



ENUGU STATE UNIVERSITY OF SCIENCE & TECHNOLOGY

JOURNAL OF SOCIAL SCIENCES & HUMANITIES

**Volume 9
Number 1,
2024**

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PUBLISHED BY

**Faculty of Social Sciences,
Enugu State University of Science And Technology**

Knowledge and Attitude of Student Nurses of University of Nigeria Teaching Hospital Enugu towards carrying out Research

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Abstract

Research is defined as the creation of new knowledge and/or the use of existing knowledge in a new and creative way so as to generate new concepts, methodologies and understanding. This study was guided to study the knowledge and Attitude of Student Nurses of University of Nigeria Teaching Hospital Enugu towards carrying out research. The study was guided by three specific objectives from where three research questions were formulated. The target population of the study was 195 students from where a sample size of 131 was selected using simple random sampling technique. A well structured self administered questionnaire containing 22 items was the instrument used for data collection which was validated by an expert and found reliable. Data collected was analyzed using tables, chart, frequency and mean. The findings of the study showed a good knowledge of research, 2.76 grand mean showed the students had a positive attitude towards carrying out research and 2.88 grand mean showed that they were aware of the factors affecting their attitude towards research like time consuming, lack of proper guidance, lack of statistical materials. Based on the findings, it was recommended that the school tutors should put in more effort in guiding the student nurses towards carrying out research so as to promote their attitude.

Keywords: *Research, Knowledge, Attitude, Student nurses*

Introduction

According to a definition given by Western Sydney University (2021), research is defined as the creation of new knowledge and/or the use of existing knowledge in a new and creative way so as to generate new concepts, methodologies and understanding. American Nurses Association (ANA) defines nursing research as the development of knowledge about health and the promotion of health over the full life span, care of persons with health problems, disabilities and nursing actions to enhance the ability of individuals to respond effectively to actual or potential health problems. Nursing research is relatively new because most of what nurses do and teach before the introduction of nursing research had been based on tradition and belief rather than evidence. Research in nursing can be traced back to Florence Nightingale. Her data collection and analysis related to factors affecting soldier mortality and

morbidity, the crime and war led to changes in nursing care and Public health. Nursing research continued to grow through the 20th and 21st Century. Polit and Beck (2015) defined the current trends for nursing research as: Increase focus on outcomes research, Increase focus on biophysiologic research, promotion of evidence-based practice, development of a stronger knowledge base through multiple confirmatory strategies, strengthening a multidisciplinary collaboration

Nursing research has a tremendous influence on current and future professional nursing practice, this rendering it an essential component of the educational process. Also the ultimate purpose of nursing is to provide high quality patient's care. International Council of Nurses has stated that professional nursing can only be achieved by evidenced based practices and emphasized that is necessary to offer education for research so that research can be conducted, research capacity can be enhanced and nurses and nursing students can evaluate research critically(International Council of Nurses, 2015). The growth and development of nursing research has been slow, particularly in Nigeria due to some reasons not yet clearly identify. However, with an increase in establishment of schools and presence of nursing department in universities will bring improvement in nursing research.

Similarly, in the education of nursing students, scientific evidence in the clinical field is very important because it provides the possibility of more comprehensive care and improves communication with the patient. To sustain professionalism, the members of a profession must be curious, investigative, and open to learning, innovative and creative, and independent; cooperate with the members of other professions; have critical, analytic thinking abilities; implement evidence-based care and evaluate outcomes (Laaksonen, Palta, von Schantz, Ylonen, & Soini, 2013). To bring scientific qualifications to a profession, its members should recognize the problems that they face, determine the problem and problem-related variables, and find solutions to these problems using scientific research processes (Rezaei& Zamani-Miandashti, 2013).

The International Council of Nurses emphasized that it is important to include research in the education of nursing students so that students can learn to conduct research, enhance students' research capacity, and students can gain knowledge of and be skilled in critically appraising research evidence (International Council of Nurses, 2015). Equipping students with a strong foundation in research is vital for the future of the nursing profession. Given the remarkable influence of research on the present-day and future professional nursing practice renders research a crucial component in the undergraduate nursing program. Besides, it is only through actual or hands-on experience that the students can better understand the concept and appreciate the importance of nursing research. However, it has been documented that nurses have difficulty understanding the value of nursing research in the course of their clinical practice.

Universities in particular are expected to lead scientific research and raise individuals with scientific attitudes and behaviors in addition to providing education services (Korkmaz, Sahin, & Yesil, 2014). Thus, nursing students should be initiated into research culture and adopt positive attitudes toward scientific research during their undergraduate education to improve the nursing profession, to contribute to the professionalization of this profession, and to maintain quality of care, nurse autonomy, and power (Celik, onder, Durmaz, Yurdusever, & Uysal, 2014). Determining the attitude of nursing students toward scientific research is very important, as these students will play a vital role in ensuring clinical research studies in the future.

