



KNOWLEDGE AND ATTITUDE OF NURSES TOWARD INFORMATION TECHNOLOGY ON
NURSING CARE DELIVERY IN GENERAL HOSPITAL IQUITA, ORON,
AKWA IBOM STATE

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ABSTRACT

The research was carried out to investigate knowledge and attitude of nurses towards information technology on nursing care delivery in General Hospital, Iquita, Oron Local Government Area, Akwa Ibom state. Four objectives, research questions and four research hypotheses were raised to guide the study. Review of literature was done according to the variables of the study. The target population was all the nurses numbering one hundred thirty (130) in General Hospital, Iquita, Oron Local Government Area. A sample size of 98 nurses was used which was determined by Yaro Yamane's formula and a simple random sampling technique was used to select the respondents for the study. A 20 item researcher's constructed questionnaire was used to obtain data for the study. The data collected were analyzed using descriptive statistics of percentages, mean scores, charts and Person Product Moment Correlation was used to test the null hypothesis which was rejected because the calculated value was greater than the critical value. Based on the findings obtained from the study there is a significant relationship between nurses' knowledge and attitude of nurses towards information technology on nursing care delivery in General Hospital, Iquita Oron Local Government Area. Akwa Ibom State. From the findings it was recommended that nurses should be properly taught on how to interpret output information on the Information Technology (IT) devices to avoid misinterpretation of information which may lead to medical errors and mistakes, and government should encourage the utilization of IT by providing uninterrupted electricity supply to the hospitals

Keywords: Knowledge, Attitude, Information Technology, Nurse, and Nursing Care Delivery

INTRODUCTION

There is advancement in the world due to the development of technology and communication, thereby contributing to the needs of people, groups and society at large in various sectors. Technology has increased rapidly over the past four decades and has become an integral part of health care (Gibbs, 2017).



Information Technology(IT) is often used as a shortened synonym for Information and Communication Technology. Information Technology can be defined as an information system that provides procedure to record and make available information, concerning part of an organization to assist organization related activities. (Flynn, 2017). Information Technology comprises of all digital technologies that support electronic capture, storage processing and exchange of information in order to promote health, prevent illness, treat disease, manage chronic illness etc. (Chan, 2019).

The environment in healthcare encompassed more than just a physical location. There is an increase in the use of Information and Communication Technology such as mobile computers, wireless solution and automated exchange between health providers and patient. Adapting to these new environment requires a paradigm shift on communication and delivery care which requires knowledge of the evolution of new technologies (David, 2019).

Nursing care delivery are different approaches in which nurses provide care for patients. (Picmonics, 2024). These models are frameworks that are used to help nurses assess, plan and implement care. Nurses in everyday work are encountered with the application of new gadgets, instruments and other modern technologies used for health care delivery. (Nilson & Erilsen 2018).

Used of Information Technology health care delivery system provides opportunities for individuals, medical professionals and health care providers to obtain information on different aspects of diseases, communicate with health care professionals and patient, offer access to medline, medical/nursing journals, textbooks and latest information on breakthrough in health (Dery et al 2016).

Information technology helps in providing a better health care delivery at lower cost and also contribute positively to the quality of health services. One of the primary drivers behind the adoption of Information Technology in nursing is its ability to enhance patient safety and quality of care. Through electronic documentation, nurses can access comprehensive patient information in real -time, enabling timely assessments, accurate medication administration and proactive monitoring of vital signs. Information technology systems facilitates the identification of potential adverse events, medication errors and patient allergies, empowering nurses to make informed decisions and mitigate risks to patient well-being

Information technology empowers nurses to transcend traditional care boundaries and embrace innovative models of care delivery. Telehealth and telemedicine technologies enable nurses to provide remote consultations, monitor chronic conditions and deliver virtual education to patient across geographical distance

Information Technology plays a pivotal role in promoting nursing efficiency, streamlining workflows and optimizing resource utilization. By automating routine tasks such as documentation, charting and scheduling, Information Technology enables nurses to focus their time and expertise on direct patient care activities, fostering greater productivity and job satisfaction. Information technology facilitates data-driven



decision-making, enabling nurses to analyze trends, monitor outcomes and identify areas of quality improvement within their practice setting.

The importance of information technology in nursing cannot be overstated, as healthcare continues to evolve in response to dynamic patient needs, technological advancement and regulatory mandates, nurses must embrace Information Technology as a fundamental tool for achieving excellence in care delivery, promoting patient safety and advancing the professions collective goal of improving health outcomes and enhancing patients experience

STATEMENT OF PROBLEM

Caring in nursing as a concept has been understood to be a nurse's attitude and behavior when taking care of patient such as compassion, commitment, confidence, competence, comportment and conscience (Roach, 2012). Information Technology facilities have been created in order to improve the efficiency, effectiveness and quality of nursing care delivery services.

In the contemporary health care landscape, the integration of information technology (IT) into nursing care delivery has become increasingly essential for efficient and effective patient management. However, the knowledge and attitude of nurses towards information technology directly influence the quality efficiency and safety of patient care.

Many nurses encounter knowledge gap related to the effective utilization of Information technology solutions, hindering their ability to leverage technology for improved nursing care delivery. Attitude and perception towards Information Technology among Nurses plays a pivotal role in determining the acceptance and utilization of technology-driven care delivery methods.

Understanding the factors influencing nurses' acceptance and utilization of Information Technology solution is crucial for optimizing nursing care delivery processes and improving overall patient outcomes hence the reason for this study "knowledge and attitude of nurses to information technology on nursing care delivery in General Hospital, Iquita, Oron Local Government, Akwa Ibom State

SIGNIFICANCE OF THE STUDY

This study is aimed at enlightening the nurses about the use of information technology to aid nursing care delivery. The findings of the study will be of utmost importance to the nurses, government especially the Ministry of Health, society and other researchers.

To the nurses, this study will help serve as a guide and make necessary intervention so that information technological facilities can be used to render care. It will also help the nurses to improve the standard of practices with maximum utilization of technological facilities in care delivery.

To the government, this study would help bridge the gap by identifying various factors affecting utilization of technological facilities and also provide means to curb the problem like organization of workshop or seminar to train the nurses on the use of



technological facilities. It would also enlighten the government to make provision of technological facilities in order to aid in nursing care delivery.

To the society at large, this study would enlighten them to know that technological facilities can also be used by nurses to render care.

To the researchers, this study would serve as a baseline for further researches.

OBJECTIVES OF THE STUDY

The general objective of the study is to investigate the knowledge and attitude of nurses to information technology on nursing care delivery in General Hospital, Iquita, Oron Government Area, Akwa Ibom State.

