Chapter One

Introduction

1.1 Background to the Study

Service delivery is a framework that supplies services from a provider to a client. It also includes the constant interaction between the two parties during the duration of the time in which the provider supplies the service and the customer purchases it. The World Health Organization defined service delivery as the management and delivery of health services so that clients receive a continuum of preventive and curative services according to their needs over time and across different levels of the health system[1]. Service delivery is vital because it helps provide people with the social amenities they want or need by introducing them to an organization with the resources to provide those services.

Companies can direct service delivery to meet the specific needs of their customers through function or price. Engaging in patient-focused service delivery may also help distinguish a hospital from its competitors by providing higher-quality service. Service delivery focuses on service quality, such as if patients are getting the amenities they're paying for and if they're happy with the service provided. Essentially, a service delivery company provides something to a client they can't create on their own. In the health sector, the services delivered to clients (i.e., Patients) are mostly referred to as Health care[1].

Health care is the maintenance or improvement of health via the prevention, diagnosis, treatment, amelioration, or cure of disease, illness, injury, and other physical and mental impairments in people. Health care is delivered by health professionals and allied health fields. Medicine, health information management professionals, dentistry, pharmacy, midwifery, nursing, optometry, audiology, psychology, occupational therapy, physical therapy, athletic training, and other health professions are all part of health care, it also includes work done in providing primary care, secondary care, and tertiary care, as well as in public health[2]. The attitude of health information management professionals while carrying out their professional obligations determines to an extent the quality of care received by the patient. Access to health care may vary across countries, communities, and individuals, influenced by social and economic conditions as well as health policies. Providing health care services means the timely use of personal health services to achieve the best possible health outcomes[2].

Metrics for measuring service delivery were adapted from the study of several works of literature. which includes: Availability of Health Information Management Professionals, Knowledge and Competence of Health Information Management Professionals, and input/infrastructure available at the clinic.[3,4] With reference to Health Information Management Professionals' Availability, the researcher considered Absenteeism as a serious issue that exacerbates problems in healthcare delivery by lowering service quality, lengthening patient wait times, and preventing people from seeking treatment[3]. A high absence rate could indicate a lack of accountability systems. They may, however, signify mental or physical health difficulties, particularly in areas where Health Information Management Professionals are in poor supply. Informal arrangements among employees, such as shift trading are frequently utilized as solutions or methods to deal with burnout and balance competing personal duties[3].

On the other hand, Health Information Management Professionals' Knowledge and Competence could be likened to the effort being applied to the management of common ailments based on acquired skills. Training and Re-training of Health Information Management Professionals increase their knowledge and better experience on ways to effectively manage certain ailments, leading to better service delivery. Approaches to evaluating care quality are evolving to recognize and accommodate the multifaceted character of clinical practice as well as variances among contexts.

Some of these infrastructures at the clinic, to mention a few are Facilities and installations such as electricity, water, sanitation, phone communication lines, power generator, building development, etc. Health clinics often lack basic infrastructure, particularly in rural areas. Access to electricity is important for the duties of Health information management professionals. Similarly, the availability of clean water and sanitation facilities are fundamental for quality services. Health Information Management Professionals' availability was examined through unannounced visits to assess absenteeism, reviewing the presence of randomly preselected staff against a duty schedule at a follow-up a few days after the initial enumeration visit. Absenteeism is a major concern that exacerbates challenges in healthcare delivery by affecting the quality of services, increasing patient waiting times, and discouraging care-seeking[3].

However, to generate appropriate interventions to address it, quantification of absenteeism should be accompanied by a characterization of the underlying reasons. The high levels of absenteeism may be a signal for weak accountability mechanisms. Still, they may also reflect mental or physical health issues, particularly in settings faced with numerical shortages of health workers. Informal arrangements among staff such as trading shifts are often used as solutions or mechanisms to cope with burn-out and accommodate competing personal responsibilities.

Ignoring these underlying considerations may lead to recommendations that further compound the problem and result in demotivation, reduced productivity, and heighten existing deficiencies.[3]

The heart of a health organization is the health information management (HIM) department, which pumps vital information to users including doctors, staff nurses, allied health professionals, health administrators, insurance firms, and government health departments with each heartbeat. The traditional responsibility of an HIM professional has been to keep data correct and organized so that it is accessible for management and patient care. Professionals in HIM perform a variety of duties to achieve this. Therefore, to manage the range of health information and human services for which they are accountable, HIM specialists need to integrate a variety of skills. These include strong knowledge of medical terminology and disease processes, application of clinical classification systems, excellent managerial skills, and computer and information technology (IT) expertise. However, the growth in information technology has had a huge influence on HIM Professionals' responsibilities.

Technology has automated many of the routine functions of data collection and thus the role of the HIM professional has become more divergent and strategic in nature, particularly with the increasing development of electronic health records. Records must now be made available to increasing numbers of healthcare providers and various other parties simultaneously. The changing role of HIM personnel in health care has increased the need for HIM professionals who understand the use and meaning of health record information as well as the language used to describe the reality of clinical treatments and financial operations[5].

Attitude is the manner, disposition, feeling, and position about a person or thing, tendency, or orientation, especially in the mind. An attitude is a positive, negative, or mixed evaluation of an

object expressed at some level of intensity. It is an expression of a favorable or unfavorable evaluation of a person, place, thing, or event. These are fundamental determinants of our perceptions of and actions toward all aspects of our social environment[6]. Attitudes involve a complex organization of evaluative beliefs, feelings, and tendencies toward certain actions. Attitude refers to feelings, beliefs, and behavior predispositions directed towards people, groups, ideas, or objects. It influences the behaviour of individuals and decides how to act or behave in a particular situation[6].

The assessment of human attitude and behavior towards subjects has been studied in psychology for a long time[6]. Attitude can be measured using the following metrics: affective, behavioral, and cognitive (ABC), adopted from the ABC model of attitude. As a central topic in the domain of social psychology, the concept of attitude is seen as a result of the interaction between three components: affective, behaviorial, and cognitive[7]. The adoption of the ABC model of attitude allows researchers to investigate how people feel, think, and interact with the attitude object, which in this case is digital data[8]. In the Library and Information Science domain (LIS), scholars consider affective and cognition as important factors in the study of human information behavior[9]. Literature argued that this body of work should be more holistic, concentrating not just on behaviors, but also on the interplay of behavior with cognition and affect[10].

The Hospitals are digitalized and often faced with network issues as well as electricity failure which in one way or the other diminishes the health information management professionals' interest in providing adequate service, with respect to affective attitude, this could also make them feel tensed or pressurized, this often happens when there are many patients waiting to be attended to, which is usually the case at both Hospitals. The behaviour portrayed by health information management professionals in the Hospital also goes a long way in affecting service

delivery. In National Orthopaedic Hospital, Igbobi, and Federal Neuro-psychiatric Hospital, yaba, Lagos, some health information management professionals portray a lackadaisical attitude and unwillingness to work, they get easily irritated and provoked, thereby not patient enough to listen to the complaints of sick people who visited the Hospital, and they are usually not careful when it comes to patient documentation, this, therefore, increases the error rate affecting quality service delivery. The appointment section in the Hospital is manned and controlled by health information management professionals, a situation whereby there is a network failure, they are unable to improvise other means of providing services, patients can be booked manually and later transferred to the system when the network gets better, but this is usually not the case of some health information management professionals, due to behavioural differences. Many health information management professionals are often worried and nervous when it comes to addressing a group of patients, which leads to poor services due to a communication gap.

The perception or belief of health information management professionals in information system use, may negatively or positively affect their attitude towards service delivery. At National Orthopaedic Hospital, some of the health information management professionals, especially the older ones do not believe in technology because they are so used to the manual method of providing services, which is usually the case at the Federal Neuro-psychiatric Hospital, yaba, these set of workers are likely to have problems when using the system to provide services.

An information system is a computer system that includes hardware and software technologies for capturing paper-based documents as scanned images. Metadata is then assigned to these captured images and taxonomies that are created for indexing them. Information system functions include capture, storage, classification, indexing, versioning, maintenance, use, security, and retention of documents[11]. An Information system also includes technologies for

receiving and storing digital documents as much as computer output laser disk (COLD) documents, including lab results and transcribed reports for electrocardiograms (EKGs) generated by other computers[11].

The Utilization of information systems and communication technologies can positively influence many aspects of healthcare provision. Among health information technology (HIT) applications, the use of computerized provider order entry (CPOE) linked to computerized clinical decision support systems (CDSSs) is the most promising approach. These applications improve patient care through data processing and the provision of patient-specific evidence, and also through health workers' increased adherence to clinical practice guidelines[12]. The Utilization of information systems in developing countries (e.g., Nigeria) has been slow, particularly in rural areas[13].

Several issues, such as technical infrastructure, computer knowledge, skills, experience, and attitudes of prospective users, need to be addressed, before introducing computers in rural healthcare settings[14]. There is evidence that health information management professionals' interest, knowledge, and skills of computers can influence their acceptance, or not, of HIT solutions in the workplace[14]. Positive attitudes are important and the willingness of health information management professionals to use any HIT system is influenced by their perceptions of its value, clinical benefits, and ease of use[14].

In developing countries like Nigeria, the successful adoption and utilization of health information systems are hindered by, among other things, insufficient technical infrastructure[13]. This is due to the non-existence or lack of reliable electricity, although solar power can offer an alternative[13]. Moreover, adverse attitudes and inadequate computer knowledge and skills among

healthcare workers can also negatively impact the adoption and utilization of information systems[14]. Not only do many rural health workers in developing countries have limited exposure to computers, but due to a lack of IT infrastructure and support, they are often also skeptical about the adoption of computers in their workplace[14]. Inadequate training, support, and limited computer access are some of the well-known reasons for pessimistic attitudes[14].

The components of the information system (IS) success model consist of six variables, which include: system quality, information quality, use, user satisfaction, individual impact, organizational impact, and service quality[15]. Information quality is the desirable characteristic of the system outputs; that is, management reports and Web pages. Example: relevance, understandability, accuracy, conciseness, completeness, currency, timeliness, consistency, and usability. System quality refers to the quality of service or support that system user receives from IS organizations and IT support in general or for a specific IS. This refers to the responsiveness, accuracy, reliability, technical competence, and empathy of the personnel[15]. User satisfaction has to do with users' level of satisfaction with reports, Web sites, and support services.

Service quality, System quality, usage, and information quality are measures of information systems utilization, supported by literature[16]. For example, system quality represents the quality of information processing itself, which is characterized by the employment of state-of-the-art technology, a system offering key functions and features, and software that is user-friendly, easy to learn, and easily maintainable. Information quality, a concept that is related to the quality of information system outputs, can be described in terms of outputs that are useful for business users, relevant for decision making, and easy to understand (representing IS quality as value) as well as outputs that meet users' information specifications (representing IS quality as conformance to specification)[16]. For the purpose of this study, Information system Utilization

will be measured using information quality and System quality adapted by a model[15]. Information quality and System quality would be adopted for this study due to the changing nature of IS, which requires the need to assess system quality when evaluating IS success, also Information quality (IQ) has become a critical aspect in organizations and, consequently in Information Systems research. There is no doubt that a good system in the organizations will produce good information and this information will influence the organization as a whole[15]. For the purpose of this study, completeness, ease of understanding, personalization, relevance, and security will serve as metrics for Information Quality. Likewise, ease of use, ease of learning, system flexibility, and system reliability will serve as metrics for System Quality adopted from the model[17]. Globally, technological advances have transformed the medical landscape. The days of meticulous charting and manually filing records are dwindling. With emerging technologies in telehealth and electronic record keeping, patients have more accessibility to their data than ever before[19]. Technology allows health information management professionals to improve efficiency and communicate more effectively[19]. While some health information management professionals have opposition to new technology, saying it takes personal interaction away from the bedside, a larger percentage of them believe that technology positively impacts patient care. For them, the new tools available in health systems help add time back into their day.

Emerging technologies in telehealth can help mitigate the burden on health information management professionals since it takes fewer personnel to provide adequate care[19]. Telehealth also provides health information management professionals the opportunity to reach geographical areas that are identified as having health professional shortages. This includes locations in more rural regions that lack reasonable numbers of healthcare professionals, telehealth helps address these shortages by effectively providing care to patients remotely. These

strides in telehealth technology can ultimately healthcare costs by decreasing ER visits and hospital admissions[19]. The advances in information technology and new devices have improved the quality of life for patients and healthcare professionals alike. Advancements in telehealth have also played a large part in improved accessibility. Telecommunication systems have made it easier for patients separated geographically to receive health care via remote patient monitoring, live video conferencing, and mobile health apps. In today's environment, it has become easier for those in remote geographic areas to have access to quality care[19]. A positive attitude towards the use of Information technology can decrease the chance of human error. health information management professionals who work long hours or have understaffed units are at a higher risk of making mistakes. With new medical technologies, documentation is done faster with little or minimal error. routine procedures are simplified, which creates a quicker process for providing service[19]. In Germany for example, the government, through the Federal Ministry of Health developed electronic Health Cards for citizens covered by insurance. The smart card contains users' personal information, history of medical records, and insurance details. The card is used by patients to access healthcare services that are covered by insurance, which significantly eases interaction between healthcare professionals and patients[13].

In Canada, the federal government created an independent organization called Canada Health Info way, which is fully funded by the government and managed by Deputy Ministers of Health. This organization is charged with the responsibility of creating and promoting the use of electronic health records (EHRs) and electronic health information systems (eHIS), also ensures the sharing of medical records and health knowledge among the federal, provincial and territorial areas across the country[20].The United Kingdom has a well-established technology infrastructure that supports the e-health system. health information management professionals have computers

with internet connectivity, which they use during interaction with patients. A high network connection also enables the sharing of medical data among healthcare professionals using electronic health records systems. Other advanced health services in the UK includes ePrescription service, eRadiology solutions, and appointment scheduling solutions[21].

The implementation of information system utilization can positively influence many aspects of health care provision. Among health information technology (HIT) applications, the use of computerized provider order entry (CPOE) linked to computerized clinical decision support systems (CDSSs) is the most promising approach. These applications improved patient care through data processing[12]. Positive attitudes are important, and the willingness of health information management professionals to use any HIT system is influenced by their perceptions of its value, clinical benefits, and ease of use[22]. In developing countries, the successful adoption of HIT is hindered by, among other things, insufficient technical infrastructure which is due to the non-existence or lack of reliable electricity, solar power can offer an alternative[13].

Moreover, adverse attitudes and inadequate computer knowledge and skills among health information management professionals can also negatively impact the adoption of computer systems[14]. In rural India, the implementation of a CDSS increased patient visits, but the increased documentation workload negatively impacted health information management professionals' attitude[14]. Not only do many rural health workers in developing countries have limited exposure to computer applications, but due to a lack of IT infrastructure and support, they are often also skeptical about the adoption of computers in their workplace[14]. Inadequate training and support and limited computer access are some of the well-known reasons for pessimistic attitudes[14].

Requirements for the success of computer-based interventions in healthcare include the familiarity of the users with the technology, and positive mental attitudes and motivation regarding computer use[14]. The majority of health information management professionals in these rural facilities had no or very limited training for and exposure to computer applications. Respondents from Ghana reported better knowledge and exposure to computers compared to Tanzania, reflecting the fact that in Ghana, health workers including health information management professionals had been exposed to various health projects such as the introduction of computers for health insurance purposes. Similar studies in sub-Saharan Africa have also reported low computer knowledge among health workers including health information management professionals [14].