Students in this field who do not show positive attitudes toward scientific research are likely not to contribute to the development of the nursing profession and not to provide evidence-based care that promotes high-quality health outcomes (Halabi, 2016). Therefore, it is important to understand the attitudes of nursing students toward scientific research.

Statement of the problem

Despite the introduction of research project writing in the training of nurses in the nursing profession, it has been observed that many research writing is of low standard. This can be observed through written and other variables for examples, nursing research study is rigorous and time consuming. Negative attitude of student nurses towards nursing research study needs proper supervision and monitoring, if progress in the nursing profession will be sustained. In the course of the researcher's educational training at School of Nursing University of Nigeria Teaching Hospital Enugu, the researcher noticed that the student nurses never anticipated the period when research project was done and many find it difficult either starting or carrying out the research. They were also not interested in research lectures and during research writing, they resort to copying other people's work thereby negating the purpose of research which are to provide solution to problem, gain new knowledge etc and subsequently the consequences of poor or lack of research such as not becoming updated in current practices which affects the care they render as students and such can also affect them eventually as practicing nurses. This prompted the researcher to assess the knowledge and attitude of student nurses towards carrying out research in the school.

Objectives of the study

1. To determine the level of knowledge of student nurses of School of Nursing, University of Nigeria Teaching Hospital Enugu towards carrying out research.
2. To determine the attitude of the student nurses of School of Nursing, University of Nigeria Teaching Hospital Enugu towards carrying out research.
3. To identify the factors affecting the attitude of student nurses of School of Nursing, University of Nigeria Teaching Hospital Enugu towards carrying out research.

Research questions

Number of questions has been raised which this study seeks to provide answers to as stated below:

1. What is the level of knowledge of student nurses of School of Nursing, University of Nigeria Teaching Hospital Enugu towards carrying out research?
2. What is the attitude of the student nurses of School of Nursing, University of Nigeria Teaching Hospital Enugu towards carrying out research?
3. What are the factors that affect the attitude of student nurses of School of Nursing, University of Nigeria Teaching Hospital Enugu towards carrying out research?

Significance of the study

The findings of this study will provide information that will guide and improve student nurses' knowledge towards carrying out research, it would also provide information that will be used to improve student nurses attitude towards carrying out research and curb the factors that affect it. Finally when published or put up in library, it will serve as a basis for further research studies.

Conceptual Review

Concept of research

The word research derives from the French *recherché* to search closely where "chercher" means "to search" in French language. Its literal meaning is 'to investigate thoroughly'. Research is a human activity based on intellectual investigation and aimed at discovering, interpreting, and revising human knowledge on different aspects of the world. It can be scientific or not scientific. Scientific research relies on the application of scientific methods based on scientific paradigm. This research provides scientific information and theories for the explanation of the nature and properties of humans and the whole Universe. It makes practical applications possible. According to Rocco (2015), "Research is a careful investigation or inquiry especially through search for new facts in any branch of knowledge. According to a definition given by Western Sydney University (2021), Research is defined as the creation of new knowledge and/or the use of existing knowledge in a new and creative way so as to generate new concepts, methodologies and understanding. Research may have certain other qualities such as:

It is a prearranged / structured enquiry (a formal step by step method or sequence to take up research activity is developed to ensure correctness of data and validity of processes). Scientific methods consist of systematic observation, classification and interpretation of data. The degree of formality, rigorousness, verifiability and general validity of scientific methods establish the results obtained. It utilizes acceptable scientific methodology to solve problems (the method used should be able to give repetitive results under similar conditions)

It should create new knowledge that is generally applicable (The outcomes should be such that they are not specific to particular issue or a situation but need to be generalized for application to comparable issues). It is creative process to develop better understanding of mankind, social and cultural and economic issues. It should be useful to others who wish to apply the findings in developing new policies or applications of findings of a research in the benefit of public.

Types of research

Research can be classified into various categories depending on the perspective under which the research activity is initiated and conducted. The categorization depends on the following perspectives in general:

Application of research study

Objectives in undertaking the research

Classification based on Application:

Pure / Basic Research: As the term suggests a research activity taken up to look into some aspects of a problem or an issue for the first time is termed as basic or pure. It involves developing and testing theories and hypotheses that are intellectually challenging to the researcher but may or may not have practical application at the present time or in the future. The knowledge produced through pure research is sought in order to add to the existing body of research methods. Pure research is theoretical but has a universal nature. It is more focused on creating scientific knowledge and predictions for further studies.

Applied / Decisional Research: Applied research is done on the basis of pure or fundamental research to solve specific, practical questions; for policy formulation, administration and understanding of a phenomenon. It can be exploratory, but is usually descriptive. The purpose of doing such research is to find solutions to an immediate issue, solving a particular problem, developing new technology and look into future advancements etc. This involves forecasting and assumes that the variables shall not change.

