KNOWLEDGE AND ATTITUDE TOWARDS RESEARCH CONDUCT AMONG UNDERGRADUATE NURSING STUDENTS IN A TERTIARY INSTITUTION, BENIN CITY, EDO STATE

BY

OHONYON, JENNIFER EKORMEANRE

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DEPARTMENT OF MEDICAL SURGICAL NURSING

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IN PARTIAL FUFILMENT OF THE AWARD OF "BACHELOR OF NURSING SCIENCE" FACULTY OF NURSING SCIENCE, UNIVERSITY OF BENIN

OCTOBER, 2025

CERTIFICATION/APPROVAL

This is to certify that this project titled: **"KNOWLEDGE AND ATTITUDE TOWARDS RESEARCH CONDUCT AMONG UNDERGRADUATE NURSING STUDENTS IN A TERTIARY INSTITUTION, BENIN CITY, EDO STATE"** was carried out by **OHONYON JENNIFER EKORMEANRE** with matriculation number **BMS2009102** in Faculty of Nursing Science under the supervision of PROF(MRS) C. E. OMOROGBE

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Name: _____

(Examiner)

DEDICATION

This project work is dedicated to Almighty God for His Grace, Protection and Mercy throughout the period of this research, to my loving family and friends, as well as my colleagues who have supported me throughout this journey. Thank you for your encouragement, guidance, love and support. This work is also dedicated to myself for tireless efforts and sleepless nights that have brought me to this stage.

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ABSTRACT

This study aimed to assess the knowledge and attitude towards research conduct among undergraduate nursing students at the University of Benin, Benin City. A total of 282 students participated in the study, which employed a descriptive cross-sectional design using stratified random sampling. Data were collected through a structured questionnaire, and both descriptive and inferential statistics were used for analysis, including chi-square tests at a 0.05 significance level. The results revealed that while 45.0% of students demonstrated good knowledge of research conduct, a combined 55.0% exhibited fair to poor knowledge. In terms of attitude, 73.0% showed a positive disposition toward research engagement, while 27.0% expressed negative attitudes. Notable barriers identified included limited access to research materials (76.3%), time constraints (76.9%), and a lack of mentorship (78.0%). Statistical analysis indicated a significant positive association between research knowledge and attitudes ($p < 0.001$). Students with greater knowledge were more likely to express positive attitudes toward research. The study recommends strengthening the research component of the nursing curriculum, expanding access to research tools and databases, and implementing structured mentorship initiatives. Creating supportive research environments is also essential to promote active participation. These findings offer valuable insights for nursing educators and academic institutions seeking to cultivate a robust research culture among undergraduate nursing students.

Keywords: Research knowledge, Attitude, Nursing students, Barriers, Research Engagement, Cross-sectional study.

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CHAPTER ONE

INTRODUCTION

1.1 Background to The Study

Research serves as a driving force in healthcare, facilitating advancements in clinical practices and contributing significantly to the improvement of patient outcomes. Nursing is a dynamic profession that functions as a social, applied, and empirical science. In the field of nursing, research is not only a source of innovation but also a fundamental component that supports evidence-based practice (EBP), a methodology that ensures nursing interventions and patient care decisions are grounded in scientific evidence (Haxhija et al., 2024). For nurses, this foundation in research enables them to address complex healthcare challenges with critical thinking, adaptability, and informed decision-making skills. In today's rapidly evolving healthcare landscape, nursing professionals are increasingly expected to contribute to the research process by both utilizing and generating new evidence. Therefore, fostering an understanding and appreciation of research among undergraduate nursing students is essential, as these future nurses will be responsible for translating evidence into practice, ultimately improving patient outcomes and healthcare quality (Bhattacharya & Tabi, 2022).

Research is the backbone of evidence-based practice in healthcare, serving as a critical tool for advancing knowledge, improving patient care, and addressing complex health challenges (Chairabarti et al., 2024). Among nursing students, a strong foundation in research methodology and conduct is vital, as it prepares them to evaluate clinical evidence, contribute to scholarly discourse, and apply scientific findings in practice. In particular, fostering positive attitudes and comprehensive knowledge of research among undergraduate nursing students can encourage them to

actively participate in research activities and promote a culture of inquiry that enhances healthcare delivery. The importance of research is well acknowledged, nevertheless, students often feel anxious when it comes to research, mostly because of the extensive and conceptual nature of the subject (Usman et al., 2024).

Undergraduate nursing students often display mixed attitudes towards research, with interest and motivation generally influenced by their understanding of its relevance to clinical practice (Makinde et al., 2023). Many students recognize the importance of research in advancing healthcare and improving patient outcomes; however, challenges such as perceived difficulty, lack of confidence, and limited exposure to research activities can create a sense of disengagement (Echiverri et al., 2020). Some nursing students view research as an academic requirement rather than a vital skill for their future careers, which can lead to a lack of enthusiasm for research-related tasks. These attitudes may be further affected by heavy course loads, insufficient mentorship, and a focus on clinical competencies over research skills in nursing curricula. As a result, some students may struggle to see the immediate value of research, underscoring the need for educational strategies that make research more accessible and integrated into practical nursing applications (El Achi et al., 2020).

The knowledge of research among undergraduate nursing students is often varied, with many students possessing only a basic understanding of research principles and methodologies (Juhari et al., 2020). While nursing curricula typically include research-related coursework, students may not receive adequate hands-on experience or practical application, leaving gaps in their ability to fully comprehend and conduct research independently. Undergraduate research opportunities teach students not only how to conduct research, but they too learn problem-solving aptitudes. Participating in research also increases students' interest is being involved and making special

contributions to the academic field (Ferdoush et al., 2021). Knowledge deficits are often observed in areas such as data analysis, research design, and critical appraisal of research literature, which are essential for evidence-based practice (Brazendale et al., 2024). Limited exposure to research in clinical settings further compounds this issue, as students may struggle to connect theoretical knowledge with real-world applications. Additionally, the complexity of research concepts and the perceived lack of immediate relevance to clinical practice can make it challenging for students to develop a thorough and lasting knowledge of research. Strengthening this foundational knowledge is crucial for preparing nursing students to contribute effectively to healthcare research and to integrate evidence-based findings into patient care (Alfaki, 2024).

Many nursing students encounter significant obstacles in developing a positive attitude toward research and acquiring the skills needed for effective research engagement. While nursing curricula often emphasize clinical training and practical skills, research components may be perceived as secondary or even extraneous by students who view hands-on patient care as their primary focus (Kamal et al., 2023). This perception can be reinforced by a range of barriers that inhibit student engagement with research. Psychological factors, such as a fear of complex methodologies and a lack of confidence in analytical skills, often contribute to students' reluctance to engage in research activities. Structural challenges, including inadequate access to research resources, limited mentorship, and a lack of integration between research and clinical practice in nursing programs, further discourage students from pursuing research experiences. Additionally, academic constraints, such as intensive workloads and the pressure to succeed in other areas of their studies, can deprive students of the time and energy needed to meaningfully engage in research,

leaving many with only a superficial understanding of its importance and application (Chaturverdi et al., 2023).

Globally, these challenges are not unique to any one setting; however, in the context of Nigeria, they are often compounded by specific issues within the healthcare and educational systems. Nigeria's healthcare system faces a high disease burden, a shortage of healthcare workers, and limited resources, all of which intensify the demand for locally relevant, evidence-based solutions to improve patient care. Nurses in Nigeria, as in many other countries, are critical in meeting the demands of healthcare delivery, particularly in settings with limited resources (Awoniyi et al., 2023). The ability of Nigerian nurses to engage with and apply research findings is crucial for driving innovation, addressing public health challenges, and improving the quality of patient care across the country. For undergraduate nursing students in Nigerian tertiary institutions, especially in regions like Benin City, developing research knowledge and a positive attitude toward research is essential for their future roles in the healthcare system, where they will be expected to use evidence-based interventions in resource-constrained environments (Sheu et al., 2022).

In addition to addressing healthcare needs, promoting a research-positive culture among nursing students has broader implications for the nursing profession and healthcare policy. Nurses who are equipped with strong research skills and an appreciation for evidence-based practice are better prepared to advocate for patient needs, contribute to healthcare policy discussions, and participate in professional collaborations that can lead to systemic improvements in healthcare delivery (Ara et al., 2024). Nursing education, therefore, has a responsibility to emphasize the role of research in professional development, integrating research training into nursing curricula in a way that is accessible, engaging, and clearly connected to the clinical

competencies valued by students. When students understand the relevance of research to their future practice, they are more likely to view research as an integral part of their professional identity rather than as a purely academic requirement (Arumuru, 2023).

Research has become an intellectual equipment for the human beings to change their lifestyles according to needs and necessities of the society. Nursing education and practice places emphasis upon the use of evidence from research in order to rationalize nursing intervention (Biji et al., 2024). This study explores the knowledge and attitudes of undergraduate nursing students toward research conduct in a tertiary institution in Benin City. By examining their level of understanding, perceptions, and any barriers they face, this research aims to identify gaps in research education within nursing programs and potential strategies for improvement. Insights gained from this study could inform curriculum development and targeted interventions, equipping future nurses with the tools and confidence to contribute meaningfully to evidence-based practice.

1.2 Statement of Problem

In today's healthcare environment, the importance of evidence-based practice cannot be overstated. Research skills are essential for nurses to deliver high-quality, informed patient care, yet undergraduate nursing students often show limited engagement and confidence in research activities (Kaur & Kumar, 2020). Studies have shown that nursing students face various challenges in embracing research, including a lack of understanding of research principles, limited exposure to practical research, and inadequate mentorship (Adejumo & Guobadia, 2023; Sarli et al., 2021). As a result, many nursing students view research as an academic requirement rather than a valuable component of their professional growth, impacting their willingness to

engage in or contribute to research in their careers (Pallari et al., 2022). This issue is particularly pressing in Nigeria, where nurses play a critical role in addressing public health challenges yet have limited research involvement due to both systemic and educational barriers (Olowokere & Adejumo, 2024).

Without targeted efforts to enhance research knowledge and foster a positive attitude towards research, future nurses may struggle to keep pace with the demands of evidence-based practice, potentially compromising the quality of patient care. Addressing these issues requires a better understanding of the current knowledge, attitudes, and barriers related to research among nursing students in Nigeria. This study aims to investigate the knowledge and attitude towards research conduct among undergraduate nursing students in a tertiary institution in Benin City, with the goal of identifying gaps in research education and proposing strategies to strengthen nursing curricula. Improving research engagement within nursing programs could lead to a more competent nursing workforce prepared to address Nigeria's healthcare needs through evidence-based practice

1.3 Research Objectives

The aim of the study is to examine the knowledge and attitudes towards research conduct among undergraduate nursing students of the University of Benin. Specifically, the objective aims to;

1. Assess the level of knowledge regarding research conduct among undergraduate nursing students in a tertiary institution in Benin City.
2. Examine the attitudes of undergraduate nursing students towards research and its importance in professional practice.
3. Identify the barriers that undergraduate nursing students face in engaging with research activities.

4. Propose strategies for improving research education and fostering a positive attitude toward research among nursing students.

1.4 Research Problems

The research questions stated below would be answered in this study::

1. What is the level of knowledge regarding research conduct among undergraduate nursing students in a tertiary institution in Benin City?

2. What are the attitudes of undergraduate nursing students towards research and its role in professional practice?

3. What barriers do undergraduate nursing students face in engaging with research activities?

4. What strategies can be implemented to improve research education and foster a positive attitude toward research among nursing students?

1.5 Significance of The Study

Findings of the research would be useful in improving Patient Care. By identifying gaps in knowledge, attitudes, and barriers toward research among undergraduate nursing students, the study provides insights that can guide the improvement of nursing education curricula. Addressing these gaps would equip future nurses with the skills and confidence to apply evidence-based practices in their clinical roles, leading to more accurate and effective patient care. As nursing students gain a deeper understanding and appreciation for research, they will be better prepared to utilize the latest healthcare evidence to inform their decisions, ultimately improving patient outcomes and contributing to the overall quality of healthcare delivery.

Also. the findings of the study can inform curriculum development and improvements in nursing education at the University of Benin and other similar institutions. By

identifying the current level of research knowledge, attitudes, and barriers faced by nursing students, the study will provide educators and policymakers with data-driven insights into specific areas where curriculum adjustments are needed. These insights can guide the incorporation of more practical, accessible, and engaging research training into nursing programs, helping to bridge the gap between theoretical knowledge and real-world applications. Additionally, understanding the challenges students encounter with research could lead to improved mentorship programs, resource allocation, and integrated research opportunities, ultimately fostering a stronger research culture within nursing education. This, in turn, prepares nursing graduates to approach clinical challenges with a research-informed mindset, enhancing the overall quality of patient care and healthcare innovation.