The specific objective of this study is to

- i. Assess the level of knowledge of nurses on information technology for nursing care delivery in General Hospital, Iquita, Oron Local Government. Akwa Ibom State
- ii. Determine the attitude of nurses towards information technology for nursing care delivery at General Hospital, Iquita, Oron Local Government, Akwa Ibom State.
- iii. Determine the utilization of information technology among nurses' in nursing care delivery at General Hospital, Iquita, Oron Local Government Area. Akwa Ibom State
- iv. To identify the factors militating against the use of information technology for nursing care delivery in General Hospital, Iquita, Oron Local Government Area. Akwa Ibom State

RESEARCH QUESTION

The relevant research question of this study are:

- i. What is the level of knowledge of nurses on information technology on nursing care delivery in General Hospital, Iquita, Oron Local Government Area. Akwa Ibom State?
- ii. What is the attitude of nurses towards information technology for nursing care delivery at General Hospital, Iquita, Oron Local Government Area. Akwa Ibom State?
- iii. To what extent is information technology utilized among nurses in nursing care delivery at General Hospital, Iquita, Oron Local Government Area, Akwa Ibom State?
- iv. What are the factors militating against the use of information technology for nursing care delivery in General Hospital, Iquita, Oron Local Government Area. Akwa Ibom State

RESEARCH HYPOTHESES

The relevant research hypotheses for this study are:

- i. There is no significant difference in the relationship between level of knowledge of nurses on information technology and nursing care delivery in General Hospital, Iquita, Oron Local Government Area.



- ii. There is no significant difference in the relationship between the attitude of nurses on information technology and nursing care delivery at General Hospital, Iquita, Oron Local Government Area. Akwa Ibom State.
- iii. There is no significant difference in the relationship between utilization of information technology among nurses and nursing care delivery at General Hospital, Iquita, Oron Local Government, Akwa Ibom State.
- iv. There is no significant difference in the relationship between the factors militating against the use of information technology for nursing care delivery in General Hospital, Iquita, Oron Local Government Area. Akwa Ibom State

DELIMITATION OF THE STUDY

The study "Knowledge and Attitude of Nurses to Information Technology on Nursing Care Delivery in General Hospital, Iquita, Oron Local Government Area is delimited to all the nurses in General Hospital, Iquita, Oron Local Government Area. The study covered Information Technology as the independent variable and Nursing care delivery as the dependent variable

LIMITATION OF THE STUDY

The study was faced with limitations to include financial constraint. Thanks to God because miraculously financial support came from friends and family to pilot the study,

The study was also faced with time constraint since this work was combined with classwork and clinical experiences but as God would have it, the researcher could properly manage time.

OPERATIONAL DEFINITION

KNOWLEDGE – Information that nurses have about information technology on nursing care delivery in General Hospital Iquita, Oron Local Government Area.

ATTITUDE – How nurses perceive information technology in nursing care delivery in General Hospital, Iquita, Oron Local Government Area

INFORMATION TECHNOLOGY –

NURSE – A person who has completed a program of basic generalized nursing education and is authorized by the appropriate regulatory authority to practice nursing in General Hospital, Iquita, Oron Local Government Area.

NURSING CARE DELIVERY – Different ways in which nurses render care towards their patient in General Hospital, Iquita, Oron Local Government

REVIEW OF LITERATURE

Concepts of Nursing Care Delivery

A nursing care delivery system defines how work is organized, how nursing staff are deployed, and who does what in providing nursing care. It identifies who has the accountability for nursing care and clinical outcomes and provide the organization, rules and structure that define responsibility and accountability (Hayajneh,2018). Nursing care delivery models, also called care delivery systems or patient care delivery models, detail the way task assignments, responsibility, and authority are structured to



accomplish patient care. The nursing care delivery model describes what health care worker is going to perform which tasks, who is responsible, and who has the authority to make decisions. The purpose of any delivery system is to provide high quality care, efficiently and effectively (Barbara,2016). A patient care delivery model is the method or system of organizing delivery nursing care. The five well-known means of organizing nursing care for patient care delivery are total patient care, functioning nursing, team and modular nursing, primary nursing, and case management. Each of these basic types has undergone many modifications, often resulting in new terminology. The choice of an organizational model involves staff skills, availability, resources, patient acuity, and the nature of the work to be performed (Danielle, 2017). By defining the components of the nursing care delivery system, the foundation of professional nursing practice is described. The professional practice model aligns and integrates nursing practice with the mission, vision, values and philosophy of nursing. The framework of professional practice model guides the nursing strategic plan, identifying clear goals and expectations for all professional nurses to achieve optimal outcomes as defined in our nursing goals; and Practice Environment, Best Patient Experience, Best Quality, and Best Financial Stewardship.

The essential components of nursing care delivery system are responsibility, accountability, clinical decision making and making assignment (Ann, 2017). Patient satisfaction is an important and commonly used indicator for measuring the quality in health care. Patient satisfaction affects clinical outcomes, patient retention, and medical malpractice claims. It affects the timely, efficient, and patient-centered delivery of quality health care. Patient satisfaction is thus a proxy but a very effective indicator to measure the success of doctors and hospitals (Prakash,2018). In addition to being a requirement of accreditation, patient/customer satisfaction is important to the success of health care organizations as businesses. Satisfied patients will share their positive experience. Because the cost of obtaining a patient is high, losing a patient is a substantial loss of investment. Patient may have been attracted through advertising or an insurance contract. There is evidence of a reciprocal relationship between patient satisfaction and continuity of care.

Types of Nursing Care Delivery System

According to Picmonic 2024, there are four (4) basic types of Nursing Care Delivery System and they include:

- **Functional Nursing:** Functional Nursing is a task-oriented approach to delivery care. Task are delegated to individual members of the team. The team members are focused on their specific task instead of total patient. Advantages to this approach are that task can be done in a shorter amount of time, but disadvantage can include fragmented care, and nurses accountability and responsibility decrease with this approach.



- **Team Nursing:** Team Nursing is an approach where the team is led by a team leader who is knowledgeable about the patient and is in charge of evaluating the patient's care plan. The leader assigns patients to the team members, who are accountable for the patient care and outcomes. The nurses who are assigned to the patient then delegate tasks to the technicians or nurse's aides, within the scope of practice. Advantages of this model are that each patient receives individualized care and that every member of the team can contribute to the decision making. Disadvantages include that the nurse is still responsible for duties being performed without performing them personally.
- **Primary Nursing:** Primary Nursing is also known as relationship – based practice, and this model focuses on keeping the nurse at bedside, actively involved in patient care. In this model, one primary nurse is responsible for managing the client care while in the hospital, from admission to discharge. An advantage to this model is that there is a strong development of the patient-nurse relationship as trust and rapport are established. Another advantage is nursing accountability because there is no ambiguity about who is responsible for the patient care plan. A disadvantage to this model is that there are not always enough registered nurses available for every patient to have a primary nurse.
- **Total Patient Care:** Total Patient care is a model where the registered nurse takes on total responsibility for planning and delivering care to the patient for the assigned time period. This Model is adopted in most of the hospitals and is therefore utilized for this study.

Concepts of Information Technology in Nursing

Technology refers to the systems, methods and the devices which are outcome of scientific knowledge being used for the practical purposes. All kind of technology provides nurses with different kinds of tools to improve and enable nurse-patient relationship. Information technology in nursing practice is the utilization and application of organized knowledge and skills in the form of devices, medicines, vaccines, procedures and systems developed to solve a health problem and improve quality of lives of patients (Mytton et al, 2018). The use of IT has improved the health of individuals and enhanced the performance of care providers thus upgrading the quality of care administered to patients by nurses (Blumenthal, 2017).