Classification based on Objectives:

Descriptive Research: This attempts to explain a situation, problem, phenomenon, service or program, or provides information viz. living condition of a community, or describes attitudes towards an issue but this is done systematically. It is used to answer questions of who, what, when, where, and how associated with a particular research question or problem. This type of research makes an attempt to collect any information that can be expressed in quantifiable terms that can be used to statistically analyze a target audience or a particular subject. Descriptive research is used to observe and describe a research subject or problem without influencing or manipulating the variables in any way.

Co relational Research: This is a type of non-experimental research method, in which a researcher measures two variables, understands and assesses the statistical relationship between them with no influence from any extraneous variable. This is undertaken to discover or establish the existence of a relationship/ interdependence between two or more aspects of a situation.

Explanatory research: is the research whose primary purpose is to explain why events occur, to build, elaborate, extend or test a theory. It is more concerned with showcasing, explaining and presenting what we already have. It is the process of turning over 100 rocks to find perhaps 1 or 2 precious gemstones.

Exploratory Research: In the subjective terms exploratory research is conducted to find a solution for a problem that has not been studied more clearly, intended to establish priorities, develop operational definitions and improve the final research design. Exploratory research helps determine the best research design, data-collection method and selection of subjects.

Characteristics of research

Characteristics of research determine whether a research is free of biases, prejudices, and subjective errors or not. The terms are very commonly used in research and the success of any research depends on these terms. They can be summarized as:

Generalized: The researcher usually divides the identified population into smaller samples depending on the resource availability at the time of research being conducted. This sample is understood to be the appropriate representative of the identified population therefore the findings should also be applicable to and representative of the entire population.

Controlled: The concept of control implies that, in exploring causality in relation to two variables (factors), you set up your study in a way that minimizes the effects of other factors affecting the relationship. Some variables are classified as controlling factors and the other variables may be classified as possible effects of controlling factors. Laboratory experiments as in pure sciences like chemistry can be controlled but any study that involves societal issues cannot be controlled. E.g. Destination studies are not controllable as they have variables like

geography, climate, accessibility, seasonality, etc but studying the effects of standard operating procedures in a hotel applied in a particular service can be controlled.

Rigorous: One must be careful in ensuring that the procedures followed to find answers to questions are relevant, appropriate and justified. Again, the degree of rigor varies markedly between the physical and social sciences and within the social sciences.

Empirical: The processes adopted should be tested for the accuracy and each step should be coherent in progression. This means that any conclusions drawn are based upon firm data gathered from information collected from real life experiences or observations. Empirical nature of research means that the research has been conducted following rigorous scientific methods and procedures.

Systematic: The procedure or process being developed to undertake a study should be carefully drafted to ensure that resources utilization is optimized. Chaotic or disorganized procedures would never yield expected outcomes. The steps should follow a logical sequence to get to the desired outcome. E.g. The meal in a fine dine restaurant at a five star hotel cannot commence with dessert being served before the starter or soup course.

Reliability: This is the degree to which the result of a measurement, calculation, or specification can be depended on to be accurate. It is difficult to be measured accurately, but now there are instruments which can estimate the reliability of a research. It is the extent to which an experiment, test, measuring procedure, research, research instrument, tool or procedure yields the same results on repeated trials. If any research yields similar results each time it is undertaken with similar population and with similar procedures, it is called to be a reliable research.

Validity & Verifiability: It is the extent to which a concept, conclusion or measurement is well-founded and likely corresponds accurately to the real world. The word "valid" is derived from the Latin *validus*, meaning strong. This should not be confused with notions of certainty nor necessity. The validity of a measurement tool is considered to be the degree to which the tool measures what it claims to measure. In terms of research, validity is the strength with which we can make research conclusions, assumptions or propositions true or false. The findings of a study should be verifiable by the researcher as well as anyone else who wants to conduct the study on similar guidelines/ under similar conditions.

Analytical & Accurate: A research should be focused not only about what is happening but also on how and why a particular phenomenon, process draws certain conclusions. Any data collected if does not yield results or is unsuitable to be used for further studies or applications disrupts the purpose of research. Therefore, data collected should be reasonable and free of errors to be easily analyzed. Accuracy is also the degree to which each research process, instrument, and tool is related to each other. Accuracy also measures whether research tools have been selected in best possible manner and research procedures suits the research problem or not.

Credibility: The extent to which an analysis of finding can be treated to be trustworthy is termed as credibility. This can only be assured by the use of the best source of information and best procedures in research. Researches based on secondary data are not reliable as such data may have been manipulated or distorted by earlier researchers to suit their work. The research study conducted based on primary data is always reliable and carries more credibility. A certain percentage of secondary data can be used if the primary source is not

available but basing a research completely on secondary data when primary data can be gathered is least credible.

Critical: Critical scrutiny of the procedures used and the methods employed is crucial to a research enquiry. The process of investigation must be foolproof and free from drawbacks. The process adopted and the procedures used must be able to withstand critical scrutiny.