Health information management professionals, computer knowledge, and attitude have an important bearing on the uptake and utilization of computer systems in the workplace. most health information management professionals in remote rural African primary health facilities (developing countries) had little computer knowledge, yet they had positive attitudes and expressed willingness to adopt the technology. Like most developing countries, Nigeria is yet to cover this gap between planning to adopt e-health technology applications and their sustainable implementation as policy objectives[13]. Nigeria had a population of 186, and the majority reside in remote rural and poor areas, where access to basic social amenities such as quality health care services, good roads, electricity supply, etc., is either poor or non-existent[13].

In Nigeria, the Federal government has developed and deployed e-health technology applications in hospitals to improve healthcare services. However, health information management professionals reported that they were not carried along in the planning process, and

implementation is largely at pilot stages, uncoordinated, and yet to be scaled up due to a lack of comprehensive e-health national policies and strategies[13]. Other barriers to acceptance of e-health by health information management professionals include apathy in embracing ICT tools and poor awareness of e-health advantages[13].

The ICT in use at the National Orthopaedic Hospital Igbobi, is known as CARE PLUS, although the management and use of health information systems have not reached their peak even though the expected standard is to an extent adhered to, due to the use of electronic health records with mechanisms in place for continuous evaluation of the health information system. Even with this improvement in the use of electronic health records, it cannot be said that National Orthopaedic Hospital Igbobi has already gotten to the peak of health information system utilization as there are still some gaps to be filled in the hospital information system, which is also the case as the Federal Neuro-psychiatric Hospital, yaba. For example, in the health information management department, not all workers are health information management professionals, and not all professionals can effectively use the computer, which could lead to a negative impact on service delivery.

Health information management professionals are the study population of which not all of them are computer inclined and a majority of them cannot type very fast, nepotism can also affect a health information management professional's attitude, bringing about an unhealthy work environment wherein employees feel undervalued. This can occur when someone in a managerial position hires a family member or close friend, without taking into consideration the eligibility of such a person, this negative effect decreases health workers' morale as they may feel unappreciated, and as a result, they may lose their motivation to achieve their goals and accomplish their day-to-day task, bringing about a non-effective use of the system. Positive

attitudes are important and the willingness of health information management professionals to use any Health Information Technology system is influenced by their perceptions of its value, clinical benefits, and ease of use, many of these workers are not ready to accept and implement the use of EMR thereby portraying a lackadaisical towards proper utilization and non-adherence to clinical practice.

The system that uses modern technologies can present information to users in an easy-to-understand format enabling them to use information systems effectively and improve their performance, high quality use of the system leads to standard information (information quality and service quality). In National Orthopaedic Hospital, Igbobi, the system is yet to grant health information managers access to patient diagnoses written by the Doctors. One of the functions of Health information managers is to assign code numbers to diagnoses and procedures to aid easy retrieval for reference and research purposes.

For positive service delivery, it is important to have proper infrastructure, equipment, and trained medical personnel. In National Orthopaedic Hospital, Igbobi, some buildings are still under construction while some are really old giving room to rodents which could cause damage to some documents. most of the chairs are bad and not convenient for staff usage, as this may lead to back pain, the systems used are not covered by a screen protector or guard which is likely to have an effect on staff sight. The ill-health of staff due to the aforementioned will definitely increase the absence rate leaving fewer hands attending to lots of patients, this further affects patients' waiting time. Due to the poor electricity supply and increase in the price of diesel, 24 hours light cannot be maintained as light is being rationed leading to staff inactivity during the light-off period, hence poor service delivery. In view of the stated background, this study investigated the influence of the attitude of health information management professionals, and

information system utilization on service delivery in National Orthopaedic Hospital, Igbobi, and Federal Neuro-psychiatric Hospital, Yaba, Lagos.

1.2 Statement of the Problem

Service delivery is an important factor in determining the success and growth of healthcare institutions. Health Information Management Professionals are responsible for registering new patients to be seen by the doctor on call, scheduling an appointment, ensuring returning patients are transferred to their rightly assigned consultants, and ensuring code numbers are rightly generated and assigned to a diagnostic condition. When Service delivery is enhanced, resources are managed and coordinated effectively, patients are satisfied with their treatment, and patients enjoy good health. However, preliminary investigation, close observation, and literature revealed that service delivery provided by health information management professionals is perceived to be ineffective, as a result, resources are not effectively and efficiently managed, chaos exists at the clinic, as patients have been wrongly scheduled for an appointment, and proper communication isn't properly passed across to them, especially in situations whereby their doctors aren't available, which may require a reschedule of appointment.

There is also low-quality care[23], overcrowding at the clinic, patients waiting a long time before being attended to, staff lateness or absent from duty, leaving a limited number of staff attending

to the crowd, network downtime, power supply instability, unavailable or inadequate drugs at the pharmacy, and poor therapeutic outcomes. However, if a solution is not proffered, certain drawbacks may occur in the health system, such as poor health index, substandard practices due to poor regulatory law, and poor allocation of funds which reduces efficiency, this may also affect the nation; consequences include, an unhealthy population, wastage of scarce resources, and low productivity. Some factors have been identified to be affecting service delivery, which includes the attitude of health information management professionals and the information systems used to provide services[23].

The attitude of health information management professionals is an important element of quality, as they influence both positively and negatively how patients perceive and experience health care. Lack of respectful care, empathy, and communication from health information management professionals may lead to dissatisfaction with the health system. Generally, a negative attitude could undermine the quality of care, leading to poor therapeutic outcomes. On the other hand, information system utilization could affect service delivery when there is a lack of adequate knowledge on the use of health information systems, duration is taking to repair the system when there is a breakdown, and lack of training and retraining[24].

On the other hand, the attitude of health information management professionals can enhance the effectiveness of service delivery by adopting a cheerful disposition and caring behaviour in the hospital, which influences their relationship with the patients. Patient relationship management is critical for the success of any hospital as satisfied patients mean more referrals and repeat revenue. But patient satisfaction depends more on the attitude of the health information management professionals in achieving efficiency for the hospital. Likewise, information system

utilization can enhance the effectiveness of service delivery by ensuring health facilities are equipped with the right number of staff properly trained in the use of technology, which has made patient monitoring easy.

Several studies have been conducted on the attitude of health information management professionals, information system utilization, and service delivery across the globe, however, few studies have been conducted in Nigeria[23,24]. Hence the need for this study.

1.3 Aim and Objectives of the Study

The aim of this study is to investigate the influence of attitude of health information management professionals and information system utilization on service delivery in Federal Health Institutions, Lagos State with particular reference to National Orthopaedic Hospital, Igbobi, and Federal Neuro-psychiatric Hospital, Yaba, Lagos, Nigeria. The objectives are to:

i. ascertain the level of service delivery of health information management professionals in Federal Health Institutions, Lagos State, Nigeria
ii. examine the attitude of health information management professionals in Federal Health Institutions, Lagos State, Nigeria
iii. investigate the information system in use by health information management professionals in Federal Health Institutions, Lagos State, Nigeria
iv. examine the influence of attitude of health information management professionals on service delivery in Federal Health Institutions, Lagos State, Nigeria

v. ascertain the influence of information system utilization by health information management professionals on service delivery in Federal Health Institutions, Lagos State, Nigeria

vi. examine the combined influence on attitude of health information management professionals and information system utilization on service delivery in Federal Health Institutions, Lagos State, Nigeria

1.4 Research Questions

i. What is the level of service delivery provided by health information management professionals in selected Federal Health Institutions, Lagos State, Nigeria?

ii. What is the attitude of health information management professionals in selected Federal Health Institutions, Lagos State, Nigeria?

iii. In what way has information system utilization helped to improve information quality in selected Federal Health Institutions, Lagos State, Nigeria?

1.5 Hypotheses

$H_0$1: There is no significant influence of the attitude of health information management professionals on service delivery in selected Federal Health Institutions, Lagos State, Nigeria

$H_0$2: There is no significant influence of information system utilization on service delivery in selected Federal Health Institutions, Lagos State, Nigeria

$H_0$3: There is no significant combined influence of the attitude of health information management professionals and information system utilization on service delivery in selected Federal Health Institutions, Lagos State, Nigeria

1.6 Significance of the Study

Going by the objectives of the study, the result of the findings will be of great benefit to healthcare practitioners, management of healthcare facilities, students, administrators, and policymakers. It will be of great benefit to health information management professionals, by making them change their negative perceptions on their attitude towards information system utilization to provide services.

The research findings will be of importance to the Management of healthcare facilities by helping them realize the benefit of ensuring proper training of health information management professionals on system use since adequate knowledge of the use of computers brings about a positive attitude towards its acceptance in health care delivery.

The research findings will be beneficial to the patient, because it's a system that works, providing the health information management professionals with the right attitude, knowledge, skill, and experience to effectively provide quality service delivery

It would also serve as a material and guide for others who would want to carry out research in a similar area.

The findings of the study can assist healthcare administrators and policymakers in Nigeria to become better informed about e-health technology benefits, and how it can be utilized effectively to derive the maximum benefits. Moreover, by comparing the findings of the study with the

existing literature, it can serve as a guide for the stakeholders to understand their areas of priority and weaknesses when planning for e-health technology adoption and implementation in hospitals and health institutions.

1.7 Scope of the Study

The focus of this study is on the influence of health information management professionals' attitudes and utilization of information systems on service delivery, in federal health institutions, Lagos. The dependent variable is service delivery and it is measured by the availability of health information management professionals, knowledge/competence of health information management professionals, and infrastructure/input. The independent variables are attitude and information system utilization. Attitude is measured by the affection, behaviour, and cognition of health information management professionals, while information system utilization is measured by information and system quality. The scope covers 2 hospitals in federal health institutions: National orthopaedic Hospital Igbobi, and Federal Neuro-psychiatric Hospital, Yaba, Lagos, Nigeria. The respondents in these hospitals are health information management professionals, which consists of fifty (50) and thirty (30) professionals respectively.

1.8 Limitations of the Study

The researcher encountered difficulty in Federal Neuro-psychiatric Hospital in getting the staff to fill the questionnaires because the department was under-going renovation at the time, so the staff were very busy and did not have the time to fill them, but was able to get their attention by going there during closing hour, when they will be less busy and more relaxed to fill the questionnaires.

1.9 Operational Definition of Terms

The following terminologies are defined in this section based on their usage in the context of this study:

Service Delivery: Refers to the care provided to patients by the health information management professionals in the hospital, which is measured by the availability of health information management professionals, knowledge of health information management professionals, and infrastructure/input.

Availability of Health Information Management Professionals: This refers to the presence of trained and licensed Health Information Management Professionals to provide services in the Hospital, which also serves as a measure of Service Delivery. The higher the absence rate of Health Information Management Professionals, the longer the patient waits to be attended to. Certain factors could lead to staff absenteeism, such as ill health.

Knowledge /Competence of Health Information Management Professionals: This refers to the skill and ability acquired by the Health Information Management Professionals formally or academically to pull through certain tasks in other to provide care in the Hospital, which also serves as a measure of Service Delivery.

Infrastructure/Input: This refers to the structure of the Hospital, as well as the supporting elements, such as the equipment, information technology/system, and machines in use. This is also a measure of Service Delivery.

Attitude of Health Information Management Professionals: Is the behaviour or character portrayed by Health Information Management Professionals towards providing health care services to the patient in the Hospital, measured in terms of the Affection (feeling), Behaviour (conative), and Cognition (perception) of Health Information Management Professionals.

Affection of Health Information Management Professionals: This relates to the feelings/emotions of a Health Information Management Professional when performing his/her duty, which could negatively or positively influence the service rendered. It has been proven to effectively measure a person's attitude.

Behaviour of Health Information Management Professionals: This refers to ways in which Health Information Management Professionals act or conduct themselves when dealing with patients, as well as how they respond to certain situations that arise when providing services in the hospital, which could negatively or positively affect the Service Delivery, also used to measure Health Information Management Professionals' attitude.

Cognition of Health Information Management Professionals: The perception/belief of a Health Information Management Professionals can affect their Attitude towards Service Delivery. Cognition is used to measure Health Information Management Professionals' Attitude.

Information System: Is a system designed to manage electronic information and records within the Hospital to aid workflow. It is a digital package used in the hospital which provides a communication link among Health Care Workers and their interactions with the system. The Information System used in National Orthopaedic Hospital is known as CARE PLUS.

Information System Utilization: This refers to a situation whereby the system is being accepted and used by health information management professionals to carry out certain tasks or functions in the Hospital to provide services to patients, measured in terms of information and system quality.

Information Quality: This has to do with how quality the information generated by the Health Information Management Professionals with the use of a system is. Information is considered to

be quality if the information generated is complete, accurate, reliable and relevant to other health teams such as the doctors, nurses, e.t.c. to provide patient care on a timely basis. it is used to measure Information System Utilization.

System Quality: A well-implemented quality management system in the hospital brings about effectiveness, safety, and patient-centeredness. A system is said to be of quality if it allows staff to carry out their function with ease, as well as providing a faster means of retrieving information needed promptly. System quality is used to measure information system utilization.

Health Information Management Professionals: These are professionals employed and trained by the Hospital to protect and manage patient data of all kinds with the use of a computer system

Endnotes

1. Geneva, *World Health Organization, Delivering quality health services, a global imperative for universal health coverage, Organization for Economic Co-operation and Development,* 2018

2. L.T. Amboree, J. Montealegre, K. Fujimoto, O. Mgbere, C. Darkoh, & P. Wermuth, *Exploring Preventive Healthcare in a High-Risk Vulnerable Population.* **International Journal of Environmental Research and Public Health,** 19, 8, April, 2022

3. A. Agweyu, T. Masenge, & D. Munube, *extending the measurement of quality beyond service delivery indicators***, BMG Global health***,* 5, 2, Dec, 2020

4. B. Gauthier, & R. Ritva, *Methodological Approaches to the Study of Institutions and Service Delivery. A Review of PETS, QSDS and CRCS in Africa,* **African Economic Research***,* 5, 2011

5. Al Kiyumi, R.H. Matar, & Gerard, *Health information management professionals [Present circumstances and future expectations].* In Takahashi, O (Ed.) **Proceedings of the 18th IFHIMA International Congress. International Federation of Health Information Management Association, Japan,** 2016, 518-529

6. I. Ajzen, & M. Fishbein, **The handbook of attitudes Mahwah***,* N.J. Lawrence Erlbaum Associates, 2015. 173-221

7. T.M. Ostrom, *The relationship between the affective, behavioral, and cognitive components of attitude*. **Journal of experimental social psychology,** 5, 1, 1969, 12-30

8. D.T. Mizokawa, & N. Hansen-Krening, *The abc's of attitudes toward reading, Inquiring about the reader's response*. **Journal of Adolescent & Adult Literacy,** 44, 2000, 72-79

9. C. Gobinda, M. Julie, G. Val, & W. Peter, *Transforming Digital Worlds*: 13th **International Conference**, 2018

10. E.P. Backes, & R.J. Bonnie, *The Promise of Adolescence, Realizing Opportunity for All Youth.* Washington (DC), **National Academies Press (US),**16 May, 2019

11. Geogia Archives, *Electronic Document Management System Technologies. Records and information management services*. Accessed, April, 2017. Available at: http://www.sos.ga.gov/archives/pdf/records