Information Technology (IT) has been described as the application of information processing in cooperation with computer software and hardware to store, retrieve, distribute and use healthcare information, data, and knowledge for communication and decision-making. It is the usage of processors and telecommunications tools to store, retrieve, spread and handle the information (Alotaibi & Federico, 2017). It is planned to aid manage the stewardship purpose, maintenance, and managing day-to-day processes and decision making (Lim, 2018).

INFORMATION TECHNOLOGY EQUIPMENT



Electronic Health Record (EHR)

An Electronic Health Record EHR is a digital collection of a patients' medical history in an electronic format, stored and transmitted to other health care providers through a secured network, and used solely to provide quality and efficient health care (Sadeghi & Naccache 2017). EHR is patient centered and contain real-time information of a patients' medical and treatment history such as diagnosis, health progress, health problems, medications, vital signs, immunization, allergies, radiology images and laboratory data (Maki & Petterson 2018).

Information in an EHR is instantly available to authorized users through a secure network. The EHR can streamline the workflow of nurses and promote evidence-based decision support, quality control and reporting of results. An efficient EHR offers accurate and timely reporting of patient diagnosis and treatment and provides a concrete resource for supporting adequate health care. (Finnell & Dixon 2013.) EHR scheme enables the medical records of patients to be made accessible to health practitioners in various health care institutions and offers access to relevant national health services, such as pharmacies, labs and specialist emergency and medical imaging facilities. The EHR provides rapid, comprehensive and timely patient information for the provision of care. (Smith, Fitzpatrick & Carpenter 2017.)



Telehealth and Electronic Patient Portal

Telehealth includes a wide range of non-clinical functions encompassing prevention, promotion and curative elements of health. It often involves the use of electronic means or methods for health care, public health, administration and support, research and health education. In recent years, telehealth has proven suitable for handling transmissible diseases.

Telehealth innovations have contributed significantly to patient accessibility. Telecommunications systems made it easier for patients living in a different region to receive nursing care through remote patient monitoring, live video conferencing and mobile health apps. Nowadays, through the use of IT, quality treatment is now available for those living in remote areas. Telehealth increases access to health care by eliminating time and regional barriers. It reduces the need for in-person consultation and travel, which enables patients to be provided with health services where they are most convenient. (WHO, 2016). Telehealth improves the quality of care through education and self-monitoring by empowering patients, which is regarded as a critical component in improving integrated care and management of health sector resources. It ensures access to medical specialists and improves communication and continuity of treatment between the health team members and the patient. It provides support for health care self-management and may offer opportunities to enhance the quality, collaboration and coordination of healthcare. Telehealth provides a secured online portal that enables clients to communicate with their nurses, schedule appointments or request for a refill of prescription medications. (WHO, 2016, 31-38)

Nurses may also use the services of telehealth to gain input from colleague through virtual consultation when they have questions regarding a patients' treatment plan, or to get an expert's opinion on a case. These virtual consultations can avoid unnecessary referrals to a specialist, reduce waiting times for the feedback of a specialist and minimize unnecessary travelling.

Bar Code Medication Administration System

A bar code medication administration system is a system designed to reduce human medication errors in drug administration in hospitals and other health care settings. From a nurses perspective it aims at improving accuracy in medication administration by ensuring that the five rights of drug administration, which are the right person, the right drug, the right dose, the right route and the right time, are followed through an inventory controlled network. (Kelley. 2016) Medication error as defined by WHO is any preventable harmful situation that may occur due to the inappropriate use of medication or any pharmaceutical product, either by the health care staff or the consumer. These errors present a major threat to patient safety. The technology comprises of a bar code scanner, a computer system with a user-specific software designed for the care facility, and a server. Drugs are labelled with unique barcodes that contain data encoded in the barcodes, which enables the prescribed drug to be matched with what was ordered for the patient. Before administering medication,



a nurse scans the barcode on the patient's wrist band and the bar code on the medication and on the nurses' batch. The data is sent by electronic means to a computer software system which uses complex algorithms to search different databases for real-time information on the patient medical history. (Kelley, 2016.) It is worth noting that the barcode of each patient contains all important information about the patient and their medication. If the system is unable to match the information on the patients' barcode with the medication to be administered, it sends an alert to the nurse. Most systems automatically record the administration of a prescribed drug in an electronic medication administration record (eMAR). The eMAR is a system usually incorporated in the EHR that automatically documents the administration of prescribed medication by nurses. (Yoder-Wise, Waddell & Walton 2019.)

Smart Infusion Pumps

A smart infusion pump is a computerized device that administers drugs or nutrition to a patient through intravenous, subcutaneous, intramuscular, intrathecal, epidural, or intra-arterial routes. It aims to minimize drug infusion errors through the use of a drug library. Unlike traditional infusion pumps, smart infusion pumps are programmed to include patient-specific data stored in the drug library. The drug library contains a list of prescribed drugs stored in its memory, and the most critical element of a smart pump. Drug libraries are designed according to the needs of each hospital. This is because each hospital has its protocol in medication administration. (Scarlat 2019.) Smart infusion pumps can be categorized into large-volume and \S -volume pumps. Large volume pumps are mainly used for the infusion of thicker fluids, while small volume pumps are used to infuse less viscous. The data programmed in the library of the smart pump includes the patient's details such as name, a list of medication with dosage, dosage unit and the concentration for each medication. The nurse sets the parameters of the infusion by infusion rate, maximum and minimum dosage. The pump notifies the nurse if the programmed infusion is out of the set parameters. (Sandberg, Urman & Ehrenfeld 2017)

Monitoring Devices

Monitoring Devices are technological devices that enable nurses to obtain biometric values of information. These devices include fetal monitors that can display a baby's heart rate still in the uterus; heart monitors that show a patient's electrical rhythm and heart pattern; and vital sign machines that take the patient's blood pressure, pulse, and breathing automatically. Other monitoring systems assess the pressure within the heart or brain or the amount of oxygen in the blood of a patient. Systems installed into the hospital bed report the weight or movement of a patient while asleep. (Wafra 2017.)



BENEFITS OF INFORMATION TECHNOLOGY TO NURSES by Saleh et al 2021

- Usage of technology decrease the possibility of opposing actions such as mistakes in the number of medications, postponements in diagnosis and management of illnesses.
- IT schemes such as electronic health records, the possibility to increase quality while decreasing costs.
- Information technology on work-life balance is a comfortable state of stability attained between an individual's primary priorities of their nursing staff position and their individual lifestyle.
- Information Technology offers possibility for better productivity and competence

Theoretical Review

The theory used in this study was Watson's Human Caring Theory. The theory was postulated by Jean Watson in 2005. The Watson Human Caring Theory emphasizes the importance of humanistic aspects of nursing care. It focuses on the nurse-patient relationship, holistic care, and promoting healing through compassion, empathy and understanding. Watson theory emphasizes the importance of caring as the essence of nursing practice and advocates for a more personal, human-centered approach to health care.

Watson Human Caring Theory proposes that caring is the essence of nursing and encompasses the nurse-patient relationship, the environment and the healing process. It emphasizes the importance of fostering a caring connection between the nurse and the patient, where the nurses demonstrates empathy, compassion and respect. The theory views patients as a whole person and promotes holistic care that addresses physical, emotional, social and spiritual needs. Additionally, it suggests that caring interactions between the nurse and the patient can facilitate healing and promote well-being.

