are conscious or unconscious, or even behavior or predisposition to behavior. In the view of Almeida (Almeida et al., 2019), attitude is a major determinant of human behavior in attaining goals, meanings, and efficiently processing living knowledge. Traditionally, student nursing jobs have been rated very negatively with respect to unpleasant work in hospitals, vacation work with no appreciation of work done, and low wages-only jobs (Koushali et al., 2012).

Nursing knowledge is very important to nurses for a number of reasons. Because nurses utilize vast arrays of ethical and practice acknowledgments in practice, it is imperative to be able to identify which nursing knowledge needs to be central to their practice. This knowledge is essential in raising awareness of personal and professional accountability and clarifying dilemmas in practice, thus improving patient care (Hall, 2005).

The literature consequently shows that practitioners with the most positive attitudes towards the nursing process are most likely to be involved in its implementation (Ghrayeb, 2017). Determining attitudes of nurses towards scientific research is very vital in ensuring that there is future clinical research (Ünver et al., 2018). Practitioners who do not believe in the significance of clinical research are not likely to contribute to the advancement of the nursing profession and their practice is not evidence-based. According to research, implementation strategies of EBP are likely to be effective if administrators of hospitals overcome the barriers that have been identified (Baker et al., 2010). While some researchers admit that EBP is hard to be established due to many obstacles or challenges like limited resources, insufficiency of time, lack of education or training, and lack of monitoring, the supporters of the EBP claim that in the framework of EBP all these issues could be handled by different kinds of adjustments (Polykarpou et al., 2018; Tahan et al., 2016; Watters, 2019)

The study assessed knowledge, attitude, and use of EBP among registered nurse-midwives working in central hospitals in Malawi. Descriptive statistics showed that, when mean scores were presented, as mean ± standard deviation, nurse-midwives had an

attitude toward EBP of 78.7 ± 19.6 and this indicate that RNs had a relatively positive attitude towards EBP, and moderate levels of knowledge levels of 70.6 ± 15.1, However, their usage of EBP was notably lower 57.8 ± 23.0, and total EBP of 68.9 ± 14.2 reflects a mixed level of integration of EBP into their work. The results showed that research experience was associated with improved EBP practice (P = 0.005) and overall EBP scores (P = 0.035), better knowledge scores (P = 0.02) related to higher educational levels. Clinical experience (P = 0.006) and the hospital setting (P = 0.016) influenced attitudes. However, gender showed no effect on the EBP scores by the nurse-midwives (Kaseka & Mbakaya, 2022).

A study that was conducted in Palestine and Saudia Arabia reported significant barriers to research utilization among medical and surgical nurses in private hospitals. The response rate from the sample population of 156 nurses was overwhelmingly high at 86.67%. The mean age for participants was 29.41 years, while 49.4% reported less than six years of clinical experience. The majority (73.1%) of the participants were females, while 54.5% had a nursing diploma. In spite of the high levels of certification, perceived barriers to utilization of research were remarkable, with the mean perception score of 3.15 out of 5 with a SD of 0.55. Of the barriers, those purported by the hospital setting and the research process were high at mean = 3.22, while barriers perceived to emanate from the nurses themselves were lower at a mean of 2.95. These causes included organizational environment and research methodologies as external factors, and individual factors of the nurses themselves. Evidence-based practice requires developing focused strategies that would strengthen organizational support and at the same time enable the nurses through education and available resources. Thus, the effort to address these barriers will translate into better implementation of research findings in clinical practices, leading to improved patient care outcomes for both regions (Fashafsheh et al., 2020).

In a previous study cross-sectional, descriptive study, a sample of 303 nurses participated to assess their practices, attitudes, and knowledge in relation to EBP in the city of Al-Madinah Al-Munawarah, Kingdom of Saudi Arabia. Different levels of engagement were shown in the results, wherein the highest mean scored was that for knowledge with EBP at 4.66 ± 1.16, followed by utilization at 4.09 ± 1.31 and attitudes at 3.81 ± 1.13 this indicates that while the nurses had a good understanding of EBP, their practical application of it was lower, similar to findings from the Saudi Arabia. The outcome

showed that younger nurses and those with BSc degrees had more positive attitudes and higher rates of utilization. On the other hand, years of experience were significantly inversely related to EBP utilization with r=-0.12, p< 0.05. The findings emerged that targeted interventions are needed to motivate Saudi nurses to adopt the EBP, which would lead to improved patient care outcome (AbuRuz, 2017).

A cross-sectional descriptive study was carried out in Jordan with a sample of 447 nurses to identify the barriers to research involvement through the BRU. 8.9 %of the sample rated obstacles to research participation as low while 53.3% rated them at the severe end of difficulty. It also had the highest score among identified domains in organization-related barriers as compared to others. Age, work experience as well as nationality were related to obstacles for research participation and explained by regression analysis (Abuhammad et al., 2020).

Understanding nurses' attitudes toward scientific research is thus very instrumental in gaining insight. The study aimed to investigate the attitudes, knowledge, practice, and perceived barriers to the use of EBP among Palestinian nurses from hospitals in the West Bank.

The findings from this study can be utilized to inform strategies and approaches that will motivate nurses. Only with a positive attitude toward research and its use in nursing practice is EBP achieved.

1.3 Problem statement

EBP is very critical in the delivery of quality patient care. It can be challenging sometimes to include EBP into healthcare services, especially in regard to nurses. Many nurses do not apply EBP consistently in their daily care for patients despite extensive research and guidelines about the existence of EBP. The problem addressed in this study, therefore, is to determine the perceptions of nurses towards EBP and to identify the barriers hindering their implementation into clinical practice. Knowing the perceptions of knowledge ,practice ,attitude and barriers to implementing EBP among nurses would help the establishment of strategies to overcome such obstacles and thus encourage the uptake of EBP in nursing practice (Alatawi et al., 2020). Also the challenge of effectively implementing Evidence-Based Practice in clinical nursing environments despite its proven benefits in improving healthcare quality and patient outcomes. Some of the

barriers that prevent nurses from fully adopting EBP include lack of time, insufficient skills in searching and evaluating research evidence, language issues, and knowledge deficits. In addition, the attitude, knowledge, and belief of nurses about EBP are critical determinants of its successful implementation.

The Middle East, together with the Mediterranean and North African regions, is an area that experiences a high rate of illnesses and recurrent humanitarian crises. Thus, it is very challenging for midwives and nurses. A scoping review indicates that even though nurses play a critical role in delivering healthcare, there is an observable variation in applying EBP (Alhusaini et al., 2016). For example, less than 50% of UAE nurses felt competent to critically appraise research or to lead EBP initiatives, while more than 60% reported they could use internal evidence to inform clinical decisions (Akkawi et al., 2023). This underscores that focused training interventions are needed.

These results underline the critical need for changes in current practices and continuing professional development, which must close the gap between knowledge and evidence-based standards. We can improve patient care and better serve the needs of the healthcare system in the hospitals of Nablus City by focusing on these areas.

1.4 Objectives

The purpose of this study is to evaluate nurses' perceptions of knowledge, attitude and practice, as well as the barriers to using, EBP in hospitals in West Bank, State of Palestine. Specifically, the research has these objectives:

To determine the perception of knowledge, attitudes, and practices related to EBP among nurses working in hospitals in Nablus city, Palestine.

To determine perceived barriers to utilizing Research, EBP among nurses working in hospitals in Nablus city, Palestine.

To explore if there were any differences between knowledge, attitudes, and practice of EBP among nurses based on their education level, gender, length of experience, and department of work.

1.5 Significance of the study

The significant of this study is the examination of nurses' perception of knowledge, practice, attitude and barriers to the approaching of EBP. These findings have the potential to improve the quality of care and the outcomes for patients. EBP is important in healthcare services as it ensures that interventions are carried out based on the most dependable evidence to get the best possible patient outcomes.

Although the merits of EBP are very well known, very few have been translated into nursing practice. An important way to implement EBP must, therefore, start with understanding factors that may influence nurses' perceptions and willingness to use EBP, in a bid to surmount its barriers to implementation.

Perceptions and barriers to the use of EBP by nurses, if known, can enable appropriate healthcare organizations to design interventions. While EBP is globally recognized for its potential to improve healthcare, there is a partial implementation of this practice due to lack of time, insufficient skills to manage research evidence, and knowledge deficits. For instance, educational programs can be designed to enhance the knowledge and skills of nurses in respect of EBP, and organizational policies can be changed in a way that would facilitate the implementation of EBP.

Ultimately, research into nurses' perceptions and the barriers to the use of EBP bears important implications for patients since it can result in effective interventions for the improvement of EBP in nursing (Alatawi et al., 2020).

1.6 Research questions

1. What are the level of knowledge, attitudes, and practices related to EBP among nurses working in hospitals in Nablus city, Palestine?
2. What are the perceived barriers to the utilization of research, and EBP among nurses working in hospitals in Nablus city, Palestine?
3. Are there any differences between knowledge, attitudes, and practice among nurses working in hospitals in Nablus city, Palestine based on their education level?
4. Are there any differences between knowledge, attitudes, and practice among nurses working in hospitals in Nablus city, Palestine based on their gender?

5. Are there any differences between knowledge, attitudes, and practice among nurses working in hospitals in Nablus city, Palestine based on their work experience?
6. Are there any differences between knowledge, attitudes, and practice among nurses working in hospitals of Nablus city, Palestine based on their place of work (clinical unit)?

1.7 Hypothesis

The study aims to test the following hypotheses:
H0: At the level of significance represented by a p-value of 0.05, the null hypothesis proposes that there is no significant link between the sociodemographic characteristics of nurses and EBP

H0: At the level of significance represented by a p-value of 0.05, the null hypothesis proposes that there is no significant link between the sociodemographic characteristics of nurses and Attitude to use EBP

H0: At the level of significance represented by a p-value of 0.05, the null hypothesis proposes that there is no significant link between the sociodemographic characteristics of nurses and Knowledge of EBP

H0: At the level of significance represented by a p-value of 0.05, the null hypothesis proposes that there is no significant link between the sociodemographic characteristics of nurses and BRU for using research

H0: At the level of significance represented by a p-value of 0.05, the null hypothesis proposes that there is no significant difference between the EBP, Attitude, Knowledge and BRU in governmental and nongovernmental hospitals

Chapter Two
Materials and Methods

2.1 Design of study

This study employed a descriptive, cross-sectional design to investigate the knowledge, attitudes, and practice of EBP, as well as the perceived barriers to its implementation among Nurses in hospitals located in Nablus City, Palestine. The study, conducted from December 2023 to June 2024.

2.2 Study site and setting

The study was conducted between December 2023 to June 2024, in Nablus City, situated within Palestine, which encompass Nablus Specialized Hospital, Al Arabi Specialized Hospital, An-Najah National University Hospital, Al-Watani Government Hospital, and Rafidia Governmental Hospital. These hospitals are the main healthcare centers in the city of Nablus Palestine. The study looked at different parts of these hospitals such as Medical/Surgical wards, Intensive Care Units (ICUs), Emergency Rooms, Oncology departments, and other special units found in the hospitals. This approach allowed to manifest realities well and work out the experiences, opinions of HCWs from a various clinical perspective in Nablus hospitals.

2.3 Population of study

The population of interest for this study comprises nurses working in Nablus hospitals, including Nablus Specialized Hospital, Al Arabi Specialized Hospital, An-Najah National University Hospital, Al-Watani Government Hospital, and Rafidia Governmental Hospital. The total population size is 660 nurses (Abukhader et al., 2020) (Zabin et al., 2022), encompassing both governmental and non-governmental hospitals within Nablus city.

2.4 Study sample and sampling technique

In the current study, a combination of sampling techniques was employed to ensure a representative sample of nurses from Nablus hospitals. Initially, The Raosoft sample size calculator (Raosoft, 2004) was utilized to determine the appropriate number of participants from a total population of 660 nurses. By specifying a 95% confidence level, a 5% margin of error, and a response of 50%, a required sample size of 244 nurses was

obtained. However, to anticipate potential non-response or incomplete responses, additional considerations were made.

Out of 300 questionnaires distributed, 275 questionnaires were returned (response rate 91.67%), to account for potential non-response or incomplete responses.

Convenience sampling was used to choose the sample for the study. Participants were selected depending on their availability and desire to take part.

Sample Size Calculation and Distribution

To distribute the questionnaires among hospitals, proportions were calculated based on their respective nurse populations:
The number of nurses in each hospital according to the hospital records show in table (1).

Table 1
Distribution of Questionnaires Among Hospitals Based on Nurse Population

Hospital	Number of Questionnaires Distributed	Percentage of Nurses	Total Nurses
Rafidia Hospital	180	27.27%	67
AL-WATANI GOVEREMNATL HOSPITAL	100	15.15%	36
An-Najah National University Hospital	240	36.36%	89
Nablus Specialized Hospital	60	9.09%	22
Al Arabi Specialized Hospital	80	12.12%	30
Total	660	100%	244

2.5 Inclusion and exclusion criteria

2.5.1 Inclusion criteria

1. Clinical experience at least one year
2. Nurses working in governmental and nongovernmental hospitals.

2.5.2 Exclusion criteria

Temporary Employment Status: Nurses who are not permanently employed at the hospitals.

Incomplete Data: Nurses who have incomplete or missing data required for the study.

Non-Consent: Nurses who do not give consent to participate in the study.

Extended Leave: Nurses who are on extended leave during the study period (e.g., maternity leave, sick leave).

Recent Employment: Nurses who have been employed for a very short period (e.g., less than 1 year), and thus might not have sufficient experience relevant to their studies.

2.6 Study Instrument, validity and reliability

The study followed a systematic approach, beginning with the development of study tools. Subsequently, the study sample was identified. To ensure the quality of the questionnaire, its face and content validity were evaluated by expert academicians in the relevant field. This assessment encompassed considerations such as completeness, appropriateness, clarity of terms, logical sequence of statements, and overall organization and accuracy.

Prior to the commencement of the study, a pilot test of the final questionnaire was conducted among 38 nurses, constituting 10% of the sample. This pilot aimed to assess the clarity and feasibility of the questionnaire. Furthermore, to ensure accessibility to all participants, the final English version was retranslated into Arabic by five proficient Arabic experts, each holding a PhD in nursing.

Reliability testing was conducted using Cronbach's Alpha formula to evaluate the consistency and reliability of the tool.