12. Y.K. Alotaibi, & F. Federico, *The impact of health information technology on patient safety.* **Saudi Medical Journal.** 38,12, Dec, 2017. 1173-1180
13. M.A. Zayyad, & M. Toycan, *Factors affecting sustainable adoption of e-health technology in developing countries, an exploratory survey of Nigerian hospitals from the perspective of healthcare professionals.* **Peer Reviewed Journal,** 1 Mar, 2018

14. F. Sukums, N. Mensah, R. Mpembeni, J. Kaltschmidt, W.E. Haefeli, & A. Blank, *Health workers' knowledge of and attitudes towards computer applications in rural African health facilities.* **Global Health Action**. 27 Oct, 2014

15. P.L. Stacie, W. DeLone2 & E. McLean, *Measuring information systems success models, dimensions, measures, and interrelationships.* **European Journal of Information Systems.** 17, 2008, 236–263

16. N. Gorla, T.M. Somers, & B. Wong, *Organizational impact of system quality, information quality, and service quality,* **Journal of Strategic Information Systems***,* 19,2010, 207–228

17. W.H. Delone & E.R. McLean, The DeLone and McLean. *Model of Information Systems Success. Service and quality measures.* **Journal of Management Information Systems,** 19,4, 2003, 9-30

18. L.F. Pitt, R.T.Watson, & C.B. Kavan, *Service quality, A measure of information systems effectiveness.* **MIS Quarterly**, 19, 2, 1995, 173–188

19. M.X. Jin, S.Y. Kim, L.J. Miller, G. Behari, & R Correa, *Telemedicine, Current Impact on the Future.* Cureus. 20, 12, August, 2020

20. P.M. Gregory, A. Sara, & M. Sherry, **Canada Health system***,* 22, 3, 2020

21. K. Eason, & P. Waterson, *The implications of e-health system delivery strategies for integrated health care, lessons from England.* **International Journal of Medical Information strategiestics,** 82, 5, 2013, 96-106

22. C. Rommel, Sanqui, Y. Mary, & A. Declaro-Ruedas, *Knowledge and Attitudes towards Healthcare Information Technology.* **Asian Journal of Education and Social Studies.** 7,1, 2020, 26-32

23. O.C. Okonkwo, *ICT knowledge and utilization as determinants of job performance of Health Information Managers in health institutions in South-East Nigeria,* **International Journal of Library and Information Science**. 13, 2, 2021, 21-33

24. I.T. Adeleke, A.H. Lawal, R.A. Adio & A. Adebisi, *Information Technology Skills and Training Needs of Health Information Management Professionals in Nigeria.* **Health Information Management journal.**·March 2014

Chapter Two

Literature Review

This chapter review relevant literature and theories on the study, it further dwells on the concept and empirical work that discussed the link between Health Information Management Professionals' Attitude, Information System Utilization, and service delivery. This chapter is organized as follows;

2.1 Conceptual Review

2.1.1 Overview of Service Delivery

2.1.2 Attitude of Health Information Management Professionals

2.1.3 Concept of Information System Utilization

2.2 Theoretical Review and Framework

2.1 Conceptual Review

Considering the variable to be discussed in this study, the review will be discussed in line with the existing literature in order to widen the understanding of these variables. To this end, each variable will be reviewed with its definition, type, and significance. The variables to be discussed are Service Delivery, Attitude of health information management professionals, and Information System Utilization.

2.1.1 Overview of Service Delivery

Service delivery is a framework that supplies services from a provider to a client. It also includes the constant interaction between the two parties during the duration of the time in which the provider supplies the service and the customer purchases it. The World Health Organization defines service delivery as "the management and delivery of health services so that clients receive a continuum of preventive and curative services according to their needs over time and across different levels of the health system". Service delivery is vital because it helps provide

people with the social amenities they need by introducing them to an organization with the resources to provide services[1].

Service delivery is a framework that has to do with providing an implementation perspective that clearly considers customer co-production[2]. The framework categorizes three degrees of service delivery from this standpoint, the first level of the framework is facilitation, which is focused on creating a favorable atmosphere and includes all organizational resources, workers, know-how, and other facilities that should be visible and available prior to providing the service[2]. and are the foundation of any value creation[2]. These include organizational resources such as human resource management and the availability of data needed to perform service, as well as consumer resources such as tangible items, rights, and nominal commodities.

The second stage of service delivery is the transformation level, this level of service delivery involves the exchange of organizational resources with customer resources that are included in service delivery for the aim of transformation[2]. This level includes knowledge implementation which shapes the delivery of service[2]. Customers and service staff act as resource integrators here. while the service organization often serves as the main integrator coordinating service delivery, Customers successfully participate in the transformation process by transferring their resources to the organization and sharing in the construction of a core offering[3]. Customers participate as co-producers in service delivery. As a result, the service provider must coordinate and integrate customers into the transformation process[2]. However, Integration and co-production processes may differ depending on whether service staff and/or customers are involved[4].

Service failures may occur as a result of service employees' inability to integrate themselves and/or customer resources into the transformation process, they could also occur if the quality of

customer co-production is insufficient[5]. The last level of the framework is usage, delivery of service begins when customer resources exit the company sphere and customers or their belongings are no longer integrated into the transformation process[2]. At this stage, the service is delivered, and the customer makes an independent decision about whether or not to use it[2]. Healthcare organizations have been attempting to improve the efficiency and efficacy of the services they provide[6]. Healthcare institutions measure the efficacy of healthcare services, such as the length of stay of the patient for treatment, and efficient care delivery which focuses on optimizing the usage of resources to reduce the overall incurred cost[7].

The effectiveness of health care service delivered is measured as the degree of satisfaction perceived by the patients. Only through providing focused, individualized, and patient-centric quality care can effective treatment be delivered, which leads to patient satisfaction[8]. High resistance to change, lack of knowledge on other functional domains related to health care, rigidity in the division of labor for physicians and employees throughout the health care system, difficulty in monitoring the care delivery process, absence of standard level of care, and complexity involved in care delivery are the main reasons attributed to this efficient and effective attainment challenge in the context of health care services[8].

Standardization, training, knowledge transfer, system thinking, design thinking, process management, usage of electronic medical records, variance minimization, etc. are some of the activities performed by healthcare organizations to attain both efficiency and effectiveness[9]. Health care service providers (HCSPs) which include health information management professionals are vital resources of a health care institution as they play a significant role in delivering efficient and effective service to patients and families[10].

In addition to the target market and the service idea, the service delivery system is one of the three components of the service strategy trinity[11]. It demonstrates how the organization provides value to its target customers[12]. the three components of a service delivery system, therefore, consist of structural, infrastructural, and integration[11]. The structural choices pertain to the system's physical components, in terms of the facilities and their layout, technologies, and equipment used, capacity management, as well as the service process interfaces, for example, front-of-house face-to-face or technology-mediated interactions, or back-of-house operations) that define the customer journey's touchpoints[13]. People, policies, procedures, processes, and performance systems are among the infrastructural choices, which pertain to the function of human resources in the service delivery system.

The integration choices relate to the external integration of the service delivery system of the company with the suppliers and the customers, the internal integration between structural and infrastructural choices and of the functional areas within the company, and the adaptive mechanisms such as intellectual capital, system knowledge, and[11]. The physical location in which the service takes place (structural choices), the service processes and internal procedures (infrastructural choices), and the system knowledge and learning (integration choices) that govern employees' behavior are all influenced by the design of a service delivery system[14]. In this regard, the service delivery system must be considered during the experience design process, to deliver value to the customers[15]. Furthermore, the right design of a service delivery system adds to the environmental and social sustainability of a company’s operations without damaging its economic performance[16].

From an operations management perspective, many elements of a service delivery system in hospitality are influenced by the use of technology in its design, including the service interface,

capacity, flexibility, costs, the role of the customer, and the degree of client contact. Above all, technology allows hospitality businesses to change their face-to-face front-of-house activities into a technology-mediated interface[17]. The usage of automation technologies (such as chatbots, robots, kiosks, and so on) accelerates the transformation by automating interactions between the organization and visitors through technology-delivered services[17]. This enables tourism companies to develop unique experiences for visitors[18].

On the other hand, the use of technology in the service delivery system reduces the amount of contact between tourists and personnel[18]. Furthermore, Client involvement in service delivery results in value co-creation[19], and the use of technology expands the role of customers transforming them into prosumers[17]. Technology boosts hospitality organizations' capacity and productivity, allowing them to serve more visitors with the same number of human staff, lowering customer service expenses[17].

Research has shown waiting time has an impact on the service satisfaction relationship and can moderate the satisfaction loyalty relationship. Extreme waiting times are thus a lose-lose approach, as patients lose valuable time and hospitals lose consumers and reputation[22]. Hence, hospital staff needs a very fast and reliable method to check their patient's status and to provide specific analysis tools[23]. Quick advances in ICT are enabling the wide diffusion of health care systems, which let continuous remote patient monitoring by hospital staff. The demand for ubiquitous and universal health care services has accelerated the development of various communication methods that incorporate a variety of wired and wireless network technologies, including those found on the Internet, wireless body networks, and ad hoc systems[24].

Over the past years, patient contribution to health care services has received serious attention. Their active participation in discussions is vital in improving medical management decisions and

results[25,26]. Also, the rise of consumerism in health care, in which consumers seek information from a variety of sources, is changing the way clinical interactions and provider relationships are conducted[27]. Online resources play a critical role in the health of people and the health care system generally[28]. Technological advancements can create a platform for patients to have simple access to information[29]. These advancements which are integrated coupled with IoT, fog, and cloud technologies make cloud-based health care services a good selection[30].

On the other hand, Internet-based health care services, such as IoT health care solutions, have the potential to become valuable tools very useful for public health organizations to improve their effectiveness[31]. IoT can lower expenses, reduce energy use, and make maintenance easier in hard-to-reach areas[32]. Health-care service providers can be categorized into primary, secondary, and tertiary care institutions. Primary and secondary care institutions generally consist of primary health centers, community health centers, and district hospitals. Tertiary care institutions are generally equipped with personnel and facilities for advanced investigation and treatment to offer specialized consultative care usually on referral from primary or secondary medical care institutions. hospitals are required to maintain high standards of care and manage quality-of-service delivery.

To improve the quality of care, the health system needs to be effective, efficient, accessible, patient-centered, equitable, and safe[33]. Service quality management has both internal and external perspectives, Internal perspective focuses on zero defects and conformance to requirements, while the external perspective focuses on customers and their expectations, perception, attitude, and satisfaction[34]. due to factors like growing consumer awareness, their expectations, and changing consumer preferences, the external perspective is gaining more importance in the case of services[34]. Patients attach the highest importance to the interpersonal aspect of care in the case

of health services[35]. Acquisition value, transaction value, efficiency value, aesthetic value, social interaction value, and self-gratification value are all factors that patients consider while evaluating a hospital[36]. Hospital support activities have a substantial impact on patients' perceptions of institution service quality, which determines future patient demand and the hospital's reputation[37].

Given the current socioeconomic scenario in Nigeria, quick and high-quality service delivery is critical in healthcare management. As a popular adage goes, health is wealth, timely and high-quality service delivery is critical to human survival. This has been a long-standing problem in the Nigerian health sector, and it requires immediate attention[38]. Obtaining dependable services and fast attention in government-owned hospitals has been a problem for most people who need to visit a hospital[38]. The first point of call in our public hospitals in Nigeria is the health information management department unit, where patients' files are kept[38]. From this point, down to the pharmacy where pharmaceuticals are provided to patients, there is a lack of competence in service delivery and lengthy processes[38].

The inefficiency and delays stem from the hospital's bureaucratic management structures. Because of the bureaucratic inclination, the majority of healthcare personnel have a negative attitude toward their jobs, which has a significant negative impact on service quality for patients and their healthcare systems. Similarly, bureaucratic processes and a terrible attitude toward work have plagued the whole public sector of our country's economy[38]. From observation, not only the healthcare sector, but virtually all public parastatals, ministries, and agencies are symbolic with delayed and slow attention when it comes to quality and efficient service delivery, and the Nigeria healthcare system is not an exemption[38].

The difficulty of bureaucratic processes delaying patients who required immediate attention is obvious in the inquiry, which confirms the preceding justifications and argues that bureaucratic processes are preventing health care from improving[39]. Inefficiency in the delivery of health care services is widespread, particularly in tertiary hospitals in Lagos State and across the country. Many elements, such as patient-related, health worker-related, and employer-related ones, interact to undermine the country's high-quality healthcare delivery[40]. The perceived challenge across all government-established hospitals, and healthcare facilities in the country, is the difficulties of poor response and attention in the cause of their visit to hospitals and this has caused a lot of damage to the citizens' health systems. Some have consciously and unconsciously killed patients in the process of delay in giving prompt attention to the patients in the name of the bureaucratic pattern of work. Most times, the bureaucratic nature is extended more than usual and it has turned to neglect and abuse of the profession, and ethics of the business by health professionals[40].

In support of this argument, poor procedural rules, excessive bureaucratic processes, political interference, poor working conditions, and poor work ethics, among other factors, have combined to negatively affect service delivery in public sector organizations, particularly in the healthcare sector[41]. Although public bureaucracy's poor service delivery is sometimes blamed for its impersonality, it nonetheless creates a gap between bureaucratic entities and the general population. Furthermore, studies have revealed that bureaucratic processes are inefficient and time-consuming, stifle innovative ideas and improvement, cold and uncaring, impede hierarchical control, are riddled with red tape, and are subject to significant goal displacement, all of which are referred to as "bureaucratic dysfunction[42]. It is this highly routine operating

structure that most times adversely influence quality healthcare service delivery in hospitals, alongside health information management professionals' attitude which this study is all about.

Another issue that informs our research is that the Nigerian healthcare business has faced various challenges in terms of service quality. Patients' health systems have been impeded as a result of the slow reaction and lax attitude towards labor, as observed through observations and exchanges. Before patients could receive health-care attention in Nigerian public health-care facilities, what could have been done quickly by one person to avoid potential hospital irritation would be extended to more than three people[43]. Division of labor, administrative procedural rules, impersonality, and waiting time are the major adverse influence on achieving quality service delivery in Nigerian public hospitals[43].

Metrics for measuring service delivery were adapted from the study of several works of literature[44,45]. These metrics includes: Availability of Health Information Management Professionals, Health Information Management Professionals' Knowledge/competence, and input/infrastructure available at the clinic. With reference to Health Information Management Professionals' Availability, the researcher considered Absenteeism as a serious issue that exacerbates problems in healthcare delivery by lowering service quality, lengthening patient wait times, and preventing people from seeking treatment[44]. A high absence rate could indicate a lack of accountability systems. They may, however, signify mental or physical health difficulties, particularly in areas where health workers are in poor supply. Informal arrangements among employees, such as shift trading, are frequently utilized as solutions or methods to deal with burnout and balance competing personal duties[44].

On the other hand, the Knowledge/Competence of Health Information Management Professionals could be likened to the acquired skills and effort being applied towards the management of common ailments. Training and Re-training of health workers increase their knowledge and better experience on ways to effectively manage certain ailments, leading to better service delivery. Approaches to evaluating care quality are evolving to recognize and accommodate the multifaceted character of clinical practice as well as variances among contexts.

Some of these infrastructures at the clinic, to mention a few are Facilities and installations such as electricity, water, sanitation, phone communication lines, power generator, building development, etc. Health clinics often lack basic infrastructure, particularly in rural areas. Access to electricity is important to perform all functions in the health information management department by the professionals via the use of a computer, such as; patient registration, appointment scheduling, coding and indexing, statistical compilation, record retrieval, e.t.c. Similarly, the availability of clean water and sanitation facilities are fundamental for quality services.

