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Among Universiti Malaysia Sarawak (UNIMAS)
Undergraduate Nursing Student**

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KNOWLEDGE AND ATTITUDE REGARDING EVIDENCE-BASED
PRACTICE AMONG UNIVERSITI MALAYSIA SARAWAK (UNIMAS)
UNDERGRADUATE NURSING STUDENT

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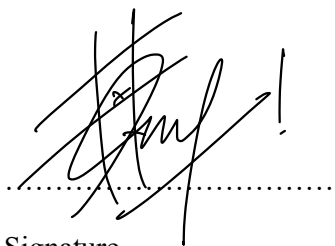
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DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Malaysia Sarawak. Except where due acknowledgements have been made, the work is that of the author alone. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

A handwritten signature in black ink, appearing to read 'Arden', is written over a horizontal dotted line.

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ABSTRACT

Evidence-Based Practice (EBP) plays a crucial role in ensuring high-quality, patient-centred nursing care. Despite its relevance, nursing students often encounter challenges in acquiring the knowledge and maintaining the attitudes needed for its effective application. This study aimed to assess the level of knowledge and attitude regarding EBP among undergraduate nursing students at Universiti Malaysia Sarawak (UNIMAS), and to examine the relationship between the two variables. A quantitative, cross-sectional design was employed, and data was collected using the Student Evidence-Based Practice Questionnaire (S-EBPQ) and the Evidence-Based Practice Beliefs Scale (EBPBS). A total of 126 students from Year 2 to Year 4 participated through simple random sampling. Descriptive statistics revealed that 66.67% of respondents had moderate to high EBP knowledge, while attitudes were more varied, with 33.33% demonstrating positive attitudes and 36.51% exhibiting low attitudes. A Pearson correlation analysis showed a moderate positive relationship between knowledge and attitude ($r = 0.519$, $p < 0.001$). These findings suggest that while knowledge levels are generally adequate, practical barriers may hinder students' attitudes toward EBP. Strengthening clinical mentorship, enhancing curriculum integration, and improving institutional support are essential strategies to promote better EBP implementation in future nursing practice.

Keywords: Evidence-Based Practice, nursing students, knowledge, attitude, UNIMAS

ABSTRAK

Amalan Berasaskan Bukti (EBP) memainkan peranan penting dalam memastikan penjagaan kejururawatan yang berkualiti tinggi dan berpusatkan pesakit. Walaupun EBP sangat relevan, pelajar kejururawatan sering menghadapi cabaran dalam memperoleh pengetahuan dan mengekalkan sikap yang positif untuk pelaksanaan EBP yang berkesan. Kajian ini bertujuan untuk menilai tahap pengetahuan dan sikap terhadap EBP dalam kalangan pelajar kejururawatan prasiswazah di Universiti Malaysia Sarawak (UNIMAS), serta mengkaji hubungan antara kedua-dua pemboleh ubah tersebut. Reka bentuk kajian secara kuantitatif dan keratan rentas telah digunakan, dan data dikumpulkan menggunakan Student Evidence-Based Practice Questionnaire (S-EBPQ) serta Evidence-Based Practice Beliefs Scale (EBPBS). Seramai 126 pelajar Tahun 2 hingga Tahun 4 telah dipilih secara rawak mudah. Statistik deskriptif menunjukkan bahawa 66.67% responden mempunyai tahap pengetahuan EBP yang sederhana hingga tinggi, manakala sikap terhadap EBP lebih pelbagai, dengan 33.33% menunjukkan sikap positif dan 36.51% mempunyai sikap rendah. Analisis korelasi Pearson menunjukkan hubungan positif sederhana antara pengetahuan dan sikap ($r = 0.519$, $p < 0.001$). Dapatan ini mencadangkan bahawa walaupun tahap pengetahuan adalah memuaskan, halangan praktikal masih menghambat sikap pelajar terhadap EBP. Pengukuhan bimbingan klinikal, penambahbaikan kurikulum, dan sokongan institusi yang kukuh merupakan strategi penting dalam mempromosikan pelaksanaan EBP yang lebih baik dalam amalan kejururawatan masa hadapan.

Kata kunci: Amalan Berasaskan Bukti, pelajar kejururawatan, pengetahuan, sikap, UNIMAS

TABLE OF CONTENTS

	Page
DECLARATION	i
ACKNOWLEDGEMENT	ii
ABSTRACT	iii
ABSTRAK	iv
TABLE OF CONTENTS	v
LIST OF FIGURES	ix
LIST OF ABBREVIATIONS	x
CHAPTER 1 INTRODUCTION	1
1.1 Study Background	1
1.2 Problem Statement	3
1.3 Objectives	4
1.3.1 Research Questions	4
1.3.2 General Research Objectives	5
1.3.3 Specific Research Objectives	5
1.4 Hypothesis	5
1.5 Significant of the study	6
1.6 Operational and conceptual definitions	7
1.7 Chapter summary	10

CHAPTER 2 LITERATURE REVIEW	11
2.1 Introduction	11
2.2 Knowledge regarding evidence-based practice	12
2.3 Attitudes toward evidence-based practice	14
2.4 Relationships between knowledge and attitude regarding evidence practice	15
2.5 Conceptual Framework	19
2.6 Summary	20
CHAPTER 3 METHODOLOGY	21
3.1 Introduction	21
3.2 Research Design	21
3.3 Research Settings	22
3.4 Inclusion and exclusion criteria	22
3.5 Sampling Method and sample size	23
3.5.1 Sampling method	23
3.5.2 Sample size	23
3.6 Study Instrument	25
3.7 Reliability and Validity	26
3.8 Ethical Considerations	26
3.9 Data collection procedure	27
3.9.1 Pilot study	27

3.9.2	Pilot Study Findings	28
3.9.3	Actual study	29
3.10	Data Analysis Method	31
3.11	Summary	31
	CHAPTER 4 RESULT	32
4.1	Introduction	32
4.1.1	Preliminary Analysis	32
4.2	Socio-demographics characteristics	33
4.3	Level of knowledge regarding evidence-based practice	39
4.4	Level of attitude regarding evidence-based practice	41
4.5	Relationship between knowledge and attitude regarding evidence-based practice	43
	CHAPTER 5 DISCUSSION	45
5.1	Introduction	45
5.2	Knowledge Regarding Evidence-Based Practice	45
5.3	Attitude Regarding Evidence-Based Practice	46
5.4	Relationship between knowledge and attitude	47
5.5	Implication for Nursing Education and Practice	48
5.6	Study limitations	49
5.7	Conclusion	49
	REFERENCES	51

LIST OF FIGURES

	Page
Figure 2.5.1 Conceptual Framework	20
Figure 3.9.1 Flowchart of data collection procedure	30
Figure 4.2.1 Distribution of participants by gender (n=126)	33
Figure 4.2.2 Distribution of participants by religion (n=126)	33
Figure 4.2.3 Distribution of participants by race (n=126)	34
Figure 4.2.4 Distribution of participants by year of study (n=126)	35
Figure 4.2.5 Histogram of age distribution (n=126)	36
Figure 4.2.6 Histogram for week of clinical experience (n=126)	37
Figure 4.3.1 Histogram of knowledge total score (n=126)	38
Figure 4.3.2 Level of knowledge among participants (n=126)	39
Figure 4.4.1 Histogram of attitude total score (n=126)	40
Figure 4.4.2 Attitude levels among participants (n=126)	42
Figure 4.5.1 Scatter plot of total score for attitude by total score for knowledge	44

LIST OF ABBREVIATIONS

EBP	Evidence-Based Practice
EBPBS	Evidence-Based Practice Belief Scale
FMHS	Faculty of Medicine and Health Sciences
PET	Practice question, Evidence, Translation
SEBPQ	Student Evidence-Based Practice Questionnaire
SPSS	Statistical Package for the Social Sciences
UNIMAS	Universiti Malaysia Sarawak

CHAPTER 1

INTRODUCTION

1.1 Study Background

Evidence-based practice (EBP) has emerged as a fundamental approach to improve healthcare quality by integrating the best available research, clinical expertise, and patient preferences into decision-making processes (Nielsen et al., 2023). Evidence-based practice differs from traditional care approaches where it systematically combines scientific evidence with individualized care, ensuring that interventions are effective, patient-centred, and adaptable to diverse clinical scenarios. This method is markedly essential in the promoting of standardization of care, patient safety, and improving overall health outcomes (Jeong et al., 2024). This approach also creates a working environment that aimed at improvement and creativity in healthcare settings which benefit both patients and healthcare providers.

The process of EBP is structured in a series of methodical steps that provide guidelines for making decisions in healthcare professionals. These steps include formulating a clear clinical question, systematically searching for and critically appraising relevant research, integrating the evidence with clinical expertise and patient preferences, and evaluating the outcomes of the decisions made (Dusin et al., 2023). This systematic process which closing the gap between theory and practice ensures that healthcare decisions are made based on most appropriate and up-to-date information. By adhering to these steps, healthcare professionals can enhance the quality of care delivered and achieve better patient outcomes.

Several efforts have been made towards incorporating EBP into clinical practice, such as developing frameworks which offer step-by-step assistance to practitioners. Notable ones

are the Iowa Model of Evidence-Based Practice, and the Johns Hopkins Nursing Evidence Based Practice Model. The Iowa Model focuses on identifying clinical issues through problem-focused or knowledge-focused triggers and emphasizes team-based strategies to implement evidence-based changes. Meanwhile, the Johns Hopkins Model utilizes the PET process (Practice question, Evidence, and Translation), offering practical tools for appraising and applying evidence systematically (Brunt & Morris, 2023). The frameworks are helpful to nursing students and professionals in enabling them to understand EBP and use it in different clinical situations.

For nursing students, developing knowledge and positive attitudes toward EBP is very important. As future healthcare providers, they must be able to make informed decisions that align with the evolving demands of healthcare. These skills allow them to evaluate the evidence, accept the best practices, and ensure that they stay current within the field. Research highlights that embedding EBP into nursing education enhances the quality of patient care, fosters clinical competence, and ensures preparedness for real-world challenges (Jeong et al., 2024).

Despite its recognized importance, the implementation of EBP among nursing students suffers from several challenges such as a lack of resources like access to research journals which keep the students from accessing the latest evidence. Time constraints, due to academic and clinical duties which limit their capacity to explore EBP comprehensively. Additionally, limited clinical exposure and insufficient opportunities to apply EBP in real clinical settings contribute to a gap between theoretical knowledge and practice. The existing negative views of EBP, which is regarded as unnecessarily theoretical and time-consuming,

also compounds these issues and reduces the willingness to work on its principles (Jeong et al., 2024).

To address these barriers, it requires several interventions in nursing education, such as improving access to EBP resources, integrating practical EBP applications into curricula, and fostering positive attitudes through mentorship and experiential learning. Research across various contexts underscores that nursing students with positive attitudes toward EBP are more likely to engage with and apply its principles effectively.

1.2 Problem Statement

Evidence-based practice (EBP) is an important method used in healthcare to improve patient outcomes by combining research evidence, clinical skills, and patient values. However, many nursing students still face challenges in understanding and applying EBP in clinical settings. Research shows that some students lack the knowledge needed to use EBP effectively, which may affect their confidence and ability to make informed decisions in patient care (Gassas, 2021).

Besides knowledge, attitude also plays a major role in how EBP is practiced. Some students feel that EBP is difficult, time-consuming, and not practical in real clinical situations, especially with academic and clinical tasks burden (Pitsillidou et al., 2023). In addition, some clinical instructors and preceptors do not promote EBP, making it harder for students to see its value and learn to apply it properly. Differences in how EBP is taught in nursing programs also cause some students to be less prepared than others.

Other common barriers include limited access to journals, lack of time to read research, and low confidence in using online databases. Some students also have limited chances to apply EBP during their clinical placements, which makes it difficult to connect what they learn in class with real practice. These challenges make it important to understand how much nursing students know about EBP and what their attitudes are toward it.

In Malaysia's growing healthcare system, these issues are especially important. At Universiti Malaysia Sarawak (UNIMAS), it is necessary to explore how students view and understand EBP to help improve their learning. This study focuses on identifying the level of knowledge and attitude toward EBP among undergraduate nursing students at UNIMAS, to support better education and prepare students for future nursing practice.

1.3 Objectives

1.3.1 Research Questions

- i. What is the level of knowledge regarding evidence-based practice among UNIMAS undergraduate nursing students?
- ii. What is the level of attitude among UNIMAS undergraduate nursing students towards the implementation of evidence-based practice in nursing care?
- iii. Is there any significant relationship between knowledge and attitude regarding the implementation of evidence-based practice in nursing among UNIMAS undergraduate nursing students?

1.3.2 General Research Objectives

This study aims to investigate the knowledge and attitude regarding evidence-based practice among Universiti Malaysia Sarawak (UNIMAS) Undergraduate Nursing Student.

1.3.3 Specific Research Objectives

- i. To assess the level of knowledge regarding evidence-based practice among UNIMAS undergraduate nursing students
- ii. To assess the level of attitude among UNIMAS undergraduate nursing students toward the implementation of evidence-based practice in nursing care.
- iii. To examine the relationship between knowledge and attitude regarding evidence-based practice in nursing among UNIMAS undergraduate nursing students.

1.4 Hypothesis

Null Hypothesis (H_0) = There is no significant relationship between knowledge and attitude regarding the implementation of evidence-based practice among Universiti Malaysia Sarawak (UNIMAS) Undergraduate Nursing Students.

Alternative Hypothesis (H_A) = There is a significant relationship between knowledge and attitude regarding the implementation of evidence-based practice among Universiti Malaysia Sarawak (UNIMAS) Undergraduate Nursing Students.