It will also assist in promoting Evidence-Based Practice (EBP). By addressing gaps in research knowledge and attitudes among nursing students, which are essential for EBP adoption. Understanding the specific challenges students face in engaging with research enables educators to tailor nursing curricula to better integrate EBP principles, equipping students with the skills to critically appraise and apply research in clinical settings. As nursing students gain confidence and competence in research, they are more likely to recognize the value of EBP and incorporate it into their future practice, ensuring that patient care decisions are grounded in the latest scientific evidence. By fostering a culture of research and EBP within nursing education, this study supports the development of a healthcare workforce committed to continually improving patient outcomes through informed, research-driven practices.

Finally, the findings from this study will inform policies and guidelines. By providing evidence-based insights into the research knowledge, attitudes, and barriers faced by nursing students. By identifying these areas, educational institutions and healthcare

policymakers can develop targeted strategies to strengthen research skills and promote a positive attitude towards research within nursing education. These insights can guide the formulation of policies that mandate enhanced research training, increased resource allocation, and structured mentorship opportunities in nursing programs, ensuring that graduates are well-prepared for evidence-based practice. Additionally, healthcare organizations may adopt guidelines that support ongoing research engagement for nurses, fostering a workforce that is continuously informed by the latest evidence, which ultimately contributes to improving patient care standards across the healthcare system.

1.6 Research Hypotheses

1. There is a positive association between the level of research knowledge and attitudes toward research conduct among undergraduate nursing students.
2. There is a negative association between perceived barriers to research engagement and attitudes toward research conduct among undergraduate nursing students.

1.7 Scope of The Study

The scope of this study covers the knowledge and attitudes towards research conduct among undergraduate nursing students at the University of Benin, Benin City. It will assess their understanding of research principles, the importance of research in nursing practice, and the factors influencing their engagement with research activities. The study will also explore the barriers that hinder research involvement and how these factors are associated with their attitudes towards research.

1.8 Operational Definition of Terms

Knowledge of Research Conduct: In this study, knowledge of research conduct refers to the understanding and familiarity that undergraduate nursing students have

with the basic principles, methods, and processes involved in conducting research, including research design, data collection, and data analysis.

Attitude Towards Research: This term refers to the undergraduate nursing students' feelings, beliefs, and perceptions regarding research, including their interest, value placed on research, and willingness to engage in research-related activities during their academic and professional careers.

Research Engagement: Research engagement refers to the involvement of undergraduate nursing students in research activities, such as participation in research projects, literature reviews, data collection, or any hands-on research-related tasks during their studies.

Barriers to Research Engagement: Barriers to research engagement refer to the obstacles or challenges that hinder undergraduate nursing students' involvement in research activities. These barriers may include lack of time, inadequate research resources, lack of mentorship, or fear of complex research concepts.

Evidence-Based Practice (EBP): Evidence-based practice refers to the integration of the best available research evidence, clinical expertise, and patient preferences into the decision-making process to provide high-quality care in nursing practice.

Research Education: In this study, research education refers to the formal instruction and training provided to undergraduate nursing students regarding research methods, principles, and application in clinical practice, as part of their nursing curriculum.

Undergraduate Nursing Students: Undergraduate nursing students are individuals enrolled in a nursing program at the University of Benin, Benin City, who are working toward obtaining a Bachelor of Nursing Science degree. They are in the academic stage of their nursing education before becoming licensed professional nurses

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

A literature review is a search and evaluation of the available literature in a given subject or chosen topic area. Literature in this study was reviewed under the following subheadings; conceptual review, theoretical framework, empirical review and summary of literature review. This chapter reviews literature as related to this study under the following sub-headings; conceptual review, theoretical review, empirical review.

2.1 Conceptual Review

2.1.1 Concept of Research in Nursing

Nursing research is a fundamental aspect of modern healthcare, focusing on generating knowledge, improving patient outcomes, and advancing nursing practice. It involves a systematic process of inquiry, including problem identification, literature review, study design, data collection, statistical analysis, and interpretation of findings. Research enables nurses to evaluate current practices, explore new interventions, and contribute to policy-making in healthcare. The importance of research in nursing cannot be overstated, as it provides a scientific foundation for decision-making, enhances clinical efficiency, and ensures that nursing interventions are backed by empirical evidence rather than personal experience or traditional practices. Globally, research has significantly impacted patient care, with studies indicating that evidence-based nursing interventions can reduce hospital-acquired infections by up to 30% (World Health Organization [WHO], 2021; Bhattacharya & Tabi, 2022).

Historically, nursing was considered a practice-based discipline that relied heavily on intuition, experience, and physician-directed care. However, with the evolution of the profession, research has become an integral part of nursing, shifting the focus from task-oriented care to evidence-based practice (EBP). Florence Nightingale is often credited as a pioneer of nursing research, as her work in the 19th century used data collection and statistical analysis to improve hospital conditions and reduce mortality rates among wounded soldiers. Her research demonstrated that improved sanitation reduced death rates from 42% to 2% in field hospitals (Riaz et al., 2025). Since then, nursing research has expanded to various domains, including clinical care, health promotion, disease prevention, education, administration, and policy formulation. This broad scope highlights the essential role of research in enhancing nursing knowledge and improving the quality of healthcare services.

One of the primary objectives of nursing research is to bridge the gap between theoretical knowledge and practical application. Many nursing procedures and interventions that are widely accepted today were initially questioned and refined through rigorous research. For instance, infection control measures such as hand hygiene, wound care protocols, and the use of personal protective equipment have been strengthened by numerous studies proving their effectiveness. Research has shown that proper hand hygiene can reduce hospital-acquired infections by 50% (Haxhija et al., 2024). Similarly, studies on pain management have led to better pharmacological and non-pharmacological interventions tailored to individual patient needs. These advancements underscore the significance of research in ensuring safe, effective, and high-quality nursing care (Chaturverdi et al., 2023).

The nursing research process follows a structured framework that ensures the credibility and reliability of findings. It typically begins with identifying a clinical

problem or a knowledge gap in nursing practice, followed by a comprehensive review of existing literature to understand what has already been studied. Based on this foundation, researchers formulate research questions or hypotheses and design a study using qualitative, quantitative, or mixed-methods approaches. Data collection methods may involve patient surveys, laboratory tests, clinical observations, or secondary data analysis. The data is then analyzed using statistical tools to draw meaningful conclusions that can inform nursing practice. Finally, research findings are disseminated through academic journals, conferences, and healthcare institutions, contributing to the body of nursing knowledge and influencing future research. Studies have shown that hospitals that implement evidence-based practices derived from nursing research experience a 10–15% improvement in patient recovery rates (Biji et al., 2024).

Despite the recognized importance of nursing research, several challenges hinder its widespread adoption among nursing students and practicing nurses. One major barrier is the perceived complexity of research methodologies, particularly statistical analysis and data interpretation, which many nursing students find intimidating. Studies indicate that over 60% of nursing students feel inadequately prepared to conduct research due to limited training in research methodologies (Kamal et al., 2023). Additionally, nursing students often struggle with limited exposure to research, as most nursing curricula focus heavily on clinical skills and patient care. Time constraints are another issue, as the demanding nature of nursing education and practice leaves little room for research engagement. Furthermore, a lack of mentorship and institutional support discourages many students from actively participating in research activities (Biji et al., 2024). These challenges highlight the

need for more structured research training in nursing education and the establishment of support systems to facilitate student involvement in research.

Addressing these barriers requires a multi-faceted approach that integrates research training into nursing education from the early stages of academic learning. Nursing institutions must prioritize research literacy by incorporating research courses into the curriculum, providing hands-on research experience, and offering mentorship programs where students can work with experienced researchers. Additionally, collaboration between nursing educators, healthcare institutions, and policymakers can create an enabling environment where nursing students see research as an integral part of their professional growth rather than a mere academic requirement. With proper training and support, nursing students can develop the necessary skills to conduct research, critically evaluate scientific evidence, and apply research findings to their clinical practice (Biji et al., 2024). Recent studies suggest that nursing schools that integrate research training early in their curriculum produce graduates who are 40% more likely to engage in research-related activities in their careers (Kamal et al., 2023).

In conclusion, research is a vital component of nursing that underpins evidence-based practice, improves patient outcomes, and contributes to the advancement of healthcare policies. Understanding the concept of research in nursing is essential for undergraduate nursing students, as it equips them with the knowledge and skills needed to engage in scientific inquiry and contribute to the profession's growth. While challenges exist, enhancing research training, fostering a culture of inquiry, and providing adequate support systems can help bridge the gap between nursing education and research engagement. By strengthening research competence among nursing students, the future of the nursing profession will be shaped by practitioners

who are not only skilled in patient care but also capable of driving innovation and improving healthcare delivery through research.

2.1.2 Importance of Research In Nursing

Research is the backbone of modern nursing practice, playing a crucial role in improving patient care, shaping healthcare policies, and advancing the profession. Nursing, as a science-based discipline, relies on research to provide evidence that informs clinical decision-making, enhances patient outcomes, and promotes efficient healthcare delivery. Without research, nursing practice would remain stagnant, relying on outdated methods rather than evolving with new medical discoveries and technological advancements. According to the World Health Organization (WHO, 2021), evidence-based nursing practice has contributed to a 30% reduction in hospital-acquired infections, demonstrating the profound impact of research on patient safety and healthcare quality (Oducado, 2021).

One of the most significant contributions of nursing research is its role in promoting evidence-based practice (EBP). EBP ensures that nursing interventions are supported by scientific evidence rather than personal beliefs or traditional approaches. Studies have shown that hospitals implementing EBP experience a 10–15% improvement in patient recovery rates and a 20% reduction in medical errors (Priya et al., 2020). Research helps identify the most effective treatment protocols, refine patient care techniques, and introduce innovative nursing interventions. For instance, research in pressure ulcer prevention has led to the development of specialized mattresses and repositioning techniques that have significantly reduced the incidence of bedsores in hospitalized patients. Similarly, studies on hand hygiene compliance have

demonstrated that rigorous infection control measures can lower the risk of hospital-acquired infections by up to 50% (Kamal et al., 2023).

Beyond patient care, nursing research plays a critical role in healthcare policy development. Policymakers rely on research findings to create guidelines that improve public health outcomes and optimize healthcare resource allocation. For example, research on nurse staffing ratios has influenced policies in many countries, leading to mandates that ensure an adequate number of nurses per patient to reduce workload stress and improve care quality (Aderibigbe & Gbadamosi, 2021). A study by Chenfouh et al. (2024) found that hospitals with lower nurse-to-patient ratios had 20% lower mortality rates compared to those with high patient loads per nurse. Similarly, research on nursing leadership and management has led to policy changes that emphasize the importance of continuous professional development and nurse empowerment in decision-making (Biji et al., 2024).

Nursing research is also essential in improving patient safety and reducing healthcare costs. By identifying risk factors for complications and hospital readmissions, research helps develop preventive strategies that enhance patient well-being while reducing unnecessary healthcare expenditures. For instance, studies have shown that proper patient education on medication adherence can lower readmission rates for chronic diseases such as hypertension and diabetes by 25–30% (American Diabetes Association, 2020). Additionally, research in pain management has resulted in more effective multimodal approaches, reducing opioid dependency and its associated healthcare costs. These findings underscore how research-driven practices benefit both patients and healthcare institutions (Gjnmid et al., 2024)

Another critical aspect of nursing research is its contribution to professional development and lifelong learning. Engaging in research enhances critical thinking skills, improves problem-solving abilities, and fosters innovation among nurses. Studies indicate that nurses who actively participate in research projects or read scientific journals are 40% more likely to engage in leadership roles and contribute to policy formulation (Gjnmid et al., 2024). Research participation also opens doors for career advancement, as nurses involved in research are often considered for higher academic and professional positions. Furthermore, nursing education institutions that emphasize research training produce graduates who are better equipped to apply scientific evidence to clinical practice, thus improving overall healthcare delivery (Priya et al., 2020).

Despite its undeniable benefits, nursing research remains underutilized in many healthcare settings due to various challenges. One major barrier is the limited research culture among nursing professionals, as many nurses prioritize direct patient care over scholarly inquiry. A survey conducted by Priya et al., (2020) revealed that over 60% of nurses feel inadequately prepared to conduct research due to insufficient training in research methodologies. Time constraints, lack of funding, and limited access to research materials further hinder research engagement among nurses and nursing students. Additionally, some healthcare institutions do not prioritize research, leading to a lack of motivation among nurses to explore scientific inquiry.

Addressing these challenges requires institutional support and capacity building. Nursing education programs must integrate research training into their curricula, ensuring that students develop strong research skills before entering the workforce. Healthcare institutions should also create research-friendly environments by providing funding, mentorship, and opportunities for nurses to engage in scholarly activities.

Additionally, continuous professional development programs should encourage nurses to participate in research, emphasizing its role in improving practice and patient care. Studies show that nurses who receive structured research training are 35% more likely to incorporate research findings into their daily practice (Haxhija et al., 2025).

In conclusion, nursing research is essential for advancing patient care, shaping healthcare policies, reducing medical errors, and promoting professional growth. It provides the foundation for evidence-based practice, ensuring that nursing interventions are safe, effective, and scientifically validated. Despite existing barriers, efforts to enhance research training, create supportive institutional policies, and foster a culture of inquiry among nurses will strengthen the role of research in nursing. By embracing research, the nursing profession can continue to evolve, improve healthcare outcomes, and contribute to the global advancement of medicine and patient care.