Steps in the conduct of research

Identify problem: Finding an issue or formulating a research question is the first step. A well-defined research problem will guide the researcher through all stages of the research process.

Evaluate the literature: A thorough examination of the relevant study is essential to the research process. It enables the researcher to identify the precise aspects of the problem. This stage gives problem-zoned background. It teaches the investigator about previous research, how they were conducted and its conclusions.

Create hypothesis: Formulating an original hypothesis is the next logical step after narrowing down the research topic and defining it. In order to establish a hypothesis, a researcher must have a certain amount of expertise in the field.

Research design: Is the plan for achieving objectives and answering research questions. It outlines how to get relevant information. It aims to minimize time, money and effort required to acquire to acquire meaningful evidence.

Describe population: This refers to the study group. Research projects usually look at a specific group of people, facilities. A final step in a study's design is to specify its sample or population so that the results may be generalized.

Data collection: This is important in obtaining the knowledge or information required to answer the research issue. Data must be collected in two categories: primary eg questionnaire, observation, interview and secondary data eg literature survey, library resources etc.

Data analysis: After collecting data, the researcher analyzes it. It involves a number of closely related stages such as setting up categories, applying these categories to raw data through coding and tabulation, and then drawing statistical conclusions.

Report writing: After completing these steps, the researcher must prepare report detailing his findings. The report must be carefully composed with the following in mind; the layout, introduction, conclusion.

Nursing Research

American Nurses Association (ANA) defines nursing research as the development of knowledge about health and the promotion of health over the full life span, care of persons with health problems, disabilities and nursing actions to enhance the ability of individuals to respond effectively to actual or potential health problems.

It can also be defined as a systematic approach to examine the phenomena that are important to nursing and nurses.

Nursing Research Vs Research in Nursing

Nursing research focuses on the practice of nursing. Research in nursing studies the nursing profession and the characteristics of the nurse. Nursing research is mainly concerned with clinical problems. Research in nursing is the broader study of the nursing profession and includes historical, ethical and political studies. Nursing research includes all studies concerning nursing practice, education, and administration. Studies concerning nurses themselves also can be included in nursing research.

Importance of nursing research

Nursing research has tremendous influence on current and future professional nursing practice, thus rendering it an essential component of the educational process. Research in nursing has the following importance:

To validate practice or patient care

Research gives background for scientific accountability of one's actions, scientific accountability implies that as many decisions and action as are possible are based on scientifically documented knowledge which seeks to find scientific answers to puzzling or perplexing problem.

To enhance social relevance of Nursing

Nurses are not practicing in isolation, at times we ask ourselves questions like: How relevant is our service to the society? Is it obsolete, current, essential or relevant to the society to make sure that the type of care we give to the society is the type they need?

To improve Nursing practice

Research is imperative in nursing in order to improve nursing practice. There are some routine traditional nursing actions and procedures that are obsolete which need research to see their relevant. Does application of hot compress reduces inflammation process? Before this question could be answer accurately, we need to carry out research to find the answer.

To improve Nursing education.

Research is carried out in nursing education in order to improve the education of nurses which in turn promote better nursing care. Curriculum is studied and reviewed often and developed to suit the changes in the society. Research is carried out on type of student (i.e. to find out their characteristics and various needs)

For effective Nursing Administration.

The whole unit or hospital solely depends on the nurse administrator's shoulder, depending on the size of the hospital, so it is the extent of the nurse administrator responsibility.

Research is necessary for decision making and policy formation. A concomitant take of nursing research is the discovery of valid means using the extent to which nursing attains its goal.

Concept of knowledge and attitude

Knowledge is an organized set of statement of facts or ideas presenting a reasoned judgement or an experimental result which is transmitted to others through some communication medium in some systematic form. It is a highly organized intellectual product of humans that includes personal experience, skills, understanding of different contexts in which we operate our activities, assimilation of all these and recording all this in a form that could be communicated to others.

Attitude

Some social psychologist describe “attitude” as a psychological tendency that is expressed by evaluating a particular entity with some degrees of favor or disfavor (Eagly & Chaiken, 2022). Today, attitude is explained as a construct not directly observable but precedes behavior and guides ones choice and decision making factors. It can be deduced from the description so far that attitude is related to liking or disliking of objects or people and on this time, is a result of what is known about the object (William Mc Guire, 2018).

The Nurses Orientation towards Research

This is another factor that contributes to good research work in nursing. It will really help if orientation of student nurses is implemented because they know how to make new findings and it will boost their knowledge the more thereby widening the scope and improve their practice.

Theoretical Review

Theory of Planned Behavior

The theory used in this study is the Theory of Planned Behavior (TPB). It is a cognitive theory by Icek Azjen (1985) that proposes an individual’s decision to engage in a specific behavior can be predicated by their intention to engage in that behavior. As a general rule, the stronger the intention to engage in a behavior, the more likely should be its performance (Ajzen, 1991).