Health Information Management Professionals' availability was examined through unannounced visits to assess absenteeism, reviewing the presence of randomly preselected staff against a duty schedule at a follow-up a few days after the initial enumeration visit. On average, the authors estimated provider absence at 30% across the surveys. Absenteeism is a major concern that exacerbates challenges in healthcare delivery by affecting the quality of services, increasing patient waiting times, and discouraging care-seeking[44]. However, to generate appropriate interventions to address it, quantification of absenteeism should be accompanied by a characterization of the underlying reasons. The high levels of absenteeism may be a signal for weak accountability mechanisms. Still, they may also reflect mental or physical health issues,

particularly in settings faced with numerical shortages of health information management professionals. Informal arrangements among staff such as trading shifts are often used as solutions or mechanisms to cope with burn-out and accommodate competing personal responsibilities. Ignoring these underlying considerations may lead to recommendations that further compound the problem and result in demotivation, reduced productivity, and heighten existing deficiencies.[44]

2.1.2 Attitude of Health Information Management Professionals

Attitude is something that is not expressly a driving force for a response or reaction that is considered to be socially significant in the individual's society and acts according to their own choice[45]. A teacher with a poor job attitude will have a detrimental impact on the school's organization, also one's attitude at work can affect one's productivity[45]. Job attitude will motivate a teacher to work better[46]. Job attitudes are related to work productivity in a major and positive way. Job attitudes are also used to judge if a teacher is competent in the task or not[47]. Furthermore, a positive attitude at work motivates a person to continue working[48]. Job satisfaction is influenced by a variety of elements, including cognitive, behavioral, and affective characteristics[48].

An individual's job attitude provides an opportunity for him or her to express their role in an organization. They also point out that a positive work attitude reflects a person's aptitude to take on responsibility in a company[49]. Job satisfaction and organizational commitment are influenced by employee attitude[50]. Research revealed that job attitude has a considerable positive impact on job satisfaction and organizational commitment[51]. At the very least, attitudes are viewed as having both cognitive and motivational dimensions. When someone is stated to have an attitude toward a situation, we assume that he has an opinion about it and a proclivity for action or at the

very least for feeling about it. However, distinguishing attitudes from ordinary factual cognitions or beliefs on the one hand, and from more general motivating processes on the other, is a difficult task. If this isn't possible, the study of attitudes will become indistinguishable from the study of learning and motivation in general, and the concept will be abandoned[52]. An attitude is a long-term collection of ideas about an object or event that causes one to respond in a particular way[53].

Attitude comes in two types, implicit and explicit. Implicit attitude differs from the explicit attitude in the ways it is formed, stored, retrieved, and operates. An explicit attitude toward an information system is a deliberately developed psychological evaluation of the IS, of which users are fully aware and may clearly describe in self-reports. Explicit attitude is constructed by means of a thoughtful process; people deliberately access relevant information in their memory, develop an evaluation either favorable or not of an object, for example, an information system within the current context, and become aware of their attitude, and can clearly describe it[54].

In contrast, implicit attitude is a stable evaluation of an IS that is formed a-priori, is stored in special fast-access memory, and is activated with little or no conscious effort in response to internal or external stimuli associated with the attitude object. Its key attributes include limited awareness, processing efficiency, fast accessibility, lack of intentionality, little control, intuition, slow learning, unlearning context independency, and temporal stability[54,55]. While implicit and explicit attitudes are not the same, both can influence behavior, including likely IS use, in various ways. Explicit attitude has an impact on behavior via forming behavioral intentions, whereas implicit attitude has two methods[56]. First, it directly triggers behavioral responses, for

example, system use without producing behavioral intentions. Second, it promotes the habituation of behaviors by providing users with easy to access cue-behavior association[57]. Because users tend to preserve mental resources in routine and high-familiarity technology use contexts, implicit attitude is especially important.

An object, a person, or a concept is evaluated psychologically with some degree of favor or disfavor[58]. Many people believe that attitude influences deliberate and goal-oriented reasoning, in terms of action, which translates to the desired behavior. As such, previous information system research focused on the explicit attitude of IS users. However, research reveals that people aren't always conscious of all of their attitudes that impact their behavior[59].

Furthermore, humans can have two sorts of attitudes toward the same item at the same time: explicit and implicit attitudes, which may or may not be of equal quantity and valence[60]. As a result, concentrating exclusively on explicit attitude misses the mark in terms of portraying the whole range of factors that can impact actions and, presumably, IS usage.

Management Information Systems (MIS) research has traditionally focused on explicit attitudes[56]. Users participate in deliberate cognitive procedures, access system-relevant information in their memory, generate a context-specific psychological appraisal of the system, and can self-report their explicit attitude toward the system if requested. People have no influence over the attitude retrieval process. because implicit attitudes, unlike explicit attitudes, do not involve purposeful long-term memory access[61]. When exposed to an attitude object or a cue, implicit attitude is automatically triggered, and as a result, is less subjected to deliberate influences, and cognitive deliberation processes are not employed[62].

Despite the potential of e-health solutions to improve the quality of healthcare in poor nations such as Nigeria, research shows that their adoption is either limited or underutilized. This is due to perceived constraints such as healthcare professionals' opposition, inadequate infrastructure, and a lack of technical skills[63]. There is a significant gap between planning for new technology adoption and its long-term execution to realize strategic or expected benefits[64]. In order to adopt new technology (such as e-health), there is a need to conduct a readiness assessment of health institutions by healthcare workers including the health information managers to provide guidelines capable of addressing potential challenges after implementation. This evaluation should be done early in the development process and periodically after implementation to evaluate the system's successes and difficulties[65]. Nigeria, like most developing countries, has struggled to bridge the gap between planning to install e-health technology applications and ensuring their long-term viability as a policy goal[63].

Attitude of health information management professionals can be measured using the following metrics: affective, behavioral, and cognitive (ABC), adopted from the ABC model. As a central topic in the domain of social psychology, the concept of “attitude” is seen as a result of the interaction between three components: affection, behavioural, and cognition[67]. The adoption of the ABC model of attitude allows researchers to investigate how people feel, think, and interact with the attitude object, which in this case is digital data[68]. In the Library and Information Science domain (LIS), scholars consider affective and cognition as important factors in the study of human information behavior[69]. Literature argued that this body of work should be more holistic, concentrating not just on behaviors, but also on the interplay of behavior with cognition and affect. He suggested that understanding teens and their interactions with data needs to be

built upon a similar holistic view, rather than being confined to one dimension of the human experience[70].

Many people believe that having a career fulfillment could be an important and idealistic aspiration but they don't realize that it is easy to have doubts about a fulfilled career, the moment individuals tend to condition themselves to a lifestyle and routine. True career fulfillment is realized when a worker finds work that is inspiring and purposeful, that achieves set goals and satisfies the desire for materialistic advancement[71]. The kind of work that prompts regular promotion, training and on the job education gives high self-esteem and societal recognition, if an individual possesses positive well-being and values are met, then such an individual is on the right path of career choice. Health information management professionals, thus requires a varying degree of passion and participation for their effective functioning as there are clear needs when it comes to physical, mental and social comfort that make finding career fulfillment a completely unique process for workers in health sector[71]. A career is a meaningful progression on a worker's life or a course of program pursued over a period of time. The moment a career is challenging and profitable, it fosters the personal development of individual workers such as health information management professionals by enabling them to impact the lives of their patrons. In the same vein, once workers experience confusion, stagnation, and a lack of appreciation, they are unlikely to perform effectively of which will have an adverse effect on those who rely on them for their means of assistance. However, career fulfillment is an indication of advancement the chosen worker's profession that includes regular increase in salary, higher status, job satisfaction, prestige, promotion opportunities, recognition and power[71].

Career fulfillment is the accumulation of work experience and perceptions of achievements during the life span of an individual worker, the regular increase in workers' salary and the

promptness in promotions are parts of a fulfilled career. The career fulfillment of health information management personnel is crucial for an effective health service delivery. When a personnel does not feel fulfilled at work, there is the chance that effective service delivery would not be achieved and the goals of the hospitals will be unaccomplished. Therefore, factors such as goal accomplishment, promotion opportunities, education and training, recognition and worker's motivation might determine the extent to which health information management professionals become fulfilled in their career[71].

Work motivation on the other is the force that propel workers towards achieving their desired objectives and goals, work motivation is the force that maintains and changes the intensity, quality and direction of behaviors toward arousing the interest of workers by constantly and willingly executing their assigned responsibilities without any coercion or little or no supervision from superiors[71]. Therefore, for health information management professionals to perform optimally in their chosen career, the hospital management must implement some motivating incentives such as awards, promotion, career advancement, salary and benefits tailored toward individual personnel's needs. The work motivation of these professionals in federal teaching hospitals in Southern Nigeria has to do with the choice of suitable factors that include welfare package, salary, career development, conducive environment, and satisfactions derived on the job, which will propel the personnel to perform at optimum level. Most establishments have come to understand that a motivated and happy workforce will deliver power to the bottom line since workers' performance can be a joint operation of ability and motivation. Thus, keeping health information management personnel motivated and fulfilled in their career will assist a smooth running of the health sector[71].

The health information management personnel that are adequately motivated by their employers are more committed to their career and tend to be mostly fulfilled in their chosen job, thus, once these personnel are sufficiently motivated, they ultimately develop some high sense of self-esteem and confidence in themselves, which makes them willing to accomplish the tasks assigned to them in a bid to having a fulfilling career. Thus, the ability of health information management professional to perform their assigned tasks in meeting various challenges and becoming happy due to the promotion opportunity, pay rise, and supervision, could bring about their contentment and fulfilling career[71].

Career fulfillment is a key consideration in employee's choice of a career as it indicates a level of self-accomplishment that could be attained when an employee derives happiness, materialistic advancement, on-the-job training, among others. Literature has revealed that career fulfillment among health information management professional in hospitals is low, therefore factors have been suggested to influence career fulfillment among health information management professional in a study done at the federal teaching hospitals in Southern Nigeria, some of which are personal factors, work motivation and self-esteem[71].

2.1.3 Concept of Information System Utilization

Information is the lifeblood of any organization, and it has evolved dramatically in the twenty-first century. Medical practices all across the world require health information, its comparable to knowledge, facts, and news gathered from numerous sources and required for healthy physical and mental health in humans[72]. This means that information managers, medical practitioners, and other health teams must make the most of available information resources to make their respective duties easier to accomplish as prescribed and scheduled. If this is accomplished,

medical practitioners are required to provide sufficient and trustworthy medical care to all of the state's citizens. However, in order for utilization to be effective, health information in various forms and sources must be located[72].

An information system is an organizational and technical system that manages information operations, such as the generation, distribution, usage, processing, systematization, preservation, and destruction of data, using technology and software[73]. An information system is a collection of organizational and technical tools for storing and processing data in order to satisfy users' information demands. Information systems, like management systems, are intertwined with both information storage and transmission technologies, as well as information exchange in the management process. The information system consists of a collection of tools and processes that enable the user to gather, store, transfer, and process data[73]. The information system's objective and tasks are to create the essential information for the efficient management of all of its resources, as well as to create the appropriate information and technical environment for managing its activities[73].

Information and communication technologies (ICT) have evolved into important instruments that have revolutionized how we view the world and live. Telephones, fax machines, and computer communication networks via the internet are used to conduct and facilitate modern-day business[74]. The world has been described as a global village due to the exploitation of information and communication technologies (ICTs) in all facets of life within and outside Nigeria. Due to the enormous volume of processing, service delivery, and maximum efficiency in all sectors that require computer skills, the use of ICT aids and improves the delivery of services in the public sector. ICT is used to help with administrative functions such as planning, coordinating, controlling, directing, budgeting, reporting, and staffing[75].

Information technology (IT) and information systems (IS) have been generally recognized as one of the greatest human inventions of modern times. When it was created, its original intention was to automate manual and pre-computer mechanical processes[76]. At present, IS have significantly matured and their roles and functions have been extended to support business strategies, business processes, and organizational structures and cultures of an enterprise. An information system is an organized combination of people, hardware, software, communication networks, and data resources that collect, transform, and disseminate information in an organization[76]. Information systems could be categorized as Transaction Processing Systems (TPS), Management Information Systems (MIS), Decision Support Systems (DSS), and Expert Systems (ES). Within the category of MIS, various types of IS exist to support functional business operations which include Human Resource Information Systems, Marketing Information Systems, Accounting Information Systems, and Financial Information Systems[76]. Realizing the benefits of IS, business enterprises regardless of size, have and continue to diffuse IS into their business operations. As these systems are developed and implemented, researchers and academics are becoming increasingly interested in studying their strategic applications. As a result, numerous models and frameworks for evaluating the strategic use of IS have been presented. While studies on strategic utilizations have received a lot of attention, studies on their drivers or antecedent elements have gotten less attention.

Today's accounting system, as one of the widely used organizational systems, provides more consistent, suitable, and appropriate financial information to different stakeholders to make efficient financial decisions concerning their business entities. An Accounting Information System (AIS) is a system that a company uses to gather, store, manage, process, retrieve, and report financial data and information so that accountants, investors, consultants, managers, and

other stakeholders may use it[77]. This system is acknowledged as a useful tool for dealing with internal and external changes by processing data and transactions to provide useful information for managing, planning, and facilitating organizational activities, hence improving organizational performance[78]. Because the costs and hazards of these huge technology expenditures outweigh their potential payoffs, monitoring effectiveness is especially important with today's organization-wide information systems[79].

Naturally, global IT development is becoming increasingly powerful, with significant investment in IT/IS in both private and public sector organizations. However, the vast majority of Information System projects fail, with significant failure rates resulting in negative consequences for corporate organizations such as financial losses and other threats[80]. Without a doubt, companies nowadays must assess and evaluate the advantages and costs of Information systems in order to justify the spending and its contribution to the organization's competitiveness, quality, and productivity[81]. This is due to the organizations' exceptional problems and demands, which include economic conditions and strong rivalry, globalization, and a fast-changing environment that causes cost-cutting requirements[82]. As a result, analyzing the Accounting Information System's efficacy and value to organizational efficiency improvement and commercial accomplishment is critical[83]. Even though it is difficult, prior research has confirmed the value of systematically evaluating IS effectiveness. In an effort to provide assistance in addressing this critical issue, the management literature has witnessed a growing and evolving series of works targeted at evaluating and measuring IS implementation success or effectiveness (both concepts are used interchangeably). One of the most widely adopted Information System is the Information System (IS) success model, which presents an integrated approach to measuring IS

effectiveness[84]. This model presented several significant contributions to the measurement of IS success or effectiveness.

As a metric of IS effectiveness, system quality is a desirable characteristic of an information system, which has to do with the ease of use, system reliability, and ease of learning, as well as system features of intuitiveness, sophistication, flexibility, and response times[81,82,85]. Information systems are divided into several categories, which includes: information and reference system;- this is an information system designed to find information within a specific subject area, economic information system;- this is an information system designed to perform management functions at an enterprise, information-analytical system of forensic accounting;- this is an information system intended for analytical support of law-enforcement activity, medical information system;- this is an information system intended for use in a medical or preventive institution, geographic information system;- this type of information system is responsible for providing collection, storage, processing, access, display and distribution of spatially coordinated data (spatial data)[73].