The questionnaire consists of four parts:

In the first part, the questionnaire includes the introduction, several elements which emphasize the target of the study, kind of data that the researchers need to collect from the study sample in addition to a paragraph aiming at encouraging the targeted individuals to respond frankly on the study questions after satisfying the tested nurses that the information will remain highly confidential and will not be used except for the scientific research only. Additionally, the introduction includes the respondent's approval of responding to the questionnaire items by his signature and date.

The second part focused on gathering demographic information with 10 questions covering aspects such as age, sex, marital status, type of hospital, job title, academic degree, years of service in the hospital, and participation in courses related to scientific evidence and if taken any course related to scientific research, as well as acknowledgment of the link between scientific research and healthcare practice.

The third part involved the administration of the Evidence- Based Practice questionnaire (EBPQ), is a self-completed questionnaire, consisting of twenty-four items divided into three sub-domains: knowledge or skills (14 items), attitudes (4 items), and practice (6 items). Each item is scored on a scale of one to seven, with a higher score associated with a more positive attitude toward EBP or use and knowledge of EBP, and a lower score associated with a negative attitude or use and knowledge of EBP. Responses to each item were considered positive if the scores were greater than 4 (Ammouri et al., 2014). This tool consists of three subscales: practice, knowledge or skills, and attitudes, Internal consistency for EBPQ, the Cronbach's alpha coefficient was 0.91 for the entire questionnaire, 0.84 for the practice subscale, 0.74 for the attitudes subscale and 0.94 for the knowledge/skills subscale (Ammouri et al., 2014).

Previous studies showed that this instrument is substantial and dependable. The past study done to check the validity and reliability of the instrument illustrated a Cronbach's alpha of 0.87 for the whole survey, 0.85 for the practice of EBP sub-scale, 0.79 for the attitudes sub-scale, and 0.91 for the knowledge or skills sub-scale (Upton & Upton, 2006). Construct validity was established using an independent EBP measure yielding a modestly positive relationship between scales. A study done by AbuRuz, Hayeah, Al-Dweik and Al-Akash (AbuRuz et al., 2017b) supported the reliability of this instrument as the following: the Cronbach's alpha coefficient was 0.96 for the entire questionnaire,

0.93 for the practice subscale, 0.82 for the attitudes subscale, and 0.95 for the knowledge/skills subscale .

In this study, the Cronbach's alpha coefficient was 0.926 for the entire questionnaire, 0.867 for the practice subscale. 0.811 for the attitude subscale and 0.930 for the knowledge/skill subscale.

Lastly, fourth part focused on the Barriers to Research Utilization (BRU) questionnaire was developed to evaluate healthcare workers 'and administrators' perceptions of obstacles to implementing research findings in practice (Funk et al., 1991). Barriers to using research/a scale consisting of an item of barriers, each item is rated on a scale from 1 to 4 (1 = not at all, 2 = slightly, 3 = medium, 4 = very severe) reflecting the degree to which it is seen as an obstacle. degree). A "no opinion" response is also allowed.

In Funk's psychometric article, Cronbach's alpha values for the four subscales were 0.80, 0.80, 0.72, and 0.65, individually (Funk et al., 1991), which implies that the tool has good reliability.

(Kajermo et al., 1998) conducted a study to explore nurses' perceptions of barriers to and facilitators of research utilization at two hospitals in Sweden, utilizing The Barriers Scale. Through factor-analytic procedures, they identified four factors: the adopter, the organization, the innovation, and the communication. The Cronbach's alpha coefficient were found to be 0.81, 0.87, 0.86, and 0.83, respectively. In contrast, (Dunn et al., 1997) applied the same scale in a study involving 316 nurses and identified similar factors: nurse, setting, research, and presentation. The total scale exhibited a Cronbach's alpha of 0.85. Factor loadings for the subscales ranged from 0.48 to 0.78.

In this study, the Cronbach's alpha coefficient was 0.869 for EBPQ, and 0.856, 0.850, and 0.831, respectively. The BRU total scale exhibited a Cronbach's alpha of 0.932.
The total scale for total tool exhibited Cronbach's alpha of 0.822.

2.7 Study variable (the independent and dependent variables)

The study includes the following variables:

2.7.1 Independent variables

Sociodemographic characteristics of nurses, including age, sex, marital status, type of hospital, job title, clinical unit (place of work), academic degree, years of service in the hospital, participation in courses related to scientific evidence, participation in courses related to scientific research, and acknowledgment of the link between scientific research and healthcare practice.

2.7.2 Dependent variables

Nurses' EBP knowledge or skills.

Nurses' attitudes towards EBP.

Nurses' EBP practices.

Perceived barriers to EBP utilization, assessed through the BRU scale, which includes characteristics of the nurse, characteristics of the organization, characteristics of the innovation, and characteristics of communication with the organization.

2.8 Procedures

The study followed a systematic approach, beginning with the development of study tools. Subsequently, the study sample was identified. To ensure the quality of the questionnaire, its face and content validity were evaluated by two expert academicians in the relevant field. This assessment encompassed considerations such as completeness, appropriateness, clarity of terms, logical sequence of statements, and overall organization and accuracy.

Prior to the commencement of the study, a pilot test of the final questionnaire was conducted among 38 nurses, they were not included in the study. This pilot aimed to assess the clarity and feasibility of the questionnaire. Furthermore, to ensure accessibility to all participants, the final English version was retranslated into Arabic by five proficient Arabic experts, each holding a PhD in nursing, the Cronbach’s alpha for pilot study was 0.703.

2.9 Statistical Analysis

This chapter discusses the methodology and statistical procedures used to analyze the relationship between nurses' perceptions of EBP and barriers to its utilization in Nablus City hospitals. The EBPQ, statements about the practice, attitude, and knowledge as related to EBP were rated by the respondents on the 1-7 Likert scale, ranging from 1= lowest/negative to 7= highest/positive response. Low response categories were defined to identify priority learning needs: scores ≤ 24 for practice indicated low adherence, scores ≤ 16 for attitude reflected negative attitudes, and scores ≤ 56 indicated insufficient knowledge (Brown et al., 2009), and BRU scale consisting of four subscales: 1) characteristics of the nurse, including their own awareness; 2) characteristics of the organization; 3) characteristics of the innovation; and 4) characteristics of communication within the organization, with total scores ranging from 28 to 112; scores from 28 to 56 are considered low, from 57 to 74 moderate, and between 75 and 112 high (Abuhammad et al., 2020). Normality tests were carried out with the Shapiro-Wilk and Kolmogorov-Smirnov tests. Consequently, non-parametric tests for analysis were used accordingly. The version of SPSS used for data analysis is version 21. Descriptive statistics were used to summarize data on sociodemographic characteristics, as well as their responses to practice, knowledge, attitude, and BRU scores. These statistics included:

- Frequencies and Percentages**:** For categorical variables such as gender, marital status, job title, and hospital type.
- Median with Interquartile Range (IQR)**:** For non-normally distributed continuous variables.
- Mean ± Standard Deviation (SD)**:** For normally distributed continuous variables.

2.9.1 Inferential Statistics

At a significance level of p<0.05p < 0.05p<0.05, the following non-parametric tests were employed:

Kruskal-Wallis Test**:** To evaluate whether there were statistically significant differences in practice, knowledge, attitude, and BRU scores with respect to age, job title, degree, clinical unit, place of study, and years of service in the hospital.

Mann-Whitney U Test**:** To compare practice, knowledge, attitude, and BRU scores with respect to gender, marital status, hospital type, and specific questions about EBP-related courses and the link between research and practice.

Additionally, the research studied the associations of EBP utilization and attitude towards EBP and knowledge associated with EBP and BRU by using Pearson Correlation Coefficient.

2.10 Ethical considerations

To address ethical concerns, this study got approval from An-Najah National University's Institutional Review Board (IRB). The IRB examined the research plan (Ref: Mas.ay.2023/14) to make sure it met ethical standards and protected participants' rights throughout the study. Also, all participants gave verbal informed consent through an official consent form before joining the study. The consent form explained the study's purpose, steps involved possible risks and benefits, privacy measures, and participants' rights. The study assured participants that they could join and leave at any time without any consequences.

The Belmont Report subsequently codifies the ethical protections for individuals, based on principles of respect for persons, beneficence and justice. With IRB approval and informed consent from the participants, these strict ethical standards were desired to maintain the safety and rights of all parties involved.

Chapter Three

Results

4.1 Sociodemographic characteristics

A total of 275 nurses participated in the study as shown table (2), with 46.9% females and 53.1% males. For age, 51.3% were between 20-29 years old, 39.6% between 30-39, while 9.1% were 40 years or older. The current level of education reported indicated that 67.3% had obtained a bachelor's degree, 10.9% a master's degree, and 21.8% had a university nursing diploma. For marital status, 68% were married and 32% were unmarried. Regarding professional experience, 36.7% had less than 5 years, 39.6% had 6-10 years, and 23.6% had over 10 years. Participants worked in the following clinical units: 47.6% in medical/surgical wards, 37.8% in ICUs, 9.5% in the Emergency Department, 1.5% in Oncology, and 3.6% in other wards. As for hospital type, 38.5% were in governmental hospitals and 61.5% in nongovernmental hospitals. Most held the title of registered nurse (89.5%), with 7.3% as Head nurses and 3.3% as practical nurses.

Table 2

Sociodemographic characteristics of the participants (n = 275)

Variable	Frequency (%)	Percentage %
Age		
20-29	141	51.3%
30-39	109	39.6%
≥40	25	9.1%
Gender		
Male	146	53.1%
Female	129	46.9%
Marital status		
Married	187	68%
Unmarried	88	32%
Hospital type		
Governmental	106	38.5%
Non-Governmental	169	61.5%
Job title		
PN	9	3.3%
RN	246	89.5%
HN	20	7.3%
Degree		
Diploma	60	21.8%
BA	158	67.3%
Master	30	10.9%
Clinical unit		
Medical/Surgery	131	47.6%
ICUs	104	37.8%
ER	26	9.5%
Oncology	4	1.5%
Others	10	3.6%
Place of study		
An AL-Najah National University	131	47.6%
Al-Tira College/Ramallah	7	2.5%
Al-Quds University	11	4%
Al-Andalib college	15	5.5%
Al-Rawda College	35	12.7%
University of Jordan	4	1.5%
Ibn Sina	33	12%
Al-Asriya College/ Ramallah	3	1.1%
American University	36	13.1%
Years of service in the hospital		
From 0-5 Years	101	36.7%
From 6-10 Years	109	39.6%
More than 10 Years	65	23.6%

3.2 Participation in Courses and Acknowledgment

A notable proportion of participants as shown in table (3), reported engagement in educational courses relevant to evidence-based practice, with 21.5% indicating participation in courses related to utilizing scientific evidence in practice. Moreover, 45.1% of participants reported completion of courses specifically focused on scientific research. Importantly, a significant majority (76%) acknowledged the vital connection between scientific research and healthcare practice.

Table 3

Nurses' participation in courses related to healthcare practice and research (n = 275)

Statement	Frequency (%)	Percentage %
Receiving courses related to practice using scientific evidence	59	21.5%
Receiving courses related to the scientific research	124	45.1%
There is a link between scientific research and healthcare practice	209	76%

3.3 Descriptive Statistics of Variables Related to Evidence-Based Practice (EBP)

The study's descriptive statistics reveal that nurses in Nablus city have a mean score of 32.52 for evidence-based practice (EBP), with scores ranging from 30.00 to 36.00 and a median of 34.00. Attitudes toward EBP have a mean score of 22.81, interquartile range from 21.00 to 26.00, and a median of 24.00. Knowledge associated with EBP is reported with a mean of 66.78, an interquartile range from 61.00 to 75.00, and a median of 68.00. For barriers to research utilization (BRU), the mean score is 2.08, with an interquartile range from 1.00 to 3.00 and a median of 2.00, showed in table (4).

Table 4

Descriptive Statistics of Variables Related to Evidence-Based Practice (EBP)

Descriptive Statistics				
Median (Q2)	Q1-Q3	Mean	N	
34.00	30.00-36.00	32.52	275	Practice
24.00	21.00-26.00	22.81	275	Attitude toward EBP
68.00	61.00-75.00	66.78	275	Knowledge associated with EBP
2.00	1.00-3.00	2.08	275	The scores of BRU scale range

3.4 Analysis of knowledge, attitude, and practice Levels Related to EBP showed in table (5).

Practice: 92.7% scored above 24, showing a high adherence to EBP practices.

Attitude: 90.5% of the respondents scored above 16, indicating an exceptionally positive attitude toward EBP.

Knowledge: 82.2% of the respondents scored above 56, reflecting a good level of knowledge regarding concepts about EBP.

Table 5 *Analysis of knowledge, attitude, and practice Levels Related to Evidence-Based Practice (n = 275)*

Statement	Frequency (%)	Percentage %
Practice		
=or less than 24	20	7.3
More than 24	255	92.7
Total	257	100
Attitude		
= or less than 16	26	9.5
More than 16	249	100.0
Total	257	100
Knowledge		
= or less than 56	49	17.8
More than 56	226	100.0
Total	257	100

3.5 Description of associations between nurses' characteristics and practice

Individuals between the ages of 20 and 29 had the highest practice scores, with a median score of 34.00 and an interquartile range (IQR) between 31.00 and 37.00 (Q1-Q3). Members of this group showed the highest level of participation in the activities under review, reflecting a strong commitment to practicing and reacting to uncertainty. Individuals between the ages of 30 and 39 had practice scores slightly lower than participants in other age groups, with a median score of 33.00 and an interquartile range from 30.00 to 36.00 (Q1-Q3). Although they were still actively involved, their level of participation seemed slightly less intense than that of younger individuals in the 20-29 age bracket. People over the age of 40: This age group experienced the lowest scores in terms of practice, with a median of 30.00 and an interquartile range between 25.00 and 33.00 (Q1-Q3). Individuals in this group showed the lowest level of engagement in the activities looked at, suggesting a decreased participation in practice and reactions to uncertainty.

Age was found to have a significant impact on evidence-based practice (EBP) practices, with a p-value of less than 0.001.

Men involved in the study had better performance scores, averaging at 34.00 with a range of 31.00 to 37.00 (Q1-Q3). This indicates a steady and fairly strong participation in the activities observed among male participants, showing their active engagement in practicing and responding to uncertainty. Female participants claimed to have lower practice scores, averaging 33.00 with a range of 29.00 to 36.00 (Q1-Q3). This suggests that women were slightly less engaged in the activities than men, indicating a difference in levels of involvement.

Gender had a notable impact on practice (p-value = 0.004), indicating a discrepancy between male and female engagement levels in practice and reactions to uncertainty. Men typically showed greater levels of engagement in comparison to women. Additional research may be needed to uncover the root causes of these disparities and create tactics to encourage equal involvement of all genders in healthcare settings.