1.5 Significant of the study

This study is crucial to identify how well nursing students at UNIMAS understand and feel about evidence-based practice (EBP). Knowing this can help improve how EBP is taught and supported in nursing programs. If students have low knowledge or negative attitudes toward EBP, changes can be made to the curriculum, teaching methods, and support systems to help them learn better.

By understanding both the knowledge and attitude of students, educators can plan better ways to teach EBP and give students more chances to practice it in clinical settings. For example, more guidance from instructors, better access to research resources, and real examples of EBP in practice could make students more confident and interested in using it.

This study also helps show the link between what students know and how they feel about EBP. If students with better knowledge also have better attitudes, this could suggest that improving education can also improve motivation. This is important for developing future nurses who are ready to provide high-quality care.

In the long term, this study helps improve nursing education at UNIMAS and support the healthcare system in Malaysia. When students are well prepared to use EBP, they are more likely to deliver safer and more effective care to their patients.

1.6 Operational and conceptual definitions

Terms	Conceptual Definition	Operational Definition
Knowledge	Define as highly esteemed state where an individual is in cognitive contact with reality (Zagzebski, 2020).	In this study, knowledge refers to the level of understanding that undergraduate nursing students have about evidence-based practice (EBP), including formulating clinical questions, searching for evidence, appraising research, and applying findings in clinical decision-making. It is measured using the Student Evidence-Based Practice Questionnaire (S-EBPQ) developed by Upton et al. (2015). The S-EBPQ consists of 21 items divided into four subscales: practice, attitude, retrieving and reviewing evidence, and

		sharing and applying EBP. Each item is rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Higher scores indicate greater knowledge and confidence in using EBP.
Attitude	Defined as a collection of feeling, beliefs and action directed towards specific items, person or events (Cherry, 2023).	Attitude in this study refers to nursing students' feelings, beliefs and actions to engage in the use of EBP in clinical care. This is assessed using the Evidence-Based Practice Beliefs Scale (EBPBS) developed by Melnyk et al. (2008). EBPBS includes 16 items, each rated on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Total scores range from 16 to 80,

		with higher scores reflecting more positive attitudes toward EBP, including belief in its value, confidence in one's ability to implement it, and perceived importance for clinical practice.
Evidence-Based Practice	Define as integration of the highest-quality evidence from systematic research with the clinical expertise of nurses, along with patient preferences and available resources (Jeong et al., 2024)	In this study, application of research-supported practices in clinical decision-making among UNIMAS undergraduate nursing students.

1.7 Chapter summary

In summary, understanding and implementation of knowledge and fostering positive attitudes are crucial elements in the successful implementation of evidence-based practice (EBP) in nursing practice. The aim of this study is to assess the level of knowledge and attitude regarding EBP among undergraduate nursing students at Universiti Malaysia Sarawak (UNIMAS). The significance of this study is to enhance the understanding of EBP concepts and attitudes and ultimately prepare nursing students at UNIMAS to provide high-quality, evidence-based care in their future clinical practice.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter provides a comprehensive analysis of the existing literature related to evidence-based practice (EBP) and its importance in nursing education. The aim is to evaluate the knowledge and attitudes of undergraduate nursing students toward EBP especially to those studying at Universiti Malaysia Sarawak (UNIMAS). Evidence-based practice acknowledged as a crucial component of high-quality healthcare delivery, requiring nursing students to develop the necessary competencies to incorporate research evidence into clinical decision-making.

The literature for this review has been sourced from reputable databases, including PubMed, Google Scholar, and MEDLINE. These platforms were chosen for their reliability, accessibility, and inclusion of peer-reviewed studies relevant to nursing education and EBP. To ensure the literature reflects the latest developments in EBP, the review incorporates studies published within the last six years (2019–2025) and is limited to English-language publications.

A targeted search strategy was employed using primary keywords such as “evidence-based practice,” “nursing students,” “knowledge,” and “attitude.” Additional combinations, including “EBP competency in nursing,” “attitudes toward EBP in nursing education,” and “nursing students’ knowledge of EBP,” were used to broaden the review’s scope. This approach ensures the inclusion of diverse perspectives on the subject matter while maintaining a focus on the study’s objectives.

To maintain the quality and relevance of the review, included studies were evaluated based on their methodology, sample size, reliability, and validity. Priority was given to research with robust methods and significant findings, ensuring that the review provides a clear and comprehensive understanding of the current state of knowledge and attitudes toward EBP among nursing students. This literature review will serve as the foundation for identifying gaps and informing strategies to enhance EBP education at UNIMAS.

2.2 Knowledge regarding evidence-based practice

Evidence-based practice (EBP) is recognized as a crucial component of nursing education and practice, equipping students with the knowledge and skills to provide high-quality, patient-centred care. Evaluations of EBP competency among undergraduate nursing students worldwide highlight varying levels of understanding, attitudes, and skills, emphasizing the need for enhanced educational strategies.

A study conducted by Miliara et al. (2024) evaluated the EBP competency of 175 Greek nursing students at the Hellenic Mediterranean University Department of Nursing using the Evidence-Based Practice Competence Questionnaire. The results demonstrate that the average score of nursing students' competency was at a moderate level with an average level of 3.03 ± 0.26 , with attitudes, skills, and knowledge similarly ranked. This reflects the moderate level of knowledge among the nursing students.

Similarly, research by Truc et al. (2024) involving 178 nursing students at Can Tho University of Medicine and Pharmacy revealed a moderate level of knowledge in evidence-based practice (EBP), with a mean score of 3.02 ± 0.70 , indicating a need for enhanced theoretical instruction. The researcher emphasized the importance of integrating EBP more

thoroughly into nursing curricula, particularly through practical training and critical appraisal exercises, to strengthen students' readiness for clinical application.

A descriptive survey by Pranata et al. (2023) examined EBP understanding among 41 nursing students in Palembang, Indonesia. The results showed that 5% of participants demonstrated good understanding while 42% were found to have sufficient understanding. However, the majority, which was 51%, were noted to have poor knowledge highlighting a significant knowledge gap. The study highlights how educational institutions can play a critical role in designing robust training programs that enhance students' comprehension and application of EBP which can potentially improve patient care outcomes.

Another cross-sectional study by Koç (2023) attitudes as well as knowledge related to EBP were assessed among 196 nursing students in Turkey. The findings revealed that students in general did not demonstrate satisfactory levels of knowledge, attitude and behaviour which resulted in the need for important amendments to the curriculum to make EBP focused. The analyses conducted revealed barriers to EBP adoption that engaged students in evidence-based practices.

Lastly, an experimental study conducted by Vincent et al. (2023) among 36 nursing students in Pakistan to measure the effect of an EBP educational program on nursing students' competence. There is a significant gap in knowledge noted. The study concluded that integrating theoretical and practical lessons into clinical training could significantly enhance students' EBP competencies, advocating comprehensive educational interventions.

Overall, the findings across these studies demonstrate a consensus on the importance of enhancing EBP knowledge and attitudes among nursing students through curriculum revisions, targeted educational programs, and practical skill development. For UNIMAS

nursing students, integrating these insights into the nursing curriculum could ensure better preparedness for evidence-based practice and eventually enhance the result of patient care.

2.3 Attitudes toward evidence-based practice

A descriptive survey by Alrasheadi (2023) which conducted among 311 Saudi postgraduate nursing students assessed their attitudes, knowledge, and practice regarding EBP using the Evidence-Based Practice Questionnaire (EBPQ). This study showed that the participants had a good attitude toward EBP practice with a mean score of 5.81 ± 1.08 for attitude showed that the respondents are willing to use EBP in their nursing practice. These results indicate a strong willingness to engage with EBP in nursing practice. However, the study's focus only on postgraduate students which limits the generalizability of its findings to undergraduate nursing students.

Similarly, a study by Elmagd & Alharbi (2024) among 130 nursing students at Umm Al-Qura University employed a descriptive cross-sectional design to evaluate attitude and intentions toward EBP among Saudi nursing students. The results showed a positive attitude among nursing students where 68.46% were willing to practice EBP in their nursing care. However, the utilization of convenience sampling limited the representativeness of the results, indicating a need for more in-depth research is required to validate these results.

In Tunisia, a descriptive cross-sectional study by Tlili et al. (2022) among 365 nursing students utilized the Evidence-Based Practice Competencies Questionnaire (EBP-COQ) to assess attitudes, skills, and knowledge related to EBP. Students scored the highest in attitude subscale with a mean of 4.04 ± 0.41 compared to their skills (3.05 ± 0.77) and knowledge (2.70 ± 0.74) subscales, suggesting a very positive attitude towards EBP, despite feeling that their skills and knowledge were lower than expected. This study identified barriers to EBP

implementation in low-resource settings, such as limited access to research data, and argued the need for focused measures to enhance EBP competencies.

An exploratory study conducted among 125 nursing undergraduates at the School of Nursing of Universidade de São Paulo found a high level of positive attitudes towards EBP, with a mean score of 4.73 ($SD = 0.79$) on the Evidence-Based Practice Questionnaire. The research underlined the need for incorporating EBP concepts into nursing education to further enhance a positive attitude and increase use (Myakava et al., 2021).

Finally, a study from Turkey examined 213 nursing students' attitudes toward EBP using the Evidence-Based Attitude Scale. The findings indicated generally high positive attitude with a mean score of 62.85 ± 6.96 . Nevertheless, the study showed that there is a disconnect between EBP research and clinical practice, which pointed out the necessity to devise measures that foster practical application of the research findings (Karabey & Karagozoglu, 2021).

Overall, these studies underscore the generally positive attitudes of nursing students towards EBP while identifying gaps in knowledge and application. Addressing these gaps requires improved curriculum integration, accessible resources, and targeted interventions to strengthen EBP competencies among nursing students.

2.4 Relationships between knowledge and attitude regarding evidence practice

Several studies have explored the relationship between nursing students' knowledge, attitudes, and practices regarding Evidence-Based Practice (EBP), providing valuable insights into how these factors influence healthcare delivery.

A cross-sectional study conducted by Alrasheadi (2022) which focused on assessing the attitudes and knowledge about evidence-based practice (EBP) among postgraduate nursing students in Saudi Arabia reveal a significant positive correlation between knowledge and attitude towards Evidence-Based Practice (EBP), with correlation of coefficient of $r = 0.57$ and p-value of $p < 0.01$. This positive correlation between knowledge and attitudes implies that higher levels of understanding regarding EBP are associated with more positive attitude towards their use in the clinical settings. This relationship highlights the importance of educational intervention which aimed at enhancing the knowledge about EBP among nursing students, as it may lead to more positive attitudes and ultimately better integration of EBP into nursing practice.

Kaseka and Mbakaya (2022) conducted a cross-sectional study which aimed to assess the knowledge, attitudes, and use of evidence-based practice (EBP) among registered nurse-midwives in central hospitals in Malawi. This study includes total of 183 registered nurse-midwives who were practicing in various central hospitals around Malawi. The study reported there is a positive correlation between knowledge and attitude scores with correlation of coefficient of $r = 0.293$ with a $p < 0.293$, suggesting that the relationship observed was statistically significant. The positive correlation between knowledge and attitudes towards EBP suggests that higher levels of knowledge are associated with more positive attitudes among nurse-midwives. This indicates that as nurse-midwives become more knowledgeable about EBP, their willingness to adopt and implement these practices in their clinical settings increases. This finding highlights the importance of educational interventions aimed at enhancing knowledge about EBP among nursing students and professionals. By fostering a deeper understanding of EBP principles and methodologies,

nursing education programs can potentially improve attitudes towards its application, ultimately leading to better patient care outcomes.

A study conducted by Alkhatib et al. (2020) aimed to assess the knowledge, perception, and attitude of nurses towards evidence-based practice (EBP) at King Abdullah Medical City in Saudi Arabia. The sample included a diverse group of nurses, and data was analysed using statistical methods to examine the relationships among knowledge, perception, and attitude regarding EBP. The study revealed a significant relationship between nurses' knowledge and their attitudes towards EBP. The correlation coefficient was reported as $r = 0.65$, indicating a moderate to strong positive correlation. The p-value was less than 0.01, suggesting that the relationship is statistically significant. This showed that as nurses' knowledge of EBP increases their attitudes towards its application also become more favourable. The observed relationship recommends that higher knowledge correlates with more positive attitudes towards EBP among nurses. This finding aligns with existing literature that emphasizes the importance of educational interventions aimed at enhancing knowledge to foster more favourable attitudes towards EBP in nursing practice. Thus, improving educational strategies related to EBP could be crucial in bridging the knowledge gap and promoting better application of evidence-based practices in healthcare settings.

The study conducted by Ahmad et al. (2024) aimed to assess the knowledge, attitudes, and practices regarding Evidence-Based Practice (EBP) among nurses at Sultan Ahmad Shah Medical Centre in Kuantan, Malaysia. This cross-sectional study utilized a structured questionnaire to gather data from a sample of nurses, focusing on their understanding and implementation of EBP in clinical settings. The studies collectively indicate a correlation between knowledge and attitudes towards EBP. In this research, while specific correlation

coefficients were not provided, the overall trend suggested that increased exposure to EBP concepts correlates with more favorable attitudes among nursing professionals. The relationship observed in these studies suggests that higher knowledge levels are associated with more positive attitudes towards EBP among nursing students and professionals. This finding aligns with broader educational theories indicating that as students gain more knowledge through their curriculum, they develop more favorable attitudes towards applying this knowledge in practice settings. Thus, enhancing educational strategies focused on EBP may lead to improved attitudes and ultimately better patient care outcomes.