Utilization is further defined by segmenting it into two subsystems: a Human Information Processing system and a Data Selection system. As part of the initial research of the utilization process, it was determined to look into the Data Selection system's interaction with the Human Information Processing system[86]. The goal of innovation is to find and improve inefficiencies in the production or operation of a product or service[87]. technology Innovation is about moving beyond the existing institutional or practice patterns to implement creative and fundamental changes in the main tasks of any organization[88], the implementation or utilization of this technological innovation improves organizational performance and increases productivity[87].

As a result, both in the commercial and public sectors, organizational innovation is continually promoted in order to improve the organization's competitiveness and to ensure its survival[89]. Building an information system is a strong way to influence an organization's competitive edge in order to improve efficiency, productivity, customer satisfaction, and effectiveness[90]. In fact, information system design, utilization, and implementation have a major impact on overall business operations[91]. Work performance has been demonstrated to be influenced by the degree of internalization of public administration information systems. Furthermore, the 4th industrial revolution's integration of ICT convergence technology has increased the creation of information systems as a policy priority for improving national competitiveness[92].

Information systems are computer systems that collect, store, process, retrieve, show, and communicate information needed in practice, education, administration and. Many benefits are obtained in the use of information systems[93]. The utilization of information systems provides numerous advantages, this benefit decreases health expenses by coordinating and enhancing service quality, as well as reducing errors and increasing speed and accuracy in care[93]. The rapid advancement and development of information demands, particularly technology in the globalization period, has had a major impact on the use of information systems in the health sector[93].

A health information system is a collection of interconnected and managed data, information, indicators, procedures, tools, technology, and human resources that provide information support for decision-making processes, health program planning, and implementation of monitoring and evaluation at all levels of health administration. Health information systems are a very important part of improving hospital efficiency and supporting competitiveness by providing health service information for management[93]. Information Technology has become a necessity in various

aspects of life, including tourism. The significant influence of information technology in the tourism sector can be seen from information technology as a platform for online tourism activities. In developing a tourism village, the role of information technology is needed both in the marketing and operational aspects of the tourism village[94].

The components of the information system (IS) success model consist of six variables, which include: system quality, information quality, use, user satisfaction, individual impact, organizational impact, and service quality[81]. Information quality is the desirable characteristic of the system outputs; that is, management reports and Web pages. Examples: relevance, understandability, accuracy, conciseness, completeness, currency, timeliness, consistency, and usability. System quality refers to the quality of service or support that system user receives from IS organizations and IT support in general or for a specific IS. This refers to the responsiveness, accuracy, reliability, technical competence, and empathy of the personnel[81]. User satisfaction has to do with users' level of satisfaction with reports, Web sites, and support services.

Service quality, System quality, usage, and information quality are measures of information systems utilization, supported by literature[95]. For example, system quality represents the quality of information processing itself, which is characterized by the employment of state-of-the-art technology, a system offering key functions and features, and software that is user-friendly, easy to learn, and easily maintainable. Information quality, a concept that is related to the quality of information system outputs, can be described in terms of outputs that are useful for business users, relevant for decision making, and easy-to-understand (representing IS quality as value) as well as outputs that meet users' information specifications (representing IS quality as conformance to specification)[95].

For the purpose of this study, Information system Utilization will be measured using information quality and System quality adapted by a model[81]. Information quality and System quality would be adopted for this study due to the changing nature of IS, which requires the need to assess system quality when evaluating IS success, also Information quality (IQ) has become a critical aspect in organizations and, consequently in Information Systems research. There is no doubt that a good system in the organizations will produce good information and this information will influence the organization as a whole[81]. For the purpose of this study, completeness, ease of understanding, personalization, relevance, and security will serve as metrics for Information Quality. Likewise, ease of use, ease of learning, system flexibility, and system reliability will serve as metrics for System Quality adopted from the model[81].

Individuals in poor and developing countries have the least access to health services due to low financial resources, lack of infrastructure, and other barriers to accessing the needed services, which is a situation in Nigeria[97,98]. In addition, the dearth of competent health care professionals and low health education has contributed to the need for a change in paradigm and innovative solutions in health workforce development[97,98]. The popularity and growth of the Internet and mobile wireless technologies have assisted in changing the face of healthcare delivery and health education for health professionals in many countries. There has been an increasing number of developed and developing countries with e-health strategies. Bangladesh, Paraguay, Qatar, and Rwanda were the most recent group of countries with the official adoption of e-health strategies among 73 countries with e-health adoption[99].

The global population is growing rapidly with an increasing need for quality healthcare which is a major challenge of telemedicine in Nigeria, there is a need to provide alternatives for people in remote locations to have access to timely and specialized healthcare[100]. The shortage of trained

health professionals in Nigeria has increased the death rate of patients suffering from numerous diseases, which necessitated immediate attention[101]. Information technology applications in the healthcare sector have emerged as effective platforms for improving the quality of treatment provided and increasing the efficiency of medical practitioners, via the information provided by the health information management professionals[63,102]. It also plays a critical role in lowering healthcare costs for healthcare decision-makers and organizations.

Telemedicine allows the distribution of information collected and collated by health information management professionals to be disseminated for use by other health teams and has the potential to help alleviate the shortage of qualified clinicians in rural areas dealing with chronic disease problems. And it is indisputable that technology is transforming how medicine is practiced in both developed and underdeveloped countries. However, there is a knowledge vacuum about Telemedicine adoption in developing nations[102].

2.2 Theoretical Review

The theoretical review explores the different theories and models that can explain the attitude of health information management professionals, information system utilization, and service delivery in the National Orthopaedic Hospital, Igbobi, and Federal Neuro-psychiatric Hospital, Yaba, Lagos. These include; DeLone and McLean's IS success model and ABC model of attitude.

2.2.1 DeLone and McLean's Information System (IS) Success Model

Information System (IS) Success Model is current and most studied by researchers. D&M Information System Success Model is the most cited model in literature with helpful references. D&M identified categories for system success by mapping an aspect of IS success to each of Mason's effectiveness levels[103]. This analysis yielded six variables of IS success, which include;

System Quality, Information Quality, Service Quality, User Satisfaction, Individual Impact, and Organizational Impact[84]. System Quality was equivalent to the technical level of communication, while Information Quality was equivalent to the semantic level of communication. DeLone and McLean's IS success model developed their initial taxonomy using established theories of communication adapted to IS[84]. The primary purpose of the D&M IS model in Information Systems Research was to bring together previous research involving MIS success into a more coherent body of knowledge and to provide guidance to future researchers.

DeLone &McLean suggested that researchers should use this model in a predictive manner, yet they cautioned that one must measure and/ or control each of the variables in the model to ensure a complete understanding of IS success. D&M called upon others to validate their model[84].

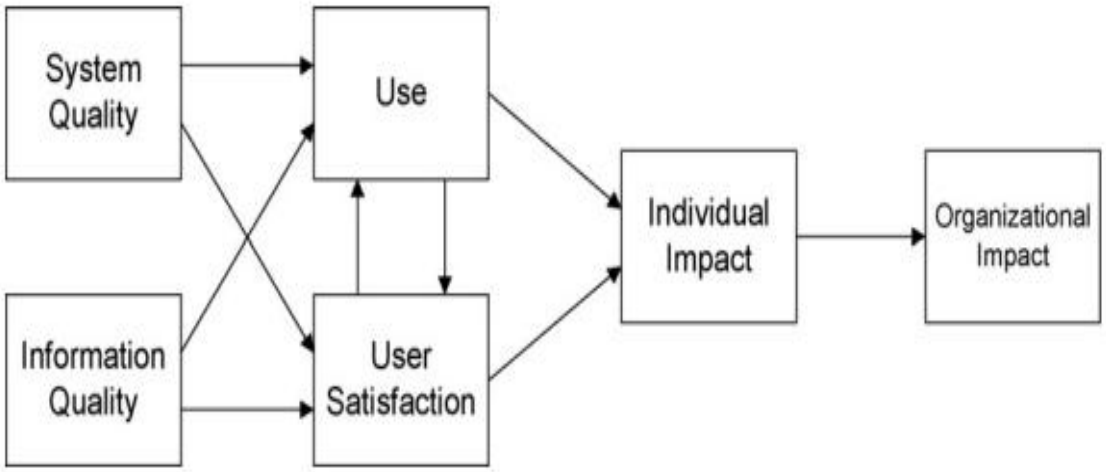

Figure 2.1 DeLone and McLean Original IS Success Model.

Source DeLone and McLean 1992.

Although, several scholars modified or extended the model throughout the years, while others adapted it for specialized purposes like knowledge management or e-commerce[104,105,106].

DeLone & McLean also tweaked its model to solve some of the original's flaws. Service Quality was added as an additional factor of IS performance in the updated model as a result of the changing nature of IS necessitating the requirement to measure service quality when evaluating IS success[96]. Depending on the context and application of the model, D&M also suggested allocating varying weights to System Quality, Information Quality, and Service Quality[96].

Seddon also argues for the removal of system use as a success variable in the causal success model, implying that use is a behavior appropriate for inclusion in a process model but not in a causal model. He argues that use must precede impacts and benefits, but it does not cause them. D&M disagree with seddom as they believe system usage is an appropriate measure of success in many cases. Another researcher examined the full model but found some parts and elements contained in the original model to be insignificant, which includes: System Quality, Information Quality, Intended Use, Individual Impact, and Organizational Impact[110].

DeLone &McLean's model has shown to be an effective paradigm for analyzing IT success. According to research, the paper that first proposed the D&M model received the most citations among the top three IS journals[111]. The D&M IS Success Model has withstood the test of time. Many studies have empirically tested parts or all of the IS success model and found it to be reasonable[112,113,114,115]. Much of the IS success model has also been supported by literature reviews[81, 106,116,117]. Few studies have attempted to validate and support the D&M success model as a whole in single research, with the conclusion that the D&M model performed quite well and outperformed the Seddon model[118].

2.2.2 ABC (Affective, Behavioural and Cognitive) Model of Attitude

It has long been viewed that attitude is made up of three elements: affection, behavioural, and cognition[119]. Affection can be defined as feelings, moods, emotions, and sympathetic nervous system activity that people have experienced in regard to an attitude object and subsequently associate with it[120]. Cognition refers to the beliefs, thoughts, and knowledge an individual has about an attitude object[119]. The core idea of the ABC model is that emotion and cognition interplay and interact in forming or shaping attitudes[121]. According to the ABC model, cognition has been one of the key factors in attitude formation along with the emotion factor. Cognition has been referred to the individual's information, beliefs, and knowledge about an object[122].

Scholars have assessed how cognition can affect consumer attitudes. Some stated that cognition determines the effectiveness of advertising[123]. With regard to corporate social responsibility, some discovered that consumers' awareness of corporate social responsibility initiatives affects consumer attitude and purchase intention, and in turn, determines the success of corporate social responsibility implementation[124]. While some researchers have addressed that cognition is significantly related to consumer attitudes[125]. Additionally, researchers have also revealed that consumers' choice of cause-related products is driven by cognitive motivation[126].

A study done in Ghana on nurses' attitudes toward patients encapsulates how they perceive and think about the patients (thought); how they feel about them (emotion), and the actions (behaviors) they exhibit toward them, which will have a negative or positive effect on the service delivery.[127] This in essence has to do with the tri-component (ABC) model of attitudes which implies that an attitude includes three components: an Affect (a feeling), Cognition (a thought or belief), and Behavior (an action)[127].

Research carried out among workers in a construction company in the UK. 70% of construction professionals were reported to have suffered from job-related stress, anxiety, or depression which can negatively affect their work attitude[128]. The tripartite model of attitude also known as the ABC model of attitudes is defined as a response to an antecedent stimulus or attitude object. The three components are three classes of responses to that stimulus[129].

This 'ABC' model of attitude has become an integral and essential component of the general body of knowledge in the areas of psychology and organizational behaviour. Meanwhile, coping is also recognized as an evaluative response that manages specific stressful stimulus[122]. The core idea of the ABC model is that emotion and cognition interact and interplay in shaping or forming attitudes[121].

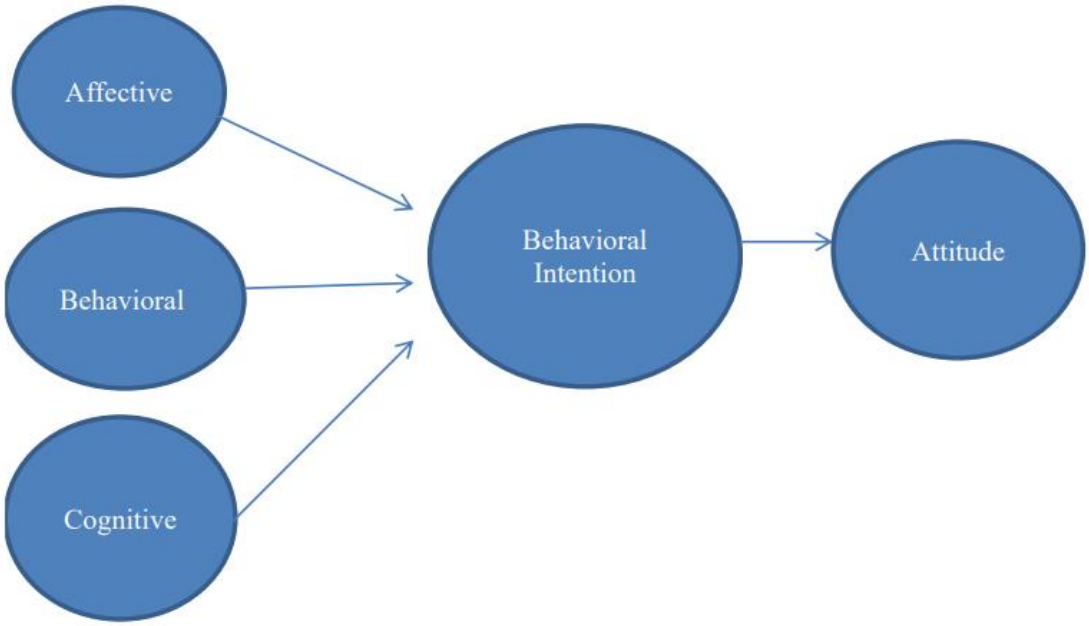

Figure 2.2 ABC Model of Attitude

Source OSTROM 1969

2.3 Empirical Review

2.3.1 Attitude of Health Information Management Professionals and Service Delivery

The success of any organization can be measured by the performance of workers in such an establishment, this gives the establishment the ability to put in their best to benefit and meet organizational aims and objectives. The World Health Organization defines service delivery as the management and delivery of health services so that clients receive a continuum of preventive and curative services according to their needs over time and across different levels of the health system. Service delivery is vital because it helps provide people with the social amenities they want or need by introducing them to an organization with the resources to provide those services, it is also regarded as a vital sign of the organization showing how well activities within a process or the final output achieve a specific goal.

attitude is a long-term collection of feelings, beliefs, and behaviour tendencies directed towards specific persons, ideas, objects, or groups. Attitudes explain an individual's behavior and they encapsulate a complex combination of a myriad of variables such as personality, beliefs, values, behaviors, and motivations. attitude encompasses a person's emotions and behaviors. For instance, a health information management professional's attitude toward patients encapsulates how they perceive and think about the patients (thought), how they feel about them (emotion), and the actions (behaviors) they exhibit toward them. This is the tri-component (ABC) model of attitudes which holds that an attitude includes three components: Affection (how one feels), Cognition (a person's perception), and Behavioural (an action). Attitudes help us define how we see situations, as well as define how we behave toward the situation or object[133,134].