According to theory of planned behavior, intentions are determined by three variables: personal attitude, subjective norms and perceived behavioral control.

Personal attitudes

This is our personal attitude towards a particular behavior. It is the sum of all our knowledge, attitudes, and prejudices (positive and negative) that we think of when we consider the behavior. For example, our individual attitude to smoking might include tobacco is relaxing and makes me feel good, but it makes me cough in the morning, costs lots of money and smells bad.

Subjective norms

This considers how we view the ideas of other people about a specific behavior. It is not what other people think but our perception of other’s attitude. As an individual’s subjective norms increase, their intentions to perform a behavior will increase.

Perceived control behavior

This is the extent to which we believe we can control our behavior. This depends on our perception of internal factors such as our own ability and determination and external factors such as the resources and support available to us. The theory argues that our perception of behavioral control has two effects: it affects our intention to behave in a certain way i.e. the more we think we have control over our behavior, the stronger our intention to perform it. It also affects our behavior directly: if we perceive that we have a high level of control, we will try harder and longer to succeed.

Application of the theory to this study

The theory of planned behavior suggest that if student nurses have positive attitude towards research, perceive that their peers and instructors support research and believe that they have the necessary knowledge and skills to conduct research, they are more likely to engage in research activities. Overall, the theory of planned behavior suggests that promoting positive attitudes towards research, providing supportive social norms and enhancing perceived behavioral control through education and training can increase student nurses' engagement in research activities.

Social Cognitive Theory

This theory was proposed by Albert Bandura (1986) and it highlights the role of social interactions, cognitive processes and observational learning in shaping human behavior. It emphasizes that individuals not only learn through direct experiences but also by observing and imitating the behavior of others within their social environment. The key concepts of social cognitive theory are:

Observational learning: this theory posits that individuals learn by observing others and modeling their behavior. It involves attention, retention, reproduction and motivation.

Self-efficacy: refers to individual's belief in their own capabilities to successfully perform specific tasks or behavior. Higher efficacy leads to increased motivation, effort, and resilience in face of challenges.

Reciprocal determinism: this theory proposes that human behavior is influenced by a dynamic interaction between personal factors, environmental factors and the behavior itself.

In the context of student nurses and research, this theory suggests that their knowledge and attitude towards research can be shaped by observing and interacting with role models such as research active faculty or experience nurse researcher. Positive role modeling and mentorship can inspire student nurses to develop an interest in research and foster positive attitude towards research activities.

Empirical Review

Chukwu, Nwakamma & Fiase (2015) conducted a cross-sectional descriptive survey on attitudes of student and midwives towards research at school of nursing and midwifery Mkar, Gboko Benue state. In the study, there were 100 participants with 100% response rate. The result of the study showed that 100% of students were aware of the importance of research in client's care, 31% strongly agreed that research in general is difficult and many do not like researching 55% agreed. 56% also agreed that students lack confidence in doing their research. 58% agreed that many students do not understand the research process. It also

showed that 17% agreed to inadequate statistical data as a barrier to effective research, 5% said it was due to inadequate lectures on research, 62% said it was time factor.

Tumilara & Oluwatosin (2021) conducted a descriptive cross-sectional study on nursing and midwifery student's attitude towards research in Ilaro, Nigeria. 91 nursing and midwifery students were used for the study. The results showed that majority of participants were females and nursing students. However, they perceived research to be stressful, complicated, difficult and complex subject. About 63% of participants had positive attitude towards research while 37% had negative attitude. Nonetheless only 39% participated in research related activities.

Furaikh, omairi & Ganapathy (2017) conducted a descriptive cross sectional study on nursing students' attitude towards research at the College of Nursing-A, King Saud Bin Abdulaziz University for health sciences. A self-administered questionnaire was used and analyzed using SPSS version 20. The result showed that overall attitude towards research was positive (68%). Most of the students (78%) regarded that research was useful for the nursing profession, 61% reported that it plays a role in professional and personal life, while the highest proportion of students (71%) perceived research to be a difficult, complicated, stressful and 64% reported statistical difficulties.

Mwiinga (2016) conducted a non-experimental descriptive cross sectional study on student nurses' attitude towards research at Ndola school of nursing. A semi structured questionnaire was used; data was analyzed through content analysis and Epi-data version 3. Results of the study showed that 55% do not like research and 72.7% had poor attitude, problems encountered include: time consuming 57%, don't know methodology 18%, difficult 16%, expensive 7%. Additionally, 68% of respondents would conduct own research and 91% would utilize other people's findings.

Bamila & Rani (2021) conducted a descriptive study in few nursing colleges of Nagercoil. 99 students in their third year and final year were used. Self-administered knowledge questionnaire was used. Result showed that 42.4% received information through their teacher, 59.59% of the students had adequate knowledge regarding research, 36.36% had moderate knowledge and 4.04% had inadequate knowledge regarding research. All scores shows above average in the attitude scale. This shows that they have a good knowledge and attitude towards research.