Lastly, study conducted by Dahal (2019) aimed to assess the knowledge and attitude toward Evidence-Based Practice (EBP) among nurses at Patan Hospital, Nepal. This study utilizes a cross-sectional design and uses convenience sampling to select 125 nurses with bachelor's degrees in nursing, who were working at the hospital. The study reported a weak positive relationship between knowledge and attitude toward EBP, $r(125) = .263, p < .003$. The weak positive correlation highlights that there was a relationship between knowledge and attitude. However, it is not strong enough to imply that higher knowledge directly leads to markedly more positive attitudes toward EBP among nurses. This finding indicates potential areas for improvement in educational strategies where enhancing knowledge may not be sufficient alone to foster better attitudes toward EBP practices. Therefore, interventions may need to address both educational content and the contextual factors influencing attitudes in clinical settings to promote effective implementation of EBP among nursing students and professionals.

In summary, while each of these studies highlights the significant relationship between knowledge and attitudes towards EBP, several limitations on methodological parts such as

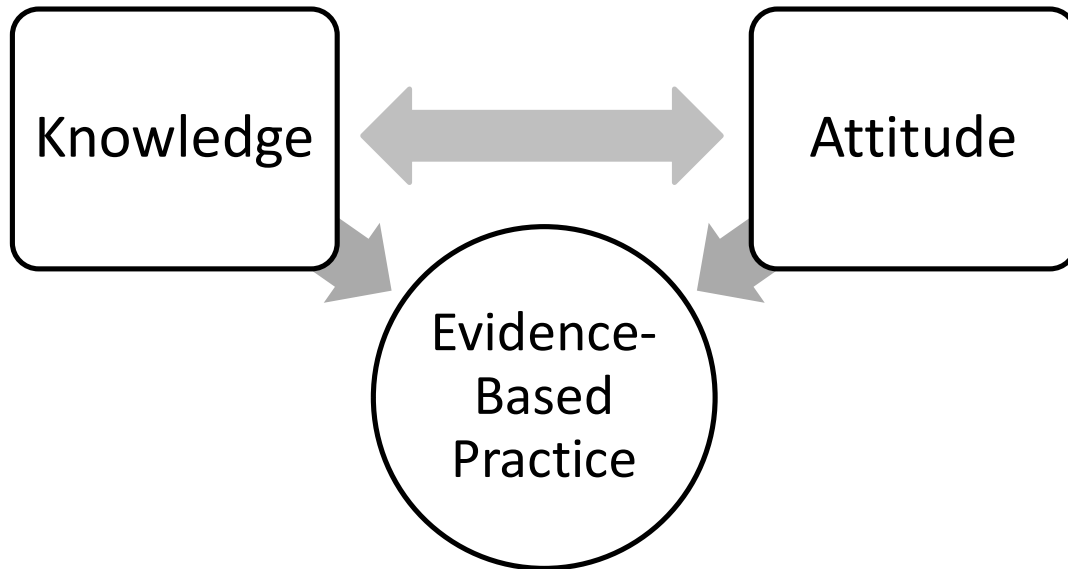
small sample sizes, cross-sectional designs, and limited generalizability which should be considered when interpreting their findings. Future research could benefit from longitudinal studies more diverse and larger samples to better understand the relationships between knowledge, attitudes, and behaviours regarding EBP among nursing students and professionals. These studies are crucial for informing nursing education and practice, particularly in Malaysia, where enhancing EBP awareness and implementation could improve healthcare outcomes.

2.5 Conceptual Framework

Knowledge and attitude regarding evidence-based practice (EBP) are crucial factors which affect nursing students' readiness to implement EBP in clinical settings. An adequate knowledge base coupled with a positive attitude towards EBP will enhance students' ability to apply research findings effectively in their practice. Attitudes towards EBP can either be positive or negative, which is influenced by knowledge. By fostering both knowledge and a positive attitude, nursing students can develop greater competency in evidence-based practice, contributing to improved patient outcomes.

Figure 2.5.1

Conceptual Framework



2.6 Summary

This literature review examines the knowledge and attitudes of nursing students toward evidence-based practice (EBP), with a focus on studies from diverse global settings. Findings consistently highlight the importance of integrating EBP into nursing curricula, as many students show moderate to poor knowledge of EBP, despite generally positive attitudes. Research indicates a strong relationship between knowledge and attitudes, suggesting that improved understanding of EBP can foster more positive attitudes and better clinical application. However, several studies identify gaps in practical skills and barriers to EBP implementation, emphasizing the need for comprehensive educational interventions to enhance EBP competencies. Future research, particularly longitudinal studies, is needed to explore the causal relationships between knowledge, attitudes, and behaviours regarding EBP.

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter presents research design in Section 3.2, while research setting presents in Section 3.3. Inclusion and exclusion criteria are present in Section 3.4, while sampling method and sampling size are present in Section 3.5. Section 3.6 presents the study instrument. Validity and reliability present in section 3.7 and ethical considerations are explained in Section 3.8. Data collection procedures present in Section 3.9, followed by Section 3.10 present the data analysis method and lastly, Section 3.11 present the summary outline.

3.2 Research Design

The aim of research design was to establish a suitable framework for study (Jilcha, 2019) and to provide a plan of study. Thus, this study employed a quantitative and cross-sectional study. Quantitative research includes using various tools to gather numerical data. (Taherdoost, 2022). Numerical data were needed for analytical purposes. Hence, the quantitative study design matched the purpose of this study. The cross-sectional study is the most appropriate design to compare knowledge attitudes among the health professional. It also stated that cross sectional study cost fewer financial issues and time constraints since the data gathered at one specific time (Wang & Cheng, 2020).

3.3 Research Settings

This study was conducted at the Universiti of Malaysia Sarawak (UNIMAS), Faculty of Medicine and Health Sciences (FHMS) which located at Jalan Datuk Mohammad Musa, 94300 Kota Samarahan Sarawak. There was a total of 239 nursing students from Faculty of Medicine and Health Sciences (FHMS). This study's target population compromised undergraduate nursing students (year 2 until year 4) from Faculty of Medicine and Health Sciences (FMHS) at the Universiti of Malaysia (UNIMAS) which are total of 186 nursing students.

3.4 Inclusion and exclusion criteria

Inclusion criteria were as follows:

- UNIMAS nursing students from year 2 until year 4 who had at least one month of clinical practice experience
- UNIMAS nursing students from year 2 until year 4 who are willing to participate in this study

Exclusion criteria were as follows:

- Year 1 students with no clinical practice experience
- Students who had participated in the pilot study
- Students who are not willing to participate in the study
- Post-registration nursing student

3.5 Sampling Method and sample size

3.5.1 Sampling method

A sample is a subset of the population, whereas a population is the entire group of individuals with particular traits (Thacker, 2019). In this study, participants were selected using simple random sampling method. A simple random sampling was categorized as a probability sampling method (Hayes, 2023). The sampling process consists of six steps: population definition, sampling frame selection, sampling technology selection, sampling size determination, data collection, and data analysis. Simple random sampling is a probability sampling method where each individual in the population has an equal chance of being selected. Simple random sampling was chosen to ensure that selection bias is reduced and increase representative of the population (Noor & Golzar, 2022). A name list of nursing students from year 2 to year 4 was obtained from the academic office FMHS, UNIMAS. The names on the name list were arranged according to the matric number by using Microsoft Excel. Then enter the formula=RAND () and press 'Enter' key. The purpose of simple random sampling is to reduce the probability of research biases (Thomas, 2023).

3.5.2 Sample size

The sample size was calculated using Taro Yamane (1973) simplified formula, as follows:

$$n = \frac{N}{1 + Ne^2}$$

n = sample size

N= population size

e= error (0.05) reliability level 95%

$$n = \frac{184}{1 + (184)(0.05)^2}$$
$$= 126 \text{ participants}$$

Based on this formula, the required sample size was 126 participants. However, researchers need to account for participant compensation such as those who decline to participate, hence, the sample size must be increased by 10% (Althubaiti, 2022). Consequently, a 10% attrition rate was applied to the sample to make up for missing data. After adding in 10%, the total sample size for this study will be 139 participants. The calculation was as follows:

Calculation of sample size with attrition rate:

$$126 \times 10\% = 12.6 @ 13, \text{ therefore } 126 + 13 = 139 \text{ participants}$$

For pilot study:

$$139 \times 10\% = 13.9 @ 14 \text{ participants}$$

For Actual Study: 139 participants out of 170 participants (184 participants from total sample size minus 14 total participants for pilot study)

Hence, a total of 139 participants will be needed for this study

3.6 Study Instrument

The study instrument is the tool utilized by the researcher to obtain the necessary data for the research. The questionnaire was presented in English. In this study, two self-administered questionnaires were adopted from two previous study by Melnyk (2008) and another one by Upton (2015) with the author's permission. The questionnaire was divided into three sections: Section A collects socio-demographic data, Section B assesses knowledge regarding evidence-based practice and Section C evaluates attitudes toward evidence-based practice.

Section A gathers information on the participants' socio-demographics, including age, gender, religion, race, academic year, and weeks of clinical experience. Participants are required to tick (✓) their answers in the boxes provided.

Section B consists of 21 items designed to assess the level of knowledge regarding evidence-based practice among UNIMAS undergraduate nursing students. This section uses a Likert scale with the options "Never" = 1 and "Frequent" =7 for Item 1 until Item 6. For Item 7 until Item 18, the option will be "Poor" = 1 and "Best" = 7. Participants must tick (✓) their answer in the provided box. No negative statements or reverse coding are applied in this section. The total score reflects the respondent's familiarity with EBP concepts, tools, and implementation strategies. A higher total score indicates a greater level of knowledge.

Section C includes 16 items to assess attitudes toward evidence-based practice among UNIMAS undergraduate nursing students. This section uses a 5-point Likert scale with the

options "Strongly Disagree" = 1 and "Strongly Agree" = 5. Participants were asked to tick (✓) their response in the box provided. 2 negative statements or reverse coding were applied in this section. This section examines the respondents' attitude regarding the usefulness, relevance, and importance of EBP in clinical settings. Higher scores indicate more positive attitudes.

3.7 Reliability and Validity

Reliability referred to the precision of an instrument in minimizing random errors during data collection (Ahmed & Ishtiaq, 2021). Valid findings indicate statistical accuracy. Cronbach's alpha was the most used method to evaluate internal consistency. The questionnaire for this study was adapted from Melnyk (2008) and Upton (2015) with the author's permission. The overall Cronbach's alpha for Student Evidence-Based Practice Questionnaire (S-EBPQ) developed by Upton et al. (2015) was 0.87. Meanwhile, for the Evidence-Based Practice Beliefs Scale (EBPBS) developed by Melnyk et al. (2008) Cronbach's alpha for this questionnaire was 0.90.

Cronbach's alpha values range from 0 to 1, with a value of 0.7 or higher indicating acceptable reliability. Values between 0.6 and 0.7 are considered acceptable, 0.8 or higher indicates good reliability, and values above 0.9 are classified as excellent. Additionally, the face and content validity of the questionnaire were reviewed and endorsed by a nursing practice specialist, specifically the supervisor.

3.8 Ethical Considerations

Ethical approval of this study was obtained from the Research and Ethics Committee of the Faculty of Medicine and Health Sciences, Universiti Malaysia Sarawak (UNIMAS) prior to its commencement (refer to Appendix A). Informed consent was obtained from participants

who were willing to take part in the study, with the assurance that they retained the right to withdraw at any time without any consequences or penalties (refer to Appendix B). Additionally, a formal email request for consent was sent to the original author to seek permission to use the questionnaire tools employed in this study (refer to Appendix C).

All data collected during the study was treated with strict confidentiality and privacy. Personal identifying information was not disclosed, and the data was used exclusively for research purposes. Access to the data was restricted to the researcher and supervisor. Confidentiality and anonymity principles were meticulously maintained, with no personal details recorded on the questionnaires. Participants were identified using a coded numbering system for reference purposes. To ensure security, all data was stored in a private, password-protected file on a laptop and will be retained securely for five years.

3.9 Data collection procedure

3.9.1 Pilot study

A pilot study was conducted prior to the main study with participants who met the inclusion criteria to evaluate the reliability and validity of the questionnaire. Validity refers to the extent to which a quantitative study accurately reflects the concept being measured (Ahmed & Ishtiaq, 2021). The purpose of the pilot study was to assess the validity of the questionnaire before conducting the primary research. This approach helps minimize unnecessary effort for both participants and researchers, as well as avoid wasting resources allocated for the study. Conducting a pilot study is essential for improving the overall quality and efficiency of the main research. The pilot study included 10% of the total sample size. Participants who took part in the pilot study were excluded from the main research.

The pilot study was also used to determine the sample size and evaluate various aspects of the primary study. Cronbach's alpha was employed to analyse the data and assess the reliability and consistency of the research instruments. For the pilot study, 10% of the total sample size was selected. Given that the total sample size for this study was 139 participants, 10% equaled 13.9, which was rounded to 14 participants. Consequently, 14 nursing students meeting the inclusion criteria were selected for the pilot study using the same sampling method planned for the main study. The data collected from the 14 participants during the pilot study were excluded from the main study and its data analysis.

3.9.2 Pilot Study Findings

A pilot study involving 14 participants was conducted to evaluate the reliability and clarity of the research instrument prior to the main data collection. These participants were selected based on the same inclusion criteria as the main study and were subsequently excluded from the final analysis to prevent response bias.

The primary aim of the pilot study was to assess the internal consistency of the questionnaire and ensure the suitability of each item in measuring the intended which was knowledge and attitude toward evidence-based practice (EBP). The data collected were analysed using IBM SPSS Statistics Version 27.

Reliability testing revealed high internal consistency across both components of the questionnaire. The reliability for knowledge based on Student Evidence-Based Practice Questionnaire (S-EBPQ) was found to be excellent (12 items; KR-20 co-efficient = .933).

Similarly, the reliability for attitude based on Evidence-Based Practice Beliefs Scale (EBPBS) was found to be good (16 items; KR-20 co-efficient = .878).

Feedback from pilot participants indicated that the overall structure and language of the questionnaire were clear and comprehensible. No major revisions were deemed necessary. Minor typographical adjustments improvements were made based on feedback to enhance readability and user experience during the main data collection phase.