Watson Human Caring Theory is rooted in the belief that caring is essential to the practice of nursing. It asserts that nurses should prioritize establishing meaningful connection with patients, showing empathy, compassion, and understanding. According to this theory, caring is not just a task but a fundamental aspect of health care that contributes to healing and overall well-being. It considering their physical, emotional, social and spiritual needs. The theory emphasizes the importance of creating a healing environment that is conducive to the patient's recovery and supports their journey towards health and wholeness.

This Theory underscores the significance of cultivating genuine, compassionate connections between nurses and patients. At its core, the theory advocates for the integration of caring into every aspects of nursing practice. It emphasizes empathy, understanding, and respect in patient care, recognizing patients as unique individuals with physical, emotional, social and spiritual dimensions. furthermore, the theory posits



that interactions promote healing, enhance well-being, and contribute to the creation of therapeutic environments conducive to patient recovery.

Watson Human Caring theory provide a framework for nurses to deliver compassionate, patient-centered care that promotes healing and enhances the overall well-being of patient.

APPLICATION TO THE STUDY

Nurses, by embracing technology while upholding the core tenets of humanistic nursing, nurses can optimize patient outcomes and experiences, ultimately enriching the quality of care. The goal is to leverage technology to support compassionate personalized care while preserving the essential elements of empathy and connection in nursing practice.

Empirical Review

Impact of Information Technology on Nursing Care Delivery

Ogungbesan et al (2022) carried out an investigation on “Knowledge and Attitude towards Utilization of Information Technology for Nursing Care Delivery Among Nurses at Olabisi Onabanjo University Teaching Hospital, Sagamu Ogun State, Nigeria”. The study determined the knowledge and attitude towards utilization of information technology for nursing care delivery among nurses at Olabisi Onabanjo University Teaching Hospital (OOUTH), Ogun state, Nigeria. A cross-sectional design was adopted and a sample of 147 consented nurses were proportionately selected in all the units/wards of OOUTH. About 126 questionnaires were retrieved and analyzed descriptively for frequency tables, percentage, chart, standard deviation and mean and hypothesis tested with regression at $p < 0.05$. Nurses were knowledgeable on IT in OOUTH. More so, the findings showed a positive significant relationship between IT knowledge and utilization of IT for delivery of nursing care among nurses in OOUTH. Nurses should be supply with IT gadgets likewise equip with more knowledge on the utilization of IT for effective delivery of nursing care to patients.

Kamoru. A Adesina1 (2021) carried out an investigation on the utilization of information and communication technology in patient management among nurses in neuropsychiatric hospital, Aro, Abeokuta. The study was conducted using a convenience sampling techniques and questionnaires as instrument on 90 nurses who are on the institution’s payroll. The findings revealed that only 86.6%(78) out of 90 respondents possess ICT skill and 62(68.9%) of all the respondents have heard of the term “information and communication technology before” and not all the respondents have the correct perception towards ICT. Also, ICT is not in use at all in patient management in N.P.H, Aro Abeokuta. The study showed that all nurses in N.P.H., Aro no matter the rank or gender have an averagely positive perception of ICT adoption and use in healthcare services. Several barriers however, which ranges from limited knowledge on computer skills, fear of change, lack of user training in ICT usage, managerial problems (which include poor administrative policy on ICT) to the application related challenges (Which include complexity of the equipment) were identified. Hence it was



recommended that nurse manager need to collaborate with other stake holders in health care institution to draft a workable policy towards the adoption and use of ICT for health care.

Ronald J. Piscotty, Jr. (2016) examined the Impact of Healthcare Information Technology on Nursing Practice. The study used a descriptive design. The sample (N=165) was composed of registered nurses working on acute care hospital units. The sample was obtained from a large teaching hospital in Southeast Michigan in the fall of 2012. All eligible nursing units (n=19) were included. The misscare Survey, Nursing Care Reminders Usage Survey, and the Impact of Healthcare Information Technology Scale were used to collect data to test for mediation. Mediation was tested using the method described by Baron and Kenny. The perceptions of the impact of healthcare information technology mediates the relationship between nursing care reminder use and missed nursing care. The findings are beneficial to the advancement of health care technology in that designer s of health care information technology systems need to keep in mind that perceptions regarding impacts of the technology will influence usage.

OMOLOLA O. IRINOYE et al (2018) carried out an investigation on Nurses' Perception and Barriers to Use of Information Communication Technology in a Teaching Hospital in Nigeria. This quantitative study has shown a generally low usage of information technology among nurses in the study setting. Many of the nurses adjudged themselves as novice in information technology, with 37.8% stating that they had never had formal training in information technology and many rating themselves as possessing little or no skill in the use of spreadsheet, databases, and soon. Many (55.6%) stated that they do not have access to information technology despite the fairly widespread satisfactory perception established among them. Results further showed that unreliable network connections, high work demand, inadequate number of computers, poor access to computers consequent on wrong locations, and poor system design with associated failure to fit work demands are some of the major barriers to the use of information technology in the study setting. These factors therefore need to be taken into consideration in any intervention that seeks to improve the nurses' use of information technology in clinical setting.

Summary of Literature Review

This chapter reviewed the related literature under theoretical, conceptual framework and empirical studies.

Under theoretical framework, one (1) theory was reviewed which was Watson Human Caring theory. This theory indicated that nurses' primary concern is promoting health, preventing illness, caring for the sick and restoring health.

Under conceptual framework, the concepts of information technology, and nursing care delivery were reviewed. Each concept reviewed with different past scholars posited or how they described each of the concepts.



For empirical studies, different research work carried out by previous researchers were reviewed under impact of information technology on nursing care delivery

RESEARCH METHODOLOGY

Research design

A cross-sectional descriptive research design was used in this study. The descriptive research is a design to depict the participants in an accurate way. This design was considered appropriate because it allows to collect relevant data on the research variables and analyses them using the appropriate techniques. It also allows to examine the existing relationship between the dependent variable (Nursing Care Delivery) and the independent variable (Information Technology).

Area of Study

Oron is a coastal city and a Local Government in Akwa Ibom State. It lies at the mouth of Cross River and is terminus of road from Uyo and Opobo. The neighboring towns to Oron is Eket, Ikot Ekpene and Uruan.

The people of Oron are made up with diverse cultural heritage and tradition. The speak Oro language. Oron is a coastal trade area for yams, cassava (manioc), fish, palm oil and kernel.

The natural resources found in the area include oil, gas and iron. The have a museum that has notable collection of ancestral carving and other artifact which save as a tourist attraction. The people of Oron are known for fishing, farming and politics.

The basic amenities present in Oron include schools, General Hospital, Oron Museum Nigeria, Oron beach and seafood market etc.

Population for the study

The population for this study comprised of all nurses working in General Hospital, Iquita, Oron Local Government Area numbering one hundred and thirty (130).

Sample and sampling technique

A sample size of 98 on was drawn using yaro yamene's formula for the research study. Simple random sampling technique was used to select respondents from the different wards.