Non-governmental hospitals: Individuals from non-governmental hospitals showed better performance results, averaging at 34.00 with a range from 31.00 to 37.00 (Q1-Q3). This shows a steady and fairly strong level of participation in the activities studied among

people in non-governmental hospitals, indicating an engaged approach to dealing with uncertainties. Governmental hospitals had lower practice scores, averaging at 33.00 with a range from 29.00 to 35.00 (Q1-Q3) according to respondents. This implies that people working in governmental hospitals were slightly less engaged in activities than those in non-governmental hospitals, possibly pointing to a difference in levels of involvement.

In the analysis, the following findings were observed regarding practice and responses to uncertainty across job titles:

Registered Nurses (RN): Registered Nurses demonstrated the highest practice scores, with a median of 34.00 and an interquartile range (IQR) from 30.00 to 37.00 (Q1-Q3). This indicates consistent and robust engagement in the examined activities among Registered Nurses, highlighting their active involvement in practice and responses to uncertainty. Head Nurses (HN): Head Nurses exhibited slightly lower practice scores compared to Registered Nurses, with a median of 34.00 and an interquartile range from 30.50 to 36.00 (Q1-Q3). While still demonstrating a moderate level of engagement, it appears that Head Nurses were slightly less involved compared to Registered Nurses, suggesting a slightly diminished level of participation. Practical Nurses (PN): Practical Nurses reported the lowest practice scores among the job titles, with a median of 27.00 and an interquartile range from 26.00 to 35.00 (Q1-Q3). This suggests that Practical Nurses were less frequently involved in the examined activities compared to Registered Nurses and Head Nurses, indicating a lower level of engagement.

Job Title did not significantly influence evidence-based practice (EBP) practices (p-value = 0.090). These findings imply variations in engagement levels across different job titles, with Registered Nurses demonstrating the highest level of involvement, followed by Head Nurses, and then Practical Nurses. Understanding these differences can help tailor strategies to enhance engagement and improve practice and responses to uncertainty among healthcare professionals in different roles.

The type of hospital had a significant impact on practice (p-value = 0.010). The results suggest a potential link between the type of hospital and the levels of engagement in practice and responses to uncertainty. Participants from non-governmental hospitals show greater involvement compared to those from governmental hospitals.

Additional investigation may be needed to comprehend the root causes of these variations and to create tactics for enhancing involvement in various hospital settings.

Master's Degree: Those with a Master's degree showed the best performance, scoring a median of 36.50 and an interquartile range (IQR) between 35.00 and 39.00 (Q1-Q3). This shows that individuals with a Master's degree consistently and strongly participate in the activities studied, demonstrating their active engagement in practice and ability to respond to uncertainty. Bachelor's degree holders showed practice scores slightly below those with a Master's degree, with a median of 34.00 and an interquartile range of 31.00 to 37.00 (Q1-Q3). Although still moderately engaged, individuals with a Bachelor's degree exhibited slightly less involvement than those with a Master's degree, indicating a slightly lower level of participation. Degree Diploma: Individuals holding a diploma had the lowest practice scores compared to other degrees, with a median of 30.50 and an interquartile range of 26.00 to 34.00 (Q1-Q3). This indicates that people with a diploma participated less often in the activities studied in comparison to individuals with Bachelor's or Master's degrees, pointing to a decreased level of involvement.

A Scientific Degree had a major impact on the implementation of evidence-based practice (EBP) (p-value < 0.001). These results emphasize differences in levels of engagement among individuals with varied educational backgrounds, showing that those with a Master's degree exhibit the greatest involvement, followed by those with a Bachelor's degree, and then individuals with a diploma. Comprehending these distinctions can guide specific actions to increase involvement and enhance skills and reactions to unpredictability in healthcare professionals with varying levels of education.

An AL-Najah National University: Engagement levels varied among 131 participants, with a median practice score of 35.00 and quartiles ranging from 32.00 to 37.00 (Q1-Q3). This suggests a relatively consistent level of engagement among participants from this institution. Al-Tira College/Ramallah: Engagement levels varied among 7 participants, with a median practice score of 31.00 and quartiles ranging from 30.50 to 31.50 (Q1-Q3). This indicates a narrower range of engagement compared to other institutions. Al-Quds University: Engagement levels varied among 11 participants, with a median practice score of 27.00 and quartiles ranging from 22.50 to 34.50 (Q1-Q3). This institution showed a wider range of engagement levels, with some participants demonstrating lower levels of involvement. Al-Andalib College: Engagement levels varied among 15 participants,

with a median practice score of 32.00 and quartiles ranging from 25.00 to 34.50 (Q1-Q3). Similar to Al-Quds University, this institution exhibited a wide range of engagement levels. Al-Rawda College: Engagement levels varied among 35 participants, with a median practice score of 30.00 and quartiles ranging from 26.00 to 34.00 (Q1-Q3).

This institution also showed a diverse range of engagement levels. University of Jordan: Engagement levels varied among 4 participants, with a median practice score of 35.00 and quartiles ranging from 30.00 to 36.00 (Q1-Q3). Despite the small sample size, this institution demonstrated relatively consistent engagement levels. Ibn Sina: Engagement levels varied among 33 participants, with a median practice score of 33.00 and quartiles ranging from 30.00 to 35.00 (Q1-Q3). This institution exhibited a moderate range of engagement levels. Al-Asriya College/Ramallah: Engagement levels varied among 3 participants, with a median practice score of 33.00 and quartiles ranging from 27.50 to 33.00 (Q1-Q3). This institution had a smaller sample size but still showed variability in engagement. An-American University: Engagement levels varied among 36 participants, with a median practice score of 34.50 and quartiles ranging from 31.50 to 37.50 (Q1-Q3). This institution also exhibited a wide range of engagement levels.

Place of study significantly influenced evidence-based practice (EBP) practices (p-value < 0.001). These findings highlight the importance of considering the educational background of healthcare professionals when designing strategies to address variations in practice and responses to uncertainty. Tailored approaches may be necessary to effectively support healthcare professionals from different institutions.

0-5 Years of Service: Participants in this group demonstrated varied engagement levels, with a median practice score of 32.00 and quartiles ranging from 30.00 to 37.00 (Q1-Q3). This suggests that healthcare professionals in the early stages of their careers exhibit diverse levels of involvement in practice and responses to uncertainty. 6-10 Years of Service: Participants with 6-10 years of service displayed consistent engagement, with a median practice score of 35.00 and quartiles ranging from 32.00 to 37.00 (Q1-Q3). This indicates a relatively stable level of involvement among healthcare professionals in this mid-career stage. More than 10 Years of Service: Healthcare professionals with more than 10 years of service exhibited varied engagement levels, with a median practice score of 33.00 and quartiles ranging from 27.00 to 35.00 (Q1-Q3). This suggests that those with extensive experience may demonstrate differing levels of involvement in practice and

responses to uncertainty, possibly influenced by factors such as burnout or changing responsibilities over time.

Years of service in the hospital significantly influenced evidence-based practice (EBP) practices (p-value < 0.001).

In the examination of practice and responses to uncertainty, participants were assigned to five distinct clinical units: Medical/Surgery, Intensive Care Units (ICUs), Emergency Room (ER), Oncology, and Other Wards. While there were variations in practice scores across different units, the clinical unit did not significantly influence evidence-based practice (EBP) practices (p-value = 0.134). The observations across units were as follows:

Intensive Care Units (ICUs): Participants in ICUs demonstrated the highest practice scores, with a median of 35.00 and an interquartile range (IQR) from 31.00 to 37.00 (Q1-Q3), indicating consistent and robust engagement in relevant activities.

Other Wards: Similarly, individuals in Other Wards displayed commendable practice scores, with a median of 33.50 and an IQR from 31.00 to 37.00 (Q1-Q3), suggesting a moderate level of engagement.

Medical/Surgery Ward: Participants in the Medical/Surgery ward reported slightly lower practice scores compared to ICUs and Other Wards, with a median of 33.00 and an IQR from 30.00 to 36.00 (Q1-Q3), still indicating substantial involvement.

Oncology Ward: Participants in the Oncology ward demonstrated a decline in practice scores, with a median of 32.50 and an IQR from 28.50 to 34.50 (Q1-Q3), suggesting reduced engagement compared to other units.

Emergency Room (ER): Participants in the Emergency Room (ER) reported the lowest practice scores among the clinical units examined, with a median of 32.00 and an IQR from 30.00 to 34.00 (Q1-Q3), indicating limited involvement.

These findings underscore variations in engagement levels across different clinical units, with individuals in ICUs demonstrating the highest level of involvement, followed by Other Wards, Medical/Surgery wards, Oncology, and Emergency Room. Understanding these differences can inform strategies to enhance engagement and improve practice and responses to uncertainty among healthcare professionals in various clinical settings.

Taking a scientific research course influenced participant engagement levels. Among 124 course completers, engagement varied but skewed towards moderate to high levels, with an interquartile range of 30.00 to 37.00 and a practice score median of 34.00. Conversely, the 151 non-completers showed similar engagement levels, with a range of 30.00 to 36.00 and a median score of 33.00. Despite lacking formal training, some non-completers still exhibited moderate to high participation. Overall, enrolment in the course led to a significant difference in participation responses, as indicated by a p-value of 0.032.

Participants who believed in the link between scientific research and healthcare practice showed varying engagement levels, with quartiles between 31.00 and 37.00 and a median score of 34.00. Those who did not see the connection had quartiles between 30.00 and 36.00 and a median score of 32.00. This suggests that awareness of the relationship between research and practice influenced engagement, with believers showing more participation in practice. The impact of this connection on practice was statistically significant (p-value < 0.001), highlighting the importance of recognizing and utilizing scientific research in healthcare decision-making for improved outcomes, showing in appendix A, table 7.

3.6 Description of associations between nurses' characteristics and knowledge

Head Nurses (HN) showed the highest level of knowledge, with a median score of 74.50 and an interquartile range (Q1-Q3) from 64.50 to 78.00, demonstrating steady involvement. Nurses who are registered (RN) showed slightly lower knowledge scores, with a middle value of 68.00 and a range of scores from 61.00 to 74.00 (Q1-Q3), indicating a moderate level of involvement. Practical Nurses (PN) had the lowest knowledge scores, with a median of 57.00 and an interquartile range of 51.00 to 68.00 (Q1-Q3), suggesting they participated less in the activities analyzed. Knowledge had a notable impact on job title (p-value = 0.018).

In the examination of knowledge and responses to uncertainty across three age groups - 20-29, 30-40, and ≥40 - notable differences in engagement levels emerged. Participants aged 20-29 demonstrated the highest knowledge scores, with a median of 69.00 and an interquartile range (Q1-Q3) spanning from 63.00 to 76.00. Conversely, individuals aged 30-39 exhibited slightly lower knowledge scores, with a median of 67.00 and an interquartile range spanning from 61.00 to 74.00 (Q1-Q3). Those aged 40 and above reported the lowest knowledge scores, with a median of 60.00 and an interquartile range

spanning from 43.00 to 74.00 (Q1-Q3), indicating less frequent involvement in the examined activities.

Age did not significantly influence knowledge (p-value = 0.060).

Examining knowledge and responses to uncertainty across different degrees revealed distinct engagement levels. Participants with a Master's degree showed the highest knowledge scores (median 76.00), indicating consistent engagement. Bachelor's degree holders had slightly lower scores (median 68.00), suggesting moderate engagement. Diploma holders reported the lowest scores (median 57.50), indicating less involvement. Scientific degree was significantly influenced by knowledge (p-value < 0.001). Higher education levels show to correlate with higher engagement levels.

NNU experienced differing engagement levels among 131 participants, with a median of 69.00 and quartiles of 65.00 to 75.00 (Q1-Q3), suggesting a moderate to high level of engagement. On the other hand, 7 participants from Al-Tira College/Ramallah showed decreased levels of participation, with a median of 53.00 and quartiles spanning from 41.50 to 59.00 (Q1-Q3), indicating less regular engagement in the activities under scrutiny.

Al-Quds University had 11 participants with engagement levels ranging from 52.50 to 75.00 (Q1-Q3), and a median of 73.00, showing a combination of moderate to high engagement. Attendees from Al-Andalib College displayed a range of involvement levels among 15 participants, with a median of 56.00 and quartiles spanning from 50.00 to 62.00 (Q1-Q3), indicating diverse levels of participation. At Al-Rawda College, engagement levels among 35 participants showed variation, with a median of 61.00 and quartiles between 53.00 and 69.00 (Q1-Q3), suggesting a moderate level of engagement. The University of Jordan observed different levels of involvement from 4 individuals, with an average of 75.50 and quartiles between 64.00 and 84.00 (Q1-Q3), indicating a combination of moderate and high engagement. At Ibn Sina, the degree of participation differed for 33 individuals, with a middle value of 70.00 and quartiles stretching from 63.00 to 76.00 (Q1-Q3), showing steady engagement. Attendees from Al-Asriya College/Ramallah showed differing levels of participation among 3 attendees, with a median of 62.00 and quartiles spanning from 54.50 to 62.00 (Q1-Q3), suggesting a moderate level of engagement. In conclusion, engagement levels differed among 36

participants at An-American University, with a median of 68.50 and quartiles of 60.50 to 74.00 (Q1-Q3), indicating a combination of moderate to high engagement.

Participants with 0-5 years of service demonstrated varied engagement levels among 101 participants, with a median of 69.00 and quartiles ranging from 63.00 to 75.00 (Q1-Q3), indicating a moderate to high level of involvement. Those with 6-10 years of service displayed consistent engagement among 109 participants, with a median of 69.00 and quartiles ranging from 63.00 to 76.00 (Q1-Q3), suggesting sustained participation over time.

However, participants with more than 10 years of service exhibited varied engagement levels among 65 participants, with a median of 64.00 and quartiles ranging from 55.00 to 72.00 (Q1-Q3), indicating a mix of moderate to lower involvement. These findings underscore the complexity of engagement levels across different tenure groups, suggesting a need for tailored strategies to maintain or enhance involvement, particularly among more experienced healthcare professionals.

Knowledge significantly influenced years of service in the hospital (p-value = 0.002).

Out of the 59 individuals who completed the course, there was a range in engagement levels, with quartiles between 67.00 and 83.00 (Q1-Q3), and a median of 76.00, demonstrating a moderate to high level of participation. On the other hand, out of the 216 individuals who had not participated in the course, there was a range of engagement levels, with quartiles falling between 60.00 and 73.00 (Q1-Q3), and a median of 67.00, indicating a combination of moderate to minimal participation.