In summary, the pilot study confirmed the questionnaire's reliability and suitability for deployment in the full-scale study. The procedures implemented and outcomes observed in the pilot contributed to strengthening the methodological rigor of the research.

3.9.3 Actual study

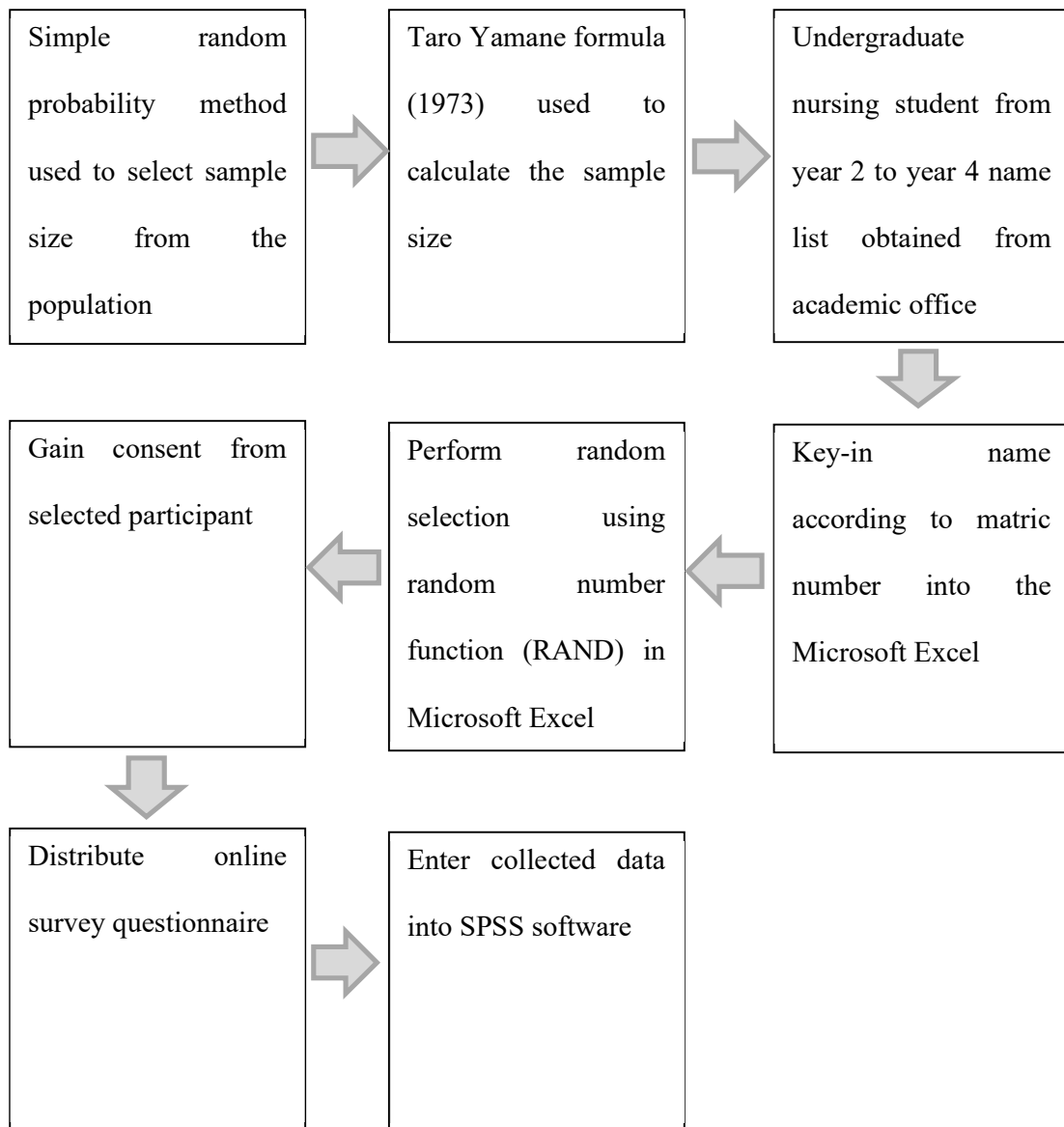
This study utilized a probability simple random sampling method to select participants from the target population. Inclusion and exclusion criteria were first established to define the study's target population. The target population consisted of UNIMAS undergraduate nursing students from Year 2 to Year 4 who met the inclusion criteria. Using the Taro Yamane Formula (1973), the sample size was determined to be 139. A name list of Year 2 to Year 4 nursing students was obtained from the academic office of the Faculty of Medicine and Health Sciences (FMHS), UNIMAS.

Questionnaire adapted from Melnyk (2008) and Upton (2015) had been modified to align with the objectives of this research, which used as the data collection tool. Participants who met the study criteria and agreed to participate were recruited. Online survey questionnaires, prepared in English, were distributed to the participants. Prior to the study's commencement,

participants were required to agree to an online informed consent form, indicating their willingness to participate and acknowledging their understanding of their rights within the study. The researcher's contact information was provided on the consent form to allow participants to ask any questions regarding the questionnaire.

Figure 3.9.1

Flowchart of data collection procedure



3.10 Data Analysis Method

The data collected from this study were analysed using the Statistical Package for the Social Sciences (SPSS) version 27 by IBM. Descriptive and inferential statistics had been employed to describe the sample characteristics, including frequency, percentage, mean, and standard deviation for the variables. The Kolmogorov-Smirnov test was used to assess the normality of continuous data, as the sample size exceeded 50. For continuous data that followed a normal distribution, the mean and standard deviation will be reported. For data that do not follow a normal distribution, the median and interquartile range had been used. Parametric tests were applied where the data were normally distributed, Pearson correlation test was used to examine the relationships between knowledge and attitude.

3.11 Summary

In summary, this study employed a quantitative approach and was conducted as a cross-sectional study at the Faculty of Medicine and Health Sciences at UNIMAS. The participants included undergraduate nursing students from year 2 to year 4. Simple random sampling had been applied, and the sample size had been calculated using the Yamane formula (1973). A total of 139 participants were involved in the study. The research instrument consists of three sections, with an online self-administered questionnaire distributed to the participants. Ethical approval had been obtained prior to the commencement of data collection. Finally, the data collected had been analyzed using IBM SPSS Statistics version 27, utilizing both descriptive and inferential statistics

CHAPTER 4

RESULT

4.1 Introduction

4.1.1 Preliminary Analysis

i. Response Rate

Out of the 139 participants who were invited to complete the online study survey 13 (9.35%) of participants failed to complete it, resulting in a final total of 126 (90.65%) participants. The initial sample size of 126 was calculated using Taro Yamane's (1973) formula, to mitigate potential non-responses, a 10% attrition rate was added, increasing the target sample size to 139 participants. Despite the 9.35% non-response rate, the final number of completed responses ($n = 126$) met the originally calculated sample size requirement. Therefore, the study achieved its minimum required sample size, ensuring sufficient statistical power for analysis.

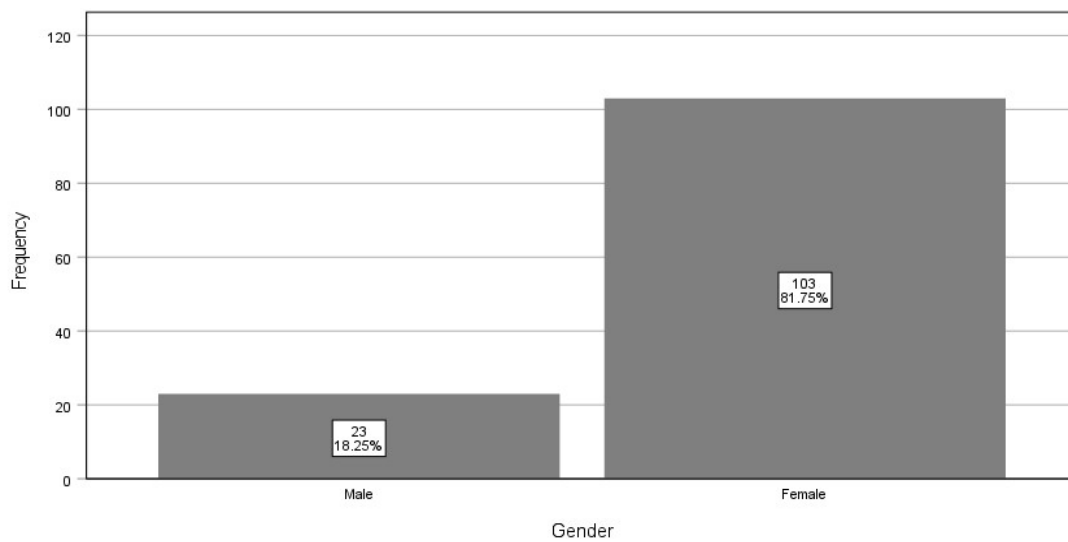
4.2 Socio-demographics characteristics

i. Gender

There are no extreme values from screening the data. Out of 126 participants, 103 (81.7%) were female and 23 (18.3%) of them were male (see Figure 4.2.1).

Figure 4.2.1

Distribution of participants by gender (n=126)

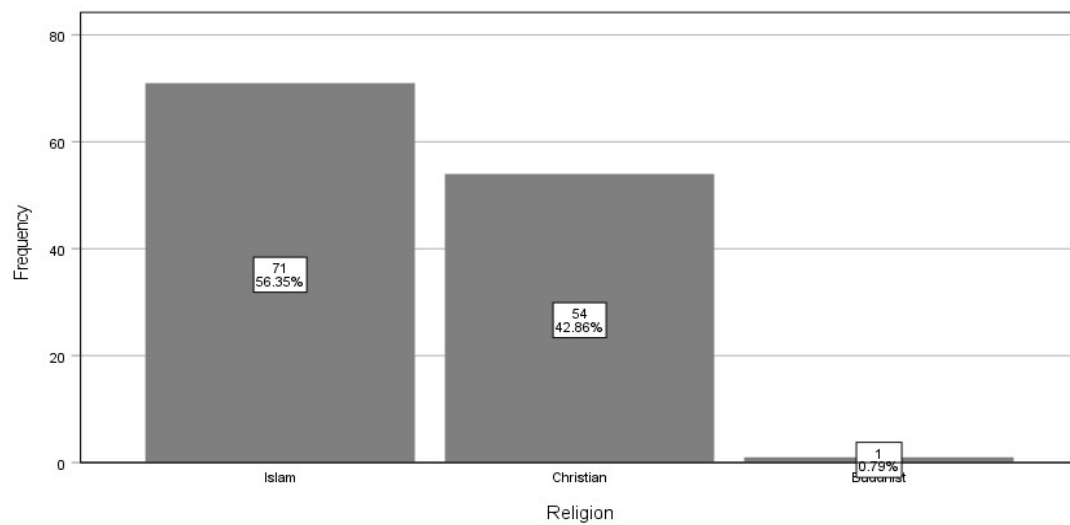


ii. Religion

Outliers were identified in the data set. The outlier was ignored due to its low frequency 1 (0.8%). Out of the 126 participants, 71 (56.4%) were Islam and 54 (42.9%) of the were Christian (see Figure 4.2.2).

Figure 4.2.2

Distribution of participants by religion (n=126)

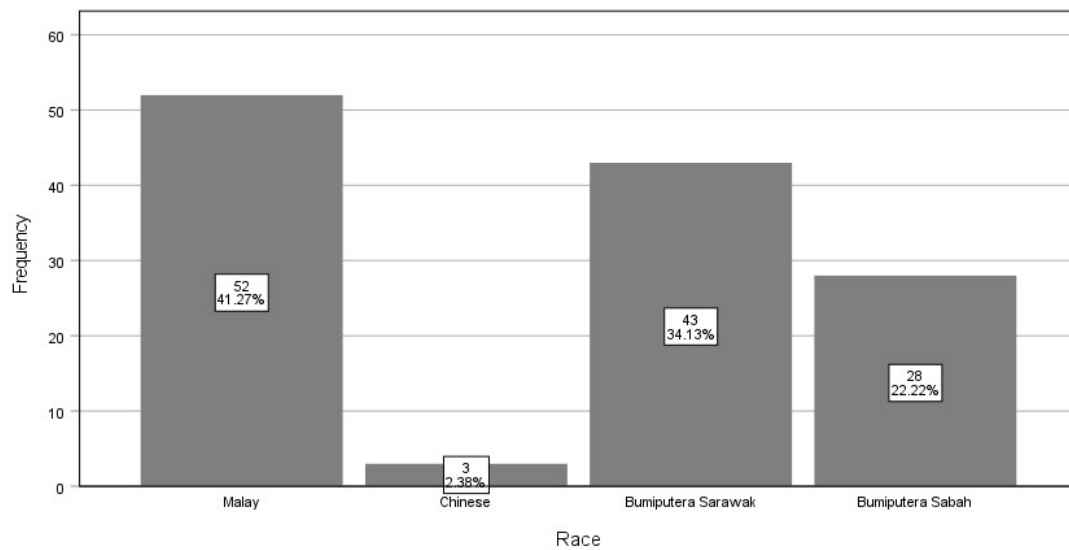


iii. Race

There is no outliers or extreme value noted from screening the data. Out of 126 participants, 52 (41.3%) were Malay followed by 43 (34.1%) Bumiputera Sarawak, 28 (22.2%) Bumiputera Sabah and 3 (2.4%) Chinese (see Figure 4.2.3).