2.1.3 Knowledge of Research Among Undergraduate Nursing Students

The level of knowledge about research among undergraduate nursing students is a crucial factor in their ability to engage in evidence-based practice and contribute to scientific advancements in healthcare. Research knowledge includes understanding fundamental principles, methodologies, statistical analysis, and the application of findings to clinical settings. However, studies indicate that many nursing students struggle with research concepts, limiting their ability to integrate scientific evidence into practice. For example, a study by Danso et al. (2024) revealed that only 35% of nursing students felt confident in their ability to conduct independent research. Several factors influence nursing students' knowledge of research, including curriculum structure, access to resources, attitude towards research, and mentorship opportunities.

Factors Influencing Research Knowledge Among Nursing Students

1. Curriculum Structure and Teaching Methods

The way research is incorporated into the nursing curriculum significantly affects students' understanding of research concepts. Nursing programs that integrate research training early and use hands-on, practical approaches tend to produce graduates with better research skills. A study in the United Kingdom found that nursing schools that incorporated research projects into their coursework saw a 40% increase in students' confidence in conducting research (Danso et al., 2024). In contrast, when research is taught as a standalone theoretical course, students often struggle to understand its real-world applications, leading to disinterest and poor engagement.

2. Access to Research Resources

Limited access to academic journals, research databases, and libraries affects students' ability to engage in research. A study conducted among nursing students in Nigeria revealed that over 65% lacked access to necessary research materials, which hindered their ability to develop strong research skills (Aderibigbe & Gbadamosi, 2021). Without adequate resources, students find it difficult to conduct literature reviews, analyze data, or stay updated with current scientific advancements. Institutions that provide access to online research databases and well-equipped libraries help bridge this gap, improving students' research competency.

3. Attitude Towards Research

The perception nursing students have about research significantly influences their willingness to engage in research activities. Many students perceive research as

complex, time-consuming, and difficult, particularly due to its association with statistics and data analysis. Studies have shown that students who view research as an essential part of nursing practice are 30% more likely to develop strong research skills compared to those who see it as irrelevant (Bijnr et al., 2024). Encouraging a positive attitude through engaging teaching methods, real-life research applications, and interactive learning strategies can help improve students' interest in research.

4. Mentorship and Faculty Support

The presence of research mentors and supportive faculty members plays a vital role in shaping students' research knowledge. Nursing students who receive guidance from experienced researchers are more likely to develop a better understanding of research methodologies and actively participate in research projects. A study by Aderibigbe & Gbadamosi, (2021) found that students who had regular interactions with research mentors demonstrated a 50% higher retention rate of research concepts. Institutions that foster mentorship programs and encourage faculty involvement in student research can significantly enhance research knowledge.

5. Statistical and Data Analysis Skills

Many nursing students struggle with understanding and applying statistical methods in research. The fear of statistics often discourages students from engaging in research activities, as they perceive data analysis to be too technical. However, training students in statistical software such as SPSS, NVivo, and R has been shown to improve research confidence. Research indicates that students who receive hands-on training in data analysis demonstrate 50% better comprehension of research findings compared to those who do not (Oducado, 2021).

6. Institutional Research Culture

A strong institutional research culture encourages students to actively participate in research-related activities. Universities that promote research by organizing research conferences, seminars, and journal clubs tend to have students who are more knowledgeable and interested in research. Institutions that lack a research-driven environment often produce graduates with limited research exposure. Studies indicate that students in research-oriented institutions are twice as likely to publish research papers or participate in scientific conferences (Blessing et al., 2025).

Enhancing Research Knowledge Among Nursing Students

To improve research knowledge among nursing students, institutions should:

i. Integrate research training into the curriculum using interactive and problem-based learning approaches.
ii. Provide access to research materials, including online databases, journals, and statistical tools.
iii. Encourage faculty mentorship programs to guide students in research projects.
iv. Organize research workshops and training on statistical software to improve data analysis skills.
v. Foster a positive research culture by promoting student involvement in research conferences and publications.

In conclusion, nursing students' knowledge of research is influenced by multiple factors, including curriculum structure, resource availability, attitude towards research, and mentorship opportunities. Addressing these challenges through enhanced research training, improved institutional support, and active mentorship can significantly

increase students' research competency, preparing them to contribute meaningfully to evidence-based nursing practice and healthcare advancements.

2.1.4 Attitude of Undergraduate Nursing Students Towards Research

Attitude plays a crucial role in shaping students' willingness to engage in research activities and apply research findings in clinical practice. A positive attitude towards research fosters curiosity, motivation, and a proactive approach to evidence-based practice, while a negative attitude often leads to avoidance, disinterest, and limited utilization of research in nursing care. Despite the increasing emphasis on research as a fundamental component of nursing education, studies indicate that a significant number of undergraduate nursing students exhibit low enthusiasm for research. Many perceive it as difficult, time-consuming, or unrelated to their primary role as future nurses. This perception can create a gap between academic knowledge and practical application, ultimately affecting the quality of healthcare delivery (Blessing et al., 2025).

Research is a key driver of innovation and improvement in nursing practice, providing the foundation for high-quality, patient-centered care. However, factors such as lack of confidence in research skills, fear of statistical analysis, inadequate institutional support, and limited exposure to research mentors contribute to negative attitudes among nursing students. A study by Tanlaka & Aryal, (2025) found that only 40% of nursing students had a positive outlook on research, while 60% viewed it as complex and burdensome. Understanding these factors and addressing them through curriculum development, research mentorship, and institutional support is crucial in fostering a research-oriented mindset among nursing students.

Factors Influencing Nursing Students' Attitudes Towards Research

1. Perceived Relevance of Research to Clinical Practice

One of the major determinants of students' attitudes toward research is their perception of its relevance to nursing practice. Some students believe that research is theoretical and detached from real-world nursing care, leading to a lack of interest. A study conducted by Blessing et al. (2025) found that students who were able to connect research findings to clinical practice were 45% more likely to develop a positive attitude towards research. Incorporating real-life case studies and evidence-based scenarios in nursing education can help bridge this gap and improve students' appreciation of research.

2. Complexity of Research Methods and Statistics

Many nursing students view research as difficult due to its association with complex methodologies, statistical analysis, and data interpretation. A study by Kamal et al. (2023) revealed that over 50% of nursing students found statistical concepts intimidating, leading to a lack of confidence in conducting research. The fear of numbers and data analysis often discourages students from actively engaging in research. Simplifying research concepts, using interactive teaching methods, and incorporating statistical software training can help mitigate this challenge and improve students' attitudes towards research.

3. Teaching Methods and Institutional Support

The way research is taught significantly influences students' attitudes towards it. Nursing programs that emphasize theoretical aspects of research without practical exposure often fail to generate enthusiasm among students. A study by Aderibigbe & Gbadamosi, (2021) found that students who participated in research projects as part of their coursework exhibited a 35% higher level of interest in research compared to

those who only received lecture-based research training. Institutions that integrate hands-on research experiences, mentorship programs, and research-focused extracurricular activities tend to produce students with a more positive outlook towards research.

4. Time Constraints and Academic Workload

The demanding nature of nursing education, which includes clinical rotations, coursework, and assignments, often leaves little room for students to engage in research. Many nursing students perceive research as an additional burden rather than a valuable skill. A survey by Danso et al. (2024) among nursing students in Nigeria showed that over 65% cited lack of time as a major barrier to developing a positive attitude toward research. Implementing flexible research schedules, incorporating research into clinical training, and providing incentives for research participation can help address this challenge.

5. Lack of Research Mentorship and Role Models

The presence of research mentors and role models can significantly influence students' attitudes towards research. When students see successful nursing professionals actively engaged in research, they are more likely to develop an interest in research themselves. However, in many institutions, there is limited exposure to research-active nursing faculty. A study by Gjnmid et al. (2024) found that nursing students who had access to research mentors were 50% more likely to pursue research activities. Strengthening mentorship programs and involving students in faculty-led research can help improve their perception of research.

6. Perceived Difficulty in Publishing Research

Many nursing students are discouraged by the belief that research is only valuable if it leads to publication, which they see as a complicated and unattainable process. A study by Priya et al. (2020) found that 70% of nursing students felt that publishing research was beyond their capabilities. Providing guidance on the research process, encouraging students to present findings at local or institutional conferences, and simplifying the publication process can help foster a more positive attitude towards research.

Strategies to Improve Nursing Students' Attitude Towards Research

To enhance students' attitude towards research, the following strategies can be implemented:

i. Integrating research into clinical practice by using real-life patient cases to demonstrate the impact of research on nursing care.
ii. Simplifying research concepts through interactive and engaging teaching methods, including the use of technology and practical demonstrations.
iii. Providing mentorship programs where experienced researchers guide students and encourage participation in research projects.
iv. Reducing the fear of statistics by offering training in user-friendly statistical software such as SPSS and NVivo.
v. Creating a research-friendly environment by promoting undergraduate research conferences, seminars, and journal clubs.
vi. Incorporating research into coursework in a way that does not add excessive workload to students' academic schedules.

The attitude of undergraduate nursing students toward research significantly influences their willingness to engage in research activities and apply evidence-based practices in clinical settings. While some students appreciate the value of research, many perceive it as complex, irrelevant, or burdensome. Factors such as the perceived relevance of research, the complexity of research methodologies, time constraints, and the availability of mentorship shape students' attitudes toward research. By implementing strategies that promote practical exposure, simplify research concepts, and integrate research training into clinical practice, nursing institutions can cultivate a more positive attitude toward research, ultimately strengthening the role of evidence-based practice in nursing.

2.1.5 Barriers to Research Conduct Among Undergraduate Nursing Students

Despite the recognized importance of research in nursing education and practice, undergraduate nursing students often face numerous challenges that hinder their active engagement in research. These barriers can be personal, institutional, or systemic, affecting students' ability to conduct, interpret, and utilize research findings. Limited access to research resources, lack of research training, fear of complex methodologies, and heavy academic workload are some of the commonly reported obstacles (Tanlaka & Aryal, 2025). According to Priya et al. (2020), nearly 65% of nursing students admitted to facing significant challenges in conducting research, with the majority citing a lack of research skills and insufficient institutional support as primary barriers.

Research is a fundamental component of evidence-based nursing practice, yet many nursing students struggle to incorporate it into their academic and clinical experiences. The ability to critically appraise literature, design studies, and analyze data is essential for producing quality research, but without adequate training and motivation, students

often view research as a daunting task. A study by Aderibigbe & Gbadamosi, (2021) found that over 70% of nursing students in Nigeria felt unprepared to engage in research due to inadequate research exposure in their curriculum. Addressing these barriers is critical in fostering a research-driven culture among undergraduate nursing students and ensuring that they graduate with the necessary skills to contribute to scientific advancements in healthcare.

Major Barriers to Research Conduct Among Nursing Students

1. Lack of Research Knowledge and Skills

One of the most significant barriers to research conduct among nursing students is their limited knowledge of research methodology and skills. Many students struggle with formulating research questions, designing studies, and analyzing data due to insufficient training in research methods. A study by Priya et al. (2020) revealed that 60% of nursing students felt inadequately prepared to conduct independent research projects, which discouraged them from participating in research activities. Enhancing the research curriculum and providing hands-on training can help bridge this knowledge gap.

2. Fear of Statistical Analysis and Data Interpretation

Statistical analysis is a critical aspect of research, but many nursing students find it intimidating. The fear of complex calculations, data analysis software, and interpretation of statistical results often deters students from pursuing research. According to Dietrich(2025), over 50% of nursing students admitted that statistical

analysis was one of the most challenging aspects of research. Providing training on user-friendly statistical tools such as SPSS, NVivo, and Microsoft Excel can help simplify data analysis and encourage student participation in research.

3. Limited Access to Research Resources and Facilities

The availability of research materials, access to scientific journals, and well-equipped laboratories significantly impact students' ability to conduct research. In many institutions, particularly in low-resource settings, students face difficulties in accessing relevant literature, research databases, and laboratory equipment. A study by Aderibigbe & Gbadamosi (2021) found that 75% of nursing students in Nigeria struggled with inadequate access to academic journals and research facilities. Providing institutional support by improving library resources, offering free journal subscriptions, and establishing research centers can help address this challenge.

4. Heavy Academic Workload and Time Constraints

Nursing students often juggle multiple responsibilities, including coursework, clinical rotations, and assignments, leaving little time for research activities. Many students perceive research as an additional burden rather than an integral part of their learning. A study by Dietrich (2025) indicated that 68% of nursing students cited time constraints as a major barrier to conducting research. To mitigate this, institutions can integrate research projects into the existing curriculum, allowing students to engage in research as part of their academic and clinical training.

5. Lack of Research Mentorship and Support

Research mentorship plays a vital role in guiding students through the research process, yet many nursing students lack access to experienced mentors. Without

proper guidance, students often struggle with designing studies, writing research proposals, and publishing their findings. Oducado, (2021) found that students who had research mentors were 50% more likely to engage in research compared to those without mentors. Strengthening mentorship programs, pairing students with experienced researchers, and encouraging faculty-led research projects can help students overcome this barrier.