Influence of knowledge on participation in courses related to practice using scientific evidence was significant (p-value < 0.001).

Knowledge and responses on course engagement in scientific research were analyzed among 124 participants who had taken the course and 151 who had not. Both groups showed comparable engagement levels, ranging from moderate to high, with quartiles from 57.00 to 78.00 and medians of 66.00 and 71.00, respectively. Participation in scientific research courses was found to be significantly influenced by knowledge (p-value < 0.001). These results suggest that taking a scientific research course may not impact overall engagement levels in knowledge and responses.

Participant perceptions of the relationship between scientific research and healthcare practice were examined, revealing varied engagement levels. Among those who perceived a link, engagement ranged from 64.00 to 78.00 (Q1-Q3) with a median of 71.00, while those who did not perceive the link had engagement levels ranging from 57.00 to 71.00 (Q1-Q3) with a median of 66.00. Knowledge significantly impacted perceptions (p-value < 0.001), showing in appendix A, table 8.

3.7 Description of associations between nurses' characteristics and attitudes

The study examined attitudes and responses to uncertainty across three age groups: 20-29, 30-39, and 40+. The 20-29 group showed the highest engagement in Attitude, with scores ranging from 21.00 to 26.00 and a median of 24.00. Participants aged 30-39 had slightly lower scores but still engaged actively. Those 40 and above reported the lowest Attitude scores, ranging from 18.00 to 23.00 with a median of 20.00, indicating less participation. Age significantly influenced attitudes (p-value = 0.025), with younger individuals demonstrating stronger engagement in the analyzed activities compared to older age groups.

Male and Female distinct differences were observed. Male participants demonstrated higher Attitude scores, with quartiles ranging from 22.00 to 27.00 (Q1-Q3) and a median of 25.00, indicating consistent engagement. Conversely, female participants reported lower Attitude scores, with quartiles ranging from 20.00 to 25.00 (Q1-Q3) and a median of 22.00, suggesting less frequent involvement in the examined activities.

Attitude significantly influenced gender (p-value = 0.001).

In the examination of attitudes and responses to uncertainty across different job titles - Practical Nurse (PN), Registered Nurse (RN), and Head Nurse (HN) - distinct patterns of practice engagement were identified. Registered Nurses (RN) demonstrated the highest Attitude scores, with quartiles ranging from 21.00 to 26.00 (Q1-Q3) and a median of 24.00, indicating consistent engagement. Head Nurses (HN) exhibited slightly lower Attitude scores, with quartiles ranging from 22.50 to 25.50 (Q1-Q3) and a median of 24.00, suggesting a moderate level of engagement. Conversely, Practical Nurses (PN) reported the lowest Attitude scores, with quartiles ranging from 19.00 to 26.00 (Q1-Q3) and a median of 19.00, indicating less frequent involvement.

Attitude did not significantly influence job title (p-value = 0.106).

Participants from non-governmental hospitals demonstrated higher Attitude scores, with quartiles ranging from 22.00 to 27.00 (Q1-Q3) and a median of 25.00, indicating consistent engagement. Conversely, participants from governmental hospitals reported lower Attitude scores, with quartiles ranging from 20.00 to 25.00 (Q1-Q3) and a median of 22.00, suggesting less frequent involvement.

Attitude significantly influenced hospital type (p-value = 0.001).

Participants with a Master's degree demonstrated the highest Attitude scores, with quartiles ranging from 23.00 to 27.00 (Q1-Q3) and a median of 25.00, indicating consistent engagement. Bachelor's degree holders exhibited slightly lower Attitude scores, with quartiles ranging from 22.00 to 27.00 (Q1-Q3) and a median of 25.00, suggesting a moderate level of engagement. Conversely, those with a diploma reported the lowest Attitude scores, with quartiles ranging from 18.00 to 22.00 (Q1-Q3) and a median of 20.50, indicating less frequent involvement.

Attitude significantly influenced scientific degree (p-value < 0.001).

Participants in ICUs exhibited the highest Attitude scores, with quartiles ranging from 22.00 to 27.00 (Q1-Q3) and a median of 25.00, indicating consistent engagement in relevant activities. Similarly, individuals in Other Wards displayed commendable Attitude scores, with quartiles ranging from 20.00 to 27.00 (Q1-Q3) and a median of 23.50, suggesting a moderate level of engagement. Participants in the Medical/Surgery ward reported slightly lower Attitude scores, with quartiles ranging from 21.00 to 26.00 (Q1-Q3) and a median of 23.00, still indicating substantial involvement. However, participants in the Oncology ward demonstrated a decline in Attitude scores, with quartiles ranging from 23.50 to 26.00 (Q1-Q3) and a median of 25.00, suggesting reduced engagement. Finally, participants in the Emergency Room (ER) reported the lowest Attitude scores, with quartiles ranging from 20.00 to 24.00 (Q1-Q3) and a median of 21.00, indicating limited involvement in the examined activities.

Attitude significantly influenced clinical unit (p-value = 0.020).

Engagement levels varied among participants at different institutions. At NNU, 131 participants had a median engagement level of 25.00, while at Al-Tira College/Ramallah,

7 students had a median of 20.00. Al-Quds University had 11 participants with engagement levels ranging from 14.00 to 21.50 and a median of 20.00. 15 participants from Al-Andalib College had a midpoint of 19.00. Al-Rawda College had 35 individuals with a middle value of 21.00. The University of Jordan saw different levels of participation from 4 individuals, Ibn Sina had 33 people involved, and Al-Asriya College/Ramallah had 3 students participating. Finally, An-American University had 36 participants with a median engagement level of 25.00.

Attitude significantly influenced place of study (p-value < 0.001).

Participants with 0-5 years of service demonstrated varied engagement levels, with quartiles ranging from 21.00 to 26.00 (Q1-Q3) and a median of 23.00 among 101 participants. Those with 6-10 years of service displayed consistent engagement, with quartiles ranging from 21.00 to 27.00 (Q1-Q3) and a median of 25.00 among 109 participants. However, participants with more than 10 years of service exhibited varied engagement levels, with quartiles ranging from 19.00 to 25.00 (Q1-Q3) and a median of 22.00 among 65 participants.

Attitude significantly influenced years of service in the hospital (p-value = 0.002).

Among the 59 participants who had taken such a course, engagement levels exhibited variance, with quartiles ranging from 20.00 to 25.00 (Q1-Q3) and a median of 23.00. Conversely, among the 216 participants who had not taken the course, engagement levels also displayed variability, with quartiles ranging from 21.00 to 26.00 (Q1-Q3) and a median of 24.00.

Participation in Courses related to Practice Using Scientific Evidence: Attitude did not significantly influence participation in courses related to practice using scientific evidence (p-value = 0.066).

Among the 124 participants who had taken such a course, engagement levels ranged from moderate to high, with quartiles spanning from 21.00 to 26.00 (Q1-Q3) and a median of 23.00. Conversely, among the 151 participants who had not taken the course, engagement levels were comparable, ranging from moderate to high, with quartiles from 20.00 to 26.00 (Q1-Q3) and a median of 24.00.

Participation in Courses related to Scientific Research: Attitude not significantly influenced participation in courses related to scientific research (p-value = 0.563).

Participants who perceived a link between scientific research and healthcare practice exhibited engagement levels with quartiles ranging from 21.00 to 26.00 (Q1-Q3) and a median of 23.00. On the other hand, participants who did not perceive the link displayed engagement levels with quartiles ranging from 20.00 to 26.00 (Q1-Q3) and a median of 24.00.

Attitude significantly influenced the perception of the link between scientific research and healthcare practice (p-value < 0.001), showing in appendix A, table 9.

3.8 Description of associations between nurses' characteristics and barriers to research utilization

A non-parametric analysis was performed to evaluate the relationship between several professional and demographic characteristics and nurses' perceptions of barriers to using research. Below is a summary of the findings:

Age: For individuals aged 20–29 (n = 141), the median barrier score was 2.00 [1.00-3.00], for those aged 30-39 (n = 109) it was likewise 2.00 [1.00-3.00], and for those aged 40 and above (n = 25), the median was 3.00 [2.00-3.00]. In the age group comparison, the p-value was 0.004, which suggests that there is a statistically significant difference between the age groups.

Gender: For male participants (n = 146), the median barrier score was 2.00 [1.00-3.00], while for female participants (n = 129), it was 2.00 [2.00-3.00]. For the gender comparison, the p-value was 0.003, which means that there is a statistically significant difference between the genders.

Hospital Type: The median barrier score for participants in governmental hospitals (n = 106) was 3.00 [2.00-3.00], whereas the median score for those in non-governmental hospitals (n = 169) was 2.00 [1.00-2.00]. Given that the p-value was less than 0.001, a statistically significant difference was present.

Degree: The median barrier score for nurses with a diploma (n = 60) was 2.00 [2.00-3.00], a bachelor's degree (n = 185) was 1.00 [1.00-3.00], and a master's degree (n = 30) was

1.00 [2.00-2.00]. There was a statistically significant difference between the degree levels, as indicated by the p-value of less than 0.001.

Clinical Unit: The median scores of nurses in ICUs (n = 104) and medical/surgery units (n = 131) were 2.00 [2.00-3.00] and 2.00 [1.00-2.50], respectively. The medians of the other units varied. There was a statistically significant difference among units, as indicated by the p-value of 0.007.

place of study : The research revealed that the median barrier scores varied among the study locations, with NNUH scoring 2.00 [1.00–2.00] and other institutions scoring 3.00 [2.00–3.00]. Given that the p-value was less than 0.001, a statistically significant difference was present.

Years of Hospital Service: The median barrier score for nurses with 0–5 years of service (n = 101) was 2.00 [2.00–3.00], for those with 6–10 years of service (n = 109) it was 2.00 [1.00–2.00], and for those with more than 10 years of service (n = 65), it was 3.00 [2.00–3.00]. Given that the p-value was less than 0.001, a statistically significant difference was present.

In the examination of BRU and responses to uncertainty across job titles - Practical Nurse (PN), Registered Nurse (RN), and Head Nurse (HN) - significant differences were observed. Practical Nurses (PN) demonstrated the highest BRU scores, with a median of 70.00 and an interquartile range (Q1-Q3) spanning from 66.00 to 81.00, indicating consistent engagement. Registered Nurses (RN) exhibited slightly lower BRU scores, with a median of 68.00 and an interquartile range spanning from 56.00 to 78.00 (Q1-Q3), suggesting a moderate level of engagement. In contrast, Head Nurses (HN) reported the lowest BRU scores, with a median of 68.00 and an interquartile range spanning from 58.00 to 74.50 (Q1-Q3), indicating less frequent involvement in the examined activities compared to Practical and Registered Nurses.

BRU did not significantly influence job title (p-value = 0.470).

Link Between Scientific Research and Healthcare Practice: A majority of participants (n = 209) believed there was a link between scientific research and healthcare practice, with a median barrier score of 2.00 [1.00-3.00], while participants who did not believe in a

link (n = 66) had a median score of 2.00 [2.00-3.00]. The p-value was 0.006, indicating a statistically significant difference.

These results highlight the associations between different variables and perceived barriers to research utilization. Further research is needed to explore these relationships in depth.

In the examination of BRU and responses to the question of whether participants received a course on practice using scientific evidence, noteworthy distinctions in engagement levels were observed. Among the 59 participants who had taken such a course, engagement levels exhibited variance, with a median of 71.00 and an interquartile range (Q1-Q3) spanning from 58.50 to 83.00. Conversely, among the 216 participants who had not taken the course, engagement levels also displayed variability, with a median of 66.50 and an interquartile range spanning from 56.00 to 77.00 (Q1-Q3). Participation in Courses related to Practice Using Scientific Evidence: BRU did not significantly influence participation in courses related to practice using scientific evidence (p-value = 0.058).

In the analysis of BRU and responses concerning whether participants had taken a course on scientific research, intriguing results emerged. Among the 124 participants who had taken such a course, engagement levels ranged from moderate to high, with a median of 70.00 and an interquartile range (Q1-Q3) spanning from 58.00 to 77.00. Conversely, among the 151 participants who had not taken the course, engagement levels were comparable, with a median of 65.00 and an interquartile range spanning from 55.50 to 80.00 (Q1-Q3). These findings suggest consistent engagement levels across both groups, regardless of participation in the scientific research course.

Link Between Scientific Research and Healthcare Practice: Participants who did not believe in a link (n = 66) had a median barrier score of 2.00 [2.00-3.00], whereas the majority of participants (n = 209) believed there was a link between scientific research and healthcare practice. With a p-value of 0.006, a statistically significant difference was shown, showing in appendix A, table 10.

3.9 Description of correlations between evidence-based practice, knowledge, attitudes, and barriers to research utilization

Correlation Between EBP and Attitudes Toward Evidence-Based Healthcare Providers:
Pearson correlation coefficient (r) = 0.619**
p-value < 0.001
Interpretation: There is a strong positive correlation ($r = 0.619$, $p < 0.001$) between EBP utilization and attitudes toward evidence-based healthcare providers. This indicates that as EBP utilization increases, attitudes toward evidence-based practice also tend to become more positive.

Correlation Between EBP and Knowledge Associated with EBP in Healthcare Providers:

Pearson correlation coefficient (r) = 0.406**p-value < 0.001

Interpretation: There is a moderate positive correlation ($r = 0.406$, $p < 0.001$) between EBP utilization and knowledge associated with evidence-based practice in healthcare providers. This suggests that higher levels of EBP utilization are associated with greater knowledge of evidence-based practices.

Correlation Between EBP and Barriers of Research Utilization (BRU) in Healthcare Providers:

Pearson correlation coefficient (r) = -0.461** p-value < 0.001

Interpretation: There is a moderate negative correlation ($r = -0.461$, $p < 0.001$) between EBP utilization and barriers of research utilization (BRU) in healthcare providers. This implies that as EBP utilization increases, barriers responses to uncertainty tend to decrease.

Correlation Between Attitudes Toward EBP and Knowledge Associated with EBP in Healthcare Providers:

Pearson correlation coefficient (r) = 0.451** p-value < 0.001

Interpretation: There is a moderate positive correlation ($r = 0.451$, $p < 0.001$) between attitudes toward evidence-based practice and knowledge associated with evidence-based

practice in healthcare providers. This suggests that more positive attitudes toward EBP are associated with higher levels of knowledge in evidence-based practices.