Figure 4.2.3

Distribution of participants by race (n=126)

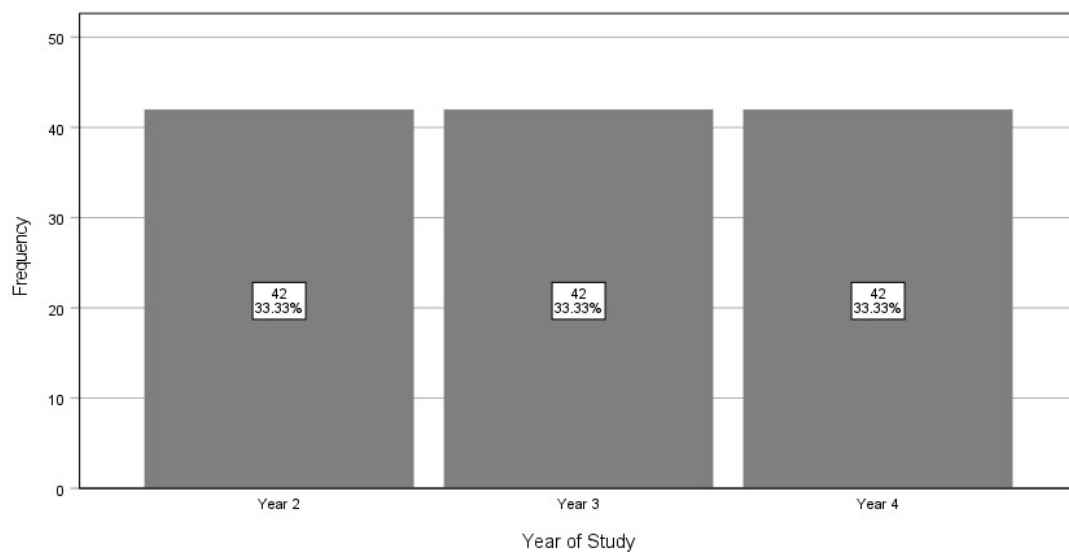


iv. Year of study

There were no outliers or extreme values noted from screening the data. Out of 126 participants, 42 (33.3%) were Year 2 followed by 42 (33.3%) Year 3 and 42 (33.3%) were Year 4 (see Figure 4.2.4).

Figure 4.2.4

Distribution of participants by year of study (n=126)

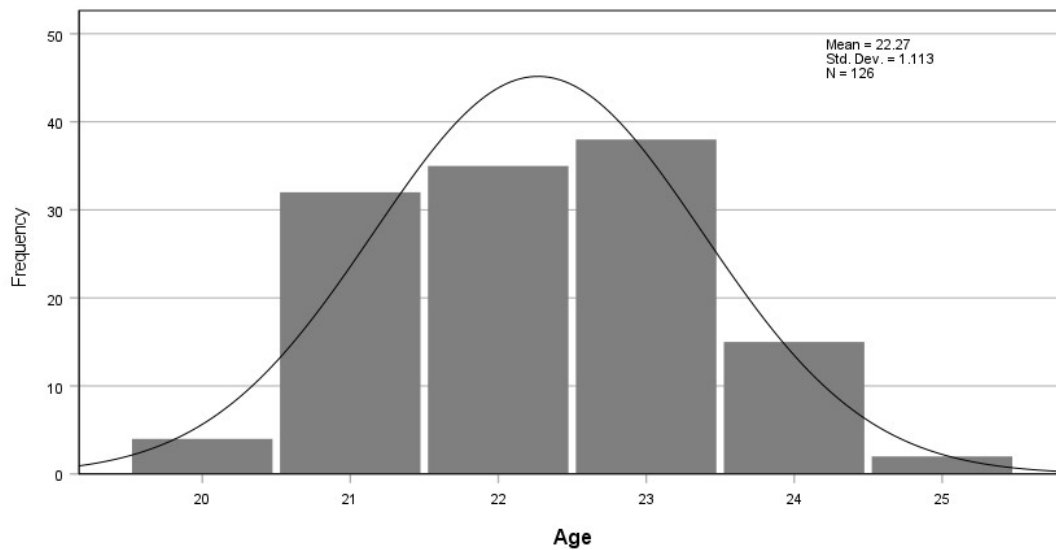


v. Age

There is no outliers or extreme values from the box plot for age. A Kolmogorov-Smirnov test shows that the data was not normally distributed, $D(126) = .181$, $p < .001$. The median age among the participants is 22 years old ($IQR = 2$ years old). The maximum age is 25 years old while the minimum age is 20 years old. The range is 5 years old. The mode age is 23 years old.

Figure 4.2.5

Histogram of age distribution (n=126)

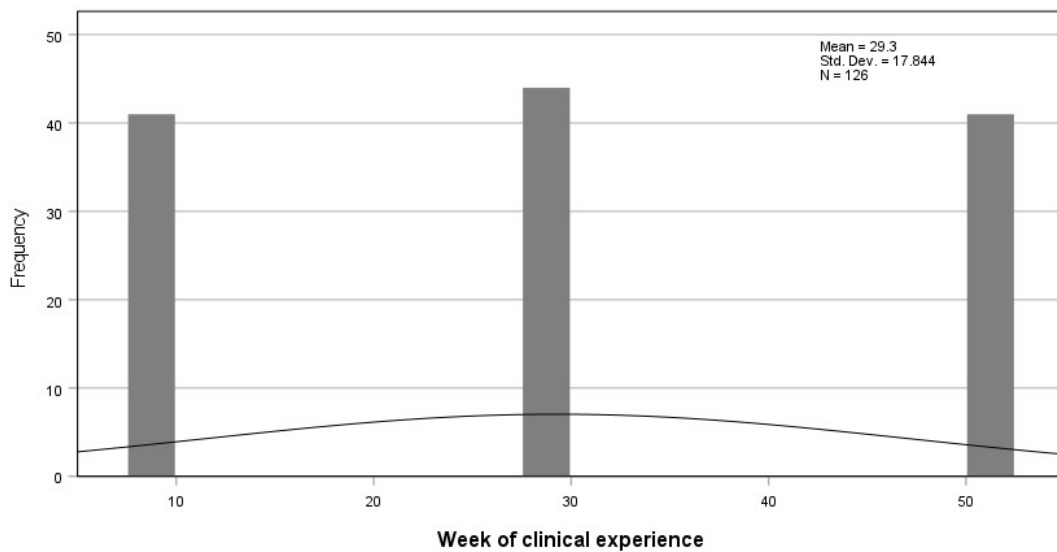


vi. Weeks of clinical experience

There is no outliers or extreme values from the box plot for weeks of clinical experience. A Kolmogorov-Smirnov test show that the data was not normally distributed, $D(126) = .224$, $p < .001$. The median week of clinical experience is 28 weeks ($IQR = 44$ weeks). The maximum week of clinical experience is 52 weeks while the minimum week of clinical experience is 8 weeks. The range is 44 weeks. The mode weeks of clinical experience are 28 weeks.

Figure 4.2.6

Histogram for week of clinical experience (n=126)

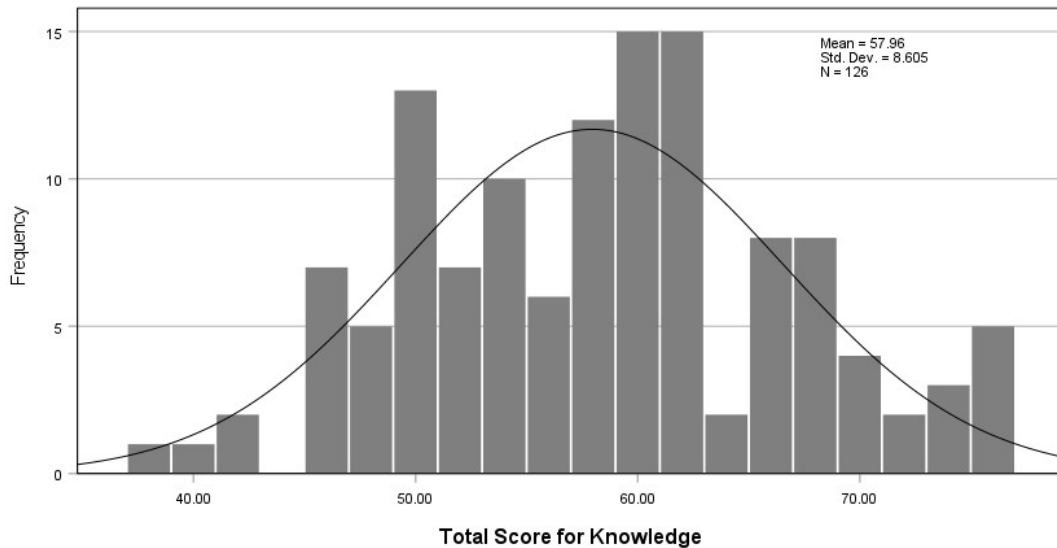


4.3 Level of knowledge regarding evidence-based practice

Outliers were identified using the box plot method. Outliers were then addressed using the winsorization method, which involved replacing values that fell outside the upper and lower thresholds with the nearest non-outliers value. This approach was chosen to minimize the influence of extreme data points while maintaining the integrity of dataset's overall distribution (Cheng & Young, 2023). Following this procedure, the data were reanalysed, and the winsorized values were used in the subsequent statistical tests. A Kolmogorov-Smirnov test showed that the data was normally distributed, $D(126) = .065$, $p = .20$. The mean score among the 126 participants was 57.97 ($SD = 8.61$). The maximum score was 76 points while the minimum score was 38 points. The range is 38 points.

Figure 4.3.1

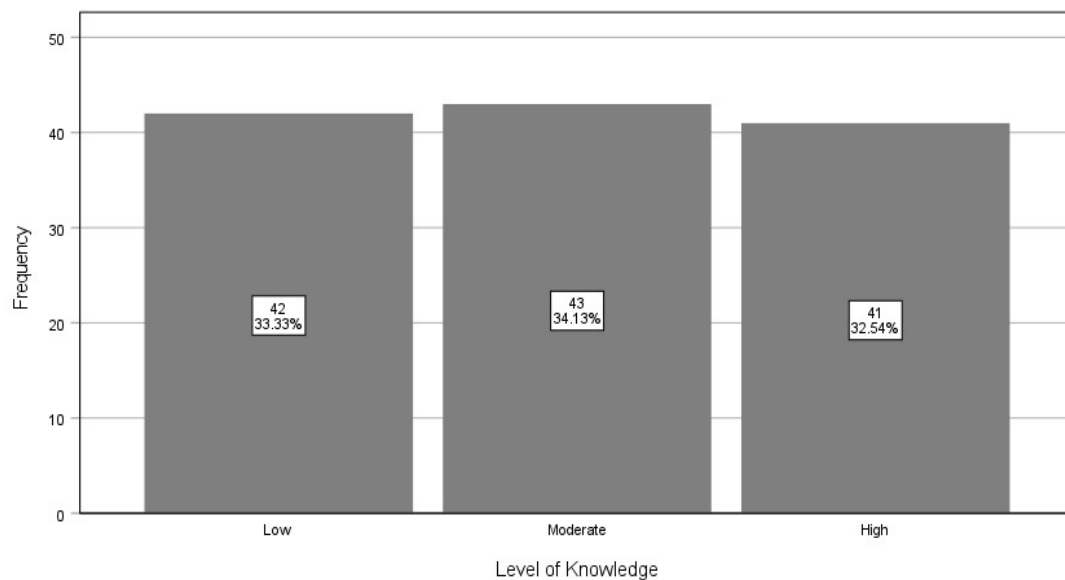
Histogram of knowledge total score (n=126)



To answer the first research objective, recoding the total knowledge scores into three categories (low, moderate, high) was performed using SPSS visual binning. Out of 126 participants, it was revealed that 42 (33.33%) of the participants have poor knowledge, followed by 43 (34.13%) of the participants have moderate knowledge and 41 (32.54%) of the participants have high knowledge regarding evidence-based practice (see Figure 4.3.2).

Figure 4.3.2

Level of knowledge among participants (n=126)

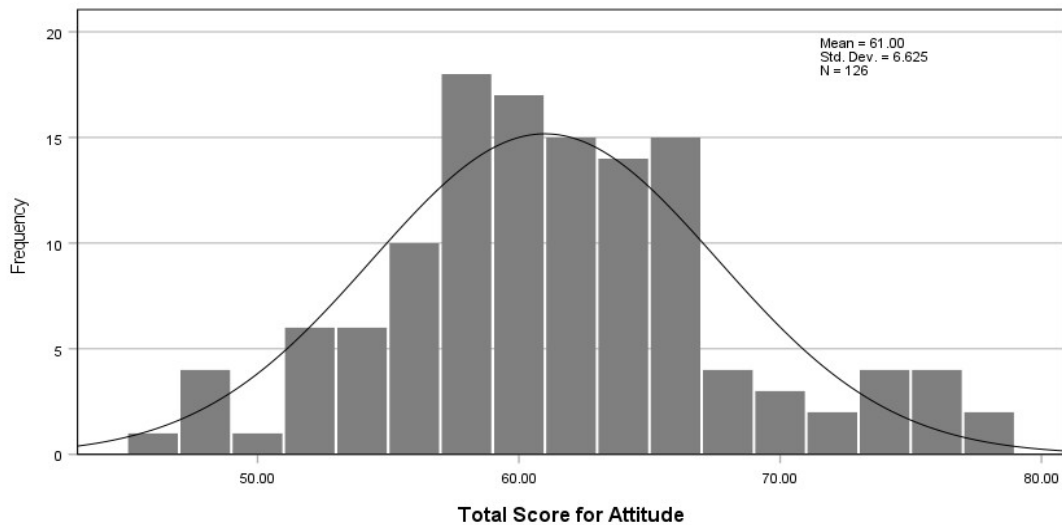


4.4 Level of attitude regarding evidence-based practice

Outliers were identified using the box plot method. Outliers were then addressed using the winsorization method, which involved replacing values that fell outside the upper and lower thresholds with the nearest non-outliers value. This approach was chosen to minimize the influence of extreme data points while maintaining the integrity of dataset's overall distribution (Cheng & Young, 2023). Following this procedure, the data were reanalysed, and the winsorized values were used in the subsequent statistical tests. A Kolmogorov-Smirnov test showed that the data was normally distributed, $D(126) = .074$, $p = 0.084$. The mean score among the 126 participants was 61.00 ($SD = 6.63$). The maximum score is 77 points while the minimum score is 46 points. The range is 31 points.