Instrument for data collection

The instrument used for data collection was researcher made questionnaire on knowledge and attitude of nurses to information technology on nursing care delivery. The questionnaire consisted of two sections; Section A and section B. Section A consisted of information on demographic data of the respondents such as name, gender, age, educational qualification, marital status while section B consisted of 20 items organized in 4 sub-scales to measure variables such as level of knowledge of nurses on information technology to nursing care delivery (5 items), attitude of nurses to information technology to nursing care delivery (5 items), utilization of information technology to nursing care delivery (5 items) and factors militating against the use of information technology to nursing care delivery (5 items). The instrument is a 4 point



modified likert scale consisting of the following scales; Strongly Agreed = 4 point, Agreed = 3 points, Disagreed = 2 points, Strongly Disagreed = 1 point was used to collect data for the present study.

Validation of the instrument

The validity of the instrument was ascertained by giving the instrument to the research supervisor to examine the purpose, research objectives as well as the hypotheses of the study in line with the specific items in the instrument. They also assessed the language used in developing the instrument. The modified some items and made necessary corrections. The instrument was designed to obtain data on “Knowledge and Attitude of Nurses to Information Technology on Nursing Care Delivery in General Hospital, Iquita, Oron Local Government Area. The instruments were arranged according to the objectives of the study.

Reliability of Instrument

Pilot testing was carried out to establish the reliability of the instrument. Copies of the questionnaire were administered to 20 nurses in General Hospital, Okobo who were considered to have similar characteristics with the group under study. Split half method was used to ascertain the reliability of the instrument using Pearson Product Moment Correlation Coefficient Formula (PPMC). And it yielded a correlation coefficient of 0.8 the instrument was therefore considered reliable for this study.

Ethical Consideration

A letter of introduction was collected from the Ministry of Health for the study to be carried out. Consent was obtained from the respondents, participation was voluntary and confidentiality was maintained by not including a space for personal names on the questionnaire.

Research Procedure

Data was collected using a researcher made questionnaire which was administered face to face to the respondents in the hospital and the questionnaire was collected at the spot. The returned rate was 100% (98 questionnaires was administered and retrieved at the spot).

Method of Data Analysis

Data obtained were analyzed using descriptive statistical methods such as simple percentages, frequency table, mean, and pie chart. The hypotheses were tested using Pearson Product Moment Correlation Coefficient (PPMC)

PRESENTATION OF RESULT

Demographic data of Adults in General Hospital, Iquita, Oron

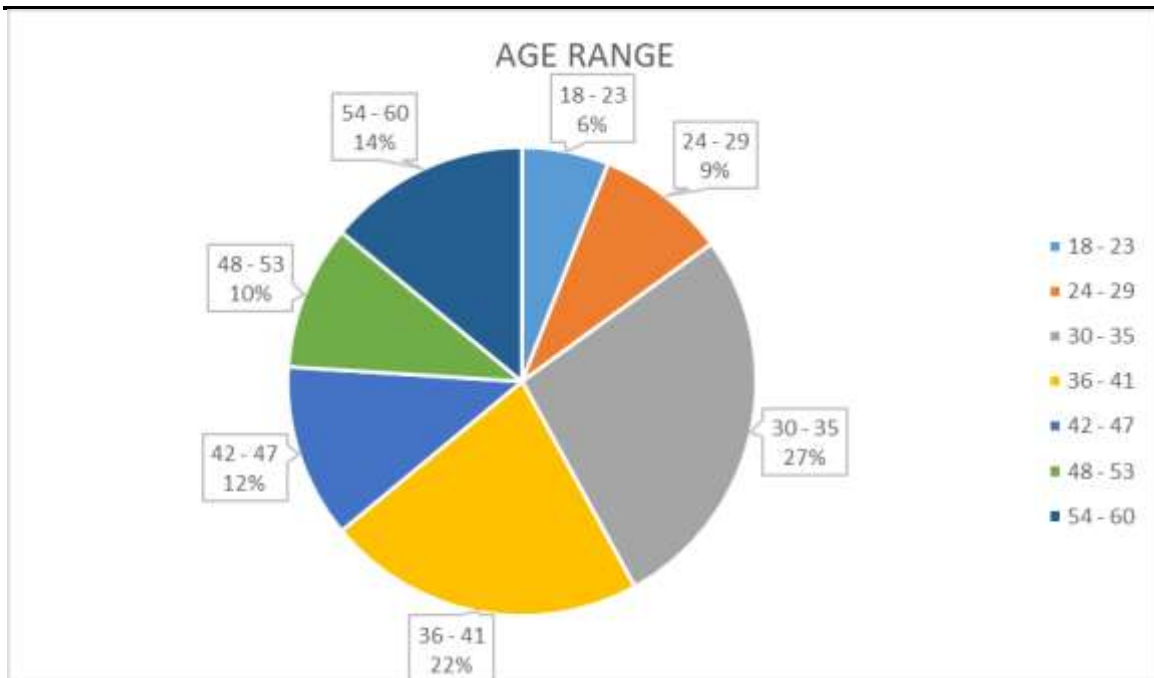


Figure 1: A pie chart showing age distribution of respondent

Figure 1 showed that 6 respondents were in the age group of 18-23 years, 9 respondents were in the age group of 24 – 29 years, 27 respondents were in the age group of 30 – 35 years, 22 respondents were in the age group of 36 – 41 years, 12 respondents were in the age group of 42 – 47 years, 10 respondents were in the age group of 48 – 53 years and 14 respondents were in the age group of 54 – 60 years.

Table 1: Demographic Data of adults in General Hospital, Iquita, Oron Local Government Area.

Variables	Frequency	Percentage (%)
NAMES OF WARD		
OPD	8	8.2
Male Surgical Ward	7	7.1
Male Medical Ward	9	9.2
Female Surgical Ward	7	7.1
Female Medical Ward	8	8.2
Children Ward	9	9.2
Theatre	7	7.1
Labour Ward	13	13.3
Ante-natal Ward	12	12.2
Ante-natal Clinic	8	8.2
HIV Unit	4	4.1
Immunization center	6	6.1
GENDER		
Male	41	41.8



Female	57	58.2
RELIGION		
Christianity	98	100
Islam	0	0
Traditional Worshippers	0	0
MARITAL STATUS		
Single	24	24.5
Married	53	54.1
Widowed	12	12.2
Divorce	9	9.2
PROFESSIONAL QUALIFICATION		
RN/RM	48	49
RN/PSY	34	34.7
B.Sc	14	14.3
M.Sc	2	2.0
PH.D	0	

Table 1 showed that 8 (8.2%) respondents worked at OPD ward, 7 (7.1%) respondents worked at Male Surgical Ward, 9 (9.2%) respondents worked at Male Medical ward, 7 (7.1%) respondents worked at Female surgical ward, 8 (8.2%) respondents worked at Female Medical Ward, 9 (9.2%) respondents worked at Children ward, 7 (7.1 %) respondents worked at Theatre, 13 (13.3%) respondent worked at the labour ward, 12 (12.2%) respondents worked at Ante-natal ward, 8 (8.2%) respondents worked at Ante-natal Clinic, 4 (4.1%) respondents worked at HIV Unit and 6 (6.1%) respondents worked at the Immunization Center. It also showed that 41(41.8%) of the respondents were male while 58 (58.2%) of the respondents were female. 98 (100%) of the respondents were Christian while nil were neither Islam or Traditional Worshipers. 24 (24.5%) of the respondents were single, 53 (54.1%) of the respondent were married 12(12.2%) of the respondent were Widowed and 9 (9.2 %) of the respondents were divorced. 12(13.04%) of the respondent were RN/RM 48 (49%) of the respondent were RN/ PSY 34 (34.7%) of the respondent were B.Sc, 14 (14.34%) of the respondent were M.Sc, 2 (2.0%) of the respondent.