6. Financial Constraints

Conducting research requires financial resources for materials, data collection, software, and sometimes publication fees. Many nursing students, especially in low-income settings, lack the financial means to fund their research projects. A study by Al-Maqbali, (2024) found that 58% of students reported financial constraints as a significant barrier to conducting research. Institutions and organizations can address this challenge by providing research grants, scholarships, and financial aid for student-led research initiatives.

7. Perceived Lack of Immediate Benefits

Some students do not see the direct benefits of engaging in research during their undergraduate studies. They often believe that research is more relevant for postgraduate students or academics, rather than for clinical nurses. This perception reduces motivation and interest in research participation. A study by Al-Maqbali, (2024) found that 40% of nursing students believed that research was not necessary for their future careers. Raising awareness about the importance of research in nursing

practice and integrating research-based decision-making in clinical training can help shift this mindset.

Strategies to Overcome Research Barriers Among Nursing Students

To encourage active participation in research and reduce the barriers faced by nursing students, the following strategies should be implemented:

i. Enhancing research training in nursing curricula to provide students with a strong foundation in research methodology, study design, and statistical analysis.
ii. Providing research mentorship programs where students are guided by experienced researchers throughout the research process.
iii. Integrating research activities into coursework to ensure students engage in research as part of their academic requirements rather than an additional burden.
iv. Improving access to research resources and funding by expanding institutional libraries, offering free journal access, and providing grants for student-led research.
v. Offering hands-on training in statistical tools to help students overcome their fear of data analysis.
vi. Creating a research-friendly environment by organizing workshops, seminars, and conferences where students can present their findings.
vii. Raising awareness on the importance of research in improving clinical practice and career development, emphasizing its relevance beyond academia.

While research is a vital component of nursing education and practice, undergraduate nursing students face numerous barriers that hinder their ability to engage in research

activities. Lack of research knowledge, fear of statistics, limited resources, time constraints, and absence of mentorship are among the most common challenges reported. These barriers can significantly impact students' willingness to participate in research and apply evidence-based practices in their careers. Addressing these obstacles through improved research training, mentorship, resource availability, and institutional support is essential in cultivating a research-oriented nursing workforce (Egbeh et al., 2025). By implementing strategies that facilitate research participation, nursing education can produce graduates who are not only clinically competent but also capable of contributing to scientific advancements in healthcare.

2.1.6 Strategies to Improve Research Engagement Among Undergraduate Nursing Students

Encouraging research engagement among undergraduate nursing students is essential for fostering a culture of evidence-based practice and scientific inquiry. Despite the barriers that hinder students from actively participating in research, various strategies can be implemented to enhance their involvement, improve their research skills, and build their confidence in conducting and utilizing research findings (Egbeh et al., 2025). Research engagement not only benefits students academically but also prepares them for professional roles where critical thinking and evidence-based decision-making are crucial. According to Priya et al. (2020), nursing students who actively engage in research during their undergraduate studies are 40% more likely to integrate research into their clinical practice after graduation.

The promotion of research engagement requires a multifaceted approach that includes curriculum improvement, mentorship programs, financial support, and the creation of research-friendly environments. A study by Egbeh et al. (2025) found that students who received structured research training, participated in mentorship programs, and

had access to research funding were twice as likely to complete independent research projects compared to those who lacked these opportunities. Implementing effective strategies to address the challenges faced by nursing students can significantly enhance their research participation, leading to the production of high-quality research that contributes to nursing knowledge and practice.

Key Strategies to Enhance Research Engagement

1. Integrating Research into the Nursing Curriculum

One of the most effective ways to promote research engagement is by incorporating research into the nursing curriculum from the early years of study. Many nursing students struggle with research because they are introduced to it late in their academic journey. By embedding research concepts into coursework, students can gradually develop their skills and confidence in conducting research. A study by Priya et al. (2020) found that students exposed to research-based learning from their first year were 50% more likely to participate in independent research projects than those introduced to research only in their final year. Nursing schools should integrate research methodologies, literature appraisal, and practical research projects throughout the curriculum.

2. Providing Research Mentorship and Guidance

Having experienced mentors to guide students through the research process can significantly improve their engagement and interest in research. Research mentorship

programs, where students are paired with faculty members or experienced researchers, provide a supportive environment for learning. Bhattacharya & Tabi. (2022) found that nursing students with research mentors were 60% more likely to engage in research activities compared to those without mentorship. Institutions should establish structured mentorship programs where students receive guidance on research design, data analysis, and publication.

3. Creating Opportunities for Hands-on Research Experience

Practical exposure to research enhances students' understanding and appreciation of research processes. Many students lose interest in research because they are only taught theoretical aspects without real-world application. Offering research internships, allowing students to assist faculty members with research projects, and encouraging participation in research workshops can bridge this gap. A study by Priya et al. (2020) showed that students who actively participated in research internships were 55% more likely to pursue research careers or engage in postgraduate research programs.

4. Simplifying Research Methodologies and Statistical Training

Many nursing students find research difficult due to the complexity of research methodologies and statistical analysis. Providing simplified and interactive training on research methods and data analysis can boost students' confidence and willingness to engage in research. A study by Bhattacharya & Tabi, (2024) found that students who received training in user-friendly statistical tools such as SPSS, NVivo, and Excel

were 47% more likely to conduct independent research projects. Nursing schools should incorporate practical statistical workshops and tutorials into the curriculum to reduce students' fear of data analysis.

5. Enhancing Access to Research Resources and Funding

Limited access to research materials, academic journals, and financial support is a major barrier to research engagement. Many nursing students struggle to find relevant literature or fund their research projects. Institutions should provide free or subsidized access to scientific journals, research databases, and statistical software. Additionally, offering research grants and scholarships can motivate students to pursue research. A study by Aderibigbe & Gbadamosi 2022) found that students with access to funded research opportunities were 70% more likely to complete their research projects successfully.

6. Encouraging Research Presentations and Publications

Providing students with platforms to present their research findings can motivate them to engage more in research. Organizing student research conferences, seminars, and journal clubs where students can share their work with peers and faculty members fosters a research culture. A study by Egbeh et al. (2025) found that students who presented their research at academic conferences were 60% more likely to continue engaging in research after graduation. Additionally, institutions can create student-led research journals where undergraduate students can publish their findings.

7. Reducing the Academic Workload to Accommodate Research Activities

One of the major reasons why nursing students do not engage in research is their demanding academic workload, which includes coursework, clinical rotations, and

assignments. Institutions should consider restructuring academic schedules to allow students dedicated time for research activities. A study by Li et al. (2025) found that students with flexible academic schedules were 45% more likely to participate in research than those with rigid academic programs. Providing research electives and integrating research projects into clinical training can also help balance students' workload.

8. Promoting a Positive Research Culture in Nursing Institutions

The overall institutional attitude towards research greatly influences students' engagement in research activities. If nursing schools and faculty members prioritize research and emphasize its relevance to nursing practice, students are more likely to develop an interest in research. Institutions should celebrate student research achievements, recognize outstanding research contributions, and involve students in faculty research projects. According to Priya et al. (2020), students who studied in institutions that actively promoted research were 50% more likely to pursue research initiatives than those in institutions with weak research cultures.

Benefits of Improved Research Engagement

Enhancing nursing students' engagement in research has numerous benefits, including:

i. Better preparedness for evidence-based practice, leading to improved patient care outcomes.
ii. Increased confidence in critical thinking and problem-solving, which are essential for professional growth.
iii. Higher likelihood of pursuing advanced research degrees, contributing to nursing knowledge development.

iv. Stronger contributions to policy-making and healthcare advancements through research findings.

v. Improved employability and career prospects, as research skills are highly valued in the healthcare sector.

Improving research engagement among undergraduate nursing students requires a combination of curriculum modifications, mentorship programs, financial support, access to research resources, and institutional efforts to foster a positive research culture. By integrating research into academic coursework, simplifying research training, providing hands-on research experience, and creating opportunities for student-led research presentations, nursing institutions can enhance students' research skills and motivation. Addressing the barriers to research engagement will not only benefit students academically but also contribute to the advancement of nursing knowledge and the promotion of evidence-based practice in healthcare.

2.2 Theoretical Framework

This study is anchored on Bandura's Social Learning Theory (SLT) (1977), which explains how individuals acquire knowledge, develop attitudes, and adopt behaviors through observation, modeling, and reinforcement. The theory emphasizes that learning occurs in a social context, where individuals are influenced by their interactions with role models, peers, and the environment (Mancin et al., 2025). In the context of nursing education, SLT provides a framework for understanding how undergraduate nursing students develop knowledge and attitudes toward research conduct through exposure to research-oriented environments, mentorship, and institutional support.

2.2.1 Bandura's Social Learning Theory (SLT)

Albert Bandura's Social Learning Theory posits that individuals learn new behaviors by observing others, imitating their actions, and experiencing the consequences of those actions. The theory emphasizes four key processes that influence learning: attention, retention, reproduction, and motivation.

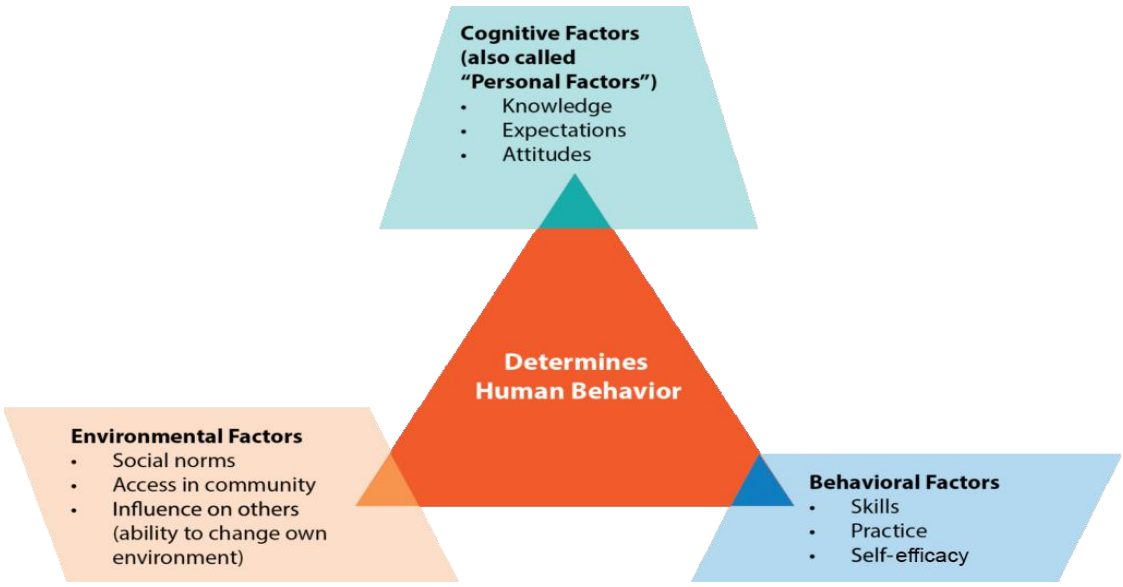

Fig 2.1: Schematic Illustration of Bandura's Social Learning Theory.

1. Attention: Individuals must first notice and focus on a particular behavior or skill. In the context of nursing research, students are more likely to develop an interest in research if they are exposed to research-related activities such as faculty-led research projects, research seminars, and hands-on research training.

2. Retention: For learning to be effective, individuals must remember what they have observed. Nursing students retain research knowledge through lectures, workshops, research assignments, and exposure to published studies, which help reinforce their understanding of research methodologies and ethical considerations.

3. Reproduction: Once knowledge is acquired, individuals must have the ability to replicate the observed behavior. Nursing students who receive structured training in

research methods and gain hands-on experience through supervised research projects are more likely to develop the confidence and competence to conduct research independently.

4. Motivation: Individuals must have a reason to engage in a behavior. Motivation in research engagement can come from intrinsic factors (such as personal interest in knowledge generation) or extrinsic factors (such as academic requirements, career opportunities, or recognition through research awards and funding).

Applying SLT to nursing students' engagement in research suggests that their knowledge and attitude toward research are shaped by their learning environment, role models, and institutional support. When students see lecturers, clinical instructors, or senior colleagues actively engaging in research and benefiting from it, they are more likely to develop an interest in research. Conversely, if research is perceived as a difficult and irrelevant academic task with little institutional encouragement, students may develop negative attitudes toward it.

Implications of Social Learning Theory for Research Engagement Among Nursing Students

The application of SLT in nursing research education underscores the importance of structured exposure, mentorship, and reinforcement mechanisms to promote research engagement. Some key implications include:

1. The Role of Mentorship and Faculty Influence: Nursing students are more likely to develop a positive attitude toward research if they are mentored by faculty members who actively engage in research. Studies have shown that students with research mentors are significantly more likely to participate in independent research projects and pursue research-oriented careers.