Excellent health-care delivery is a requirement in any country, and quality health care is a human right that must not be surrendered for anything. The attitude of health information management professionals has a significant impact on the quality of care provided. Nursing care is also one of the most important healthcare services that aid in the recovery of patients[135]. A nationwide conference was held in Ghana to address the "eroding compassion" of health information management professionals, which was prompted by public uproar and outcry over their negative attitudes toward clients and patients at health institutions[135]. A number of studies, media sources, and personal experiences of the writers indicate that generally, the attitude of health information management professionals in Ghana is unhealthy, which is hampering health delivery in the county[135].

Throughout the world, there is a paradigm shift toward client-centered healthcare delivery. However, the situation is different in Ghanaian hospitals, especially public hospitals. It is not uncommon to hear health information management professionals shout and humiliate patients who seek explanations for certain things concerning their health[135]. In order to avoid these humiliations, patients simply keep quiet and do whatever they are asked to do without question. When a patient returns home from the hospital, relatives or friends may inquire, "What was the diagnostic of your health condition?" to which the patient may respond, "I don't know." Without any explanation, the doctor simply prescribed these medications for me to purchase." The general impression is that the medical personnel profess to be omniscient, this prevents a number of people from going to the hospital when they are sick, thereby encouraging self-medication[135].

The attitude of some health information management professionals had become a major challenge in the healthcare delivery service and also sunk the image of the profession[135]. In response to the complaints leveled against them, some health information management professionals said that their actions were sometimes caused by patients' rudeness, particularly when it came to paying for treatment. Some reported that when hospital patients didn't have enough money to buy drugs, they had to stand in for them at the dispensary, only to find out later that the patients had fled without paying[136]. The health information management professionals who guaranteed the payment was required to pay the money to a pharmacist or dispensary attendant who was unfamiliar with the patient. As a result of this activity, a lot of health information management professionals owed large sums of money, and their sympathies for poor patients in critical health circumstances had diminished. Another factor given by health information management professionals is that they are overworked, which leads to poor human relations with the patients. They believe that the tension is caused by a lack of infrastructure and inadequate staff[136].

Cultural patterns play a vital role in one's attitudes toward and reactions to pain. Furthermore, a health information management professional's level of expertise and exposure to pain is another aspect that affects their attitude toward and reaction to a patient's discomfort[137]. A crying guy receiving medical attention from a health information management professional is likely to be ignored or treated indifferently. According to the authors, a health information management professional with a lot of expertise can weigh a patient's current level of discomfort, complaints, groaning, and shouting, and compare it to some historical memories of more severe cases. This may have an impact on their attitude and reaction to pain, as well as the patient's requests. Some

health information management professionals may have to prioritize who they attend to based on their own personal experiences with real agony, while those who are left untreated may interpret their priority as a negative attitude toward them[137].

Better and higher levels of satisfaction have been associated with a positive attitude towards usage and acceptance of the system[138,139]. Considering the role of health information management professionals in providing high-quality healthcare services to patients, adequate health information accessibility along with user-friendly systems and proper training is required to improve their viewpoint towards computerization, which in turn will influence the current and future planning and implementation of EMR[138,139,140].

Service providers are the backbone of any hospital or health facility as well as other health-related programs such as the ART program, they are also an important contributor to some patients disengaging from care. Trust is key to building good interpersonal relationships between patients and providers[141]. However high staff turnover, congested clinics, lack of continuity of care, and pressured targets, bring about an environment where fostering this trust becomes difficult. A lack of trust can negatively affect retention in care and an individual's likelihood of re-engaging with care after an interruption[141]. Patients' care experiences at clinics can be affected by all cadres or levels of clinical and non-clinical staff, including administrative staff and security[142]. Retention can also be compromised by insufficient numbers of skilled and trained staff[143]. Lack of empathy, psychological burnout, bias or discrimination, and disrespectful treatment can also be key factors in disrupting and interrupting patient health care[141,142,144].

A study done in South Africa on managing HIV patients returning for care implied that some patients distrust healthcare providers, health information management professionals inclusive,

due to poor quality service delivery, long queues, drug stock-outs, poor attitudes and communication from staff, and lack of leadership[142-146]. The South African antiretroviral therapy (ART) program is the largest in the world[141,147]. In 2019, UNAIDS reported there were 7,500,000 people living with human immunodeficiency virus (HIV) in South Africa, of which 92% (6,900,000) had been diagnosed with HIV, 70% (5,200,000) were on ART and 92% (4,800,000) were virally suppressed[147]. Evidence shows that retention of patients within the South Africa HIV program has been compromised by organizational and behavioural challenges that impact negatively on the delivery of quality health services[145,148]. These obstacles have a negative impact on how patients interact with services and their subsequent retention or re-engagement. Elements of service delivery that need to be improved to support the retention and re-engagement of patients include the clinic flow and service efficiency, drug availability and tolerability, and health information management professionals' attitude and behaviour towards service users. Rigid clinic policies, drug stockouts, stigma and discrimination, and bad patient-provider relationships are all examples of health system issues that operate at the facility level[142,144]. Returning to a clinic after a break in treatment can be overwhelming, and patients may anticipate or encounter unpleasant reactions from clinic staff, which serves as yet more motivation to stay away from therapy[141,146].

Health Information Management Professionals are to understand the challenges that each individual may face and accept these in a non-judgmental manner. Often, the corporate or organizational culture remains punitive, generating fear amongst patients, which pushes them towards remaining out of care for longer and more damaging periods of time[141,144,146]. Health information management professionals' attitudes and behavior are attractive and cost-effective for change in healthcare systems, where physical resource restrictions make change difficult[146,149].

health information management professionals' behaviour can change at any point in time and it is worth investigating ways to better behaviourial improvement by targeting low-cost behavioural interventions to specifically address health information management professionals related obstacles, to strengthen the quality of care in the country[146,150]. Health information management professionals can be encouraged to behave well towards their patients to provide better care[146].

A study was conducted in six clinics in one administrative region of Johannesburg, Region E. This area, including Alexandra township, makes up about 14% of Johannesburg's population, with approximately 700,000 inhabitants[151]. There are nine clinics in the region, including one community health center that provides a wider range of services. This is a mixed-methods study that consists of three components; Surveys were completed by health professionals, covering their own and their facility's management of patients reinitiating ART; Semi-structured interviews were conducted with health professionals that had completed the survey. Interviews covered staff attitudes and facility management of patients reinitiating ART in more depth and lastly, Reflexive feedback sessions were conducted to gain further insight into the study findings[151].

Another study was conducted in Johannesburg, where a majority of the health information management professionals responded that patients returning to care were managed appropriately. Interviews revealed that patients face many difficulties accessing care, and empathized with their challenges. Responses also indicated that many supported returning patients by providing education about the risks of developing treatment resistance[148]. However, some poor practices still persisted. Participant responses revealed returning patients still waited longer to be serviced by healthcare providers, and members of staff still shout at patients for

refusing treatment and making them wait longer to be helped[148]. participants expressed that these poor attitudes and behaviours resulted from working within highly demanding and rigid work environments.[152]

Literature has confirmed the link between perceived health information management professional's service quality and patient satisfaction, demonstrating a direct association which expresses that the higher the perceived healthcare service quality, the higher the patient satisfaction[154,155]. In addition, Studies have shown that patients and their satisfaction are seen as the most basic point in the organizing, execution, and appraisal of service delivery[157]. Additionally, addressing the requirements of patient and healthcare principles are very important for accomplishing high worth. In healthcare settings, patient satisfaction is widely used to determine service quality[157].

Literature has demonstrated the association between service quality and patient satisfaction, and results show a positive association between healthcare service quality and patient satisfaction[158]. Patient satisfaction is also assessed by examining the difference between perceived and expected service quality[158]. Furthermore, Patient satisfaction serves as a medium between service quality and behavioural intentions. The point when a client or patient is pleased with a product or service is considered satisfactory[159,160]. Satisfaction can be said as a positive reaction of people to a specific concentration (shopper experience) that is resolved at a specific moment. Patient satisfaction upgrades the image of the hospital, which ultimately converts in increased service utilization[161]. Patient satisfaction has an impact on how well patients follow doctors' advice and requests, In this manner, satisfaction really influences the result of medicinal practices[162].

A study carried out on HIV patients, conducted in Nigeria, recorded a high level of satisfaction among HIV patients with pharmaceutical services, using a Patient Satisfaction with Pharmaceutical Service (PSPS) questionnaire and using a standardized structured interview questionnaire[163]. This has demonstrated that most of the respondents were satisfied with the service provided, however, indicated long waiting hours to finally receive their medication as a major problem that is responsible for their dissatisfaction[163].

A study conducted in the southwest region of Nigeria on satisfaction with primary health services also indicated waiting for time and availability of drugs as the main interests of the participants[164]. It's worth noting that both NHIS and non-NHIS respondents were extremely pleased with the health services they received from the health information management professionals at their healthcare facilities[165]. Contrary to the studies discussed above, research recorded low levels of satisfaction by the respondents with health information management professionals' services[166]. Thus, evaluation of patients' satisfaction with health services is important and crucial to pinpoint certain areas of service and practice which need to be improved.

A study carried out in Malawi on pregnant women, revealed that one of the factors facilitating communication between health professionals and patients is good interaction which entails providers treating patients with warmth, sympathy, and respect. On the other hand, factors that inhibit health professionals -patient communication includes; verbal abuse, failure by health professionals to take questions from patients, linguistic barriers and poor quality of non-verbal communication, and discrimination due to one's status[167]. Furthermore, the study has also revealed that both private and public hospitals in Malawi have some health professionals who communicate poorly with their patients[167].

The study identified health professionals' positive attitudes and behavior in both private and public health institutions as one of the effective facilitators of provider-patient communication. This study has shown that women who experienced good communication at a health facility for maternal services were satisfied[167]. They were even committed to returning to the same hospital facility for their next delivery. Some respondents at a private health facility indicated that some health professionals had a bad attitude and communicated to them poorly[167]. This was surprising because one might expect a better quality of service in private hospitals where patients pay a fee to access healthcare services. Those participants described their lack of desire to utilize that health facility again in the future. This finding is consistent with earlier research that shows that strong provider-patient communication is critical to patient satisfaction[168-170]. The more satisfied a patient is, the more likely she adheres to all treatment regimens and follows recommendations[171].

Another finding implies many health professionals in public health facilities and some in private health facilities insult and disrespect patients by talking to them rudely and shouting at them. This finding is consistent with other studies in Malawi which found that some health professionals are unfriendly, impolite, rude, and shout at patients[172-177]. In addition, this study also supports that of another researcher, who implied that instead of offering support to women in labor, health professionals are neglectful in their duty of care[178]. On the contrary, it was claimed that a skilled health professional at one private hospital refused to help and yelled at a woman who was ready to give birth. Such conduct is inappropriate, may have resulted in major difficulties, and is likely to discourage women from seeking maternal care at health facilities[173,175,176,177]. Previous studies have shown that labor can be shortened with the help of professionals[179-182].

Literature has shown that certain health information management professionals discriminate against patients based on their socioeconomic level and where they live. This discrimination is counterproductive and is likely to discourage patients from accessing maternal services at a health facility[183-185]. Even though all participants in this study appreciated the need for a pregnant woman to access maternal service at a health facility, some participants said that they would consider seeking help elsewhere if they knew that a health personnel would not treat them with respect and dignity. This finding is consistent and in line with a study conducted in Nigeria, which found that discrimination based on ethnicity, literacy level, and place of residence contributed to the low proportion of births overseen by experienced birth attendants[183-185].To address the current situation, health information management professionals and other health professionals must eliminate all forms of discrimination so that they can properly communicate with their patients. Frequent supportive monitoring of health information management professionals, as well as refresher training in communication skills, can significantly improve provider-patient communication[167].

In public health facilities, discrimination based on one's status was also noticed in the way health information management professionals communicate with illiterate patients, because of their illiteracy, some participants said they have trouble comprehending information from them[167]. Unfortunately, they stated that when they attempted to ask questions in order to better grasp what was being communicated to them, they refused to allow them to do so[167]. The information chasm widens as a result. health information management professionals must demonstrate empathy and provide information to all patients, regardless of their education level.

This finding is consistent with another study conducted in Mangochi, Malawi, which found that one of the barriers to getting maternal services was a lack of education between health professionals and patients[173]. To address this, health information management professionals should work and strive to improve patients' awareness of their own health needs, as there is a link between comprehension and compliance. This issue could be addressed with training on how health information management professionals should communicate with patients[186,187]. Furthermore, healthcare providers and information managers must present patients with clear and concise ways to interpret health information, regardless of their level of education. As a result, health professionals' communication must be written in simple language and geared for the typical or uneducated individual to grasp[186].

Finally, research has discovered that language is still another obstacle to patient-provider communication. This is consistent with the findings of a Canadian study that found that failing to address language barriers can lead to misunderstandings, problems with informed consent, inadequate comprehension of diagnoses and treatments, dissatisfaction with care, preventable morbidity and mortality, and disparities in prescriptions, test ordering, and diagnostic evaluations[188]. Language limitations can make it difficult for a health information management professional to elicit vital patient information for effective treatment, leading to overuse of diagnostic resources or invasive procedures, ineffective treatment, and diagnostic errors. Other studies have also found that linguistic barriers were one of the problems or challenges affecting provider-patient communication[189-192]. This barrier may be challenging to overcome due to current policies in Malawi where civil servants and other personnel are posted to any part of the country without consideration of their ability to speak the dominant languages of those areas.

Literature has argued that posting staff according to the languages they speak would in some cases mean that civil servants work in their home district or region, which could exacerbate regionalism and ethnic loyalties at the expense of national cohesion[189]. Where a health information management professional provider does not speak the same language as a patient, an interpreter should be employed to bridge the communication gap[189,191,192.]

2.3.2 Information System Utilization and Service Delivery

Being able to utilize technology to engage in and contribute to modern social, cultural, political, and economic life is described as being able to use technologies to participate in and contribute to modern social, cultural, and political[193]. This comprises the ability to use the information system as well as the supporting infrastructure. Skills in typing and entering data using a keyboard and the ability to use a mouse are examples. Previous research has found that health information management professionals' involvement with Information systems is influenced by digital literacy levels[194-196]. It has also been determined that in order for EHRs to have a beneficial influence on patient safety, health information management professionals must be able to properly use these systems once they are available[195]. Thus, given the growing and increasing use of technology in healthcare, it is important for healthcare staff to be digitally literate[197]. Furthermore, it has been discovered that negative attitudes toward Information systems (IS) have a detrimental impact on staff engagement levels with IS, with low health information management professionals' involvement severely affecting patient safety and quality of care[198].

The effective use of computing applications in health sectors can make it possible for health information management professionals to monitor and follow up on patients' health status[199].

Such applications are commonly used in many developed countries in nursing homes, hospitals, and other related institutions. Furthermore, the purpose of healthcare is to offer equitable, efficient, and effective care. With this in mind, previous research has suggested that using emerging technology to improve healthcare service practices could provide more opportunities for tracking, prevention, detection, and treatment of disease[200].

As a result, information technology (IT) is a critical precondition for providing effective healthcare services. Recent consideration of IT solutions such as electronic health record systems has aided in the prevention of common errors, the protection of patients' privacy, and the archiving of patients' data[201]. The rapid adoption of cloud-based innovations has had a variety of consequences on the distribution of healthcare data. However, numerous challenges remain in the way of establishing electronic health systems, including client help, cost, online connectivity, and emergency recovery[202]. Nonetheless, cloud computing in the healthcare sector has the potential to deliver significant benefits in terms of improving healthcare services. Cloud computing can be defined as a cloud-based solution that incorporates the processing and management of healthcare records in a distributed health setting[203].