Research Question 1

What is the level of knowledge of nurses on information technology on nursing care delivery in General Hospital, Iquita, Oron Local Government Area. Akwa Ibom State?

No 1 -5 in the questionnaire will answer this question

Table 2: Level of Knowledge of Nurses on Information Technology on Nursing Care Delivery in General Hospital, Iquita, Oron Local Government Area. Akwa Ibom State

n = 98



S/N	ITEMS	SA	A	D	SD
	Information Technology facilities enhances the quality of care.	38 (38.7%)	25 (25.52%)	18 (18.4%)	17 (17.4%)
	Information Technology helps in report writing, record keeping and documentation of nursing task.	21 (21.4%)	28 (28.6%)	22 (22.4%)	27 (27.6%)
	Acquired Skills to make use of all technological equipment.	27 (27.6%)	29 (29.6%)	24 (24.5%)	18 (18.4%)
	Proper orientation is given on how to use information technology equipment.	15 (15.3%)	28 (28.6%)	26 (26.5%)	29 (29.6%)
	Information Technology equipment enable greater accessibility of nursing care.	25 (25.5%)	27 (27.6%)	22 (22.4%)	24 (24.5%)

Table 2 shows that 38 (38.7%) strongly agreed that information technology equipment enhances the quality of care, 25 (25.5%) agreed, 18 (18.4%) disagreed and 17 (17.4%) strongly disagreed to this fact.

21 (21.4%) strongly agreed that information technology equipment helps in report writing, record keeping and documentation of nursing task, 28 (28.6%) agreed, 22 (22.4%) disagreed and 27 (27.6%) strongly disagreed to this fact.

27 (27.6%) strongly agreed that they've acquired skills to make use of all technological equipment, 29 (29.6%) agreed, 24 (24.5%) disagreed and 18 (18.4%) strongly disagreed to this fact

15 (15.3%) strongly agreed that proper orientation is given on the how to use information equipment, 28 (28.6%) agreed, 26 (26.5%) disagreed and 29 (29.6%) strongly disagreed to this fact



25 (25.5%) strongly agreed that information technology equipment enables greater accessibility of nursing care 27 (27.6%) agreed, 22 (22.4%) disagreed and 24 (24.55%) strongly disagreed to this fact.

Research Question 2

What is the attitude of nurses towards information technology for nursing care delivery at General Hospital, Iquita, Oron Local Government Area. Akwa Ibom State.

No 6 -10 in the questionnaire will answer this question

Table 3: Attitude of nurses towards information technology for nursing care delivery at General Hospital, Iquita, Oron Local Government Area , Akwa Ibom State.

n = 98

S/N	ITEMS	SA	A	D	SD
	Using Information Technology equipment is often frustrating.	19 (19.4%)	18 (18.4%)	42 (42.9%)	19 (19.4%)
	Utilization of Information Technology restricts autonomy of nurses towards in making decisions related to patient care.	16 (16.3%)	19 (19.4%)	39 (39.8%)	24 (24.5%)
	Nursing care to the patients on papers to computers as it requires a lot of mental effort	39 (39.8%)	20 (20.4%)	21 (21.4%)	18 (18.4%)
	Information Technology equipment for nursing care delivery increases nurse’s workload.	15 (15.3%)	28 (28.6%)	26 (26.5%)	29 (29.6%)
	Using Information Technology equipment increases the errors of health team.	16 (16.3%)	13 (13.3%)	42 (42.9%)	27 (27.6%)

Table 3 shows that 19 (19.4%) strongly agreed that using information technology equipment is often frustrating., 18 (18.4%) agreed, 42 (42.9%) disagreed and 19 (19.4%) strongly disagreed to this fact

16 (16.3%) strongly agreed that utilization of information technology restricts autonomy of nurses towards making decisions related to patient care 19 (19.4%) agreed, 39 (39.8%) disagreed and 24 (24.5%) strongly disagreed to this fact.



39 (39.8%) strongly agreed that nursing care to the patients on paper to computers as it requires a lot of mental effort 20(20.4%) agreed, 21 (21.4%) disagreed and 18 (18.4%) strongly disagreed to this fact

15 (15.3%) strongly agreed that information technology equipment for nursing care delivery increases nurse’s workload, 28 (28.6%) agreed, 26 (26.5%) disagreed and 29 (29.6%) strongly disagreed to this fact

16 (16.3%) using information technology equipment increases the errors of health team 13 (13.3%) agreed, 42 (42.9%) disagreed and 27 (27.6%) strongly disagreed to this fact.

Research Question 3

To what extent is information technology utilized among nurses in nursing care delivery at General Hospital, Iquita, Oron Local Government Area, Akwa Ibom State?

No 11 - 15 in the questionnaire will answer this question

Table 4: Utilization of Information Technology among nurses in nursing care delivery at General Hospital, Iquita, Oron Local Government Area.

n = 98					
S/N	ITEMS	SA	A	D	SD
	Patients’ appointment are booked using information technology equipment.	16 (16.3%)	21 (21.4%)	42 (42.9%)	19 (19.4%)
	Varieties of information technology equipment are used in storing data in my ward	19 (19.4%)	16 (16.3%)	39 (39.8%)	24 (24.5%)
	Information Technology equipment are used in nursing care delivery in my ward.	16 (16.3%)	21 (21.4%)	41 (41.8%)	22 (22.4%)
	Maintaining client privacy is possible with electronic patient record.	23 (23.5%)	26 (26.5%)	24 (24.5%)	25 (25.5%)
	Information Technology are used when need in my ward.	15 (15.3%)	28 (28.6%)	24 (24.5%)	31 (31.6%)

Table 4 shows that 16 (16.3%) strongly agreed that patient appointments are booked using information technology equipment, 21 (21.4%) agreed, 42 (42.9%) disagreed and 19 (19.4%) strongly disagreed to this fact



19 (19.4%) strongly agreed that varieties of information technological equipment are used in storing patient data in their ward 16 (16.3%) agreed, 39 (39.8%) disagreed and 24 (24.5%) strongly disagreed to this fact.

16 (16.3%) strongly agreed that information technological equipment are being used for nursing care delivery in their ward, 21 (21.4%) agreed, 41(41.8%) disagreed and 22 (22.4%) strongly disagreed to this fact

23 (23.5%) strongly agreed that maintaining client privacy is possible with electronic patient record, 26 (26.5%) agreed, 24 (24.5%) disagreed and 25 (25.5%) strongly disagreed to this fact

15 (15.3%) strongly agreed that information technology is used when needed in their ward, 28 (28.6%) agreed, 24 (24.5%) disagreed and 31 (31.6%) strongly disagreed to this fact.

Research Question 4

What are the factors militating against the use of information technology for nursing care delivery in General Hospital, Iquta, Oron Local Government Area. Akwa Ibom State?