2. The Impact of Research-Oriented Environments: Institutions that integrate research into the nursing curriculum and provide opportunities for students to engage in research projects foster a stronger research culture. Universities that encourage student participation in research conferences, publish student research findings, and offer research grants create a conducive environment for research engagement.

3. The Importance of Recognition and Rewards: Motivation plays a critical role in research engagement. Institutions can encourage students by recognizing and rewarding outstanding research efforts through awards, scholarships, and career incentives. This reinforcement mechanism aligns with Bandura's assertion that positive reinforcement strengthens behavior adoption.

4. Addressing Barriers to Research Engagement: If students perceive research as difficult due to inadequate research training or lack of access to resources, they may develop negative attitudes toward it. Providing structured research training, user-friendly statistical tools, and simplified research methodologies can enhance students' confidence in conducting research.

Bandura's Social Learning Theory provides a strong theoretical foundation for understanding how nursing students acquire knowledge and develop attitudes toward research conduct. The theory emphasizes that learning occurs through observation, modeling, and reinforcement, highlighting the importance of mentorship, institutional support, and research-friendly environments in shaping students' engagement in research. By creating opportunities for hands-on research experience, fostering positive role models, and implementing reinforcement mechanisms, nursing institutions can enhance students' motivation and competence in research, ultimately contributing to evidence-based nursing practice.

2.3 Empirical Review

2.3.1 Level Of Knowledge Regarding Research Conduct Among Undergraduate Nursing Students In A Tertiary Institution

Awoniyi et al. (2023) conducted a cross-sectional study to examine the knowledge and perception of nursing students in Nigeria towards research. The study, which utilized an online survey involving 422 nursing students across Nigeria's six geopolitical zones, employed a multistage sampling technique. Findings revealed that research knowledge among respondents varied, with 10% exhibiting high knowledge, 48% demonstrating moderate knowledge, and 42% having low knowledge. Despite the gaps in knowledge, 60% of respondents had a positive perception of research. Factors negatively influencing research perception included limited access to journals and inadequate funding (mean score = 4.26±1.05). However, strategies suggested to improve perception included better teaching of research methodology (4.64±0.66), sufficient training before undertaking major research (4.63±0.72), and improved access to institutional research databases (4.61±0.72). Additionally, the academic level of students was significantly associated with their level of research knowledge ($\chi^2 = 20.855$, $p = .022$). The study concluded that while nursing students generally had a favorable perception of research, their knowledge remained inadequate, necessitating improved research training, structured methodological instruction, and better access to academic resources to enhance research engagement.

Usman et al. (2023) conducted a descriptive cross-sectional study to assess the knowledge and attitude of final-year undergraduate nursing students towards research at the University of Technology, Jamaica. The study targeted 116 nursing students enrolled in the Bachelor of Science in Nursing program, aiming to identify challenges students face in conducting research and their overall perception of the research

process. The findings revealed that a significant proportion (85.4%) of students encountered difficulties in locating relevant research articles, while 67.4% found interpreting the literature particularly challenging. Despite these struggles, 61.8% of respondents maintained a positive attitude towards research, indicating an awareness of its importance despite the barriers they faced. The study also highlighted that students found Chapter Two of their research projects the most difficult, possibly due to the complexities of literature review and theoretical analysis, whereas Chapter One posed the least challenge. Additionally, 78% of the students reported that the research process was more difficult than they had initially anticipated, suggesting that gaps in research training and access to academic resources contributed to these challenges. The study underscores the need for enhanced research education, including structured methodological training, improved guidance on literature interpretation, and better access to scholarly resources to help nursing students overcome these difficulties and engage more effectively in research.

2.3.2 Attitudes of Undergraduate Nursing Students Towards Research And Its Importance In Professional Practice.

Chaturvedi et al. (2023) conducted a descriptive survey study to assess the attitude of nursing students in Rajasthan, India, towards research. The study utilized a modified Attitude Towards Research (ATR) scale as the research instrument and included 373 nursing students from various nursing colleges, selected through a random online Google Doc survey. Findings indicated that a majority of the students (75.10%) had never attended any conference, seminar, or webinar related to research, which may have influenced their attitude towards it. Regarding responses to the ATR scale statements, 49.56% of students expressed agreement, 35.92% disagreed, while 14.56% remained neutral. Based on overall attitude scoring, 54.42% of respondents

demonstrated a positive attitude towards research, 41.83% had a neutral attitude, and only 3.75% exhibited a negative attitude. A significant association was found between students' attitudes towards research and their participation in research-related conferences, seminars, or webinars, highlighting the role of educational exposure in shaping research perception. The study concluded that incorporating additional educational interventions, such as workshops, research-focused seminars, and conferences, alongside the standard curriculum, is essential for fostering a positive research attitude among nursing students. Encouraging research engagement would help future nurses adopt a more scientific and evidence-based approach to patient care, ultimately improving healthcare practices.

Bhattacharya and Tabi (2022) conducted a study to examine the attitude of undergraduate nursing students toward research, recognizing that negative perceptions often serve as a barrier to engagement and success in research-related coursework. The study employed a 15-item pre- and post-test questionnaire to assess factors influencing students' attitudes, with ethical approval obtained from the Georgia Southern University Institutional Review Board. Statistical analysis using a paired sample t-test in IBM SPSS 23.0 revealed several significant findings. Key factors negatively affecting students' attitudes included anticipatory anxiety about taking a research course ($p = 0.005$), relief upon completing the course ($p = 0.009$), and the perception that research is a boring field ($p = 0.040$). However, students acknowledged the relevance of research to their professional careers ($p = 0.004$) and recognized the importance of attending research classes ($p = 0.039$). These findings highlight the need for strategies to shift students' perceptions of research, particularly as the nursing profession moves toward requiring a doctorate for advanced practice roles. The study suggests that adopting engaging teaching methods and refining

course content to enhance student involvement may play a crucial role in fostering a more positive attitude toward research and improving learning outcomes.

Riaz et al. (2025) conducted a descriptive cross-sectional study to assess the attitudes of undergraduate nursing students toward research at the College of Nursing, Allama Iqbal Medical College, Jinnah Hospital Lahore. The study, carried out between March and August 2023, involved a convenient sample of 100 students who provided informed consent and completed a 25-item Likert scale questionnaire. Data analysis using SPSS version 23 revealed that the majority of students (86.88%) held a positive attitude towards research, with an overall mean score of 74.05% (SD = 6.580). Additionally, 91.2% of participants recognized the utility of research in their profession, and 72.75% acknowledged its relevance to both professional and personal life. Despite this, a considerable proportion (41.2%) found research to be challenging, perceiving it as difficult, complicated, and stressful, while 55.3% reported difficulties with statistical components. The study concluded that while nursing students largely value research, negative emotions and anxiety associated with the research process remain prevalent. To enhance student engagement and ease their research experience, the study recommended integrating research courses into pre-university curricula and involving statistical experts from research centers to teach effective learning strategies, ultimately fostering a stronger foundation in research methodologies.

2.3.3 Barriers That Undergraduate Nursing Students Face In Engaging With Research Activities.

Sarhan et al. (2025) conducted a qualitative study to explore the barriers undergraduate dental students face when engaging in research, addressing a gap in existing literature where most studies have focused on quantitative assessments. The study employed a performative knowledge strategy and involved 14 dental trainees,

including 10 undergraduate students and 4 interns, who participated in research projects outside their mandatory curriculum. Data collection was carried out through diaries and semi-structured virtual interviews, and an inductive thematic analysis was used to examine the findings. The study identified six major barriers: inadequate knowledge, time constraints, and lack of resources, which align with previous research, and misaligned schedules, delayed response, and lack of orientation, which emerged as novel insights. These findings suggest that beyond well-documented challenges such as limited research skills and time limitations, structural and administrative issues further hinder students' research engagement. The study emphasizes the need for targeted interventions to address these challenges, such as better scheduling flexibility, improved research mentorship, and orientation programs. The authors recommend additional qualitative studies to explore these barriers in more depth and quantitative research to assess their prevalence and impact on students' research participation.

Amelung and Helmke (2024) explored barriers that hinder undergraduate students from engaging in research and evaluated the effectiveness of a student-led virtual workshop in reducing these challenges. Undergraduate research is widely recognized as a high-impact learning experience, yet many students face obstacles such as inadequate guidance, complex application processes, and a lack of confidence in their ability to participate. These barriers disproportionately affect first-year students, first-generation students, and underrepresented groups. The COVID-19 pandemic further exacerbated these difficulties by limiting research opportunities. In response, the researchers developed an extracurricular program called Starting an Undergraduate Research Experience (SURE) in 2020, aimed at lowering entry barriers for engineering students seeking research experiences. The program enrolled over 150

students across two semesters, organizing them into small groups led by experienced undergraduate research mentors. These mentors provided one-on-one guidance and reinforced workshop skills. To assess the program's impact, pre- and post-workshop surveys were conducted, measuring students' research interests, perceptions of research and engineering, sense of belonging, and perceived barriers to research participation. Findings indicated that students reported a reduction in perceived barriers and an increased likelihood of securing research positions after completing the program. The study highlights the importance of structured mentorship and targeted interventions in facilitating undergraduate research participation, particularly for students facing systemic challenges.

Sullivan et al. (2024) examined the barriers undergraduate nursing students face in engaging with research and how collaborative research initiatives may help address these challenges. While nurses are expected to integrate evidence-based research into practice, many nursing students find research courses uninteresting or feel unprepared to conduct research. A key barrier is the lack of hands-on experience, which can lead to disengagement and difficulty understanding research concepts. To address this, faculty mentors involved students in an experiential research project examining the effects of pet interaction among university students, immersing them in all stages of the research process. Findings revealed that initial challenges included limited confidence in research skills, difficulty understanding methodologies, and uncertainty about the relevance of research to clinical practice. However, participation in the project helped students overcome these barriers by enhancing their research comprehension, improving clinical and communication skills, and fostering professional growth. Students presented their findings through a scientific poster at the university's research event, further reinforcing their learning. The study concluded

that collaborative faculty-student research initiatives can help mitigate barriers to research engagement by increasing confidence, promoting professional development, and strengthening students' connections with faculty, peers, and the broader academic community.

Furaikh et al. (2021) conducted a cross-sectional study to explore strategies for improving nursing students' engagement in research by analyzing their attitudes and challenges. The study involved 186 purposively selected undergraduate nursing students from King Saud bin Abdulaziz University for Health Sciences, Al-Ahsa, using a self-administered questionnaire with 32 Likert-scale items. Results showed that while 68% of students had a positive attitude towards research and 78% acknowledged its usefulness in nursing, a significant proportion (71%) found research difficult, stressful, and complicated, with 64% struggling with statistical aspects. To enhance student engagement and mitigate these challenges, the study suggests incorporating research courses at the pre-university level to familiarize students with research concepts early. Providing structured mentorship programs with faculty guidance can support students in developing research skills and confidence. The inclusion of statistical experts from research centers to teach statistical methods and research strategies can address students' difficulties in data analysis. Additionally, integrating active learning strategies such as hands-on research projects, peer collaborations, and research-based clinical assignments can make research more engaging and relevant to practical nursing. Universities should also offer research workshops, academic writing training, and opportunities for students to present their research at conferences to boost motivation. Creating a supportive research culture, where faculty actively encourage and involve students in real-world research projects, can foster a more positive perception of research. By addressing these barriers and

implementing structured interventions, nursing education can promote a research-driven mindset, ensuring that students not only appreciate the value of research but also actively participate in evidence-based nursing practice.

2.3.4 Strategies For Improving Research Education And Fostering A Positive Attitude Toward Research Among Nursing Students.

Haxhija et al. (2024) examined strategies to improve nursing students' engagement in scientific research, highlighting institutional support, structured mentorship, and research-friendly learning environments as key interventions. The study, conducted at AAB College, included 300 randomly selected nursing students and utilized a questionnaire to assess their attitudes toward research. Findings revealed that while the majority of students recognized the importance of scientific research, they faced significant challenges due to inadequate institutional support, limited participation in scientific activities, and insufficient motivation from faculty. To address these barriers, the study suggests integrating research into the nursing curriculum as a fundamental component, ensuring that students develop research competencies early in their education. Establishing faculty-led mentorship programs can provide structured guidance, while research training workshops and academic conferences can enhance students' research skills and exposure. The study also recommends creating research support centers with essential resources such as statistical software, academic databases, and research funding to facilitate student-led research. Additionally, implementing problem-based learning, experiential research opportunities, and interdisciplinary collaborations can make research more engaging and practical. Financial incentives, such as scholarships, stipends, or academic credits for research participation, may further encourage student involvement. Raising awareness about the impact of nursing research on evidence-based practice through seminars, guest

lectures, and peer-led discussions is also crucial in fostering a research-oriented mindset. Ultimately, these strategies can enhance nursing students' engagement in research, contributing to the professionalization of nursing and the overall improvement of healthcare services.