Halabi (2016) conducted a descriptive study on attitude of Saudi nursing students towards nursing research. A convenient sample of 244 senior students was used; a 22 item self-administered 4 point Likert type attitude questionnaire was used. Result showed that majority of the students reported positive attitude towards research with the highest scores for usefulness of research and personal interest in research and lowest scores for using research in clinical practice. Research attitude significantly correlate with students' seniority and having completed a research course.

Sharma, Thatikonda & Ukey (2020) conducted a cross sectional study on knowledge, attitude, practice and barriers for research amongst medical students of Government Medical College, Nagpur India. 156 medical students were used, a self-administered questionnaire with 31 questions was used. Data was analyzed by IBM SPSS software version 24.0. Results showed that out of 156 students, 61% and 69% had a positive attitude and a good level of knowledge towards research respectively. Only 8.4% students have conducted research project which only 5.7% have published their study. Lack of time (75%), lack of proper guidance (68%),

and lack of funding(67%) were some important barriers limiting their research practice. Most of the students (39%) have suggested including research in the medical curriculum, 35% of them have thought of the necessity to improve awareness about research.

Methodology

Research Design

This study adopted descriptive survey research design which aimed at collecting data, analyzing them and describing it in a systematic manner; they are concerned with the description of events as they are. This method is relevant to determine the knowledge and attitude of student nurses of School of Nursing University of Nigeria Teaching Hospital Enugu towards carrying out research.

Setting/Area of Study

This study was conducted in the School of Nursing, University of Nigeria Teaching Hospital Enugu, Enugu state, Nigeria. It is located in Enugu Metropolis in Enugu North Local Government Area of Enugu State in the South Eastern Zone of Nigeria. It is bounded in the North by Iva Valley, South by the Central Police Station (CPS), East by Government Secondary School and West by Ngwo town.

Target population

The study population consists of all students in second year and third year in School of Nursing University of Nigeria Teaching Hospital, Enugu with second year having 115 student nurses and third year having 80 student nurses giving a total of one hundred and ninety five (195) student nurses.

Sample size

Sample size was determined using Taro Yamane method. The Taro Yamane method for sample size calculation was formulated by the statistician Taro Yamane in 1973 to determine the sample size from a given population. Below is the mathematical illustration for the taro Yamane method:

$$n = \frac{n}{(1+n(e)^2)}$$

Where:

n = sample size

N = population under study

e = margin error (%)(0.05)

The sample of this research will be calculated using this method with 95% confidence level using 195 student nurses in school of nursing university of Nigeria teaching hospital Enugu.

Substituted numbers in formula:

$$n = \frac{195}{(1+195(0.05)^2)}$$

n = 131

Sample size therefore is 131 student nurses.

Sampling technique

Simple random sampling was used to select the participants for the study. This technique will allow for fair representation of the population whereby every member of the department will have equal chance of being selected. The selection will be done by picking a paper from a box where “YES” or “NO” will be written and folded and shaken. Those who picked “YES” will be selected while those who picked “NO” will not be selected as participants.

Instrument for data collection

The instrument for data collection was a structured questionnaire titled knowledge and attitude of student nurses of School of Nursing University of Nigeria Teaching hospital Enugu towards carrying out research. The researcher developed items through the information gotten from literature review and research questions. The questionnaire was sectioned into four: section A comprised of the personal data of respondents, section B, C, D contained questions on knowledge and attitude towards carrying out research. Face and content validity was done by project supervisor and other research experts before questionnaires will be administered. The reliability of the instrument was tested by conducting a pilot test using 20 respondents from School of Nursing, Nnamdi Azikiwe University Teaching Hospital Nnewi. It will be done to ascertain the internal consistency of the questionnaire, remove any ambiguity, make amendments where necessary and ensure that the instrument can measure what it is meant to measure.

Method of Data collection and Analysis

The data was collected using items formulated from the research question in form of a questionnaire. The questionnaire was delivered by hand to the respondents and also collected later for data analysis. The responses from the respondents were collected and analyzed using pie chart, bar charts, tables, frequency and percentages.

Data Analysis

This chapter is concerned with the analysis and presentation of data collected from the study. The findings are presented under the following headings: demographic data, determining the knowledge of student nurses towards carrying out research, determining the attitude of student nurses towards carrying out research and factors affecting their attitude towards carrying out research.

Section A: Demographic Data

Characteristics	Frequency	Percentage
Age		
18-23	90	68.70%
24-29	39	29.77%
30 above	2	1.52%
Total	131	100%

Table 1: Age of respondents

This table shows that 90(68.70%) of the respondents were within the age range of 18-23, 39(29.8%) were within 24-29 and 2(1.5%) were 30 and above.