Correlation Between Attitudes Toward EBP and BRU in Healthcare Providers:

Pearson correlation coefficient (r) = -0.486** p-value < 0.001

Interpretation: There is a moderate negative correlation (r = -0.486, p < 0.001) between attitudes toward evidence-based practice and barriers of research utilization (BRU) in healthcare providers. This indicates that more positive attitudes toward EBP are associated with lower levels of barriers response to uncertainty.

Correlation Between Knowledge Associated with EBP and BRU in Healthcare Providers: Pearson correlation coefficient (r) = -0.342** p-value < 0.001

Interpretation: There is a weak negative correlation (r = -0.342, p < 0.001) between knowledge associated with evidence-based practice and barriers (BRU) in healthcare providers. This suggests that higher levels of knowledge in evidence-based practices may be associated with lower levels of barriers response to uncertainty, although the correlation is weak, showed in table 6.

Table 6

Correlations between knowledge, attitudes, practice, and barriers to research utilization

		Attitude toward EBP	Knowledge associated with EBP	BRU total score
EBP	Correlation Coefficient	0.619**	0.406**	-0.461-**
	P-value	< 0.001	< 0.001	< 0.001
Attitude toward EBP	Correlation Coefficient		0.451**	-0.486-**
	P-value		< 0.001	< 0.001
Knowledge associated with EBP	Correlation Coefficient			-0.342-**
	P-value			< 0.001

**Correlation is significant at the 0.01 level (2-tailed).

The key findings from the regression analyses in appendix A table 11 were: evidence-based practice (EBP) - The model accounted for 16.6% of the variance explained, $R^2 = 0.166$. Degree was a positive predictor, B = 3.194, p < 0.001; age was

negatively associated with EBP, B = -2.119, p = 0.005, while gender, marital status and hospital type were not significant predictors of the model.

Attitude to EBP: The model accounted for 17.4% of the variance, $R^2 = 0.174$. Degree contributed significantly and positively, B = 2.533, $p < 0.001$, while age, gender, and years of service showed insignificant associations. Type of hospital was also significant, B = 1.167, p = 0.028.

Knowledge Associated with EBP: The model accounted for 20.9% of the variance ($R^2 = 0.209$). Degree again was significantly positively related (B = 9.193, $p < 0.001$) and age was negatively associated (B = -1.936, p = 0.217). Other predictors such as gender, marital status, and hospital type were not significant predictors.
BRU Scale Range: The model accounted for 24.7% of variance, $R^2 = 0.247$. Degree negatively predicted BRU scale scores, B = -0.270, $p < 0.001$, while the type of hospital had a significant negative effect, B = - 0.619, $p < 0.001$. Age, gender, and years of service did not reach statistical significance in predicting BRU scale scores. Education level repeatedly emerged as a strong predictor: degree positively predicted EBP, attitudes about EBP, and knowledge. Age was negatively associated with EBP and associated knowledge. Other variables came in and out of strength across the different models.

Chapter Four
Discussion

4.1 Assessing Knowledge Levels to Evidence-Based Practice Among Nurses

While score over 56%, at 82.2% of the participants, expressed a higher level of knowledge about EBP, it can be said that most have a good command of EBP concepts. This is similar to other studies, such as one by (Hammad et al., 2020), where the same level of knowledge was found in Jordanian nurses. This is, however, contrary to studies done elsewhere, which reported poor knowledge levels; hence, these results could signal that local educational drives within Nablus City have borne fruits in the acquisition of knowledge among the nurses. The statistically significant relationship between knowledge and involvement in EBP activities, established in this study (p-value < 0.001), asserts the role of knowledge in encouraging the involvement of individuals in EBP, as evidenced in literature by an indication for continuous professional development.

4.2 Palestinian nurses' perceived knowledge associated with EBP, Attitude toward EBP, and EBP

In this study, across the three aspects (Knowledge, Attitude, and Practice), knowledge got the highest median score (76.00). This indicates a strong understanding and awareness among participants regarding the principles and importance of EBP, followed closely by practice (36.50), which suggests that participants are actively engaged in implementing EBP principles in their clinical practice, demonstrating a practical application of their knowledge, then attitude (25.00), This reflects a positive and supportive attitude among participants towards EBP, indicating their willingness and openness to adopting evidence-based approaches in healthcare delivery. In the previous study among Jordanian nurses found that attitude toward EBP had the highest mean score, followed by knowledge connected with EBP, and finally EBP implementation (practice) (Ma'moun & Abu-Moghli, 2020). However, Previous studies in Saudi Arabia found that knowledge of EBP had the highest mean score, while EBP implementation had the highest mean score in another study. However, a study from the Arab world (Ammouri et al., 2014; Ma'moun & Abu-Moghli, 2020) and other countries such as California ,Birmingham and in Mid-Atlantic region found that RNs' attitude toward EBP had the highest mean score (Brown et al., 2009; White-Williams et al., 2013; Williamson et al., 2015).

Knowledge Score: Because the median score for knowledge of EBP was 76.00, nurses have a high degree of awareness of the principles and concepts of EBP. This score means they have a fair knowledge of how to identify, evaluate, and apply research evidence to inform their clinical practice. The findings of the current study are also consistent with previous studies in Jordan and the Arab world (AbuRuz, 2017; Ammouri et al., 2014), However, the current study RNs' scores were higher than those in study(Ammouri et al., 2014; Ma'moun & Abu-Moghli, 2020) and prior studies conducted in other countries. (Farokhzadian et al., 2015; Heydari et al., 2014; Kang & Yang, 2016; Saunders & Vehviläinen-Julkunen, 2016; Skela-Savič et al., 2016). This could be explained by the current study being conducted among RNs in Nablus who are required to keep up to date with current guidelines. A South African study found 82% of the registered nurses within that specific department were not familiar with EBP concepts. It may be necessary in the future to further research RNs' awareness of EBP in a department. (Jordan et al., 2016).

The overall attitude toward EBP generally denotes good participation in this study by the nurse. Previous studies conducted at a regional and international level (Ammouri et al., 2014; Carlone & Igbirieh, 2014; Hamaideh, 2017; Harper et al., 2017; Heydari et al., 2014; Shafiei et al., 2014; Skela-Savič et al., 2016; Thorsteinsson, 2013; White-Williams et al., 2013) have been done that generally indicate that most RNs have a positive attitude toward the adoption of EBP.

This holds particularly true for young nurses, males, those with higher educational qualifications such as master's degrees, and those working in non-governmental hospitals and specialized units. The foregoing mentioned groups had continuously demonstrated higher participation and interest in EBP activities than their counterparts. Accordingly, the findings of this study suggest that only particular sectors of the nursing population have a relatively positive attitude toward EBP, manifested by their willingness to adopt evidence-based approaches in healthcare practice. However, differences in demographic and professional features—signalizing the need for special support and interventions tailored to needs and conditions on an individual level—are necessary in promoting and maintaining it.

Emphasize the positive effects of EBP on practicing nurses while representing varied views. The study conducted in Nablus, Palestine, and comparable worldwide findings in Oman, Saudi Arabia, Iran, and Jordan (AbuRuz, 2017; Ammouri et al., 2014; Shafiei et

al., 2014). emphasize a satisfactory level of EBP adoption among registered nurses, with higher scores attributed to the complexity of patient care and continuing integration of best practices.

In contrast, the overall observation shows different levels of EBP application across demographics and settings, with younger age groups, higher education levels, and non-governmental hospitals demonstrating more consistent EBP practices. However, there is some variation, particularly among nurses with more years of experience or who work in certain wards. perspectives advocate for focused methods to increase EBP consistency, whether through persistent support in departments or tailored interventions targeting demographics and Contextual obstacles to promoting evidence-based nursing practice generally.

The current study found that individuals with graduate education (Master's) reported a statistically significant greater level of knowledge, attitude, and practice of EBP than those with only an undergraduate degree (BSc). Jordanian studies reported similar findings (Ma'moun & Abu-Moghli, 2020) ,The study done in Slovenian Hospitals (Skela-Savič et al., 2016), the mid-Atlantic region (Warren et al., 2016),the Korea (Park et al., 2015),and other researches from many nations have found that higher levels of education, such as master's or doctoral degrees, had a beneficial impact on EBP knowledge, attitude, and practice. (Baird & Miller, 2015; Heydari et al., 2014; Squires, Hutchinson, et al., 2011; Williams et al., 2015).The current study suggests that nurses who hold a graduate degree have received in-depth education related to scientific research and continue to search for the latest information.

More specifically, healthcare professionals who have experienced training in evidence-based practice have very significantly high levels of perceived knowledge on EBP, the attitudes to maintain on applying it right, and extent of the implementation of EBP in practice. This result indicates that actual training is necessary for making nurses more knowledgeable, confident, and truly applying EBP principles in their daily clinical practice. Thus, the implication is that organized efforts at teaching EBP would ensure active uptake of EBP in healthcare settings, exactly as previous studies have. This finding was also corroborated by a former study which found that the correlation of training and education to EBP implementation was positive. (Skela-Savič et al., 2016) . Moreover, findings of the present study are supported by both (Kang & Yang, 2016) and

(Thorsteinsson, 2013), hat found significantly higher EBP implementation among research-active RNs. Still others have reported findings regarding nurses' scores in EBP knowledge to be significantly higher when they had previous EBP training, (Farokhzadian et al., 2015).

However, a study conducted in Jordan found participation in hospital-based research to be significantly negatively associated with EBP implementation. These findings can be explained by the fact that training and continuing education would increase the knowledge of RNs regarding EBP and increase their awareness of its effectiveness, thus, developing a positive attitude toward EBP with the final outcome of extending the implementation.

The results indicated there was a negative correlation between age and knowledge of and attitude toward EBP. This implies that with higher age in both cases, the participants showed less knowledge regarding EBP and also tended to have fewer positive attitudes toward implementing the EBP compared to the younger ones. The study has, therefore, affirmed that age moderates' knowledge and attitude regarding EBP. These findings are in line with previous studies (AbuRuz, 2017; Farokhzadian et al., 2015) (Skela-Savič et al., 2016; Thorsteinsson, 2013; Warren et al., 2016), where it was presented that younger registered nurses had better levels of understanding of evidence-based practice compared to older nurses; at the same time, younger nurses held more positive beliefs and attitudes toward EBP and were likely to practice on evidence. Current findings may be explained by a lack of recent knowledge of scientific research on the part of an older RN, since graduation from nursing school was a long time ago and there was no additional education in research in clinical areas that was obtained after graduation.

The Relationship between Nurses' Perceived Knowledge of EBP and Attitude Toward EBP .

The study has identified that awareness by the nurses about evidence-based practice and implementation of evidence-based practice are significantly positively related to each other. Therefore, those nurses who perceived themselves as having knowledge related to EBP applied more of the EBP concepts and practices in their clinical contexts. This can be related to the belief that more knowledge about EBP will lead to a better implementation (Kang & Yang, 2016) and (Skela-Savič et al., 2016) found that

knowledge linked with EBP correlated positively with its implementation. This positive relationship underscores that the level of understanding of EBP among nurses must be increased through education and training, directly contributing to the implemented practice of nursing care. Therefore, improving nurses' awareness as well as competencies in evidence-based practice are very essential in enhancing great delivery of healthcare.

The results show a great significant relationship between nurses' attitude towards EBP and actual practice of EBP. The implication is that nurses who have a great and positive attitude towards EBP are likely going to practice actively, and from the practice, there will be incorporation of principles and practices of EBP during decision-making and care of patients. An optimistic attitude toward evidence-based practice might be the factor that encourages and motivates nurses to adopt and utilize practice guidelines and recommendations from evidence-based practice. Encouraging a positive attitude toward EBP in nurses through education, training, and support in organizational policies will increase adoption and integration of evidence-based practices in the healthcare settings, which will ultimately lead to better patient outcomes.

It was found that attitude toward research was the only factor that had a consistent positive relationship with research use in the past studies (Estabrooks et al., 2003; Squires, Estabrooks, et al., 2011) and had positive relationship with EBP implementation in other studies.. (Farokhzadian et al., 2015; Kang & Yang, 2016; Skela-Savič et al., 2016; Stokke et al., 2014). From a practical perspective, the results of this study provide insight into the barriers that prevent nurses in Palestinian hospitals from basing their practice on research evidence, such as significant relationships between demographic and various professional variables. Thus, taking into account the results of this study along with those of a similar study conducted by (Hammad et al., 2020), we are able to reach more in-depth conclusions regarding common barriers and situational differences in the way nurses perceive the barriers to basing their practice on research.

By the use of the demographic categories, this study consequently established unique observations on attitudes and participation rates in EBP. Regarding BRU, elderly persons aged 40 years and above ranked highly, meaning that they greatly favored decisions that were evidence-based. In contrast, the younger persons, those aged 20-29, ranked slightly lower pertaining to BRU, which means that they had a potential need to take certain action in order for them to improve participation in EBP.

These findings concur with the previously conducted studies by(Kaseka & Mbakaya, 2022) and (AbuRuz, 2017), that also reported a tendency among healthcare providers for positive attitudes of EBP. These can be interpreted by the need for age-related factors to be considered when promoting EBP decision-making towards all-age people.

Educational qualification was a key factor in determining the level of understanding of evidence-based practice. Those with qualifications such as a Diploma were a little more involved than the latter in activities of Evidence-Based Practice. This finding agrees with prior research that demonstrates a strong link of education level to understanding of Evidence-Based Practice (Kaseka & Mbakaya, 2022).

Additionally, the length of time working in the hospital and involvement in pertinent training programs were discovered to impact participation levels in evidence-based practice. Respondents that had been in the service for over and above 10 years had a different level of participation thus proving that the experience gained in working influences the application of EBP. Similarly, those who had undertaken scientific research classes or used scientific evidence within practice had slightly higher engagement with the topic, highlighting the importance of ongoing professional development to support this area of evidence-based practice (Long & Matthews, 2016).

These findings provide valuable insights into nurse's knowledge, attitudes and practices toward an evidence-based practice (EBP). Many participants had solid foundational knowledge of EBP principles but little to share, in terms of clinical experience using these skills. This difference is consistent with other studies suggesting that nurses have the theoretical knowledge of EBP, but fail to transfer it into practice. In addition, the culture that nurses hold about EBP has a significant effect on implementing into practice. Participants reported a wish to seek EBP, however they were deterred by time limitations and lack of organizational support This is consistent with previous research which has found that while attitudes towards EBP are generally positive, systemic barriers perpetuate a gap between knowledge and practice. Furthermore, the researchers found that educational background had a strong influence on attitudes towards EBP and use of EBP: nurses with higher academic qualifications showed more positive attitude toward evidence based practice as well actual practices.