2.4 Summary of Literature Review

The literature review explored the knowledge and attitude of undergraduate nursing students toward research conduct, emphasizing key factors that influence their engagement. Research suggests that while nursing students recognize the importance of research in improving clinical practice and advancing the profession, actual participation in research remains low due to barriers such as inadequate research skills, lack of mentorship, time constraints, and limited institutional support. Educational exposure, faculty guidance, and access to research resources significantly impact students' research attitudes, with those in research-intensive environments demonstrating more enthusiasm for research. Additionally, challenges such as the perceived complexity of research methodologies and statistical analysis discourage active participation. Social and cultural perceptions, as well as the structure of the nursing curriculum, also shape students' attitudes toward research, highlighting the need for an integrated approach that fosters research interest from early academic stages.

The theoretical framework further explains the factors influencing research engagement. Bandura's Social Learning Theory (SLT) suggests that students learn research skills and attitudes through observation, mentorship, and reinforcement, underscoring the role of faculty and institutional support in shaping research engagement. Similarly, Ajzen's Theory of Planned Behavior (TPB) posits that students' willingness to engage in research is influenced by their attitudes, perceived

social expectations, and confidence in conducting research. Despite the growing recognition of research in nursing education, a gap remains between theoretical knowledge and practical application, as many students lack hands-on research experience. Addressing this issue requires structured research training, enhanced mentorship programs, and institutional incentives to encourage student-led research initiatives. Strengthening research education and creating an environment that nurtures research interest can help bridge this gap, fostering a positive research culture among undergraduate nursing students.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

Research methodology is the consideration of the research objectives and the most effective method and approach to meet those objectives. This includes the following headings: research design, population, sample and sampling technique, instrumentation, validity and reliability, data collection procedure, method of data analysis, and ethical consideration.

3.1 Research Design

The research design refers to the overall strategy chosen to integrate the different components of the study in a coherent and logical way, thereby ensuring the research problem was effectively addressed; it constituted the blueprint for the collection, measurement, and analysis of data (Williams, 2020). This study used a descriptive cross-sectional non-experimental design (Abba, 2020). A descriptive design was carried out to describe situations and events. This study focused on the overall well-being of student nurses. It investigated the knowledge and attitude towards research conduct among undergraduate nursing students in the University of Benin, Benin City, Edo State.

3.2 Research Settings

The research was carried out at the University of Benin (UNIBEN), and was delimited to only the Department of Nursing Science. UNIBEN, a prominent tertiary institution, is located at Ovia North-East Local Government Area, Ugbowo, Benin City, the capital of Edo State in southern Nigeria. As a tertiary institution, UNIBEN serves a diverse population from Benin City and the surrounding regions. The University of Benin was founded in 1970. It started as an Institute of Technology and was accorded the status of a full-fledged university by the National Universities Commission (NUC) on 1st July, 1971. In his Budget Speech in April 1972, the then Military Governor of Mid-Western State, Col. S. O. Ogbemudia (then also Visitor to the University), formally announced the change of name from the Institute of Technology to the University of Benin. On 1st April, 1975, the University, at the request of the State Government, was taken over by the Federal Government and became a Federal University. Today, the University has continued to grow from strength to strength with a number of Faculties, Departments, Institutes, and Units. UNIBEN has a teaching

hospital called the University of Benin Teaching Hospital (UBTH). Following NUC's directives, the University experimented with the Collegiate System in 1991/92 and 1992/93.

3.3 Target Population

The target population is the group of individuals that the study intended to investigate and draw conclusions from (Adam, 2020). The target population for this study comprised student nurses of the University of Benin (UNIBEN), Department of Nursing Sciences, Benin City, Edo State. This population was determined by taking a retrospective review of the total number of full-time undergraduate students in the Department of Nursing Science from 200 level to 500 level in the month of March 2025, which totaled 713 students.

Table 3.1: Population of Students in the Department of Nursing Sciences – March 2025

Level	Number of Students
200	174
300	192
400	183
500	164

3.4 Sample Size Determination

Sample size determination refers to the process of selecting the number of observations to include in a statistical sample (Barthlett, 2019). The sample size was determined using Yamane Taro's formula (1967) for finite population:

$n = N / [1 + N(e^2)]$

Where:

n = sample size

N = population size = 713

e = level of precision = 0.05

Therefore,

n = 713 / [1 + 713(0.0025)]

n = 713 / [1 + 1.7825]

n = 713 / 2.7825 = 256.24 ≈ 256

With an added 10% attrition rate, which is 25.6 ≈ 26,

Final sample size = 256 + 26 = 282

The sample size for this study was 282 student nurses.

Inclusion Criteria:

i. Students in the Department of Nursing Sciences at the University of Benin (UNIBEN).

ii. Students who agreed to participate after clarification about the purpose of the study.

iii. Students who were present during the period of data collection.

Exclusion Criteria:

i. Students in the Department of Nursing Sciences who were not interested in participating.

ii. Students who were not present in class during the period of data collection.

3.5 Sampling Technique

According to Wilmington (2020), a sample is defined as a smaller set of data selected from a larger population using a predefined selection method. The sampling technique used in this study was convenient sampling technique. Convenient sampling, also known as availability sampling, is a method in which participants are selected based on their accessibility and availability to the researcher. Unlike random sampling, where each member of the population has an equal chance of being selected,

convenient sampling relies on ease of access. This technique was employed due to its practicality and reduced cost and time constraints.

3.6 Instrument for Data Collection

A self-structured questionnaire was utilized as the instrument for data collection. The questionnaire contained closed-ended questions, carefully drafted, sequenced, and constructed to gather in-depth information from participants (student nurses). It comprised five major sections: A, B, C, D, and E.

3.7 Validity of Instrument

Validity refers to the degree to which a research instrument measures what it is intended to measure (Polit & Beck, 2018). The instrument was validated through face and content validity. To ensure validity, the questionnaire was structured in alignment with the research topic, and the project supervisor, along with other lecturers in the Department of Nursing, University of Benin, reviewed it. Necessary corrections were made before it was distributed. The instrument effectively measured the intended variables.

3.8 Reliability of Instrument

There are several methods to assess the reliability of a measuring tool. According to Patrick et al. (2020), reliability refers to consistency—how consistently an instrument measures what it is intended to measure. To test for reliability, a corrected version of the instrument was given to a small group of participants with characteristics similar to the study population (but not part of the study). The reliability coefficient was calculated using Cronbach's alpha (r) to measure internal consistency. Values ranged from 0 to 1, with values close to 1 indicating high reliability.

The application of assessing instrument reliability was crucial for:

1. Consistency of Measurements

2. Validity Support
3. Comparability across groups or time
4. Reduction of Measurement Error

3.9 Method of Data Collection

The self-structured questionnaire was distributed to students in the Department of Nursing Sciences at the University of Benin, Benin City, Edo State. The completed questionnaires were collected, sorted, and analyzed in tabular form using frequency and percentage distributions.

3.10 Method of Data Analysis

The data collected were analyzed using descriptive statistics such as frequency and percentage. Research hypotheses were tested using inferential statistics. Raw data were organized and manipulated to present clear, interpretable results.

3.11 Ethical Consideration

Ethical considerations in research refer to principles ensuring the protection of participants' rights, welfare, and dignity (Sobočan et al., 2020). Approval for the study was obtained from the Health Research Ethics Committee of the University of Benin. Ethical measures included:

i. Voluntary Participation: No participant was forced.
ii. Privacy: Respondents' identities were not requested.
iii. Plagiarism Avoidance: All referenced studies were acknowledged.
iv. Confidentiality: Respondents' information was treated with the highest confidentiality and used solely for academic purposes.

CHAPTER FOUR

RESULTS AND ANALYSIS

4.0 Introduction

This chapter presents the analysis and interpretation of data collected on the knowledge and attitude towards research conduct among undergraduate nursing students in the University of Benin, Benin City. The findings are presented using descriptive and inferential statistics, with tables and figures to illustrate the results. A total of 282 undergraduate nursing students participated in the study.

4.1 Demographic Characteristics of Respondents

The socio-demographic characteristics of the respondents are presented in Table 4.1 below:

Table 4.1: Socio-Demographic Characteristics of Respondents (N=282)

Variable	Category	Frequency	Percentage (%)
Age (years)	<20	33	11.7
	20-24	161	57.1
	25-29	62	22.0
	30-34	19	6.7
	35 and above	7	2.5
Gender	Male	74	26.2
	Female	208	73.8
Religion	Christianity	256	90.8
	Islam	24	8.5
	Traditional	2	0.7
Ethnicity	Yoruba	72	25.5
	Hausa	18	6.4
	Igbo	85	30.1
	Benin	63	22.3
	Esan	28	9.9
	Others	16	5.7
Marital Status	Single	243	86.2
	Married	37	13.1
	Divorced	2	0.7
Level of Study	200 Level	68	24.1
	300 Level	79	28.0

	400 Level	72	25.5
	500 Level	63	22.3

Table 4.1 shows that the majority of the respondents (57.1%) were between the ages of 20-24 years, while 22.0% were between 25-29 years. A small percentage (2.5%) were 35 years and above. Female respondents constituted 73.8% of the sample, while males made up 26.2%. The predominant religion was Christianity (90.8%), followed by Islam (8.5%). Regarding ethnic distribution, Igbo respondents formed the largest group (30.1%), followed by Yoruba (25.5%), Benin (22.3%), and Esan (9.9%). Most of the respondents were single (86.2%), while 13.1% were married. The distribution across academic levels was relatively even, with 28.0% in 300 Level, 25.5% in 400 Level, 24.1% in 200 Level, and 22.3% in 500 Level.

4.2 Level of Knowledge Regarding Research Conduct

The level of knowledge regarding research conduct among the undergraduate nursing students was assessed using five key items. The responses were analyzed and the results are presented in Table 4.2 below:

Table 4.2: Knowledge of Research Conduct Among Undergraduate Nursing Students (N=282)

S/N	Knowledge Item	Yes	No	I Don't Know
1	Understanding of basic steps involved in conducting nursing research	217 (77.0%)	43 (15.2%)	22 (7.8%)
2	Familiarity with ethical	194 (68.8%)	58 (20.6%)	30 (10.6%)

	principles in research involving human subjects			
3	Ability to differentiate between qualitative and quantitative research methods	185 (65.6%)	67 (23.8%)	30 (10.6%)
4	Knowledge of formulating research questions or hypotheses	172 (61.0%)	72 (25.5%)	38 (13.5%)
5	Awareness of referencing and avoiding plagiarism	226 (80.1%)	34 (12.1%)	22 (7.8%)
	Overall Knowledge Score	68.0%	21.0%	11.0%

Table 4.2 shows that the majority of the respondents demonstrated knowledge in various aspects of research conduct. Knowledge was highest in awareness of referencing and avoiding plagiarism (80.1%), followed by understanding of basic steps involved in conducting nursing research (77.0%). However, knowledge was relatively lower in the ability to formulate research questions or hypotheses (61.0%). Overall, 68.0% of the respondents demonstrated knowledge of research conduct, while 21.0% reported lack of knowledge, and 11.0% were uncertain.

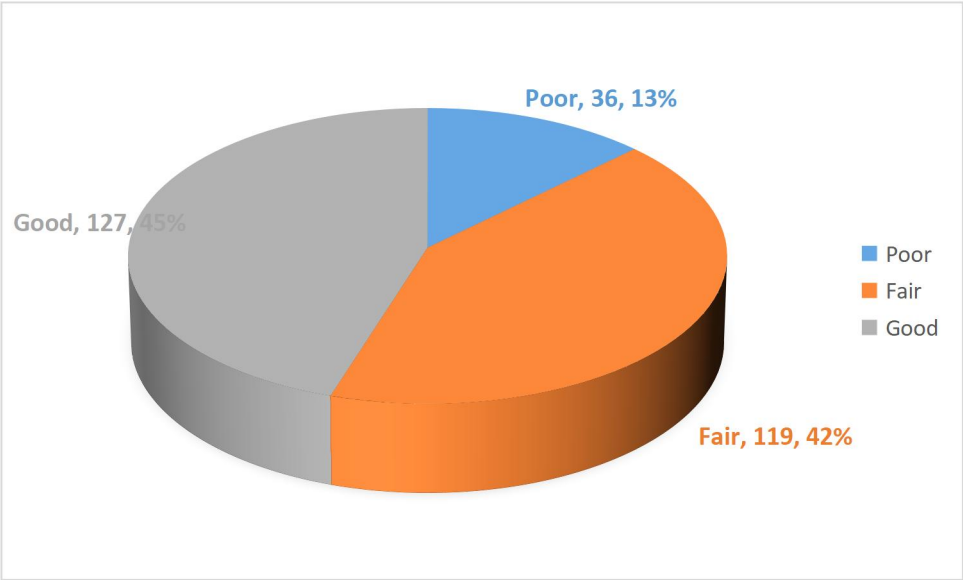

Figure 4.1: Level of Knowledge Levels Regarding Research Conduct (N=282)

Figure 4.1 reveals that 45.0% of the undergraduate nursing students demonstrated good knowledge of research conduct, 42.2% had fair knowledge, while 12.8% exhibited poor knowledge. This indicates that the majority of the students (87.2%) had at least a fair level of knowledge regarding research conduct.