Figure 4.4.1

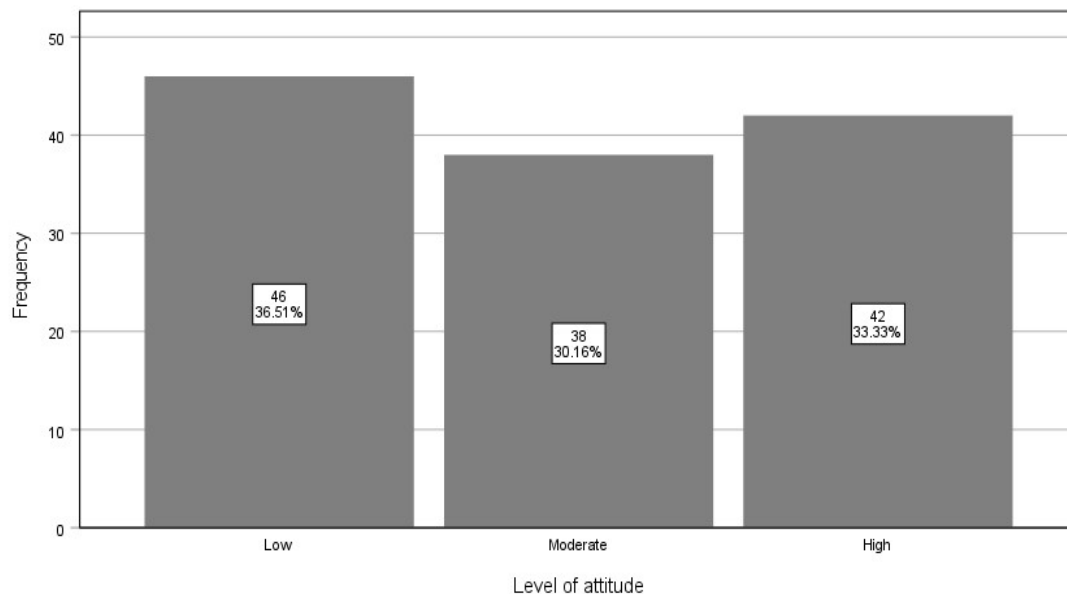
Histogram of total score for attitude (n=126)



To answer the second research objective, recoding the total attitude scores into low, moderate, and high levels was carried out via SPSS visual binning. Out of the 126 participants, it was revealed that 46 (36.51%) of the participants have a low attitude followed by 38 (30.16%) have moderate attitude and 42 (33.33%) have a high attitude toward implementing evidence-based practice (see Figure 4.4.2).

Figure 4.4.2

Attitude levels among participants (n=126)

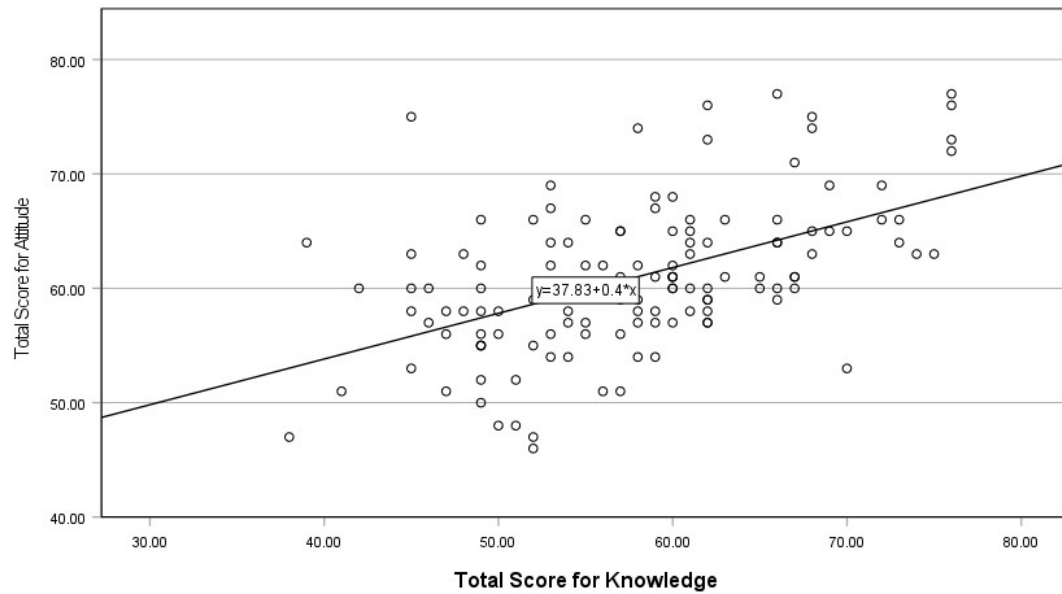


4.5 Relationship between knowledge and attitude regarding evidence-based practice

To draw conclusion to the third research objective, the relationship between knowledge regarding evidence-based practice (as measured by SEBPQ) and attitude regarding evidence-based practice (as measured EBPBS) was investigated using Pearson correlation coefficient. Preliminary analyses were performed to ensure no violation on the assumption of normality for knowledge, $D(126) = .065$, $p = .200$ and attitude, $D(126) = .74$, $p = .084$. Outliers were identified in both knowledge and attitude data using the box plot method. Outliers were then addressed using the winsorization method, which involved replacing values that fell outside the upper and lower thresholds with the nearest non-outliers value. This approach was chosen to minimize the influence of extreme data points while maintaining the integrity of dataset's overall distribution (Cheng & Young, 2023). Following this procedure, the data were reanalysed, and the winsorized values were used in the subsequent statistical tests. There was a moderate positive correlation between the two variables, $r(126) = .519$, $p < .001$, with high knowledge associated with high attitude. There was a moderate positive correlation between the two variables, $r(126) = .519$, $p < .001$, with high knowledge ($M = 57.97$) associated with high attitude ($M = 61.00$).

Figure 4.5.1

Scatter plot of total score for attitude by total score for knowledge



CHAPTER 5

DISCUSSION

5.1 Introduction

This chapter synthesizes the main findings derived from the investigation into the knowledge and attitudes regarding evidence-based practice (EBP) among undergraduate nursing students at Universiti Malaysia Sarawak (UNIMAS). It revisits the research objectives and discusses how the results have addressed each aim of the study. The chapter also provides practical recommendations for the improvement of EBP integration within the nursing curriculum and clinical education. Furthermore, the limitations encountered during the study are acknowledged, and suggestions for future research are proposed to inform ongoing efforts to enhance EBP competencies among nursing students.

5.2 Knowledge Regarding Evidence-Based Practice

In this study, the results showed that most students (66.67%) had a moderate to high level of knowledge about EBP. This suggests that UNIMAS nursing students have a good understanding of EBP and its application in nursing. These findings are consistent with past studies. For instance, research by Miliara et al. (2024) reported a mean score of 3.03 ($SD = 0.49$) for knowledge toward EBP while a study by Truc et al. (2024) reported a mean score of 3.02 ($SD = 0.70$) which both indicate that while basic EBP principles are understood, there is a notable deficiency in more advanced skills such as systematic literature searches and critical appraisal.

However, it is concerning that one-third of the students (33.33%) showed poor knowledge levels. This result aligns with study by Pranata et al. (2023) which showed that a sizable proportion of students in other contexts exhibit poor knowledge of EBP, which suggests that the issues identified in this study may be reflective of a broader, global challenge. This point towards uneven delivery of content, varying teaching styles, or a lack of emphasis on EBP in parts of the curriculum. It could also reflect limited hands-on opportunities where students can see EBP being used in real clinical settings. As Mthiyane and Habedi (2018) highlighted, it is often difficult to turn theory into practice without enough exposure to real-world experience.

These insights indicate that enhancements in teaching methods such as increased hands-on training, interactive case studies, and enhanced mentorship opportunities are crucial for bridging the gap between theoretical knowledge and clinical expertise.

5.3 Attitude Regarding Evidence-Based Practice

In this study, it was revealed that UNIMAS undergraduate nursing students' attitudes towards EBP were mixed. While 33.33% of students had a high attitude score which indicated a positive outlook while 36.51% had a low score. This shows that even though students may understand EBP, not all of them are enthusiastic or confident applying it in practice.

This aligns with findings in a study by Alatawi et al. (2020) where nursing students often face real barriers such as time constraints, lack of support from clinical staff, and insufficient encouragement to apply EBP in their clinical rotations. A study by Yoo et al. (2019) also

noted that students' confidence and their sense of control over their practice influence how they feel about using EBP.

Additionally, this result is consistent with the study by Alruwaili et al. (2025) which reported that although students value EBP theoretically, issues such as limited access to role models and time constraints detract from their ability to implement it in practice. Almarwani et al. (2025) further assert that while positive attitudes are essential to promote EBP, institutional and practical challenges must be addressed to translate these attitudes into effective clinical action. Therefore, to encourage the practical application of EBP, nursing education should extend beyond traditional lectures and provide ample opportunities for hands-on training, mentorship, and real-world practice.

5.4 Relationship between knowledge and attitude

This study found a moderate positive correlation ($r = .519, p < .001$) between knowledge and attitude. In simple terms, students who knew more about EBP tended to have a better attitude towards using it. A correlation of $r = .519$ indicates a moderate relationship, suggesting that while knowledge is a key driver of attitude, other factors such as clinical mentorship and institutional culture play equally critical roles. This result supported by Vincent et al. (2023), highlighting an important educational dynamic where increased theoretical knowledge contributes to more positive attitudes. The moderate strength of the correlation suggests that factors beyond mere knowledge improvement such as dedicated clinical mentoring and practical exposure which play crucial roles. Study by Alruwaili et al. (2025) emphasize that environmental supports, including faculty role modelling and research engagement are necessary to enhance the impact of EBP training. Therefore, it is imperative

that nursing curricula are systematically revised to provide integrated educational experiences that not only impart theoretical knowledge but also build practical skills. These comprehensive reforms are likely to promote a more robust and enduring foundation for the practical application of evidence-based practice in clinical settings.

However, the fact that the correlation is only moderate suggests that knowing about EBP is not absolute. Attitudes are also shaped by other things including whether students see their mentors using EBP, whether they believe it makes a difference, and whether they feel supported to apply it themselves.

5.5 Implication for Nursing Education and Practice

The findings indicate that, although progress has been made, there is significant potential for enhancing the integration of evidence-based practice (EBP) within nursing education. EBP should not only be confined to isolated theoretical modules, but it must be embedded throughout the entire educational continuum. The incorporation of pedagogical strategies including case-based discussions, simulation exercises, and journal clubs can render abstract concepts more tangible and applicable to real-world clinical scenarios.

Moreover, clinical placements serve a pivotal role in reinforcing EBP principles. Preceptors and practicing nurses need to consistently demonstrate EBP in their clinical reasoning and decision-making processes where students are more likely to internalize and adopt these practices. Accordingly, sustained collaboration between academic institutions and healthcare facilities is essential to foster a culture in which EBP is normalized and actively practiced.

In addition, student confidence represents a critical determinant in the effective application of EBP. Structured workshops that equip students with the skills to locate, critically appraise, and implement research findings into clinical care can substantially strengthen their competence. When students are able to recognize the direct impact of EBP on patient outcomes, their motivation to engage in evidence-informed care is significantly enhanced.

5.6 Study limitations

As with all research, this study is subject to certain limitations. Firstly, its cross-sectional design only records data one particular moment, which precludes the establishment of causal relationships between variables. Secondly, the sample was limited to students from Universiti Malaysia Sarawak (UNIMAS), potentially restricting the applicability of the findings to other institutional contexts. Finally, the use of self-reported data raise the risk of response bias, where participants may have given socially desirable answers rather than accurately reflecting their attitudes or action.

5.7 Conclusion

This study aimed to assess the level of knowledge and level of attitude among UNIMAS undergraduate nursing students regarding Evidence-Based Practice (EBP). The results showed that 66.7 % of students scored in the moderate to high range for EBP knowledge, while 33.3 % scored poor knowledge. Attitudes were more varied, 33.3 % of students held positive attitudes, 30.2 % were neutral, and 36.5 % demonstrated low attitudes toward applying EBP. For examining the relationship between knowledge and attitude regarding evidence-based practice among UNIMAS undergraduate nursing students, a Pearson correlation revealed a moderate positive relationship between knowledge and attitude ($r =$

0.519, $p < 0.001$), indicating that students with higher EBP knowledge tend to have more favorable attitudes.