No 16 - 20 in the questionnaire will answer this question

Table 5: Factors Militating against the use of information technology for nursing care delivery in General Hospital, Iquta, Oron Local Government Area

n = 98

S/N	ITEMS	SA	A	D	SD
	There are practical Orientation training on information technology during nursing education.	38 (38.8%)	23 (21.4%)	19 (42.9%)	18 (19.4%)
	There is limited access to information technology equipment.	35 (35.7%)	27 (27.6%)	19 (19.4%)	17 (17.4%)
	There is regular power supply so as to use information technology equipment	15 (15.3%)	28 (28.6%)	25 (25.5%)	30 (30.6%)
	Information Technology procedures are incompatible with nursing procedures	28 (28.6%)	19 (19.4%)	34 (34.7%)	17 (17.4%)



Information Technology application conflict with my nursing skill	33 (33.7%)	18 (18.4%)	23 (23.5%)	24 (24.5%)
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Table 5 shows that 38 (38.8%) strongly agreed that there are practical training on information technology during nursing education 23 (23.5%) agreed, 19 (19.4%) disagreed and 18 (18.4%) strongly disagreed to this fact

35 (35.7%) strongly agreed that there are limited access to information technology equipment 27 (27.6%) agreed, 19 (19.4%) disagreed and 17 (17.4%) strongly disagreed to this fact.

15 (15.3%) strongly agreed that there is regular power supply to use the equipment, 28 (28.6%) agreed, 25 (25.5%) disagreed and 30 (30.6%) strongly disagreed to this fact.

28 (28.6%) strongly agreed that information technological procedures are incompatible with nursing procedures, 19 (19.4%) agreed, 34(34.7%) disagreed and 17 (17.4%) strongly disagreed to this fact

33 (33.7%) strongly agreed that information technology application conflict with their nursing skills, 18 (18.4%) agreed, 23 (23.5%) disagreed and 24 (24.5%) strongly disagreed to this fact

Testing of Hypotheses

Hypothesis 1: There is no significant difference in the relationship between level of knowledge of nurses on information technology and nursing care delivery in General Hospital, Iquita, Oron Local Government Area.

Table 7: Pearson Product Moment Correlation Analysis of knowledge and attitude of nurses to information technology on nursing care delivery in general hospital, Iquita, Oron Local Government Area. Akwa Ibom State

X – Strongly Agreed and Agreed

Y – Disagreed and Strongly Disagreed

X	Y	X ²	Y ²	XY
63	35	3969	1225	2205
49	49	2401	2401	2401
56	42	3136	1764	2352
43	55	1849	3025	2365
52	46	2704	2116	2392
263	227	14059	10531	11713

n = 5, df = 3, calculated value= 1, critical value = 0.805

Decision Rule: Reject the null hypothesis (Ho1) if calculated value is greater than critical value. Since the calculated value is 1 and is greater than the critical value 0.805 at the level of significance of 0.05 and at the degree of freedom 3, the null hypothesis is rejected indicating that there is a significant relationship between level of knowledge of



nurses on information technology and nursing care delivery in General Hospital, Iquita, Oron Local Government Area.

Hypothesis 2: There is no significant difference in the relationship between the attitude of nurses on information technology and nursing care delivery at General Hospital, Iquita, Oron Local Government Area. Akwa Ibom State.

Table 8: Pearson Product Moment Correlation Analysis of knowledge and attitude of nurses to information technology on nursing care delivery in general hospital, Iquita, Oron Local Government Area. Akwa Ibom State

X – Strongly Agreed and Agreed

Y – Disagreed and Strongly Disagreed

X	Y	X ²	Y ²	XY
37	61	1369	3721	2257
35	63	1225	3969	2205
59	39	3481	1521	2301
43	55	1849	3025	2365
29	69	841	4554	2001
203	287	8765	16790	11129

n = 5, df = 3, calculated value= 1, critical value = 0.805

Decision Rule: Reject the null hypothesis (Ho2) if calculated value is greater than critical value. Since the calculated value is 1 and is greater than the critical value 0.805 at the level of significance of 0.05 and at the degree of freedom 3, the null hypothesis is rejected indicating that there is a significant relationship between the attitude of nurses on information technology and nursing care delivery at General Hospital, Iquita, Oron Local Government Area. Akwa Ibom State.

Hypothesis 3: There is no significant difference in the relationship between utilization of information technology among nurses and nursing care delivery at General Hospital, Iquita, Oron Local Government, Akwa Ibom State.

Table 9: Pearson Product Moment Correlation Analysis of knowledge and attitude of nurses to information technology on nursing care delivery in general hospital, Iquita, Oron Local Government Area. Akwa Ibom State

X – Strongly Agreed and Agreed

Y – Disagreed and Strongly Disagreed

X	Y	X ²	Y ²	XY
37	61	1369	3721	2257
35	63	1225	3969	2205
27	63	729	3969	1701
49	49	2401	2401	2401
43	55	1849	3025	2365
191	175	7573	17085	10929

n = 5, df = 3, calculated value= 0.92, critical value = 0.782



Decision Rule: Reject the null hypothesis (H_03) if calculated value is greater than critical value. Since the calculated value is 0.92 and is greater than the critical value 0.782 at the level of significance of 0.05 and at the degree of freedom 3, the null hypothesis is rejected indicating that there is a significant relationship between utilization of information technology among nurses and nursing care delivery at General Hospital, Iquita, Oron Local Government, Akwa Ibom State.

Hypothesis 4: There is no significant difference in the relationship between the factors militating against the use of information technology for nursing care delivery in General Hospital, Iquita, Oron Local Government Area. Akwa Ibom State

Table 10: Pearson Product Moment Correlation Analysis of knowledge and attitude of nurses to information technology on nursing care delivery in general hospital, Iquita, Oron Local Government Area. Akwa Ibom State

X – Strongly Agreed and Agreed

Y – Disagreed and Strongly Disagreed

X	Y	X ²	Y ²	XY
61	34	3721	1156	2074
62	33	3844	1089	2046
43	55	1849	3025	2365
47	51	2209	2601	2397
51	47	2601	2209	2397
264	220	14224	10080	11279

$n = 5$, $df = 3$, calculated value= 0.99, critical value = 0.805

Decision Rule: Reject the null hypothesis (H_04) if calculated value is greater than critical value. Since the calculated value is 0.99 and is greater than the critical value 0.805 at the level of significance of 0.05 and at the degree of freedom 3, the null hypothesis is rejected indicating that there is a significant relationship between the factors militating against the use of information technology for nursing care delivery in General Hospital, Iquita, Oron Local Government Area. Akwa Ibom State

Research Question 1

Findings from table 2 shows that out of 98 respondents (100%) 64 (65.3%) agreed that information technology equipment enhances the quality of care, 49 (50%) agreed that information technology equipment helps in report writing, record keeping and documentation of nursing task, 56 (57.14%) strongly agreed that they've acquired skills to make use of all technological equipment, 33 (33.67%) agreed that proper orientation is given on the how to use information equipment, 52 (53.06%) strongly agreed that information technology equipment enables greater accessibility of nursing care

This is in support with the findings from Ogungbesan et al (2022) which showed a positive significant relationship between IT knowledge and utilization of IT for delivery of nursing care among nurses in OOUTH and implied that nurses should be supply with



IT gadgets likewise equip with more knowledge on the utilization of IT for effective delivery of nursing care to patients.