Sex

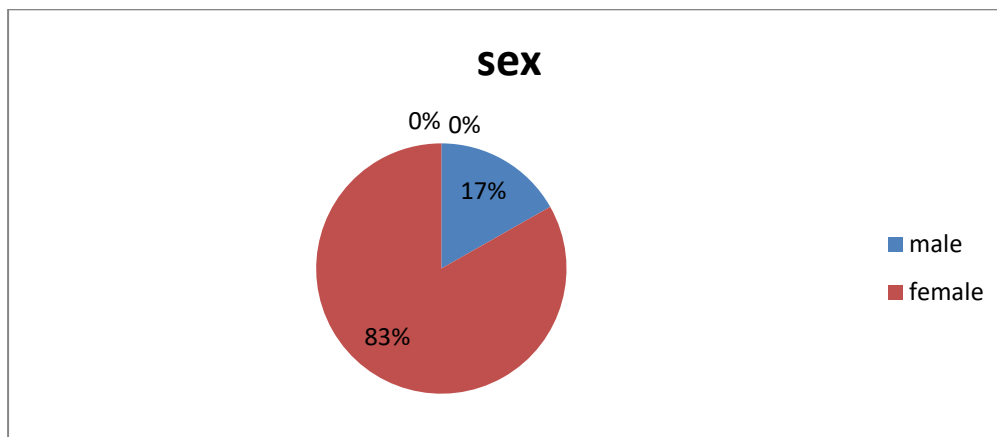


Figure 1: sex of respondents

The findings of this study showed that majority of the respondents (83%) were females while 17% were males.

Level in school

Level	Frequency	Percentage
Second year	75	57.25%
Third year	56	42.75%
Total	131	100%

Table 2: level in school

Majority of the respondents 75(57.25%) were in their second year while 56(42.75%) were in their third year.

Religion of respondents

Religion	Frequency	Percentage
Christian	131	100%
Traditional	-	-
Islamic	-	-
Total	131	100%

Table 3: Religion of respondents

The findings revealed that all the respondents were Christians and it accounted for 131(100%).

Table 4: Marital status of respondents

Status	Frequency	Percentage
Single	121	92.37%
Married	10	7.63%
Total	131	100%

The findings showed that majority of the respondents 121(92.37%) were single and the rest (7.63%) were married as shown in table 4.

Research question 1

Determining the Knowledge of Student Nurses towards carrying out Research

According to the findings, all respondents 131(100%) have received teaching on research methodology and were also able to define research as ‘a scientific and systematic method of inquiry for new facts to create knowledge and solve problem’. 120(92.37%) of the respondents received it as a course. 120(91.60%) and 116(88.55%) knew which part of a research article that sample is determined and also the part that talks about study limitation respectively.

Have you received any teaching/lecture on research methodology?

Category	Frequency	Percentage
Yes	131	100%
No	-	0.00%
Total	131	100%

Table 5: respondents’ responses on if they have received any teaching/lecture on research methodology

Which option best defines research?

Category	Frequency	Percentage
A systematic way of doing things	0	0.00%
A quest for new knowledge	0	0.00%
A scientific and systematic method of inquiry for new facts to create knowledge or solve problem	131	100%
I don’t know	0	0.00%
Total	131	100%

Table 6: respondents’ response on which option best defines research

Which part of the research article is sample determined?

Category	Frequency	Percentage
Introduction	2	1.53%
Methodology	120	91.60%
Discussion	4	3.05%
Literature review	5	3.82%
Total	131	100%

Table 7: respondents’ response of which part of research article is sample determined

Which part of research article talks about study limitation?

Category	Frequency	Percentage
Acknowledgement	0	0.00%
Discussion	116	88.55%
Introduction	5	3.82%
Methodology	10	7.63%
Total	131	100%

Table 8: respondents' response on which part of research article talks about study limitation

Research question 2

Determining the attitude of student nurses towards carrying out research

n=131

S/n	Items	SA 4	A 3	D 2	SD 1	ΣFX N	Mean	Remark
1	Research is interesting	105 (420)	14 (42)	10 (20)	2 (2)	484 131	3.69	Agree
2	Research is enjoyable	63 (252)	18 (54)	30 (60)	20 (20)	386 131	2.95	Agree
3	Research is useful for enriching my knowledge	87 (348)	39 (117)	5 (10)	0 (0)	475 131	3.63	Agree
4	I will employ research approaches in my career	105 (420)	13 (39)	7 (14)	6 (6)	479 131	3.66	Agree
5	Research is irrelevant to my career	0 (0)	2 (6)	60 (120)	69 (69)	195 131	1.49	Disagree
6	Research is difficult	45 (180)	20 (60)	25 (50)	41 (41)	331 131	2.53	Agree
7	Research makes me nervous	8 (32)	31 (93)	42 (84)	50 (50)	259 131	1.98	Disagree
8	Just thinking of research is stressful	17 (68)	28 (84)	46 (92)	40 (40)	284 100	2.17	Disagree

Table 9: respondents' responses on attitude towards carrying out research

Grand mean = 2.76

Decision rule: >2.5 = agree; <2.5 = disagree

From the analyzed result on the table above, majority of the respondents had above 2.5 which indicate a positive attitude towards carrying out research. The agreed were 5 items compared to 3 disagreed items.