It cannot be denied that electronic medical records (EMRs) have led to a significant positive effect on patient care and the work lives of family physicians. At present, Health information technology (HIT) has become a fundamental basis for healthcare improvement and is a key benchmark for enriching the quality of health care, enhancing patient management, and extending excellent results in healthcare delivery. With the evolution of new methods and techniques in the field of Health Information Technology, the best EMR care systems are being developed to cater for the present needs of the patients and healthcare organizations. Some of the

new and advanced features of EMR include protecting patient records through role-based, which allows only authorized personnel to get into the system in order to view the patient records and use the data for auditing document access control[204].

Again, the addition of Automatic Transcription allows registering the words once uttered with minimal errors, which has greatly helped reduce manual errors caused during the entry of information. The introduction of patient portals that let the patients communicate electronically to doctors, health information management professionals, and other staff is also a much more advanced feature that can help the health information management professionals as well as the nurses monitor the patients' concern more closely. The EMRs have also included the novel feature of writing and transmitting electronic prescriptions for an improved workflow for medical professionals like the health information management professionals, doctors and nurses[204].

Australian, Canadian, and American hospital were found to be lacking in digital literacy understanding in a recent systematic assessment of English language studies linked to staff digital literacy levels and computer skills training[205]. Furthermore, a study in Scottish discovered that staff viewed their digital literacy to be poor, citing a lack of confidence in using ICT as the reason[205]. Similar findings were found in a cross-sectional study of 500 healthcare workers, including health information management professionals which found that 81.1 percent of those polled had insufficient computer expertise[205].

In Australia, a survey of over 4000 staff including health information management professionals showed that knowledge, experience, and confidence in using ICT is only limited to basic computer applications, with health information management professionals expressing low

confidence in the use of computer-based applications.[197] Similarly, a study assessing computer hardware and software usage identified that American staff working at a community hospital had low computer literacy levels, claiming and stating that they had little to no experience with some hardware and software items surveyed[206].

Previous studies of healthcare staff views about Information System (IS), on the other hand, have yielded mixed results. The health information management professionals, Nurses, physicians, social workers, nutritionists, unit clerks, and patient attendants have all expressed support for IS in previous research[207-211], implied that Information System helped them do their jobs better, improve the safety and quality of patient care, prevent duplication, increase ease of access, help with speedy decision-making, and increase efficiency in these studies[207-211]. However, in other studies, they have identified frustrations with Information System use, disagreeing and arguing the fact that IS improves patient care and increases efficiency[212,213]. Health information management professionals also implied that Information System is technically difficult and time-consuming[210,214].

Information System (IS) is becoming more widely used in both clinical and non-clinical contexts around the world. Numerous research has been conducted in order to uncover crucial success elements for using IS in the health care sector[215,216]. The need to invest in training, assess the skill level of the user, provide focused training, and provide diverse modes of training to satisfy user requirements have all been cited as critical considerations to date. Health information management professionals' self-efficacy and subsequent engagement with the IS have been found to be enhanced when ICT competence and confidence are increased[216].

A study conducted in a long term facility in Australia, suggested that the healthcare planners and health information managers should ensure that the implementation of EMRs in a healthcare facility is useful and easy to use[217]. According to a recent study in the United States of America, the federal government has enacted legislation aimed at encouraging health information management professionals, medical practitioners, and other health teams to use electronic health record (EHR) systems meaningfully, and has approved the idea of the federal government providing required funds for compliance with meaningful criteria and advanced patient involvement in the system[218].

health information management professionals' adoption of computerization would be improved if user-friendly systems and suitable training were provided in consideration of their needs to provide high-quality healthcare information. They can be regarded as important influences on EMR planning and implementation[219,220]. Formal training is required for health information management professionals to master their EMR-related activities. When adequate and supportive training is provided in the healthcare organization, health information management professionals will be more motivated to learn and less resistant to change[221].

In Iraq, there are lack of studies regarding the IT integrity and effectiveness in health organizations[222]. The Iraqi government has taken several steps to implement cloud-based approaches for improving healthcare practices. This includes changing the way patient record and other health-related data is stored by health information management professionals, thereby allowing medical personnel to more easily access and interpret patients' circumstances[222]. On the other hand, the present Iraqi health system is being hampered by a lack of medical personnel, health information management professionals as well as political interference,

according to the report. Meanwhile, these authors emphasized the importance of reinforcing data quality when data passes from the facility to the Ministry of Health[223].

Furthermore, researchers acknowledged the current obstacles and challenges that face the Iraqi healthcare sector in providing medical management services due to the inappropriate utilization of technology in which no procedure is executed for information sharing[224]. Previous studies in the healthcare sector have mostly emphasized the potential for addressing health information management professionals' perception when it comes to clarifying technology utilization and adoption. This is because health information management professionals are the actual generation of information to be made available for use by the physicians, who are the actual users of cloud-based health systems. Cloud information systems provide platforms for health information management professionals to communicated with other health care professionals and share medical data across departments[224].

Literature has shown that many health systems were built on work flows that include fragmented IT systems, paper medical records, and duplicated test results; this means that most medical professionals tend not to always have access to information generated by the health information management professionals, especially when they need to make a quick decision about patient care. Therefore, cloud computing was found to alter current health management practices in both developing and developed countries[224].

Furthermore, a study conducted in Taiwan proposed a model to explain health information management professionals' acceptance and resistance prior to the implementation of a health cloud system[225]. The researchers integrated technology acceptance and status quo bias perspectives to determine how health information management professionals' intention to

adopt/use the health cloud service was associated with their intention to resist it. The authors found that health information management professionals' resistance was the result of regret avoidance, inertia, perceived value, switching costs, and perceived threat. In addition, the researchers found that attitude, subjective norm, and perceived behavior control affected health information management professionals' intention to use the health cloud[225]. the researcher discovered that the main cause of resistance was sunk costs, inertia, perceived value, transition costs, and uncertainty. Performance expectancy, effort expectancy, social influence, and facilitating conditions were shown to have positive and direct effects on patients' intention to use the health cloud[226]. Another study looked into the elements that influenced decision-makers in the Taiwanese medical industry to use cloud computing technologies. Data security, perceived technical expertise, cost, top manager support, and complexity were found to be the five most essential variables[227].

A study done suggested a concept for private cloud computing based on a number of parameters. The findings revealed the importance of information system trust in understanding cloud computing performance in Taiwanese hospitals. The proposed approach was designed to assist hospitals in evaluating or achieving success following the adoption of private cloud computing healthcare services. The key predictors of cloud computing satisfaction includes: information quality, system quality, and service quality[228]. These factors influenced users' trust, which influenced their contentment. A study conducted in Malaysia suggested a cloud adoption model to enhance the Malaysian healthcare sector[229]. They took into account factors related to investments and costs of infrastructure, communication, medical-related equipment, and software.

In Saudi Arabia, a model was suggested for cloud enterprise resource planning adoption that combined the TOE (technology-organization-environment) model with the DOI (Difussion of

Innovation) to create a four-dimensional model with domains for technology, organization, environment, and innovation[230]. The proposed methodology was thought to provide practical guidance for effective cloud ERP adoption in Saudi Arabia and to aid other developing countries. These examples are provided to demonstrate how varied demands, cultures, and surroundings make it impossible to adapt a single paradigm to the Iraqi healthcare situation[230]. This assumption was further supported by researchers, stating that diverse cultures must verify the existing theory/model in the context of use. Furthermore, it can be stated that the majority of studies on cloud adoption in healthcare imposed some constraints relating to factors, context, and aim of use[231].

A system's compatibility refers to how well it fits an individual's existing values, previous practices, and current needs. In this context, Compatibility can be defined in this study as the degree to which the cloud health information system is compatible with the work practices or preferences of healthcare professionals[232]. According to the study, determining how well a health information system fits an individual's needs is crucial for shaping their system usage behavior. However, system compatibility has not been fully investigated as a significant facilitator in Iraqi healthcare organizations[232]. Literature showed that compatibility is an important factor to consider when examining new technology adoption[233]. Literature has indicated that the compatibility of a health information system significantly influences and has an impact on healthcare professionals' and information managers' acceptability as a whole[234]. This aspect was supported by other studies, with the discovery that system compatibility is the first facilitator to shape a positive IT attitude and usage behavior[235].

This is also evident from researchers who asserted that the lack of system compatibility across healthcare organizations, health information management professionals and web-based users is

a crucial factor that needs to be considered when attempting to integrate modern technology[236]. This also extends to other studies on how software compatibility can be associated with an individual's behavior regardless of the case complexity and environmental settings[236]. In addition, it is believed that lack of system compatibility in Iraqi hospitals may potentially result in a significant barrier to complete realization of merging medical data across departments.

The study's major goal was to model the relationship between the key parameters influencing health information management professionals' use of cloud health information systems in Iraq. Compatibility, complexity, security, and privacy were found to positively and significantly affect health information management professionals' confirmation and behavioral control, according to the statistical analysis findings. The latter, on the other hand, was found to have a beneficial impact on health information management professionals' use of cloud computing services[238].

In terms of complexity, findings revealed that the health system's complexity had a favorable impact on health information management professionals' confirmation and behavioral control. This is most likely due to their perceptions of the cloud system's capabilities to drive their behavioral aspects and regulate their work. which corresponds to a study that looked at the connections between system elements and individual behavioral changes in a cooperative setting[239]. this extends the effort put in by some researchers on how the complexity of the system can regulate one's behavioral confirmation to process various tasks. However, there was little evidence in the literature that system complexity had a direct impact on health information management professionals' confirmation[240].

Researchers wondered how people's perceptions of complexity can influence their behavioral confirmation depending on their expectations in the environment[241]. In addition, it is believed

that both aspects of complexity and expectations are embedded in the notion of effective utilization of technological advances. This is because the complexity of a system and its cost may rise depending on the type of service and user demands to process and manage medical records.

In the aspect of security, the results demonstrated that the security of a cloud system had a strong favorable effect on health information management professionals' affirmation of the technology. This could be because they viewed cloud technology as a secure platform to communicate and share relevant health data to other health team[242]. This finding is relevant to the few researchers, who stressed the relevance of system security in regulating people's behavioral norms towards the usage and adoption of technology in various settings[242]. This process has been claimed to balance data security with user convenience or control, although it has yet to be examined in the healthcare setting.

Behavioral control, on the other hand, is the impression of a lack of or existence of resources needed to carry out an activity. The system's security features can be considered a primary driver of perception. As a result, it is believed that investigating the relationships between cloud security and behavioral variables could lead to new developments in the healthcare field. Health information management professionals at Iraqi hospitals, on the other hand, must believe that they have significant control over the resources and operational factors that affect their technology use. This control would be correctly coupled with system support by providing the security settings necessary for them to perform their duties.

In terms of privacy, the findings revealed that system privacy improved health information management professionals' confirmation and control. This is understandable, given privacy

concerns about patients' medical information are among the most widely researched human-centered topics, as online platforms by their very nature allow data to be shared and distributed across spaces. Individuals' concerns about information privacy can influence their attitude and intention to use technology[243]. this was supported by some experts, who implied that there is a link between privacy perception and consent to the collection and use of personal medical data by healthcare users[244]. It also extends the study done by researchers on how an institution perceives the privacy of data under its control.

However, a survey of the literature revealed that there has been relatively little research on the impact of system privacy on behavioral confirmation. Iraqi hospitals would benefit greatly from privacy-enhancing technologies such as the cloud. It is believed that perceived control can boost health information management professionals' trust in cloud systems and have a significant impact on their overall use of the technology in Iraqi hospitals, also providing up-to-date privacy protection policies for the cloud system can contribute to physicians' behavioral confirmation and use in different management and sharing activities.

Research conducted in Malaysia public hospitals revealed various challenges that Malaysia has encountered when implementing the Hospital Information System, including limited financial resources because the HIS is a project under the Ministry of Health, which has complete control over funding[245]. Low Acceptance Level because some of the health information management professionals, especially those who work more than 20 years continue to use and rely on paper[246]. Interoperability (the ability of computerized systems to easily relate and communicate with one another) is a significant challenge in implementing the system, lack of user skill towards the system is also a big challenge because the staff lacks computer and basic IT skills due to a lack of knowledge in IT[247].

The Malaysian government implemented Health Information System (HIS) across the country to expand the use of technology to improve healthcare delivery, but little is known about the benefits and drawbacks of HIS adoption in each institution. The goal of implementing a HIS is to improve healthcare quality, increase productivity, and make data collection and recording easier. In comparison to a manual approach, HIS can reduce errors and improve communication among employees[248]. Nonetheless, implementing the HIS in hospitals is not an easy task, as there are numerous challenges, notably in terms of hierarchical variables, because the clinic is a vast organization with complicated authority hierarchies[249].

A model approach was used by the researcher to determine whether or not the Health Information System (HIS) installation is successful, this approach assesses the effective implementation of a data framework using three criteria: service quality, system quality, and information quality[81]. Data quality is one of the framework's most appealing features, as it is associated with significance, precision, succinctness, fulfillment, justifiable, cash, opportuneness, and ease of use[250,251].

The nature of patient care, understanding rights, and medical services specialists and their work practice are all heavily influenced by information security and the secure administration of patient and other information using HIS[251]. furthermore, this study supports the previous work done in Iraq on security of patient record[243]. Securing the privacy of health and other administrative information in HIS is critical to ensuring that people's rights to privacy are respected. Reduced copy work: A good healing HIS should reduce data duplication and end-user time spent archiving patients and administrative data[252].

2.3.3 Attitude of Health Information Management Professionals, Information System Utilization, and Service Delivery

The general attitude of health information management professionals when utilizing a computer, affects service delivery, negatively or positively. An information system used in any institution should be compatible and not complicated, easy to understand and use by workers in that institution, and above all must be able to generate results useful to provide quality services to patients in the Hospitals. The Health Information Management Professionals are the first point of call in any Hospital, therefore their manner of approach to patients, influences their decision on whether to visit again and continue treatment in the same facility. Excellent health-care delivery is a requirement in any country, and quality health care is a human right that must not be surrendered for anything.

The attitude of health information management professionals has a significant impact on the quality of care provided. Nursing care is also one of the most important healthcare services that aid in the recovery of patients[253]. When it comes to the crucial training and logistics, such as constant access to information technology and communication channels necessary to maintain successful health information management among healthcare facilities, urban healthcare administrators have an advantage over their rural counterparts. According to this presumption, urban health care managers have sufficient knowledge and experience in health information management compared to their counterparts in rural areas[253].

In Ghana, health information management is gradually moving from the paper-based era to the new ruling era of Information Technology and Communication applications leading to the approval and use of a web-database application called District Health Information Systems 2 (DHIS 2). Notwithstanding, the lack of constant telecommunication network and internet

connectivity coupled with inadequate human resource capacity in the rural setting, has made quality health information management a difficult task to achieve[254]. A study was conducted in Ghana to assess the difference in the knowledge and practice of health information managers among rural and urban health facilities in selected districts in Ghana.[254] This study was conducted in sixty-seven (67) government-owned health facilities in Asokore Mampong (urban) and Offinso North (rural) Districts in the Ashanti Region of Ghana. The urban and rural districts have a projected population of 191,402 and 83,440 with 41 and 27 government health facilities respectively. The study employed a structured questionnaire with closed-ended questions to elicit data from all 67 respondents from 1st February to 10th March 2022. Epi-info was used in analyzing data collected from the interview[254].