Research Question 2

Findings from table 3 shows that out of 98 respondents (100%) 37 (37.76%) agreed that using information technology equipment is often frustrating, 35 (35.71%) agreed that utilization of information technology restricts autonomy of nurses towards making decisions related to patient care, 59 (60.20%) agreed that nursing care to the patients on paper to computers as it requires a lot of mental effort, 43 (43.88%) agreed that information technology equipment for nursing care delivery increases nurses workload, 26 (26.53%) agreed that using information technology equipment increases the errors of health team. This is in consonance with the study conducted by Habib Alquraini et al (2018) that respondents have positive attitude towards information technology and no matter the rank or gender have an averagely positive attitude of Information Technology use in nursing care delivery services

Research Question 3

Findings from table 4 shows that out of 98 respondents (100%) 39(39.80%) agreed that patient appointments are booked using information technology equipment 35 (35.71%) agreed that varieties of information technological equipment are used in storing patient data in their ward, 37 (37.76%) agreed that agreed that information technological equipment are being used for nursing care delivery in their ward, 49 (50%) that maintaining client privacy is possible with electronic patient record, and 43 (43.88%) agreed that information technology are used when needed in their ward.

This is in support with the study conducted by Ogunbesan et al (2022) and Kamoru. A Adesina¹ (2021) nurses should be supply with IT gadgets likewise equip with more knowledge on the utilization of IT for effective delivery of nursing care to patients.

Research Question 4

Findings from table 4 shows that out of 98 respondents (100%) 61 (62.24%) agreed that there are practical training on information technology during nursing education, 62 (63.27%) agreed that there are limited access to information technology equipment 43 (43.88%) agreed that there are regular power supply to use the equipment, 46 (46.94)% that information technological procedures are incompatible with nursing procedures, and 56 (5714%) agreed that that information technology application conflict with their nursing skills,. This is in support with the study conducted by Kamoru and Adesina (2021) which states that several barriers however, ranging from limited knowledge on computer skills, fear of change, lack of user training in ICT usage, managerial problems (which include poor administrative policy on ICT) to the application related challenges (Which include complexity of the equipment) were identified ad factors that hinders the effective use of Information Technology in Nursing Care Delivery.

Hypothesis 1



The null hypothesis indicating that there was no significant relationship between level of knowledge of nurses on information technology and nursing care delivery in General Hospital, Iquita, Oron Local Government Area was rejected and an alternate hypothesis was accepted which states that there is a significant relationship between level of knowledge of nurses on information technology and nursing care delivery in General Hospital, Iquita, Oron Local Government Area since the calculated value was greater than the critical value.

This is in support with the findings from Ogungbesan et al (2022) which showed a positive significant relationship between IT knowledge and utilization of IT for delivery of nursing care among nurses in OOUTH and implied that nurses should be supply with IT gadgets likewise equip with more knowledge on the utilization of IT for effective delivery of nursing care to patients.

Hypothesis 2

The null hypothesis indicating that there is no significant difference in the relationship between the attitude of nurses on information technology and nursing care delivery at General Hospital, Iquita, Oron Local Government Area, Akwa Ibom State. was rejected and an alternate hypothesis was accepted which states that there is a significant difference in the relationship between the attitude of nurses on information technology and nursing care delivery at General Hospital, Iquita, Oron Local Government Area. Akwa Ibom State. since the calculated value was greater than the critical value.

This is in consonance with the study conducted by Habib Alquraini et al (2018) that respondents have positive attitude towards information technology and no matter the rank or gender have an averagely positive attitude of Information Technology use in nursing care delivery services

Hypothesis 3

The null hypothesis indicating that there is no significant difference in the relationship between utilization of information technology among nurses and nursing care delivery at General Hospital, Iquita, Oron Local Government, Akwa Ibom State was rejected and an alternate hypothesis was accepted which states that there is a significant difference in the relationship between utilization of information technology among nurses and nursing care delivery at General Hospital, Iquita, Oron Local Government, Akwa Ibom State since the calculated value was greater than the critical value.

This is in support with the study conducted by Ogungbesan et al (2022) and Kamoru. A Adesina1 (2021) nurses should be supply with IT gadgets likewise equip with more knowledge on the utilization of IT for effective delivery of nursing care to patients.

Hypothesis 4

The null hypothesis indicating that there is no significant difference in the relationship between the factors militating against the use of information technology for



nursing care delivery in General Hospital, Iquita, Oron Local Government Area. Akwa Ibom State was rejected and an alternate hypothesis was accepted which states that there is a significant difference in the relationship between the factors militating against the use of information technology for nursing care delivery in General Hospital, Iquita, Oron Local Government Area. Akwa Ibom State since the calculated value was greater than the critical value.

This is in support with the study conducted by Kamoru and Adesina (2021) which states that several barriers however, ranging from limited knowledge on computer skills, fear of change, lack of user training in ICT usage, managerial problems (which include poor administrative policy on ICT) to the application related challenges (Which include complexity of the equipment) were identified as factors that hinders the effective use of Information Technology in Nursing Care Delivery.

NURSING IMPLICATION

Based on the findings of the study, it has been observed that if knowledge and attitude on information technology equipment are enhanced among nurses, it may have a positive impact on their health, thereby increasing their ability to provide quality care for patients, their level of job satisfaction and also their level of work performance.

SUMMARY

The research was carried out to investigate knowledge and attitude of nurses towards information technology on nursing care delivery in General Hospital, Iquita, Oron Local Government Area, Akwa Ibom state. Four research question and four research hypothesis were raised to guide the study. Review of literature was done according to the variables of the study. The target population was all the nurses in General Hospital, Iquita, Oron Local Government Area. A sample size of 98 nurses was used which was determined by Yaro Yamane's formula and a simple random sampling technique was used to select the respondents for the study. A 20 item researcher's constructed questionnaire was used to obtain data for the study. The data collected were analyzed using descriptive statistics of percentages, mean scores, charts and PPMC was used to test the null hypothesis which was rejected because the calculated value was greater than the critical value.

CONCLUSION

The Study found a significant relationship between nurses' knowledge and attitude of nurses towards information technology on nursing care delivery in General Hospital, Iquita Oron Local Government Area. Akwa Ibom State.

RECOMMENDATIONS

Based on the findings from this study, the following are recommended

- Nurses should be properly taught on how to interpret output information on the IT devices to avoid misinterpretation of information which may lead to medical errors and mistakes.
- Nurses should be provided with access to information technology to enhance communication between nurses and patient



- Government should encourage the utilization of IT by providing uninterrupted electricity supply for the hospitals
- Nurses should be practically trained on how to use IT devices before utilizing it to provided health care for patient
- The hospital administration should regularly organize seminars and workshop on the proper use of equipment to enhance proper usage on patients' care.

SUGGESTION FOR FURTHER STUDIES

- The researcher suggested that similar research should be carried out in other General Hospital, and also in other states.
- Quality care of patient should be incorporated in every care rendered to patient.
- Technological Equipment should also be given to assess good nursing care delivery.



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