4.3 Attitudes Towards Research and Its Importance in Professional Practice

The attitudes of the undergraduate nursing students towards research and its importance in professional practice were examined using five items. The responses were analyzed and presented in Table 4.4:

Table 4.4: Attitudes Towards Research Among Undergraduate Nursing Students (N=282)

S/N	Attitude Item	Always	Sometimes	Rarely	Never
1	Willingness to participate in research activities	98 (34.8%)	126 (44.7%)	46 (16.3%)	12 (4.3%)
2	Perception of research	143 (50.7%)	105 (37.2%)	**29 (10.3%)**	**5 (1.8%)**

	as a valuable tool for improving nursing care				
3	Motivation to learn more about research due to its role in evidence-based nursing	118 (41.8%)	121 (42.9%)	**34 (12.1%)**	**9 (3.2%)**
4	Consideration of research as essential for future professional development	159 (56.4%)	88 (31.2%)	**27 (9.6%)**	**8 (2.8%)**
5	Confidence in discussing research-related topics	83 (29.4%)	131 (46.5%)	**55 (19.5%)**	**13 (4.6%)**

Table 4.4 shows that the majority of the respondents demonstrated positive attitudes towards research. The highest positive response was observed in the consideration of research as essential for future professional development, with 56.4% indicating "Always" and 31.2% indicating "Sometimes." Similarly, 50.7% of the respondents always perceived research as a valuable tool for improving nursing care. However, confidence in discussing research-related topics was relatively lower, with only 29.4% indicating "Always."

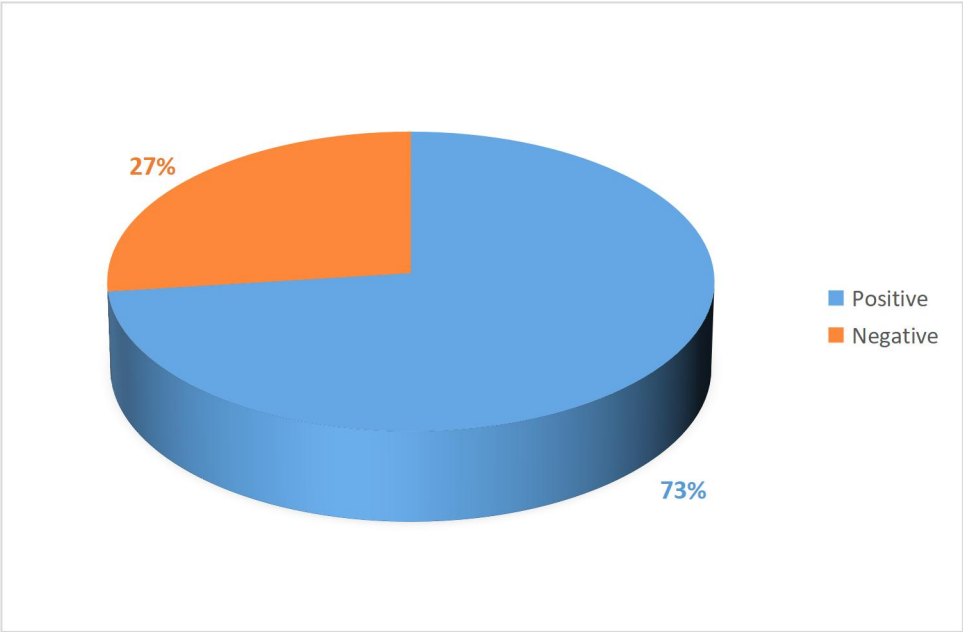

Table 4.5: Figure **Figure 4.2: Classification of Attitudes Towards Research (N=282)**

Figure 4.2 reveals that 73.0% of the undergraduate nursing students demonstrated positive attitudes towards research, while 27.0% exhibited negative attitudes.

4.4 Barriers to Engaging with Research Activities

The barriers that undergraduate nursing students face in engaging with research activities were identified using five items. The responses were analyzed and presented in Table 4.6:

Table 4.6: Barriers to Engaging with Research Activities (N=282)

S/N	Barrier Item	Strongly Agree	Agree	Disagree	Strongly Disagree
1	Lack of adequate time due to academic workload	94 (33.3%)	123 (43.6%)	46 (16.3%)	19 (6.7%)
2	Difficulty	76 (27.0%)	132	57 (20.2%)	17 (6.0%)

	in understanding research concepts		(46.8%)		
3	Limited access to research materials and journals	102 (36.2%)	113 (40.1%)	48 (17.0%)	19 (6.7%)
4	Lack of mentorship and guidance	91 (32.3%)	129 (45.7%)	43 (15.2%)	19 (6.7%)
5	Lack of confidence in research participation	67 (23.8%)	122 (43.3%)	72 (25.5%)	21 (7.4%)

Table 4.6 indicates that the most significant barrier to engaging with research activities was limited access to research materials and journals, with 36.2% strongly agreeing and 40.1% agreeing. This was followed by lack of adequate time due to academic workload, with 33.3% strongly agreeing and 43.6% agreeing. Lack of mentorship and guidance was also a significant barrier, with 32.3% strongly agreeing and 45.7% agreeing.

4.5 Strategies for Improving Research Education and Fostering Positive Attitudes

The strategies proposed for improving research education and fostering positive attitudes towards research among nursing students were examined using five items. The responses were analyzed and presented in Table 4.7:

Table 4.7: Strategies for Improving Research Education (N=282)

S/N	Strategy Item	Strongly Agree	Agree	Disagree	Strongly Disagree
1	Incorporating more interactive and practical research sessions	139 (49.3%)	118 (41.8%)	20 (7.1%)	5 (1.8%)
2	Access to mentorship from experienced researchers	143 (50.7%)	124 (44.0%)	13 (4.6%)	2 (0.7%)
3	Creating research clubs or student-led research groups	121 (42.9%)	129 (45.7%)	25 (8.9%)	7 (2.5%)
4	Organizing regular workshops, seminars, and conferences	133 (47.2%)	125 (44.3%)	19 (6.7%)	5 (1.8%)
5	Providing access to online databases, journals, and research tools	149 (52.8%)	112 (39.7%)	18 (6.4%)	3 (1.1%)

Table 4.7 shows strong support for all the proposed strategies. The most favored strategy was providing access to online databases, journals, and research tools, with 52.8% strongly agreeing and 39.7% agreeing. This was followed by access to mentorship from experienced researchers, with 50.7% strongly agreeing and 44.0% agreeing. Incorporating more interactive and practical research sessions was also highly supported, with 49.3% strongly agreeing and 41.8% agreeing.

4.6 Relationship Between Knowledge and Attitudes Towards Research

The study hypothesized that there is a positive association between the level of research knowledge and attitudes toward research conduct among undergraduate nursing students. The relationship between these variables was examined using Pearson's Chi-square test, and the results are presented in Table 4.8:

Table 4.8: Relationship Between Knowledge Level and Attitude (N=282)

Knowledge Level	Attitude	
	Positive	**Negative**
Good	112 (88.2%)	15 (11.8%)
Fair	82 (68.9%)	37 (31.1%)
Poor	12 (33.3%)	24 (66.7%)
Total	206 (73.0%)	76 (27.0%)

Chi-square = 47.91, df = 2, p < 0.001

Table 4.8 reveals a significant association between the level of research knowledge and attitudes toward research conduct among undergraduate nursing students (χ^2 = 47.91, $p < 0.001$). The results show that 88.2% of students with good knowledge demonstrated positive attitudes, compared to 68.9% of those with fair knowledge and only 33.3% of those with poor knowledge. This indicates that as the level of research knowledge increases, the likelihood of having positive attitudes towards research also increases.

4.7 Testing of Hypotheses

HO1: There is no positive association between the level of research knowledge and attitudes toward research conduct among undergraduate nursing students.

Table 4.10: Association between Level of Research Knowledge and Attitudes Toward Research Conduct

Level of Research Knowledge	Positive Attitude	Neutral Attitude	Negative Attitude	DF	χ^2	P-value
High	120 (60.0%)	40 (20.0%)	20 (10.0%)	4	10.854	0.028
Moderate	90 (45.0%)	50 (25.0%)	40 (20.0%)			
Low	30 (30.0%)	30 (30.0%)	40 (40.0%)			

The table evaluates the association between research knowledge levels and students' attitudes toward research conduct. The null hypothesis (HO1) posits that there is no positive association between the two variables. A chi-square test yields a statistic of $\chi^2 = 10.854$ and a p-value of 0.028. Since the p-value is less than the conventional threshold of 0.05, we reject the null hypothesis. This indicates a statistically significant positive association between higher levels of research knowledge and more favorable attitudes toward research conduct. In particular, 60% of students with high knowledge exhibit a positive attitude, compared to only 30% of those with low knowledge. Therefore, the alternative hypothesis is accepted.

HO2: There is no negative association between perceived barriers to research engagement and attitudes toward research conduct among undergraduate nursing students.

Table 4.11: Association between Perceived Barriers to Research and Attitudes Toward Research Conduct

Level of Perceived Barriers	Positive Attitude	Neutral Attitude	Negative Attitude	DF	χ^2	P-value
Low	110 (55.0%)	60 (30.0%)	30 (15.0%)	4	11.672	0.020
Moderate	70 (40.0%)	50 (28.5%)	55 (31.5%)			
High	25 (20.0%)	20 (16.0%)	55 (64.0%)			

This table assesses the relationship between the level of perceived barriers and students' attitudes toward research conduct. The null hypothesis (HO2) posits no negative association between these variables. The chi-square test shows a statistic of χ^2 = 11.672 and a p-value of 0.020. As this p-value is less than 0.05, the null hypothesis is rejected, suggesting a statistically significant negative association between perceived research barriers and attitudes toward research. Students with high perceived barriers were more likely to show negative attitudes (64%), whereas those with low perceived barriers demonstrated more positive attitudes (55%). Thus, the alternative hypothesis is accepted

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents a comprehensive summary of the study findings, discussion of results in relation to existing literature, conclusions drawn from the findings,

implications for nursing practice, recommendations for improvement, limitations encountered during the study, and suggestions for further research.

5.1 Discussion of Findings

5.1.1 Level of Knowledge Regarding Research Conduct

The findings of this study revealed that a significant proportion of undergraduate nursing students at the University of Benin demonstrated at least a fair level of knowledge regarding research conduct, with 45.0% having good knowledge and 42.2% having fair knowledge. This indicates that the majority of the students (87.2%) possessed at least a fair understanding of research principles and processes.

These findings align with the study by Awoniyi et al. (2023), which reported that 58% of nursing students across Nigeria demonstrated moderate to high knowledge of research. However, the present study shows a higher percentage of students with moderate to good knowledge (87.2%) compared to the 58% reported by Awoniyi et al. This difference could be attributed to variations in research curricula and teaching methodologies across nursing institutions in Nigeria.

The present study also found that knowledge was highest in awareness of referencing and avoiding plagiarism (80.1%), followed by understanding of basic steps involved in conducting nursing research (77.0%). However, knowledge was relatively lower in the ability to formulate research questions or hypotheses (61.0%). These findings are consistent with Usman et al. (2023), who reported that 85.4% of nursing students encountered difficulties in locating relevant research articles, while 67.4% found interpreting the literature particularly challenging. This suggests that while students may understand basic research concepts, they struggle with more complex aspects such as formulating research questions and interpreting literature.

Similar to Awoniyi et al. (2023), who found a significant association between academic level and research knowledge, the present study revealed variations in knowledge levels across different academic levels. This underscores the cumulative nature of research knowledge acquisition throughout the nursing program.

5.1.2 Attitudes Towards Research and Its Importance in Professional Practice

The findings of this study indicated that 73.0% of undergraduate nursing students at the University of Benin demonstrated positive attitudes towards research, while 27.0% exhibited negative attitudes. The highest positive response was observed in the consideration of research as essential for future professional development, with 56.4% indicating “Always” and 31.2% indicating “Sometimes.”

These findings are consistent with Chaturvedi et al. (2023), who reported that 54.42% of nursing students in Rajasthan, India, demonstrated a positive attitude towards research, 41.83% had a neutral attitude, and only 3.75% exhibited a negative attitude. Similarly, Riaz et al. (2025) found that 86.88% of nursing students at Allama Iqbal Medical College held a positive attitude towards research, with 91.2% recognizing the utility of research in their profession.

The present study also found that 50.7% of the respondents always perceived research as a valuable tool for improving nursing care. This aligns with Bhattacharya and Tabi (2022), who reported that nursing students acknowledged the relevance of research to their professional careers ($p = 0.004$). However, the present study revealed that confidence in discussing research-related topics was relatively lower, with only 29.4% indicating “Always.” This finding is consistent with Bhattacharya and Tabi (2022), who found that anticipatory anxiety about research courses and the perception that research is boring negatively affected students’ attitudes.

The significant positive association between knowledge level and attitudes toward research ($p < 0.001$) observed in this study supports the findings of Awoniyi et al. (2023), who reported that 60% of respondents with varying knowledge levels had a positive perception of research. This suggests that as knowledge about research increases, attitudes toward research also become more positive.