Research question 3

Identifying the factors that affect the attitude of student nurses towards carrying out research

S/n	Items	SA 4	A 3	D 2	SD 1	Σfx N	Mean	Remark
1	Lack of confidence in doing research	10 (40)	31 (93)	41 (82)	49 (49)	264 131	2.02	Disagree
2	Time consuming	53 (212)	46 (138)	25 (50)	7 (7)	407 131	3.11	Agree
3	Financial constraint	62 (248)	49 (147)	18 (36)	2 (2)	433 131	3.31	Agree
4	Lack of proper	48	42	21	20	380	2.90	Agree

	guidance	(192)	(126)	(42)	(20)	131		
5	Lack of statistical material	52 (208)	49 (147)	19 (38)	11 (11)	404 131	3.08	Agree

Grand mean: 2.88

Table 10: Respondents’ response on factors affecting student nurses attitude towards carrying out research.

As shown above, the respondents agreed on 4 items out of 5 as factors affecting attitude of student nurses towards carrying out research. Majority of the students did not agree that lack of confidence in doing research affect their attitude. Therefore the analysis showed that students are knowledgeable on the factors that affect their attitude. This shows that responding positively to these factors will improve their attitude towards carrying out research.

Discussion

Research Q1

What is the level of knowledge of student nurses of university of Nigeria teaching hospital towards carrying out research?

This question was answered using questionnaire Q6 – Q10 where 100% of the respondents have received lectures on research and were able to define research. This agrees with the research study of Sharma, et al (2020) in Government Medical College, Nagpur India which shows that the student had a good level of knowledge towards research. All 131(100%) were able to define research as “a scientific and systematic enquiry for new facts to create new knowledge or solve a problem. With a further 91.60% stating the part of the research article where sample is determined. 88.55% also stated the part of research article that talks about study limitation.

Research Q2

What is the attitude of student nurses towards carrying out research?

This question was answered using questionnaire Q11 – Q17. It was calculated using mean: majority of the respondent had positive attitude towards carrying out research. 5 out of 8 items were above the decision mean of 2.5. These findings are in agreement with a study conducted by Furaikh, et al (2017) on nursing student’s attitude towards research at College of Nursing-A, king Saud Bin Abdulaziz University for Health Sciences which showed that overall attitude towards research was positive. It also agrees with a study conducted by Tumilara (2021) on nursing and midwifery student’s attitude towards research. The results showed that 63% of participants had positive attitude towards research.

Research Q3

What are the factors affecting student nurses attitude towards carrying out research?

This question was answered using Q18-22. This was calculated using mean as shown in table 10. The respondents agreed in 4 out of 5 items as factors that affect their attitude. The respondent did not agree with lack of confidence in doing research as a factor affecting their attitude. The mean (2.88) in this category showed that most of the respondents were aware of these factors. This is in line with the study conducted by Sharma et al (2020) on knowledge, attitude, practice and barriers for research amongst medical students of Government Medical College, Nagpur India. Findings showed that lack of time (75%), lack of proper guidance (68%), and lack of funding (67%) were some important barriers limiting their research practice.

Conclusion

From the findings, it is very imperative to deduce the following; majority of the student nurses had adequate knowledge on research and also portrayed positive attitude towards carrying out research. Some of the respondents believed that research is stressful and also makes them nervous. The study also showed that student nurses are aware of the factors affecting their attitude towards carrying out research.

Nursing implication

According to the research findings, carrying out research is relevant for the nursing profession. It is imperative that the prospective nurses develop interest and the right attitude as well as get involved in clinical nursing research to develop critical thinking skills in order to provide optimal quality care to the patients. Providing solutions to the factors affecting their attitude such as providing proper guidance through lectures and supervision and providing relevant statistics materials will foster their attitude.

Recommendations

From the result of the findings, the following recommendations were made:

The school tutors should put in more effort in guiding the student nurses towards carrying out research. There should be continuous orientation of student nurses concerning their attitude towards carrying out research. Holding of seminars, workshop for the student nurses on research methodology. The Nursing and Midwifery Council of Nigeria should mandate the involvement of all the student nurses in research study from the beginning of the study.

Limitations of the study

The major problem encountered by the researcher in the course of carrying out this research on the knowledge and attitude of student nurses towards carrying out research were financial constraint and time factor. Also problems of insufficient information on the internet, journals and magazine.

Suggestions for further studies

Based on the recommendations made above, the researcher suggested that a similar study be carried out in another school using a different instrument for data collection and analysis to know if they have the same attitude towards carrying out research.

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