REFERENCES

- Ahmad, N., Makhtar, A., Abdullah, N. A., & Fadzil, S. M. (2024, November 30). *Knowledge, Attitudes and Practices Regarding Evidence-Based Practice: A Cross-Sectional Study of Nurses at Sultan Ahmad Shah Medical Centre @IIUM (SASMEC @IIUM), Kuantan, Pahang, Malaysia. Research Gate.* https://www.researchgate.net/publication/386287666_Knowledge_Attitudes_and_Practices_Regarding_Evidence-Based_Practice_A_Cross-Sectional_Study_of_Nurses_at_Sultan_Ahmad_Shah_Medical_Centre_IIUM_SASMEC_IIUM_Kuantan_Pahang_Malaysia
- Ahmed, I., & Ishtiaq, S. (2021, October 7). *Reliability and validity: Importance in medical research.* JPMA. The Journal of the Pakistan Medical Association. <https://pubmed.ncbi.nlm.nih.gov/34974579/>
- Alatawi, M., Aljuhani, E., Alsufiany, F., Aleid, K., Rawah, R., Aljanabi, S., & Banakhar, M. (2020, January 31). *Barriers of implementing evidence-based practice in Nursing Profession: A literature review.* Science Publishing Group. <https://www.sciencepublishinggroup.com/article/10.11648/j.ajns.20200901.16>
- Alkhatib, A. H., Ibrahim, E. A., Ameenuddin, M., & Ibrahimi, I. A. (2020, November 15). *Nurses' knowledge, perception, and attitude towards evidence-based practice at King Abdullah Medical City-Saudi Arabia. Nurses' Knowledge, Perception, and Attitude towards Evidence-Based Practice at King Abdullah Medical City-Saudi Arabia.* https://www.researchgate.net/publication/346907154_Nurses'_Knowledge_P

erception_and_Attitude_towards_Evidence-
Based_Practice_at_King_Abdullah_Medical_City-Saudi_Arabia

Alrasheadi, B. A. (2023, January). *Attitudes and knowledge about evidence-based practice among Saudi postgraduate nursing students*. Majmaah Journal of Health Sciences. <https://www.bibliomed.org/?mno=115475>

Alruwaili, A., Abuadas, F., Alruwaili, M., Alsadaan, N., & Baghdadi, N. (2025, March 24). *Examining knowledge, attitudes, and implementation of evidence-based practice among nursing students: A Multicenter cross-sectional study - BMC nursing*. BioMed Central. <https://bmcnurs.biomedcentral.com/articles/10.1186/s12912-025-02963-8>

Althubaiti, A. (2022, December 14). *Sample size determination: A practical guide for health researchers*. Journal of general and family medicine. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10000262/>

Brunt, B. A., & Morris, M. M. (2023, March 4). *Nursing professional development evidence-based practice*. StatPearls. <https://www.ncbi.nlm.nih.gov/books/NBK589676/>

Cheng, K., & Young, D. S. (2023). An approach for specifying trimming and Winsorization cutoffs. *Journal of Agricultural, Biological, and Environmental Statistics*, 28(2), 299–323. <https://doi.org/10.1007/s13253-023-00527-4>

Cherry, K. (2024, May 5). *How can our attitudes change and influence behaviors?*. Verywell Mind. <https://www.verywellmind.com/attitudes-how-they-form-change-shape-behavior-2795897>

- Dahal, S. (2019, May 25). *Knowledge and attitude toward evidence based practice among nurses of a tertiary care teaching hospital, Nepal*. Nepal Journals Online. <https://nepjol.info/index.php/JPAHS/article/view/27081/22441>
- Dusin, J., Melanson, A., & Lawson, L. M. (2023, May 4). *Evidence-based practice models and frameworks in the healthcare setting: A scoping review*. BMJ Open. <https://bmjopen.bmj.com/content/13/5/e071188.abstract>
- Elmagd, M. H. A., & Alharbi, M. (2024, April 18). *Nursing students' beliefs and willingness to implement evidence-based nursing practice at Umm al-Qura University: A descriptive cross-sectional study*. Cureus. <https://www.cureus.com/articles/245470-nursing-students-beliefs-and-willingness-to-implement-evidence-based-nursing-practice-at-umm-al-qura-university-a-descriptive-cross-sectional-study#!/>
- Gassas, R. (2021, August 10). *Sources of the knowledge-practice gap in nursing: Lessons from an Integrative Review*. Nurse education today. <https://pubmed.ncbi.nlm.nih.gov/34388539/>
- Hayes, A. (2023, December 17). *Simple random sampling: 6 basic steps with examples*. Investopedia. <https://www.investopedia.com/terms/s/simple-random-sample.asp>
- Jeong, D., Park, C., Sugimoto, K., Jeon, M., Kim, D., & Eun, Y. (2024, May 16). *Effectiveness of an evidence-based practice education program for Undergraduate Nursing Students: A systematic review and meta-analysis*. MDPI. <https://www.mdpi.com/1660-4601/21/5/637>

- Jilcha, K. (2019, August). *Research Design and methodology*. Research Gate. https://www.researchgate.net/publication/335110374_Research_Design_and_Methodology
- Karabey, T., & Karagozoglu, S. (2021, September). *Determination of Nursing Students' Attitudes towards Evidence-Based Nursing: Turkey Example*. International Journal of Caring Sciences. https://internationaljournalofcaringsciences.org/docs/26_karabey_original_14_3.pdf
- Kaseka, P. U., & Mbakaya, B. C. (2022, June 6). *Knowledge, attitude and use of evidence based practice (EBP) among registered nurse-midwives practicing in central hospitals in Malawi: A cross-sectional survey*. BMC Nursing. BioMed Central. <https://bmcnurs.biomedcentral.com/articles/10.1186/s12912-022-00916-z>
- Koç, Z. (2023, September 5). *Knowledge, attitudes, and behaviors of nursing students toward evidence-based nursing*. New Trends and Issue Proceeding on Humanities and Social Sciences. <https://un-pub.eu/ojs/index.php/pntsbs/article/view/9103>
- Melnyk, B. M., Overholt, E. F., & Mays, M. Z. (2008). *The evidence-based practice beliefs and implementation scales: Psychometric Properties of two new instruments*. Worldviews on evidence-based nursing. <https://pubmed.ncbi.nlm.nih.gov/19076922/>
- Miliara, E., Kalokairinou, A., Schetaki, S., Patelarou, E., & Patelarou, A. (2024, September 10). *Evaluation of evidence-based practice competency among Greek undergraduate nursing students*. MDPI. <https://pubmed.ncbi.nlm.nih.gov/39337152/>

- Mthiyane, G. N., & Habedi, D. S. (2018, November 29). *The experiences of nurse educators in implementing evidence-based practice in teaching and learning*. Health SA Gesondheid. <https://hsag.co.za/index.php/hsag/article/view/1177>
- Myakava, L. H. K., Santos, M. A. dos, & Püschel, V. A. de A. (2021, September 1). *Knowledge, skills, and attitudes of nursing students on evidence-based practice*. Revista da Escola de Enfermagem da USP. <https://www.scielo.br/j/reecusp/a/qBQbGJbR6vxbWJvDmTc3PyB/?lang=en>
- Neumbe, I. M., Ssenyonga, L., Soita, D. J., Iramiot, J. S., & Nekaka, R. (2023, July 25). *Attitudes and perceptions of undergraduate nursing students towards the nursing profession*. PLOS ONE. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0280700>
- Nielsen, L. D., Noe, B. B., Egebaek, H. K., Ramachandran, A., Jorgense, R. B., & Castano, F. M. (2023, December 20). *Teaching evidence-based practice to undergraduate healthcare students educators' knowledge, skills, attitudes, current practice, perceived barriers, and facilitators: A Danish cross-sectional study*. Nurse Education Today. https://www.sciencedirect.com/science/article/pii/S0260691723003763?casa_token=Hj6Ewo-pLtUAAAAA%3AIIJwvoQLdEOgMWeD_xkO7CzKOZbF2cZoLQD25D6RF7XH7MLDFTnhn243TUbEj7KXJPNajv74kZ11a#bb0130
- Noor, S., & Golzar, J. (2022, December 16). *Simple random sampling*. Research Gate. https://www.researchgate.net/publication/366390022_Simple_Random_Sampling

Pitsillidou, M., Noula, M., Roupa, Z., & Farmakas, A. (2023, September 4). *Barriers to the adoption of evidence based practice in nursing: A Focus Group Study*. Acta informatica medica : AIM : journal of the Society for Medical Informatics of Bosnia & Herzegovina : casopis Drustva za medicinsku informatiku BiH. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10875937/>

Pranata, L., Siswo, L., Surani, V., Ajul, K., Suryani, K., & Fari, A. I. (2023, July). *UNDERSTANDING OF RESEARCH METHODS BASED ON EVIDENCE-BASED PRACTICE IN NURSING FOR NURSING STUDENTS*. Research Gate. https://www.researchgate.net/publication/372605439_UNDERSTANDING_OF_RESEARCH_METHODS_BASED_ON_EVIDENCE-BASED_PRACTICE_IN_NURSING_FOR_NURSING_STUDENTShttps://www.researchgate.net/publication/372605439_UNDERSTANDING_OF_RESEARCH_METHODS_BASED_ON_EVIDENCE-BASED_PRACTICE_IN_NURSING_FOR_NURSING_STUDENTS

Taherdoost, H. (2022, August 18). *What are different research approaches? Comprehensive Review of Qualitative, quantitative, and mixed method research, their applications, types, and limitations*. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4178694

Thacker, L. R. (2019, December 23). *What Is the Big Deal About Populations in Research?*. Progress in Transplantation. <https://journals.sagepub.com/doi/10.1177/1526924819893795>

- Thomas, L. (2023, December 18). *Simple Random Sampling: Definition, Steps & Examples*. Scribbr. <https://www.scribbr.com/methodology/simple-random-sampling/>
- Tlili, M. A., Aouicha, W., Tarchoune, S., Sahli, J., Dhiab, M. B., Chelbi, S., Mtiraoui, A., Ajmi, T., Rejeb, M. B., & Mallouli, M. (2022, June 2). *Predictors of evidence-based practice competency among Tunisian nursing students - BMC medical education*. BioMed Central. <https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-022-03487-4>
- Truc, M. N. T., Dung, N. T., An, P. L., & Thiep, N. (2024, January 9). *Evidence-Based Practice: Attitude and Knowledge Among Undergraduate Nursing and Midwifery Students at Can Tho University of Medicine and Pharmacy in 2023 and Related Factors*. Can Tho Journal of Medicine and Pharmacy. <https://tapchi.ctump.edu.vn/index.php/ctump/article/view/2968/1913>
- Upton, P., Evans, L. S., & Upton, D. (2015, November 11). *Development of the student evidence-based Practice Questionnaire (S-EBPQ)*. Nurse education today. <https://pubmed.ncbi.nlm.nih.gov/26627595/>
- Vincent, R., Deewan, S., Ismat, P., Iqbal, A., & Vincent, J. (2023, December 14). *Effect of an evidence-based practice (EBP) educational program on the competence of nursing students*. International Journal of Science and Research Archive. <https://ijsra.net/content/effect-evidence-based-practice-ebp-educational-program-competence-nursing-students>
- Wang, X., & Cheng, Z. (2020, July). *Cross-sectional studies*. Chest Journal. [https://journal.chestnet.org/article/S0012-3692\(20\)30462-1/fulltext](https://journal.chestnet.org/article/S0012-3692(20)30462-1/fulltext)

Yeheyis, T., Hoyiso, D., Borie, Y. A. A., & Tagesse, N. (2024, March 21). *Implementation of evidence-based clinical practice and its associated factors among health care workers at public hospitals in Sidama Regional State, southern Ethiopia*. PloS one. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10956850/>

Yoo, J. Y., Kim, J. H., Kim, J. S., Kim, H. L., & Ki, J. S. (2019, December 26). *Clinical nurses' beliefs, knowledge, organizational readiness and level of implementation of evidence-based practice: The first step to creating an evidence-based practice culture*. PLOS ONE. <https://journals.plos.org/plosone/article?id=10.1371%2Fjournal.pone.0226742>

Zagzebski, L. T. (2020, October 22). *What is knowledge?*. OUP Academic. <https://academic.oup.com/book/31894/chapter-abstract/267561990?redirectedFrom=fulltext&login=false>

APPENDICES

APPENDIX A: ETHICAL APPROVAL APPLICATION LETTER

Arden Howard Dickson

Faculty Medicine and Health Sciences,
Universiti Malaysia Sarawak,
94300 Kota Samarahan,
Sarawak.

The Chairman,

Medical Research Ethics Committee,
Faculty Medicine and Health Sciences,
Universiti Malaysia Sarawak,
94300 Kota Samarahan,
Sarawak.

15th December 2024

Professor/Associate Professor/Dr/Sir/Madam,

REQUEST FOR APPROVAL TO CONDUCT RESEARCH PROJECT

I am a final-year student pursuing a Bachelor of Nursing with Honours at the Faculty of Medicine and Health Sciences, UNIMAS. I enrolled in MDJ 4653 Final Year Project I, in which the course is coordinated by Madam Shalin Lee Wan Fei. Please find my details as follows:

Full name: Arden Howard Dickson

Matrix number: 77844

IC No.: 020412-12-0497

I would like to request for the kind approval from the Faculty of Medicine and Health Sciences Medical Research Ethics Committee to conduct the following study:

Research title: Knowledge and Attitude regarding Evidence-Based Practice Among Universiti Malaysia Sarawak (UNIMAS) Undergraduate Nursing Student

Supervisor's name: Shalin Lee Wan Fei

Email address: 77844@siswa.unimas.my

Supervisor's HP number: 016-878 4825

Please find the required documents as appended for your kind consideration and approval.

Thank you.

Yours sincerely,

Arden

(Arden Howard Dickson)

Pejabat Akademik
Fakulti Perubatan dan Sains Kesihatan
Academic Office
Faculty of Medicine & Health Sciences
☎: 581000 samb 7768
✉: 665152

UNIVERSITI MALAYSIA
SARAWAK
94300 Kota Samarahan

MEMORANDUM

Reference : UNIMAS/NC-21.05/03-03 Jld. 8(109)

To : Arden Howard Dickson (77844)
Bachelor of Nursing with Honours
Faculty of Medicine and Health Sciences

From : Dean
Faculty of Medicine and Health Sciences

Date : 05 March 2025

Subject : **Final Year Project - Research Approval: Knowledge and attitude regarding Evidence-Based Practice among Universiti Malaysia Sarawak (UNIMAS) Undergraduate Nursing Student**

The above matter is referred.