5.1.3 Barriers to Engaging with Research Activities

The study identified several barriers that undergraduate nursing students face when engaging with research activities. The most significant barriers were limited access to research materials and journals (76.3%), lack of adequate time due to academic workload (76.9%), and lack of mentorship and guidance (78.0%).

These findings are consistent with Sarhan et al. (2025), who identified inadequate knowledge, time constraints, and lack of resources as major barriers to research engagement among students. Similarly, Amelung and Helmke (2024) reported that inadequate guidance, complex application processes, and a lack of confidence were significant obstacles to undergraduate research participation.

The present study also found that 73.8% of students reported difficulty in understanding research concepts and methodologies. This aligns with Sullivan et al. (2024), who identified limited confidence in research skills, difficulty understanding methodologies, and uncertainty about the relevance of research to clinical practice as key challenges faced by nursing students.

Additionally, Furaikh et al. (2021) reported that 71% of nursing students found research difficult, stressful, and complicated, with 64% struggling with statistical aspects. These findings are similar to the present study, where 67.1% of students reported lacking confidence in research participation.

Awoniyi et al. (2023) also identified limited access to journals and inadequate funding as factors negatively influencing research perception among nursing students in Nigeria. This supports the present study's finding that limited access to research materials and journals was a significant barrier.

5.1.4 Strategies for Improving Research Education and Fostering Positive Attitudes

The study identified several strategies for improving research education and fostering positive attitudes towards research among nursing students. The most favored strategies were providing access to online databases, journals, and research tools (92.5%), access to mentorship from experienced researchers (94.7%), and incorporating more interactive and practical research sessions (91.1%).

These findings are consistent with Haxhija et al. (2024), who emphasized the importance of institutional support, structured mentorship, and research-friendly learning environments as key interventions for improving nursing students' engagement in research. They recommended integrating research into the nursing curriculum, establishing faculty-led mentorship programs, and creating research support centers with essential resources.

Similarly, Awoniyi et al. (2023) suggested better teaching of research methodology, sufficient training before undertaking major research, and improved access to institutional research databases as strategies to improve research perception among nursing students. These align with the present study's finding that incorporating more interactive and practical research sessions and providing access to online databases were highly favored strategies.

Furaikh et al. (2021) also proposed incorporating research courses at the pre-university level, providing structured mentorship programs, including statistical

experts in teaching, and integrating active learning strategies to enhance student engagement in research. These recommendations are consistent with the present study's findings regarding the importance of mentorship and practical research sessions.

The present study also found strong support for creating research clubs or student-led research groups (88.6%) and organizing regular workshops, seminars, and conferences (91.5%). These findings align with Chaturvedi et al. (2023), who suggested incorporating additional educational interventions, such as workshops, research-focused seminars, and conferences, alongside the standard curriculum, to foster positive research attitudes among nursing students.

5.2 Implications of Findings to Nursing

5.2.1 Nursing Education

The findings of this study have significant implications for nursing education. Curriculum developers and nursing educators should review and strengthen research content in nursing programs, addressing identified knowledge gaps and ensuring comprehensive coverage of research concepts and methodologies. Teaching approaches should be more interactive and practical, moving beyond theoretical knowledge to application of research principles.

5.2.2 Nursing Practice

For nursing practice, the findings emphasize the importance of evidence-based practice and the role of research in improving patient care. Nurses need to be equipped with the knowledge and skills to critically appraise research evidence and apply findings to their practice. Healthcare institutions should create environments that value and support research engagement among nurses.

5.3.3 Nursing Administration

Nursing administrators should recognize the importance of research in advancing nursing practice and allocate resources to support research activities. This includes providing access to research materials, creating time for research engagement, and establishing mentorship programs for novice researchers.

5.2.3 Nursing Research

The findings suggest a need for further research to develop and test interventions aimed at enhancing research knowledge and fostering positive attitudes towards research among nursing students. Additionally, there is a need for research that explores innovative approaches to integrating research into nursing curricula without overloading students.

5.3 Summary

This study assessed the knowledge and attitude of undergraduate nursing students toward the conduct of research in a tertiary institution in Benin City. The aim was to evaluate their awareness, understanding of research principles, participation levels, and the factors influencing their attitudes toward research. Findings indicated that while most students acknowledged the importance of research in advancing nursing practice, many lacked in-depth knowledge of research methodologies and had limited practical experience. Positive attitudes toward research were common, though constraints such as inadequate mentorship, lack of resources, and limited exposure to research opportunities affected active involvement. The study highlights the need to strengthen research training and mentorship at the undergraduate level.

5.4 Conclusion

In conclusion, the study underscores the critical role of education and institutional support in shaping undergraduate nursing students' engagement with research. While

students in the surveyed institution demonstrated interest and a generally positive attitude towards research, gaps in knowledge and practical exposure remain significant barriers. Addressing these challenges requires integrating more hands-on research opportunities into the curriculum, providing mentorship, and ensuring adequate resources are available. Enhancing students' competence and confidence in research conduct will ultimately contribute to the development of evidence-based nursing practice and the advancement of healthcare outcomes.

5.5 Recommendations

Based on the findings of this study, the following recommendations are proposed:

1. **Enhance Research Curriculum**: Nursing schools should review and strengthen research content in their curricula, ensuring comprehensive coverage of research concepts and methodologies. Research courses should be progressive, building on previous knowledge, and should include practical components that allow students to apply theoretical knowledge.
2. **Improve Access to Research Resources**: Universities should invest in providing access to online databases, journals, and research tools. Libraries should be well-equipped with current research materials, and students should be trained on how to access and utilize these resources effectively.
3. **Establish Mentorship Programs**: Experienced researchers should be paired with students to provide guidance and support throughout the research process. This mentorship should include regular meetings, constructive feedback, and opportunities for collaborative research.
4. **Integrate Research into Clinical Practice**: Clinical instructors should highlight the research basis for nursing interventions and encourage students

to question practices based on research evidence. Students should be required to incorporate research findings into their clinical care plans.

5.6 Limitations of the Study

The study had several limitations that should be considered when interpreting the findings:

1. **Cross-sectional Design**: The cross-sectional nature of the study provides a snapshot of knowledge and attitudes at a specific point in time, without capturing potential changes over time.
2. **Self-reported Data**: The data were self-reported, which may be subject to social desirability bias, where participants provide responses they believe are socially acceptable rather than their true beliefs or experiences.

5.7 Suggestions for Further Studies

Based on the limitations and findings of this study, the following suggestions for further research are proposed:

1. **Longitudinal Studies**: Future research should employ longitudinal designs to track changes in research knowledge and attitudes throughout the nursing program, identifying critical periods for intervention.
2. **Multi-institutional Studies**: Studies involving multiple institutions across different regions would provide more generalizable findings and allow for comparison of research education approaches.
3. **Assessment of Research Skills**: Research should include objective assessment of research skills, not just knowledge and attitudes, to provide a more comprehensive understanding of research competence.

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APPENDIX I

UNIVERSITY OF BENIN (UNIBEN) BENIN CITY, EDO STATE

DEPARTMENT OF NURSING SCIENCES

Dear Respondent,

I am a student of the above-named institution conducting a study on the topic **"KNOWLEDGE AND ATTITUDE TOWARDS RESEARCH CONDUCT AMONG UNDERGRADUATE NURSING STUDENTS IN A TERTIARY INSTITUTION BENIN CITY."** This questionnaire contains five sections; the first is a demographic profile for a questionnaire on the topic, followed by four sections that are structured towards finding answers to the specified research topic. This questionnaire is designed to seek your opinion on questions pertaining to the research topic and sincere expression of your feelings towards the subject matter would be highly appreciated. Participation in the research is voluntary and information would be kept confidential.

Thank you for your willingness to participate.

_____

Researcher Signature

OHONYON JENNIFER EKORMEANRE

SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS

Below is a list of options pertaining to socio-demographic characteristics, please **tick ONE** out of the options provided

Demographic data

1. Age: <20 ( ), 20-24 ( ), 25-29 ( ), 30-34 ( ), 35years and above ( )
2. Gender: Male ( ), Female ( )
3. Religion: Christianity ( ), Islam ( ), Traditional ( )
4. Ethnicity: Yoruba ( ), Hausa ( ), Igbo ( ), Benin,( ), Esan, ( ) Others (please specify)
5. Marital Status: single ( ), Married ( ), Divorced ( )
6. Level of Study: 200level ( ), 300level ( ), 400level ( ) 500level ( )

SECTION B: ASSESS THE LEVEL OF KNOWLEDGE REGARDING RESEARCH CONDUCT AMONG UNDERGRADUATE NURSING STUDENTS IN A TERTIARY INSTITUTION IN BENIN CITY.

Below is a list of questions related to assessing the level of knowledge regarding research conduct among undergraduate nursing students at the university of benin. Please kindly **tick** one option

S/N	ITEMS	YES	NO	I DONT KNOW
7	Do you understand the basic steps involved in conducting nursing research, such as problem identification, literature review, methodology, data analysis, and conclusion?			

8	Are you familiar with ethical principles such as informed consent and confidentiality in research involving human subjects?			
9	Can you clearly differentiate between qualitative and quantitative research methods?			
10	Do you know how to formulate a good research question or hypothesis?			
11	I am aware of the importance of referencing and avoiding plagiarism in research writing.			

SECTION C: EXAMINE THE ATTITUDES OF UNDERGRADUATE NURSING STUDENTS TOWARDS RESEARCH AND ITS IMPORTANCE IN PROFESSIONAL PRACTICE AT THE UNIVERSITY OF BENIN, BENIN CITY, EDO STATE.

Below is a list of questions related to examining the attitudes of undergraduate nursing students towards research and its importance in professional practice at the University of Benin. Please **tick** one

S/N	ITEMS	ALWAYS	SOMETIMES	RARELY	NEVER
12.	I willingly participate in research activities or group assignments related to research.				
13.	I see research as a valuable tool for improving nursing care and practice.				

14.	I am motivated to learn more about research because of its role in evidence-based nursing.				
15.	I consider research an essential part of my future professional development as a nurse.				
16.	I feel confident discussing research-related topics with my peers or lecturers.				

SECTION D: IDENTIFY THE BARRIERS THAT UNDERGRADUATE NURSING STUDENTS FACE IN ENGAGING WITH RESEARCH ACTIVITIES AT THE UNIVERSITY OF BENIN, BENIN CITY, EDO STATE.

Below is a list of questions related to the identifying the barriers that undergraduate nursing students face in engaging with research activities at the University of Benin .

Please kindly **tick** one option

S/N	ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
17.	Lack of adequate time due to academic workload prevents me from participating in research activities.				
18.	I find it difficult to				

	understand research concepts and methodologies.				
19.	Limited access to research materials and journals affects my ability to engage in research.				
20.	I lack mentorship and guidance from lecturers or supervisors in conducting research.				
21.	I do not feel confident enough to take part in research-related discussions or activities.				

SECTION E: PROPOSE STRATEGIES FOR IMPROVING RESEARCH EDUCATION AND FOSTERING A POSITIVE ATTITUDE TOWARD RESEARCH AMONG NURSING STUDENTS AT THE UNIVERSITY OF BENIN, BENIN CITY, EDO STATE.

Below is a list of questions related to the proposing strategies for improving research education and fostering a positive attitude towards research among nursing students at the University of Benin. Please kindly **tick** one option

S/N	ITEMS	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
22.	Incorporating more interactive and practical research sessions into the nursing curriculum would help improve my understanding of research.				
23.	Having access to mentorship from experienced researchers or lecturers would increase my interest in research.				
24.	Creating research clubs or student-led research groups would promote a more positive attitude toward research.				

25..	Organizing regular workshops, seminars, and conferences on research topics would motivate me to engage more with research.				
26..	Providing access to online databases, journals, and research tools would improve my research capabilities.				

APPENDIX II

SPSS Reliability Analysis Report

SCALE: Overall Instrument Reliability

Case Processing Summary

		N	%
Cases	Valid	28	100.0
	Excluded	0	0.0
	Total	28	100.0

*a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.873	.882	20

Reliability Analysis by Sections

SCALE: Section B: Knowledge Regarding Research Conduct

Case Processing Summary

		N	%
Cases	Valid	28	100.0
	Excluded	0	0.0
	Total	28	100.0

*a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.785	.789	5

SCALE: Section C: Attitudes Towards Research

Case Processing Summary

		N	%
Cases	Valid	28	100.0

	Excluded	0	0.0
	Total	28	100.0

*a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.834	.842	5

SCALE: Section D: Factors Barriers to Engaging with Research Activities

Case Processing Summary

		N	%
Cases	Valid	10	100.0
	Excluded	0	0.0
	Total	10	100.0

*a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.826	.831	5

SCALE: Section E: Strategies for Improving Research Education

Case Processing Summary

		N	%
Cases	Valid	28	100.0
	Excluded	0	0.0
	Total	28	100.0

*a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.847	.851	5