In this research used the BRU scale to evaluate nurses' perceived obstacles to using research, the tool was explicitly for creating the factual foundation for detailing the barriers that health professionals must overcome to introduce suitable, research-based health-care facilities. More precisely, as much as the previous research work done in Jordan stated (Hammad et al., 2020), it had come to the report that even if, in many situations, barriers involved in the research use by nurses are the same, differences are more probable in other settings

As can be seen in the distribution of barrier scores between three categories, most of them reported moderate level barriers to research utilization (41.1%), high barriers (33.5%), and a smaller percentage reported low barriers (25.5%). While some differences can be detected compared to the outcomes of the study of (Hammad et al., 2020), both studies indicate that nurses experience significant obstacles in using research in practice.

A further analysis of the relationship between professional/demographic characteristics and nurses' attitudes toward what impedes their use of research revealed that attributes such as age, gender, type of hospital, level of education, clinical unit, alma mater, years of experience in the hospital, and belief that there is a positive connection between scientific research and health care practice have an impact on the perceived barriers of using research.

For example, high scores came from the older nurses and those working in public hospitals, indicating that they perceive more barriers against using research. Also, nurses with advanced education and those that could understand the linkage between scientific research and healthcare practice perceived low barriers for use.

Indeed, such results emphasize the importance of custom interventions and strategies at the organizational level to effectively eliminate barriers to research finding utilization. Health facilities can develop custom interventions to improve patient care outcomes by focusing on specific demographic and professional factors.

Findings from this analysis have implications for nursing practice. Clearing away barriers within the very organization and promoting a positive attitude toward evidence-based treatment are considered critical elements in the success of the number of faculty members participating in EBP activities. Filling the gap is important to work against the

gap in evidence-based health care through tailored group, individual literature interventions, and other educative measures to combat the existing gap.

Graduate education should further the development of the said research-oriented culture and a positive attitude toward scientific research to move the nursing profession forward. All the health care organizations might contribute to better patient care outcomes if the nurses are enabled to produce knowledge through research to be translated into practice.

4.3 Limitations and Future Directions

This study had some limitations that need to be taken into account. It should be noted, at the outset that sampling was carried out form hospitals in Nablus City which may not allow for generalization of these results to other regions or health care settings. Furthermore, the use of self-reported data is inherently limited by social desirability bias, meaning that participants might have overestimated their knowledge and attitudes towards EBP. A cross-sectional design only provides a picture of the perceptions by nurses in one time, and not over time or if interventions have occurred. In addition, this study mainly investigated Knowledge ,attitude and practice rather than other important organizational factors such as implementation climate and readiness for change. Additionally, the study could have been subject to response bias as nurses with more interest in EBP may be over-represented. Third, the cultural context of both students and researchers will undoubtedly influence perceptions about EBP practices which remain a quantitative lens on understanding work experiences.

Future research studies will have to apply prospective longitudinal approaches. Educational effects will have to be assessed on the sustainability of evidence-based practice and measures of patient care outcomes. Moreover, examination of the organizational determinants related to leadership support and policies that facilitate research participation can give some valuable suggestions on how to overcome the barriers identified to Evidence-Based Practice.

This study adds to the literature about health professionals' attitudes toward evidence-based decision-making and their engagement in EBP activities. In addition, it investigates demographic and professional factors that determine EBP implementation in healthcare organizations, information helpful in tailoring specific interventions in support of evidence-based practice and better patient care outcomes. Further studies would be needed to clarify these relationships and get informed on how to develop successful strategies for promoting EBP among health providers.

4.4 Conclusions and recommendations

4.4.1 Conclusions

The present study contributes significantly to the literature related to the self-reported knowledge and attitudes of Palestinian nurses about evidence-based practice and their practices. Results: a number of key factors, which may help explain how Nablus nurses integrate evidence-based practices into their clinical practice, are shown. Knowledge of EBP; attitude towards EBP

This leads to the result that the study reported a good knowledge score among Palestinian nurses on the principles of EBP, with a high median score of 76.00. This reveals how well the respondents knew how to identify, assess, and apply research evidence in clinical contexts. Correspondingly, the attitude median score was 25.00, therefore meaning a positive attitude towards EBP and emphasizing that nurses are open and willing to use evidence-based approaches in healthcare delivery.

Previous studies conducted in the region as well as around the world have mixed reports regarding which of the three parts of EBP—knowledge, attitudes, or practice—had the highest mean score. Some studies give a lot of importance to attitudes; however, this research focuses on knowledge for a complicated approach among Palestinian nurses toward the basic knowledge of EBP.

Implications for Practice and Policy

The findings indicate that with better educational qualifications, more knowledge, attitude, and practice regarding EBP were found among graduate nurses. Moreover, the EBP training programs enhance the confidence and effectiveness of nurses in using evidence-based practices. Formal educational programs are thus of great importance in facilitating EBP adoption in hospitals.

Barriers to Research Utilization

Though there were generally quite positive attitudes toward EBP, this study has revealed important barriers to the use of research by nurses, particularly older nurses and nurses working in public hospitals. Such barriers underline individual approaches and institutional strategies aimed at surmounting obstacles and promoting a research-friendly environment in clinical practice.

This study has interrogated various aspects that relate to the acceptance of evidence-based practice, attitudes, knowledge levels, and barriers for utilizing research among healthcare providers, and particularly nurses, in Palestinian hospitals. After the analysis of demographic and professional factors compared to similar studies in the past, a number of important findings have emerged.

First, unique trends in opinions and EBP involvement rates among different demographic categories have been identified. The average BRU score was higher for older respondents, meaning that they had a greater belief in basing decisions on evidence. For the same reason, the younger subjects had somewhat lower scores, which might imply the need for targeted interventions to increase involvement in EBP.

It was found out that one of the determining factors for the extent of involvement in evidence-based practice was higher levels of education; hence, there is a positive relationship between educational qualifications and knowledge levels regarding EBP. In addition, the number of years working in the hospital and the number of relevant training courses attended influence involvement in evidence-based practice, thus indicating the role of continuous professional development in enhancing evidence-informed decision-making.

The findings in this study proved that a majority of the participants had moderate-level research utilization barriers, with age, sex, setting, education level, clinical department, study location, experience years, and beliefs about research as being the determinant variables. These results underscore a call to customized interventions and strategies at organizational levels to surmount such obstacles in the practice of evidence-based practice.

The implications for practice are, therefore, breaking the barriers within the organizations, fostering a positive attitude toward evidence-based decision-making, and nurturing a culture of research intensity in undergraduate education. Healthcare organizations can improve patient care outcomes by empowering nurses to generate new knowledge through research that can be translated into practice and implemented as evidence-based practice.

However, the study's limitations need to be acknowledged in view of the cross-sectional design and reliance on self-report data. Further research should employ longitudinal study designs to assess long-term impacts of educational programs on the use of evidence-based practice and patient outcomes. In addition, research examining how characteristics of organizations can facilitate research use may provide significant insights into strategies for overcoming barriers to EBP.

In other words, this thesis allows us to explain and understand the attitude of healthcare providers toward evidence-based decision-making and their involvement in EBP activities. Identification of demographic and professional factors influencing the performance in EBP will help healthcare organizations institute specific interventions that will foster evidence-based practice and, subsequently, provide positive patient care outcomes. Further research is needed to more fully examine these relationships to better inform the development of effective strategies to promote the EBP among healthcare providers.

4.4.2 Recommendations

The following recommendations can be drawn from the research findings to enhance evidence-based practice uptake and implementation among healthcare professionals in Palestinian healthcare facilities, in particular nurses. Individual strategies must therefore be developed to overcome unique barriers identified across different demographics, most notably young health professionals with scope for change through further education and training. Furthermore, health professionals need to extend their knowledge and skills in EBP and decision-making through continuous professional development. This includes education in the methods of EBP and research. At the same time, organizations should have plans to support the practice of EBP at an organizational level by promoting cultures of curiosity and creativity within practice and providing support for the implementation of EBP. In contrast, if the EBP principle can be inculcated into undergraduate nursing education curricula, it may have the effect of inducing a research-oriented frame of mind at the very beginning of healthcare professionals' careers. Long-term follow-up studies are required to determine whether an educational intervention in EBP is effective and sustained enough to impact patient outcomes, while additional research may be required that focuses on the role of organizational variables in influencing research involvement and EBP implementation. By following these recommendations and advocating for evidence-based practice, healthcare organizations will ensure better patient care outcomes.

In the future, it will tackle demographic and professional disparities in EBP adoption. Interventions targeted to individual age groups, educational levels, and clinical situations would facilitate consistency and effectiveness in EBP. A research-driven environment, established from undergraduate education, would win great abilities in evidence-based decision-making for the nursing profession in the future.

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Appendices

Appendix A

Tables

Table 7

Associations between sociodemographic factors and evidence-based practice (n = 275)

Variable	Frequency	Percentage %	Median [Q1-Q3]	P-value
Age				< 0.001
20-29	141	51.3%	34.00 [31.00-37.00]	
30-39	109	39.6%	34.00[30.00-36.00]	
≥40	25	9.1%	30.00[25.00-33.00]	
Gender				0.004
Male	146	53.1%	34.00[31.00-37.00]	
Female	129	46.9%	33.00[29.00-36.00]	
Marital status				0.503
Married	187	68%	33.00[30.00-36.00]	
Unmarried	88	32%	34.00[30.00-37.00]	
Hospital type				0.010
Governmental	106	38.5%	33.00[29.00-35.00]	
Non-governmental	169	61.5%	34.00[31.00-37.00]	
Job title				0.090
PN	9	3.3%	27.00[26.00-35.00]	
RN	246	89.5%	34.00[30.00-37.00]	
HN	20	7.3%	34.00[30.50 - 36.00]	
Degree				< 0.001
Diploma	60	21.8%	30.50[26.00-34.00]	
BA	158	67.3%	34.00[31.00-37.00]	
Master	30	10.9%	36.50[35.00-39.00]	
Clinical unit				0.134

Medical/Surgery	131	47.6%	33.00[30.00-36.00]	
ICUs	104	37.8%	35.00[31.00-37.00]	
ER	26	9.5%	32.00[30.00-34.00]	
Oncology	4	1.5%	32.50[28.50-34.50]	
Other	10	3.6%	33.50[31.00-37.00]	
Place of study				< 0.001
An AL-Najah National University	131	47.6%	35.00[32.00-37.00]	
Al-Tira College/Ramallah	7	2.5%	31.00[30.50-31.50]	
Al-Quds University	11	4%	27.00[22.50-34.50]	
Andalib college	15	5.5%	32.00[25.00-34.50]	
Rawda College	35	12.7%	30.00[26.00-34.00]	
University of Jordan	4	1.5%	35.00[30.00-36.00]	
Ibn Sina	33	12%	33.00[30.00-35.00]	
Al-Asriya College/ Ramallah	3	1.1%	33.00[27.50-33.00]	
American University	36	13.1%	34.50[31.50-37.50]	
Years of service in the hospital				< 0.001
From 0-5 Years	101	36.7%	32.00[30.00-37.00]	
From 6-10 Years	109	39.6%	35.00[32.00-37.00]	
More than 10	65	23.6%	33.00[27.00-35.00]	
Have you received any course related to practice using scientific evidence?				0.465
Yes	59	21.5%	33.00[29.50-35.50]	
No	216	78.5%	34.00[30.00-37.00]	
Have you taken any course related				0.032

to scientific research?				
Yes	124	45.1%	34.00[30.00-37.00]	
No	151	54.9%	33.00[30.00-36.00]	
Is there a link between scientific research and health care practice?				< 0.001
Yes	209	76%	34.00[31.00-37.00]	
No	66	24%	32.00[30.00-36.00]	

Table 8

Associations between sociodemographic factors and knowledge of evidence-based practice (n = 275)

Variable	Frequency	Percentage %	Median [Q1-Q3]	P-value
Age				0.060
20-29	141	51.3%	69.00 [63.00-76.00]	
30-39	109	39.6%	67.00[61.00-74.00]	
≥40	25	9.1%	60.00[43.00-74.00]	
Gender				0.720
Male	146	53.1%	68.00[63.00-74.00]	
Female	129	46.9%	68.00[58.00-75.00]	
Marital status				0.558
Married	187	68%	68.00[59.00-75.00]	
Unmarried	88	32%	68.00[63.00-74.00]	
Hospital type				0.427
Governmental	106	38.5%	69.00[60.00-77.00]	
Non-governmental	169	61.5%	68.00[62.00-74.00]	

Job title				0.018
PN	9	3.3%	57.00[51.00-68.00]	
RN	246	89.5%	68.00[61.00-74.00]	
HN	20	7.3%	74.50[64.50-78.00]	
Degree				< 0.001
Diploma	60	21.8%	57.50[50.50-67.50]	
BA	158	67.3%	68.00[63.00-74.00]	
Master	30	10.9%	76.00[73.00-80.00]	
Clinical unit				0.251
Medical/Surgery	131	47.6%	68.00 [60.00-74.00]	
ICUs	104	37.8%	69.00 [64.00-76.50]	
ER	26	9.5%	64.50 [56.00-72.00]	
Oncology	4	1.5%	69.00 [62.50-74.00]	
Other	10	3.6%	67.00 [53.00-78.00]	
Place of study				< 0.001
An AL-Najah National University	131	47.6%	69.00 [65.00-75.00]	
Al-Tira College/Ramallah	7	2.5%	53.00 [41.50-59.00]	
Al-Quds University	11	4%	73.00 [52.50-75.00]	
Andalib college	15	5.5%	56.00 [50.00-62.00]	
Rawda College	35	12.7%	61.00 [53.00-69.00]	
University of Jordan	4	1.5%	75.50 [64.00-84.00]	
Ibn Sina	33	12%	70.00 [63.00-76.00]	

Al-Asriya College/ Ramallah	3	1.1%	62.00 [54.50-62.00]	
American University	36	13.1%	68.50 [60.50-74.00]	
Years of service in the hospital				0.002
From 0-5 Years	101	36.7%	69.00 [63.00-75.00]	
From 6-10 Years	109	39.6%	69.00 [63.00-76.00]	
More than 10	65	23.6%	64.00 [55.00-72.00]	
Have you received any course related to practice using scientific evidence?				< 0.001
Yes	59	21.5%	76.00 [67.00-83.00]	
No	216	78.5%	67.00 [60.00-73.00]	
Have you taken any course related to scientific research?				< 0.001
Yes	124	45.1%	71.00 [64.00-78.00]	
No	151	54.9%	66.00 [57.00-71.00]	
Is there a link between scientific research and health care practice?				< 0.001
Yes	209	76%	71.00 [64.00-78.00]	
No	66	24%	66.00 [57.00-71.00]	