The Faculty of Medicine and Health Sciences, Universiti Malaysia Sarawak (UNIMAS) has granted the **RESEARCH APPROVAL** for this Final Year Project research based on the appraisal by the Department of Nursing, Faculty of Medicine and Health Sciences, Universiti Malaysia Sarawak (UNIMAS) on 24 February 2025. The Final Year Project research details stated below:

Student Name : Arden Howard Dickson

Student ID : 77844

Programme : Bachelor of Nursing with Honours

Research Title : *Knowledge and attitude regarding
Evidence-Based Practice among Universiti
Malaysia Sarawak (UNIMAS)
Undergraduate Nursing Student*

**Supervisor
Name** : Madam Shalin Lee Wan Fei

Supervisor H/P : +60 16-878 4825

All records and data are to be kept strictly **CONFIDENTIAL** and can only be used for the purpose of this study. All precautions are to be taken to maintain data confidentiality. Permission from the all relevant heads of departments/units where the study will be carried out must be obtained prior to the study.

Please note that the approval is valid from **February 2025** to **November 2025** only. The reference number for this letter must be stated in all correspondence related to this study to facilitate the process.

Thank you with regards and well wishes.

Yours sincerely,



Professor Dr. Asri bin Said
Dean

c.c : Deputy Dean of Undergraduate
: Head of Nursing Department
: Bachelor of Nursing with Honours
: MDJ4653 Final Year Project I Course Coordinator

APPENDIX B: PARTICIPANT'S INFORM CONSENT FORM



INFORMATION SHEET OF THIS STUDY

TITLE OF STUDY: Knowledge and attitudes regarding Evidence-Based Practice among Universiti Malaysia Sarawak (UNIMAS) undergraduate nursing students.

MAIN RESEARCHER: Arden Howard Dickson (77844)

SUPERVISOR: Shalin Lee Wan Fei

INSTITUTION: Universiti Malaysia Sarawak (UNIMAS)

INSTITUTION ADDRESS: Department of Nursing, Faculty of Medicine and Health Sciences, Universiti Malaysia Sarawak, 94300 Kota Samarahan Sarawak, Malaysia.

THE NATURE AND PURPOSE OF THE STUDY

Objectives:

1. To assess the level of knowledge regarding evidence-based practice among UNIMAS undergraduate nursing student
2. To assess the attitude of UNIMAS undergraduate nursing student toward the implementation of evidence-based practice in nursing care.
3. To examine the relationship between knowledge and attitude regarding the implementation of evidence-based practice in nursing among UNIMAS undergraduate nursing students.

RISKS OF STUDY PARTICIPATION

There is no risk of study participation identified

STUDY DESCRIPTION

The data will be collected using self-administered questionnaire, which consists of three parts. Participant will be asked to answer on their socio-demographics, knowledge regarding evidence-based practice, and attitude towards the implementation of evidence-based practice in nursing care. The approximate time required to complete the questionnaire is 20-25 minutes.

As participant, you are required to fulfil a few responsibilities, including truthfulness in answering the questionnaire, you could contact the investigator immediately if you have any difficulties during the session.

POSSIBLE BENEFITS OF STUDY PARTICIPATION

You will be able to assess your knowledge and attitudes towards evidence-based practice (EBP).

VOLUNTARY PARTICIPATION

You understand that participation in this study is voluntary and if you decide to withdraw from the study, you will experience no penalty or loss of benefits to which you would otherwise be entitled outside of this study. If you decided to participate, you may change your decision about being in this study and may stop at any time. You understand that such decision will not influence the availability of future medical care or other benefits to which you are entitled outside of this study.

CONFIDENTIALITY

All data obtained from this study are confidential and your personal data will not be identified.

TO OBTAIN FURTHER INFORMATION

Any enquiries can be referred to Arden Howard Dickson via WhatsApp at 013-2644750 or e-mail to 77844@siswa.unimas.my

INFORMED CONSENT TO PARTICIPATE IN THIS STUDY

Title of Study: Knowledge and Attitude Regarding Evidence-Based Practice Among
Universiti Malaysia Sarawak (UNIMAS) Undergraduate Nursing Student

By signing below I confirm the following:

- I have been given oral and written information for the above study and have read and understood the information given.
- I have had sufficient time to consider participation in the study and have had the opportunity to ask questions and all my questions have been answered satisfactorily.
- I understand that my participation is voluntary and I can at anytime free withdraw from the study without giving a reason and this will in no way affect my future treatment. I am not taking part in any other research study at this time. I understand the risks and benefits, and I freely give my informed consent to participate under the conditions stated. I understand that I must follow the study doctor's (investigator's) instructions related to my participation in the study.
- I understand that study staff, qualified monitors and auditors, the sponsor or its affiliates, and governmental or regulatory authorities, have direct access to my medical record in order to make sure that the study is conducted correctly and the data are recorded correctly. All personal details will be treated as STRICTLY CONFIDENTIAL
- I will receive a copy of this subject information/informed consent form signed and dated to bring home.
- I agree/disagree* for my family doctor to be informed of my participation in this study. (**delete which is not applicable*)

Subject:

Signature:

I/C number:

Name:

Date:

Investigator conducting informed consent:

Signature:

I/C number:

Name:

Date:

APPENDIX C: PERMISSION TO USE QUESTIONNAIRE



Re: Permission to use EBPQ/SEBPQ

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

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

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

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

Yours sincerely

A handwritten signature in blue ink, appearing to read "penney".

Dr Penney Upton

Dr Penney Upton
Associate Professor in Health
Health Research Institute
University of Canberra
T: +61 4 8113 3384
E: penney.upton@canberra.edu.au

A handwritten signature in blue ink, appearing to read "D. Upton".

Professor Dominic Upton

Professor Dominic Upton
Pro-Vice-Chancellor Health
Faculty of Health
Charles Darwin University
T: +61 8 8946 6263
E: dominic.upton@cdu.edu.au

RE: Request to Use Evidence-Based Practice Beliefs Scale (EBPB) for Undergraduate Nursing Program Research

From: Melnyk, Bernadette melnyk.15@osu.edu
To: ARDEN HOWARD DICKSON
77844@siswa.unimas.my
Cc: Ellen (ellen.fineout.overholt@gmail.com)
ellen.fineout.overholt@gmail.com, Ellen Fineout-Overholt Ellen.Fineout-Overholt@ascension.org
Sent: Monday, November 25, 2024 at 11:42 PM

Hi Arden—it is great to hear from you!

My colleague, Dr. Ellen Fineout-Overholt, handles the dissemination of our scales for use in educational settings.
I've cc'd her on this email. Best wishes!

Warm and well regards,
Bern
Bernadette Mazurek Melnyk, PhD, APRN-CNP, FAANP,
FNAP, FAAN
Vice President for Health Promotion
University Chief Wellness Officer
Helene Fuld Health Trust Professor of Evidence-Based Practice,
Founder of the Helene Fuld Health Trust National Institute for
Evidence-based Practice in Nursing and Healthcare,
and Former Dean, College of Nursing
Professor of Pediatrics & Psychiatry, College of Medicine
 The Ohio State University
260 Meling Hall | 370 W. 9th Ave Columbus, OH 43210
[614-292-4844](tel:614-292-4844) Office
Founder & President, the National Consortium for Building
Healthy Academic Communities (BHAC)
Editor, *Worldviews on Evidence-based Nursing*
melnyk.15@osu.edu
<http://millionhearts.hhs.gov/index.html>
www.healthyacademics.org
[twitter@bernmelnyk](https://twitter.com/bernmelnyk)

APPENDIX D: DATA COLLECTION INSTRUMENT

Section A: Sociodemographic

In this section, please provide your age and select one answer for each question related to your sociodemographic background by ticking the appropriate box.

1. Age:.....
2. Gender:
 - ☐ Male
 - ☐ Female
3. Religion:
 - ☐ Islam
 - ☐ Christian
 - ☐ Hindu
 - ☐ Buddhist
 - ☐ Others: _____
4. Race:
 - ☐ Malay
 - ☐ Chinese
 - ☐ India
 - ☐ Bumiputera Sarawak
 - ☐ Bumiputera Sabah
5. Year of study:
 - ☐ Year 2
 - ☐ Year 3
 - ☐ Year 4
6. Weeks of clinical experience:
 - ☐ 0-13 weeks
 - ☐ 14-26 weeks
 - ☐ 27-39 weeks
 - ☐ 40-52 weeks

Section B: Student Evidence Based Practice Questionnaire (S-EBPQ)

This section is designed to gather information and opinions on the use of evidence based practice. There are no right or wrong answers and we are interested in your opinions and your own use of evidence in your practice.

1. In the past 6 months, how often have you the following in response to gap in your knowledge about patient care (please ✓)								
Formulated a clearly answerable question as the beginning of the process towards filling this gap:								
Never								Frequently
Tracked down the relevant evidence once you have formulated the question:								
Never								Frequently
Critically appraised, against set criteria, any literature you have discovered:								
Never								Frequently
Integrated the evidence you have found with your expertise:								
Never								Frequently
Evaluated the outcomes of your practice:								
Never								Frequently
Shared this information with colleagues:								
Never								Frequently

2. Please indicate (by ✓) where on the scale you would place yourself for each of the following pairs of statements:								
I resent having my clinical practice questioned								I welcome questions on my practice
Evidence based practice is a waste of time								Evidence based practice is fundamental to professional practice
I stick to tried and trusted methods rather than changing to anything new								My practice has changed because of evidence I have found

3. On a scale of 1 to 7 (with 7 being the best) how would you rate your:								
Please circle one number for each statement								
	Poor						Best	
Research skills	1	2	3	4	5	6	7	
Converting your information needs into a research question	1	2	3	4	5	6	7	
Awareness of major information types and sources	1	2	3	4	5	6	7	
Knowledge of how to retrieve evidence	1	2	3	4	5	6	7	
Ability to analyze critically evidence against set standards	1	2	3	4	5	6	7	
Ability to determine how valid (close to the truth) the material is	1	2	3	4	5	6	7	
Ability to determine how useful (clinically applicable) the material is	1	2	3	4	5	6	7	

4. On a scale of 1 to 7 (with 7 being the best) how would you rate your:							
Please circle one number for each statement							
	Poor						Best
Ability to identify gaps in your professional practice	1	2	3	4	5	6	7
Ability to apply information to individual cases	1	2	3	4	5	6	7
Sharing of ideas and information with colleagues	1	2	3	4	5	6	7
Dissemination of new ideas about care to colleagues	1	2	3	4	5	6	7
Ability to review your own practice	1	2	3	4	5	6	7

Section C: Evidence-Based Practice Believe Scale (EBPBS)

Please indicate your level of agreement with each statement by circling the number that corresponds to your response:

1 = Strong Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

No.	Question	Strong Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I believe that EBP results in the best clinical care for patients.	1	2	3	4	5
2	I am clear about the steps of EBP	1	2	3	4	5
3	I am sure that I can implement EBP	1	2	3	4	5
4	I believe that critically appraising evidence is an important step in the EBP process.	1	2	3	4	5
5	I am sure that evidence-based guidelines can improve clinical care.	1	2	3	4	5
6	I believe that I can search for the best evidence to answer clinical questions in a time efficient way	1	2	3	4	5
7	I believe that I can overcome barriers in implementing EBP	1	2	3	4	5
8	I am sure that I can implement EBP in a time efficient way	1	2	3	4	5

9	I am sure that implementing EBP will improve the care that I deliver to my patients	1	2	3	4	5
10	I am sure about how to measure the outcomes of clinical care.	1	2	3	4	5
11	I believe that EBP takes too much time.	1	2	3	4	5
12	I am sure that I can access the best resources in order to implement EBP.	1	2	3	4	5
13	I believe EBP is difficult.	1	2	3	4	5
14	I know how to implement EBP sufficiently enough to make practice changes	1	2	3	4	5
15	I am confident about my ability to implement EBP where I work.	1	2	3	4	5
16	I believe the care that I deliver is evidence-based.	1	2	3	4	5

APPENDIX E: GANTT CHART

Activities	Month									
	2024			2025						
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY
Determination of research title										
Literature review										
Meeting with supervisor										
Submission of oral defence slide										
Ethical approval										
Submission of first draft										
FYP 1: Submission of research proposal										
Data Collection										
Data Analysis										
Writing report										
Submission final draft										
FYP 2: Submission of final report										

APPENDIX F: EXPENDITURE

Expenditure			
Project title	Knowledge and attitude regarding evidence-based practice among Universiti Malaysia Sarawak (UNIMAS) undergraduate nursing student		
Duration of the project	October 2024 – July 2025		
Items	Unit price (RM)	Quantity	Amount (RM)
Report			
Printing proposal defends slides (FYP 1)	0.50	27	13.50
Printing FYP I	0.20	128	25.60
Printing poster presentation	60.0	1	60.00
Printing FYP II	0.20	196	39.20
Others			
SPSS software	5.00	1	5.00
Plastic binding cover	1.50	4	6.00
Binding	2.50	2	5.00
Total Amount		RM 154.30	

APPENDIX G: TURNITIN SIMILARITY INDEX REPORT

Knowledge and Attitude regarding EBP

ORIGINALITY REPORT

19%

SIMILARITY INDEX

13%

INTERNET SOURCES

11%

PUBLICATIONS

7%

STUDENT PAPERS

PRIMARY SOURCES

1

ir.unimas.my

Internet Source

1%

2

Cardoso, Daniela Filipa Batista. "Evidence Based Practice in the Nursing Education Process in Portugal", Universidade de Coimbra (Portugal), 2024

Publication

1%

3

Submitted to Universiti Malaysia Sarawak

Student Paper

1%

4

Submitted to Capella University

Student Paper

1%

5

Sailaza Dahal. "Knowledge and attitude toward evidence based practice among nurses of a tertiary care teaching hospital, Nepal", Journal of Patan Academy of Health Sciences, 2019

Publication

1%

6

www.mdpi.com

Internet Source

<1%

7

bmcnurs.biomedcentral.com

Internet Source

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