Table 9

Associations between sociodemographic factors and attitudes toward evidence-based practice (n = 275)

Variable	Frequency	Percentage %	Median [Q1-Q3]	P-value
Age				0.025
20-29	141	51.3%	24.00 [21.00-26.00]	
30-39	109	39.6%	24.00 [21.00-26.00]	
≥40	25	9.1%	20.00 [18.00-23.00]	
Gender				0.001
Male	146	53.1%	25.00 [22.00-27.00]	
Female	129	46.9%	22.00 [20.00-25.00]	
Marital status				0.441
Married	187	68%	24.00[21.00-26.00]	
Unmarried	88	32%	24.00[21.00-26.50]	
Hospital type				0.001
Governmental	106	38.5%	22.00[20.00-25.00]	
Non-governmental	169	61.5%	25.00[22.00-27.00]	
Job title				0.106
PN	9	3.3%	19.00[19.00-26.00]	
RN	246	89.5%	24.00[21.00-26.00]	
HN	20	7.3%	24.00[22.50-25.50]	
Degree				< 0.001
Diploma	60	21.8%	20.50[18.00-22.00]	
BA	158	67.3%	25.00[22.00-27.00]	
Master	30	10.9%	25.00[23.00-27.00]	
Clinical unit				0.020
Medical/Surgery	131	47.6%	23.00 [21.00-26.00]	
ICUs	104	37.8%	25.00 [22.00-27.00]	
ER	26	9.5%	21.00 [20.00-24.00]	

Oncology	4	1.5%	25.00 [23.50-26.00]	
Other	10	3.6%	23.50 [20.00-27.00]	
Place of study				< 0.001
An AL-Najah National University	131	47.6%	25.00[23.00-27.00]	
Al-Tira College/Ramallah	7	2.5%	20.00 [19.50-22.50]	
Al-Quds University	11	4%	20.00 [14.00-21.50]	
Andalib college	15	5.5%	19.00 [16.50-21.00]	
Rawda College	35	12.7%	21.00 [18.00-23.00]	
University of Jordan	4	1.5%	26.50 [24.50-28.00]	
Ibn Sina	33	12%	22.00 [21.00-26.00]	
Al-Asriya College/ Ramallah	3	1.1%	21.00 [18.50-21.50]	
American University	36	13.1%	25.00[21.50-26.00]	
Years of service in the hospital				0.002
From 0-5 Years	101	36.7%	23.00 [21.00-26.00]	
From 6-10 Years	109	39.6%	25.00 [21.00-27.00]	
More than 10	65	23.6%	22.00 [19.00-25.00]	
Have you received any course related to practice using scientific evidence?				0.066
Yes	59	21.5%	23.00 [20.00-25.00]	
No	216	78.5%	24.00 [21.00-26.000]	
Have you taken any course related to scientific research?				0.563
Yes	124	45.1%	23.00 [21.00-26.00]	
No	151	54.9%	24.00 [20.00-26.00]	
Is there a link between scientific research and health care practice?				< 0.001
Yes	209	76%	23.00 [21.00-26.00]	
No	66	24%	24.00 [20.00-26.00]	

Associations between sociodemographic factors and barriers to research utilization (n = 275)

Table 10

Associations between sociodemographic factors and barriers to research utilization (n = 275)

Variable	Frequency	Percentage %	Median [Q1-Q3]	P-value
Age				0.004
20-29	141	51.3%	02.00 [01.00-03.00]	
30-39	109	39.6%	02.00 [01.00-03.00]	
≥40	25	9.1%	03.00 [02.00-03.00]	
Gender				0.003
Male	146	53.1%	02.00 [01.00-03.00]	
Female	129	46.9%	02.00 [02.00-03.00]	
Marital status				0.124
Married	187	68%	02.00 [02.00-03.00]	
Unmarried	88	32%	02.00 [01.00-03.00]	
Hospital type				< 0.001
Governmental	106	38.5%	03.00 [02.00-03.00]	
Non-governmental	169	61.5%	02.00 [01.00-02.00]	
Job title				0.364
PN	9	3.3%	02.00 [02.00-03.00]	
RN	246	89.5%	02.00 [01.00-03.00]	
HN	20	7.3%	02.00 [02.00-02.50]	
Degree				< 0.001
Diploma	60	21.8%	02.00 [02.00-03.00]	
BA	158	67.3%	01.00 [01.00-03.00]	
Master	30	10.9%	01.00 [02.00-02.00]	
Clinical unit				0.007
Medical/Surgery	131	47.6%	02.00 [02.00-03.00]	
ICUs	104	37.8%	02.00 [01.00-02.50]	
ER	26	9.5%	02.00 [02.00-03.00]	
Oncology	4	1.5%	02.00 [01.50-02.00]	
Other	10	3.6%	02.50 [02.00-03.00]	
Place of study				< 0.001
An AL-Najah National University	131	47.6%	02.00 [01.00-02.00]	
Al-Tira College/Ramallah	7	2.5%	03.00 [02.00-03.00]	
Al-Quds University	11	4%	03.00 [02.00-03.00]	

Andalib college	15	5.5%	03.00 [02.50-03.00]	
Rawda College	35	12.7%	02.00 [02.00-03.00]	
University of Jordan	4	1.5%	03.00 [02.50-03.00]	
Ibn Sina	33	12%	03.00 [02.00-03.00]	
Al-Asriya College/ Ramallah	3	1.1%	03.00 [02.50-03.00]	
American University	36	13.1%	02.00 [01.50-02.00]	
Years of service in the hospital				< 0.001
From 0-5 Years	101	36.7%	02.00 [02.00-03.00]	
From 6-10 Years	109	39.6%	02.00 [01.00-02.00]	
More than 10	65	23.6%	03.00 [02.00-03.00]	
Have you received any course related to practice using scientific evidence?				0.173
Yes	59	21.5%	02.00 [02.00-03.00]	
No	216	78.5%	02.00 [01.00-03.00]	
Have you taken any course related to scientific research?				0.549
Yes	124	45.1%	02.00 [02.00-03.00]	
No	151	54.9%	02.00 [01.00-03.00]	
Is there a link between scientific research and health care practice?				0.006
Yes	209	76%	02.00 [01.00-03.00]	
No	66	24%	02.00 [02.00-03.00]	

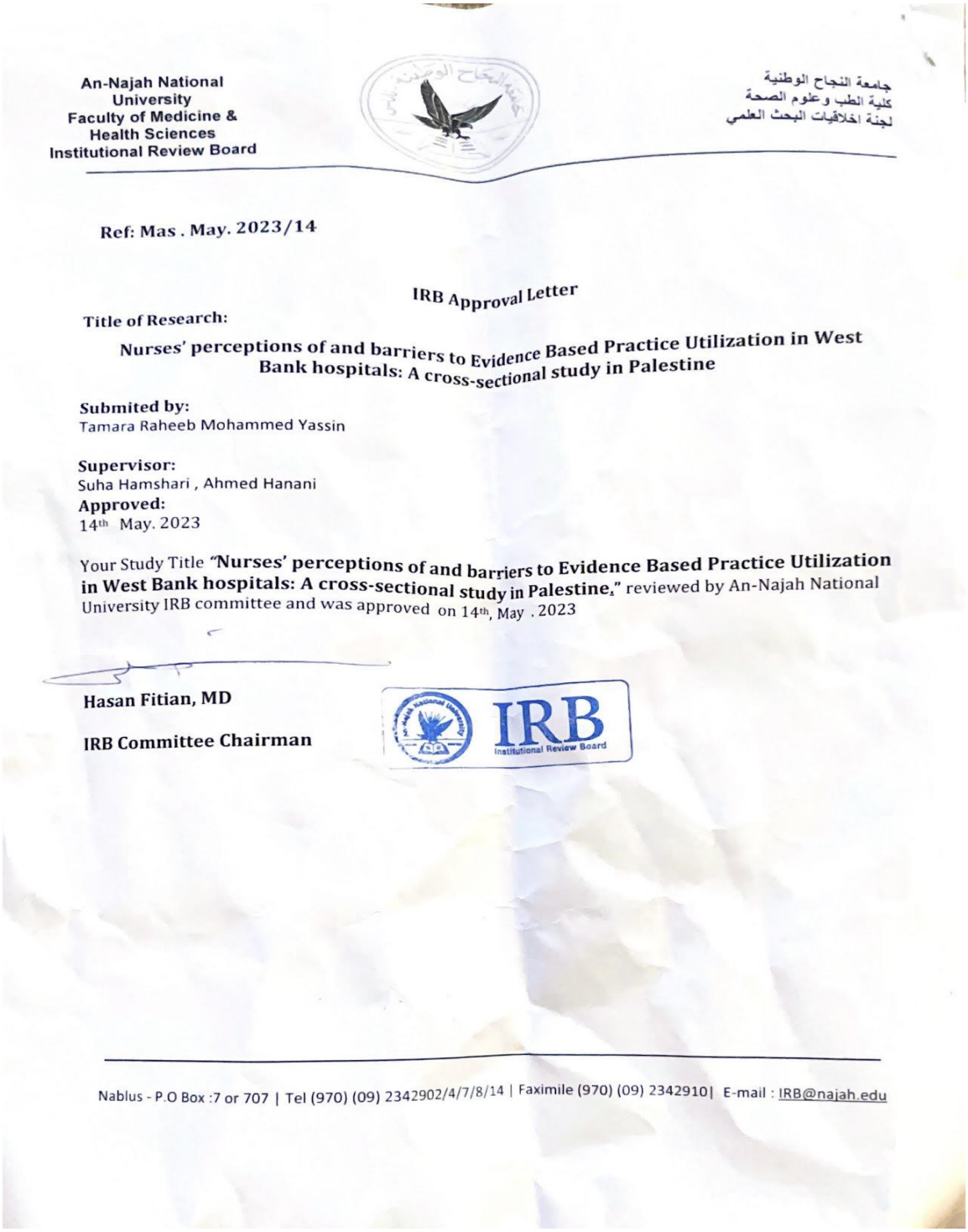
Table 11

Model Comparison: Coefficients, ANOVA, and Residuals

Variable	EBP	Attitude toward EBP	Knowledge associated with EBP	BRU Scale Scores
Model Summary				
R	0.408	0.417	0.457	0.497
R Square	0.166	0.174	0.209	0.247
Adjusted R Square	0.145	0.152	0.188	0.227
Std. Error of the Estimate	5.35527	4.10847	11.09272	0.67246
ANOVA				
F	7.618	8.012	10.088	12.479
Sig	0.000	0.000	0.000	0.000
Coefficients				
Constant	29.971	17.613	57.203	3.275
Age	-2.119	-0.721	-1.936	-0.078
Gender	-0.670	-0.675	1.131	0.175
Marital Status	-0.146	0.394	0.267	-0.032
Hospital Type	0.391	1.167	-2.049	-0.619
Degree	3.194	2.533	9.193	-0.270
Clinical Unit	-0.184	0.057	-0.406	0.026
Years of Service in the Hospital	0.386	0.020	--1.467	0.095
Residuals Statistics				
Minimum Predicted Value	26.6239	18.3108	53.5041	1.3819
Maximum Predicted Value	37.8428	27.0914	81.7213	2.9098
Mean Predicted Value	35.5200	22.8145	66.7818	2.0800
Std. Deviation of Predicted Value	2.36254	1.85881	5.63131	0.37969
Minimum Residual	22.32730	14.98534	-41.32330	-1.71580
Maximum Residual	12.70187	8.85415	42.87012	1.46626
Mean Residual	0.00000	0.00000	0.00000	0.00000
Std. Deviation of Residual	5.28642	4.05565	10.9510	0.66381

Appendix B

IRP Approval



An-Najah National University
Faculty of Medicine & Health Sciences
Institutional Review Board

جامعة النجاح الوطنية
كلية الطب وعلوم الصحة
لجنة اخلاقيات البحث العلمي

Ref: Mas . May. 2023/14

IRB Approval Letter

Title of Research:

Nurses' perceptions of and barriers to Evidence Based Practice Utilization in West Bank hospitals: A cross-sectional study in Palestine

Submited by:
Tamara Raheeb Mohammed Yassin

Supervisor:
Suha Hamshari , Ahmed Hanani
Approved:
14th May. 2023

Your Study Title **"Nurses' perceptions of and barriers to Evidence Based Practice Utilization in West Bank hospitals: A cross-sectional study in Palestine,"** reviewed by An-Najah National University IRB committee and was approved on 14th, May . 2023

Hasan Fitian, MD

IRB Committee Chairman

IRB Institutional Review Board

Nablus - P.O Box :7 or 707 | Tel (970) (09) 2342902/4/7/8/14 | Faximile (970) (09) 2342910| E-mail : IRB@najah.edu

Appendix C

Study Instrument (Questionnaire)

نموذج موافقة على المشاركة في دراسة/بحث علمي

عنوان الدراسة وأهدافها :

عنوان الدراسة : تصورات الممرضين وحواجز استخدام الممارسات القائمة على الأدلة في مستشفيات الضفة الغربية: دراسة شاملة للقطاعات الحكومية و الغير حكومية في فلسطين

نحن طلاب جامعة النجاح الوطنية , كلية الطب وعلوم الصحة في برنامج إدارة الصحة العامة ,نود إشراك العاملين من الطاقم التمريضي في المستشفيات الضفة الغربية, فلسطين في هذه الدراسة (القطاع الحكومي ,القطاع الغير حكومي) ، حيث يهدف الاستبيان إلى دراسة تصورات الممرضين وحواجز استخدام الممارسات القائمة على الأدلة في المستشفيات .

والبيانات التي يتم جمعها سيتم التعامل معها بموضوعية وسرية تامة، حيث لن يتم جمع أي اسم من الممرضين المشاركين في الدراسة وسيتم التعامل معهم بأرقام بيانية فقط ، ويمكن للمشاركين في الانسحاب في أي وقت يرونه ، كما ونؤكد لكم أن المعلومات لن تصل إلا إلى الباحث وسوف تستخدم لأغراض خاصة بالبحث فقط، وستبقى ضمن حدود السرية والخصوصية ولن يتم نشرها في أي مكان ونتحمل كافة المسؤولية عن نشر أي منها ,إجابتك عن الاستبيان تعني الموافقة على المشاركة في الدراسة.

وفقًا للقانون 2003/196 بشأن حماية المعلومات الشخصية، لن تتم معالجة البيانات إلا في شكل إجمالي ولن يترتب عليها أي نشر للاسم. حيث تم اتخاذ جميع الاحتياطات اللازمة بحيث لا يمكن من خلال المعلومات الواردة في الاستبيان تتبع الشخص الذي قام بتجميعها، وبالتالي سيكون مجهول الهوية تمامًا مما يسمح بفتح الردود.

تشكل عودة الاستبيان المكتمل قبولًا ضمنيًا لاستخدام البيانات للهدف المذكور أعلاه

ما هي المخاطر والفوائد من المشاركة في الدراسة ؟

لا يوجد مخاطر لهذه الدراسة عليك, بل على العكس ,سوف تساعدنا في دراسة تصورات الممرضين وحواجز استخدام الممارسات القائمة على الأدلة في المستشفيات

للاستفسار التواصل عبر البريد الالكتروني التالي :

t.yaseen@najah.edu

(القسم الأول):المعلومات الشخصية

1. العمر : _____

2. الجنس : □ ذكر □ أنثى

3. الحالة الاجتماعية: □ متزوج □ غير متزوج

4. نوع المستشفى : □مستشفى حكومي □ مستشفى غير حكومي

5. المسمى الوظيفي :□ مساعد/ة ممرض □ممرض/ة □ رئيس/ة القسم □ مشرف/ة التمريض

6. الدرجة العلمية : □ دبلوم □ بكالوريوس □ ماجستير □ دكتوراه

7. مكان العمل (الوحدة السريرية): □ الوحدات الطبية والجراحية □وحدات العناية المركزة □أقسام العمليات □وحدات الأورام □وحدات الطوارئ □ غيرها (_____)

8. مكان الدراسة: (_____)

9. سنوات الخدمة في المستشفى : (_____)

10. هل تلقيت أي دورة تتعلق بالممارسة باستخدام الأدلة العلمية : □ نعم □ لا

11. هل تلقيت أي دورة تتعلق بالبحث العلمي : □ نعم □ لا

12. هل يوجد ربط بين البحث العلمي و ممارسة الرعاية الصحية ؟ □ نعم □ لا

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.

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

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

1. بالنظر إلى ممارستك فيما يتعلق برعاية المريض الفردي على مدار العام الماضي ، كم مرة فعلت ما يلي ردًا على فجوة في معرفتك (من فضلك √ أو X):

Formulated a clearly answerable question as the beginning of the process towards filling this gap **صياغة سؤال واضح يمكن الإجابة عليه كبداية للعملية نحو سد هذه الفجوة:**		
Frequently **كثيرًا**	□□□□□□□	**Never** **أبدا**
Tracked down the relevant evidence once you have formulated the question: **تتبع الأدلة ذات الصلة بمجرد صياغة السؤال:**		
Frequently **كثيرًا**		**Never** **أبدا**
Critically appraised, against set criteria, any literature you have discovered: **تقييم نقدي ، مقابل معايير محددة ، أي أدبيات اكتشفتها:**		
Frequently **كثيرًا**	□□□□□□□	**Never** **أبدا**
Integrated the evidence you have found with your expertise: **دمج الأدلة التي وجدتها مع خبرتك:**		
Frequently **كثيرًا**	□□□□□□□	**Never** **أبدا**

Evaluated the outcomes of your practice: **تقييم نتائج ممارستك:**		
Frequently **كثيرًا**	▫▫▫▫▫▫▫	**Never** **أبدا**
Shared this information with colleagues **مشاركة هذه المعلومات مع الزملاء:**		
Frequently **كثيرًا**	▫▫▫▫▫▫▫	**Never** **أبدا**

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

) إلى المكان الذي ستضع فيه نفسك على المقياس لكل زوج من العبارات التالية:2X. يرجى الإشارة (بواسطة √ أو

New evidence is so important that I make the time in my work schedule **الدليل الجديد مهم جدًا لدرجة أنني أجعل الوقت في جدول عملي**	▫▫▫▫▫▫▫	**My workload is too great for me to keep up to date with all the new evidence** **عبء عملي أكبر من أن أتمكن من مواكبة كل الأدلة الجديدة**
I welcome questions on my practice **أرحب بأسئلة حول ممارستي**	▫▫▫▫▫▫▫	**I resent having my clinical practice questioned** **أنا مستاء من استجواب ممارستي السريرية**
Evidence based practice is fundamental to professional practice **تعتبر الممارسة القائمة على الأدلة أساسية للممارسة المهنية**	▫▫▫▫▫▫▫	**Evidence based practice is a waste of time** **الممارسة المبنية على الأدلة مضيعة للوقت**
My practice has changed because of evidence I have found **لقد تغيرت ممارستي بسبب الأدلة التي وجدتها**	▫▫▫▫▫▫▫	**I stick to tried and trusted methods rather than changing to anything new** **أنا متمسك بالأساليب المجربة والموثوقة بدلاً من التغيير إلى أي شيء جديد**

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

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

Please circle one number for each statement **الرجاء وضع دائرة على رقم واحد لكل بيان**							
الأفضل **(BEST)**				**الأضعف** **(POOR)**			
7	6	5	4	3	2	1	**Research skills** **مهارات البحث**
7	6	5	4	3	2	1	**IT Skills** **مهارات تقنية المعلومات**
7	6	5	4	3	2	1	**Monitoring and reviewing of practice skills** **مراقبة ومراجعة مهارات الممارسة**
7	6	5	4	3	2	1	**Converting your information needs into a research question** **تحويل احتياجاتك من المعلومات إلى سؤال بحث**
7	6	5	4	3	2	1	**Awareness of major information types and sources** **الوعي بأنواع ومصادر المعلومات الرئيسية**
7	6	5	4	3	2	1	**Ability to identify gaps in your professional practice** **القدرة على تحديد الفجوات في ممارستك المهنية**
7	6	5	4	3	2	1	**Knowledge of how to retrieve evidence** **معرفة كيفية استرجاع الأدلة**
7	6	5	4	3	2	1	**Ability to analyse critically evidence against set standards** **القدرة على تحليل الأدلة النقدية مقابل معايير محددة**
7	6	5	4	3	2	1	**Ability to determine how valid (close to the truth) the material is** **القدرة على تحديد مدى صحة المادة (قريبة من الحقيقة) هي**
7	6	5	4	3	2	1	**Ability to determine how useful (clinically applicable) the material is** **القدرة على تحديد مدى فائدة المادة (القابلة للتطبيق سريريًا)**
7	6	5	4	3	2	1	**Ability to apply information to individual cases** **القدرة على تطبيق المعلومات على الحالات الفردية**
7	6	5	4	3	2	1	**Sharing of ideas and information with colleagues**

							تبادل الأفكار والمعلومات مع الزملاء
7	6	5	4	3	2	1	**Dissemination of new ideas about care to colleagues** **نشر الأفكار الجديدة حول الرعاية للزملاء**
7	6	5	4	3	2	1	**Ability to review your own practice** **القدرة على مراجعة ممارساتك الخاصة**

Third Section :Barriers to Research Utilization Scale القسم الثالث : معوقات استخدام البحث/مقياس				
no extent غير موافق على الإطلاق	a little extent موافق إلى مدى صغير جدا	a moderate extent موافق إلى مدى معتدل	a great extent موافق إلى مدى كبير جدا	FACTOR 1. CHARACTERISTICS OF THE ADOPTER: The nurse's research values, skills, and awareness العامل الأول: خصائص المتابع: القيم البحثية للممرضة ومهاراتها ووعيها
				The nurse does not see the value of research for practice 1. لا يرى الممرض قيمة للبحث العلمي في الممارسة التمريضية
				The nurse sees little benefit for self 2. يرى الممرض أن البحث العلمي يعود له بمنفعة قليلة
				The nurse is unwilling to change/try new ideas 3.الممرض/ة غير مستعد/ة لتغيير / تجربة أفكار جديدة.
				There is not a documented need to change practice 4.لا توجد حاجة موثقة لتغيير الممارسة.
				The nurse feels the benefits of changing practice will be minimal 5. تشعر أن فوائد تغيير الممارسة ستكون ضئيلة.
				The nurse does not feel capable of evaluating the quality of the research 6.لا تشعر بأنك قادر على تقييم جودة البحث.
				The nurse is isolated from knowledgeable colleagues with whom to discuss the research 7. الممرض/ة معزول/ة عن الزملاء المطلعين الذين تناقش معهم البحث.

				The nurse is unaware of the research 8.لست على دراية بالبحث.
FACTOR 2. CHARACTERISTICS OF THE ORGANIZATION: Setting barriers and limitations العامل الثاني :خصائص المنظمة: وضع الحواجز والقيود				
				Administration will not allow implementation 9.لن تسمح الإدارة بالتنفيذ.
				Physicians will not cooperate with implementation 10.لن يتعاون الأطباء مع التنفيذ.
				There is insufficient time on the job to implement new ideas 11.لا يوجد وقت كاف في العمل لتنفيذ أفكار جديدة.
				Other staff are not supportive of implementation 12.الموظفون الآخرون لا يدعمون التنفيذ.
				The facilities are inadequate for implementation 13. المرافق غير كافية للتنفيذ.
				The nurse does not feel she/he has enough authority to change patient care procedures 14.لا تشعر بأن لديك السلطة الكافية لتغيير إجراءات رعاية المريض.
				The nurse does not have time to read research 15.ليس لديك الوقت لقراءة البحث.
				The nurse feels results are not generalizable to own setting 16.تشعر بأن النتائج غير قابلة للتعميم على الوضع الخاص.
FACTOR 3. CHARACTERISTICS OF THE INNOVATION: Qualities of the research العامل الثالث: خصائص الابتكار: صفات البحث				
				The research has methodological inadequacies 17.البحث يحتوي على أوجه قصور منهجية.
				The conclusions drawn from the research are not justified 18.الاستنتاجات المستخلصة من البحث غير مبررة.
				The research has not been replicated

				19.لم يتم تكرار البحث.
				The literature reports conflicting results 20.تشير الأدبيات إلى نتائج متضاربة.
				The nurse is uncertain whether to believe the results of the research 21.الممرض غير متأكد مما إذا كان سيصدق نتائج البحث.
				Research reports/articles are not published fast enough 22.لا يتم نشر التقارير/المقالات البحثية بالسرعة الكافية.
FACTOR 4. CHARACTERISTICS OF THE COMMUNICATION: العامل الرابع . خصائص الاتصال:				
				Implications for practice are not made clear 23.لم يتم توضيح الآثار المترتبة على الممارسة.
				Research reports/articles are not readily available 24.التقارير/ المقالات البحثية غير متاحة بسهولة.
				The research is not reported clearly and readably 25.لم يتم الإبلاغ عن البحوث بشكل واضح ومقروء.
				Statistical analyses are not understandable 26.التحليلات الإحصائية غير مفهومة.
				The relevant literature is not compiled in one place 27.لم يتم تجميع الأدبيات ذات الصلة في مكان واحد.
				The research is not relevant to the nurse's practice 28.البحث ليس له علاقة بممارسة الممرض/ة

جـامعـــة النجاح الوطنية

كليـــة الدراســـات العليـــا

تصورات الممرضين والعوائق التي تحول دون استخدام الممارسة المبنية على الأدلة في مستشفيات الضفة الغربية: دراسة مقطعية في فلسطين

إعداد

تمارا رهيب ياسين

إشراف

د. سهى همشري

قدمت هذه الرسالة استكمالا لمتطلبات الحصول على درجة الماجستير في إدارة الصحة العامة، من كلية الدراسات العليا، في جامعة النجاح الوطنية، نابلس– فلسطين.

2024

تصورات الممرضين للمعرفة والممارسة والمواقف والحواجز المتصورة أمام الممارسة القائمة على الأدلة في مستشفيات مدينة نابلس

إعداد

تمارا رهيب ياسين

إشراف

د. سهى همشري

الملخص

خلفية البحث: إن أهمية الممارسة القائمة على الأدلة في التمريض تشكل اعتبارًا حقيقيًا في تقديم رعاية تمريضية عالية الجودة. وقد هدفت هذه الدراسة البحثية إلى تقييم مستوى المعرفة والموقف تجاه الممارسة القائمة على الأدلة بين الممرضين والتحديات التي يواجهونها في تنفيذ هذا المستوى من الممارسة في مستشفيات مختارة في مدينة نابلس، فلسطين.

الطريقة: أكمل ما مجموعه 275 ممرضًا المقابلة المنظمة باستخدام استبيانات مصممة للحصول على معلومات ديموغرافية وموقف تجاه الممارسة القائمة على الأدلة ومستوى المعرفة والحواجز أمام استخدام البحث في ممارسة التمريض.

النتائج: أظهرت النتائج أن معظم المشاركين (82.2٪) يمتلكون مستوى من المعرفة حول الممارسة القائمة على الأدلة والذي تم تصنيفه على أنه مرتفع مع متوسط درجة المعرفة 76.00 وعلى الرغم من هذا المستوى المشجع من المعرفة، إلا أنه لوحظت تحديات في الاستخدام الفعال للممارسة القائمة على الأدلة حيث أشار (41.1٪) من المستجيبين إلى تحديات معتدلة بينما أشار (33.5٪) إلى تحديات عالية. من الناحية الإحصائية، كانت مواقف الممارسة القائمة على الأدلة الإيجابية مرتبطة بشكل كبير بمستويات المعرفة (r = .451، p < .001) في حين أن مواقف الممارسة القائمة على الأدلة السلبية ترتبط بحواجز استخدام البحث (r = −.486، p < .001).

الاستنتاجات: تقدم الدراسة المعرفة كعامل أساسي لتعزيز المشاركة في الممارسة القائمة على الأدلة، مع التأكيد على الحاجة إلى وضع تدابير تعليمية مناسبة للتغلب على التحديات التي تم تحديدها بالفعل. بالإضافة إلى ذلك، تظهر الدراسة أن فهم موقف الممرضين تجاه البحث العلمي يساعد على فهم المشاكل التي يواجهونها. وهذا مهم لمؤسسات الرعاية الصحية التي تسعى إلى تحسين جودة رعاية المرضى من خلال استخدام الممارسات القائمة على الأدلة. ومع ذلك، في الدراسات اللاحقة، يجب التركيز على الدراسات الطولية التي تقيم تأثير تنفيذ البرامج التعليمية على الممارسة القائمة على الأدلة ونتائج المرضى بمرور الوقت.

الكلمات المفتاحية : المعرفة، الموقف، الممارسة، الممارسة القائمة على الأدلة، حواجز استخدام البحوث، الممرضين.