The study revealed Adequate health information management knowledge levels for rural and urban settings were 36.7% and 34.3% respectively. The level of adherence to good health information management practices for rural and urban were 53.3% and 43.2% respectively. The study further revealed no statistical difference in the mean scores for knowledge $t(65) = -0.08$, $p = 0.94$ and practice $t(65) = -0.59$, $p = 0.56$ of health information management between rural and urban settings[254]. This implies that proper training and experience in both urban and rural settings have relatively low levels of health information management, which calls for ongoing, specifically focused capacity training for health managers to advance understanding and practice. Continuous capacity building tailored to health information management is therefore paramount to ensure adequate knowledge and practice to improve health information practice among health facility managers in both rural and urban settings[254].

Health information officers' duties include collecting and processing data from the point of collection to the point where it can be compiled and ready for analysis, as well as communicating

the analysis's findings to staff for use in making decisions and preparing to improve service delivery. It is a sustainable method for gathering, analyzing, publishing, and utilizing information health services operate. Transfer of information begins with health professionals gathering and compiling data at the point of service[255]. A study was conducted in Cape Town Metro area in the Western Cape of South Africa, which has about 41-day hospitals, health centres, and clinics that provide mental health services, of these, 14 health facilities were selected for inclusion in the study. The study employed a qualitative approach to explore and describe health information officers' view of mental health information processing and utilization. For proper care and treatment of people with mental health conditions, access to structured and thorough information and communication is essential[255].

Information and communication technology allowed for the management of mental health mechanisms to prevent patients with cooperative families from being readmitted to hospitals, note that information management systems offer healthcare providers an opportunity to improve standards of patient care, not only by accessing and exchanging relevant information on the individual patient but also by immediate access to patient information and up-to-date research in the field. Data were collected using individual semi-structured interviews with 14 participants, held at times and locations convenient to them. The result shows that the health information officers have limited skills to analyze the data to be used at the facility level, therefore, facility-level systems for information analysis and utilization do not exist, and there were barriers associated with information collection and processing[255]. The findings further revealed that the health information officers at the Primary Health Care level did not have adequate knowledge and skills in collecting and processing health information, such as accurate recording and conducting simple analysis of the health data for use at the facility level. There were concerns

about the capability of some health information officers in terms of computer skills, even though they had a long service history in the health facility, they had no computer literacy skills training in order to transform the paper-based systems to electronic recoding of health data. Factors that need to be addressed for effective implementation of a new system are training the implementers, such as the health information management professionals, developing a sound management system, and having a strong leadership[255].

Through different e-health projects, Information and Communication Technologies (ICT) have revolutionized healthcare delivery, especially in the fields of disease control, diagnosis, patient management, training, communication, storage, and retrieval of medical information. Despite these advantages, health information managers are still lacking in their ability to effectively use and apply new ICT facilities in the course of their work at healthcare institutions[256]. A study was conducted in the south-east region of Nigeria, Nnewi on ICT knowledge and utilization level of health information managers and how it affects their job performance. A descriptive study was conducted involving 22 selected government-owned, mission/faith-based, and private health institutions from over 4,093 health institutions that provided patient care information support services and are licensed Health Information Managers[256]. A structured questionnaire was used to elicit responses from 411 health information managers in the selected health institutions using a stratified sampling technique.

The results however show that majority of the Health Information Managers in this study have adequate ICT knowledge through training received from self-study, but utilization was poor because most of these health institutions visited do not have ICT facilities. Nevertheless, they are competent in discharging their duties. Provision of adequate funding for ICT, computerization of

health institutions, and training of health information managers on the use of ICT to enhance job performance are recommended[256].

2.4 Conceptual Framework

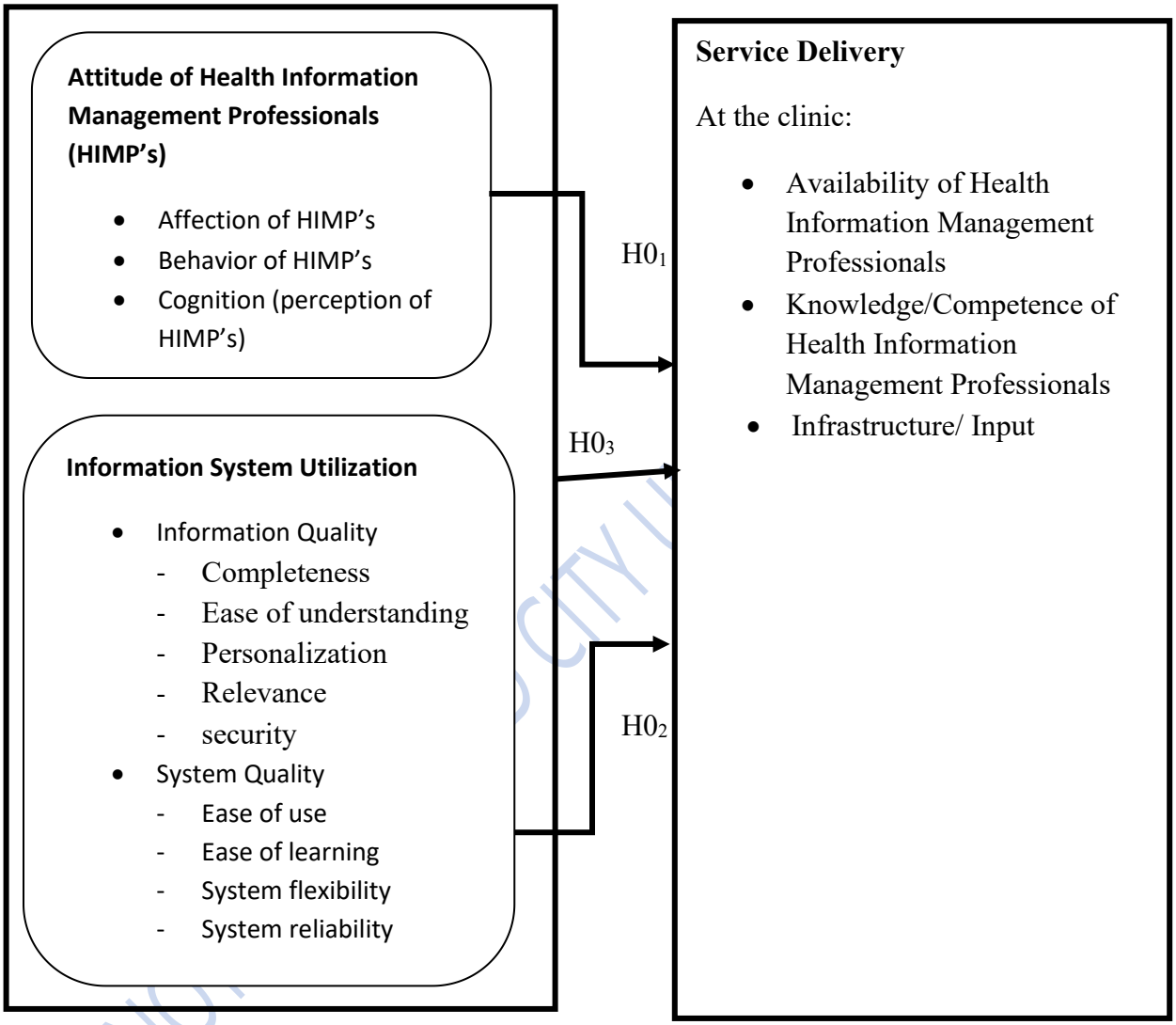

Figure 2.3 Conceptual Model of Attitude of Health Information Management Professionals, Information System utilization and Service Delivery (Source: Researcher, 2022)

The conceptual framework shows the relationship between the independents and dependent variables as well as the construct of the variables. The diagram clearly depicts that attitude of health information management professionals and its constructs have direct impact on service delivery. The model shows that health workers attitude rest on construct such as affective

(emotions) how a professional feel delivering certain services. The more the positivity, the better the services, behavioural (conative) this denotes the professional's intention, as well as the way and manner in which a task is done, which could be influenced, and cognitive (perception) this denotes the thoughts and beliefs a professional has towards a job function, which directly affects service delivery. The assumption of this study is that the right and positive attitude portrayed by healthcare professionals brings about a better service delivery. It is also expected that when health workers are properly trained with the right skill to perform a job function as well as adequate provision of infrastructural facilities needed to work well are being put to place, patient care can therefore be appropriately delivered.

Based on this study, various metrics have been highlighted to measure both the independent and independent variables. Affective, Behavioural, and Cognitive to serve as the measuring indicator for Attitude, Information, and System Quality to serve as a measuring indicator for Information System Utilization, while Availability of Health Information Management Professionals, Health information management professionals Knowledge/Competence, Infrastructure, and Input are measuring indicators for Service Delivery.

2.5 Summary of Literature Reviewed

Service Delivery is key in any organization, the healthcare industry is not left out. Several studies have been conducted on Attitude of Health Information Management Professionals,

Information System Utilization on service delivery. However, there is a gap worthy of investigation. Following this, other related studies done in this regard are being identified in the summary below.

Research done on the Conundrum of bureaucratic processes and healthcare service delivery in government hospitals in Nigeria discovered the inefficiency and delays from the hospital's bureaucratic management structures. Due to bureaucratic inclination, the majority of healthcare personnel have a negative attitude toward their jobs, which has a significant negative impact on service quality for patients and their healthcare system, not only the healthcare sector, but virtually all public parastatals, ministries, and agencies are symbolic with delayed and slow attention when it comes to quality and efficient service delivery, and the Nigeria healthcare system is not an exemption. The study surveyed 600 outpatients and attendees visiting tertiary and government hospitals in Nigeria using a descriptive design to obtain data from the respondents. A research instrument, a questionnaire, was used to gather data. Out of the 600 outpatients visiting the 20 hospitals in government and tertiary hospitals, 494 responses were returned from the attendees, which isn't up to an 80 percent response rate and may unlikely give a reliable result[38].

A study on Measuring e-commerce success. This success model clearly needs further development and validation before it could serve as a basis for the selection of appropriate IS measures, although, several scholars modified or extended the model throughout the years, while others adapted it for specialized purposes like knowledge management or e-commerce. Service quality which is a major indicator to measuring system utilization was not included in the model, also, measuring the amount of time a system is used does not properly capture the relationship between usage and the realization of expected results[84].

A study of inter-relationships and behaviour implied that the ABC model has largely fallen out of favor in social psychology for a long time, due to the fact that it is widely understood that behavior should not be subsumed under attitude. Perhaps they should be viewed as independent entities. In as much as the ABC model is one of the most used attitude models from social psychology, which examines the relationship between affective, cognition, and overall attitudes[130].

A study done on human-wildlife has highlighted those cognitive terms proved more important than affective terms. The model did not account for the various social and cultural factors which are thought to affect attitudes, found to be significant. factors such as cultural background, education, and affluence, influence overall attitudes and should therefore be included in the model[132].

A study conducted on Immigrant women's experiences of maternity services in Canada, this research has discovered that language is still another obstacle to patient-provider communication. This is consistent with the findings of a Canadian study that found that failing to address language barriers can lead to misunderstandings, problems with informed consent, inadequate comprehension of diagnoses and treatments, dissatisfaction with care, preventable morbidity and mortality, and disparities in prescriptions, test ordering, and diagnostic evaluations. Linguistic barriers were one of the problems or challenges affecting provider-patient communication. This barrier may be challenging to overcome due to current policies in Malawi where civil servants and other personnel are posted to any part of the country without consideration of their ability to speak the dominant languages of those areas[167].

A study on Cloud computing in support of supply chain information system infrastructure. According to the study, determining how well a health information system fits an individual's needs is crucial for shaping their system usage behavior. However, system compatibility has not been fully investigated as a significant facilitator in Iraqi healthcare organizations. Compatibility is an important factor to consider when examining new technology adoption, compatibility of a health information system significantly influences and have impact on healthcare professionals' acceptability[236].

A research conducted in Malaysia revealed that Malaysian government implemented Health Information System (HIS) across the country to expand the use of technology and improve healthcare delivery, but little is known about the benefits and drawbacks of HIS adoption in each institution. The goal of implementing a HIS is to improve healthcare quality, increase productivity, and make data collection and recording easier. In comparison to a manual approach, HIS can reduce errors and improve communication among employees[248]. Nonetheless, implementing the HIS in hospitals is not an easy task, as there are numerous challenges, notably in terms of hierarchical variables, because the clinic is a vast organization with complicated authority hierarchies[249]public hospital revealed various challenges that Malaysia has encountered when implementing the Hospital Information System, including limited financial resources because the HIS is a project under the Ministry of Health, which has complete control over funding. Low Acceptance Level because some of the employees, especially those who work more than 20 years continue to use and rely on paper. Interoperability (the ability of computerized systems to easily relate and communicate with one another) is also a significant challenge in implementing the system, lack of user skill towards the system is also a big challenge because the staff lacks computer and basic IT skills due to a lack of knowledge in IT[249].

It has been observed that perhaps, it seems based on what has been reviewed in this study, there is scarcity of research on attitude of health information management professionals, information system utilization and service delivery in National Orthopaedic Hospital, Igbobi, and Federal neuro-psychiatric Hospital, yaba, Lagos State. Therefore, this is what the study is set to investigate into.

Endnotes

1. Geneva, *World Health Organization, Delivering quality health services, a global imperative for universal health coverage, Organization for Economic Co-operation and Development,* 2018

2. S.L.,Vargo, & R.F.,Lusc,. *Evolving to a new dominant logic for marketing,* **Journal of Marketing,** 68, 1, 2008, 1-17

3. R.F. Lusch, S.LVargo, & M. O'Brien, *Competing through service, insights fromservice-dominant logic,* **Journal of Retailing,** 83, 1, 2007, 5-18

4. P. Güntürkün, & L.M. Schons, *Engaging Customers in Co-Production Processes: How Value-Enhancing and Intensity-Reducing Communication Strategies Mitigate the Negative Effects of Co-Production Intensity,* **Journal of Marketing** 79, 6, 2015

5. Z.M. Alzaydi, A.Al-Hajla, B. Nguyen, & C. Jayawardhen, *A review of service quality and service delivery Towards a customer co-production and customer-integration approach,* **Business Process Management Journal**, 24, 1, 2018, 295-328

6. A.R. Varming, R.Torenholt, T.Andersen, B.L. Møller,& I. Willaing, *Targeting "hardly reached" people with chronic illness: a feasibility study of a person-centered self-management education approach.* **Patient Prefer Adherence**, 12, 2018, 275-289

7. K.S. Osundina, & R.O. Opeke, *PATIENTS' WAITING TIME: INDICES FOR MEASURING HOSPITAL EFFECTIVENESS* **International Journal of Advanced Academic Research,** 3, 10, October, 2017, 2488-9849

8. O.O. Oleribe, J. Momoh, B.S. Uzochukwu, F. Mbofana, A. Adebiyi, T. Barbera, R. Williams, & S.D. Taylor-Robinson, *Identifying Key Challenges Facing Healthcare Systems In Africa And Potential Solutions.* **International Journal of General Medicine**, 6, 12, Nov, 2019, 395-403

9. E. M. Winpenny, C. Miani, E. Pitchforth, S. King, & M. Rolan, *Improvingthe effectiveness and efficiency of outpatient services, A scoping review of interventions at the primary-secondary care interface,* **Journal of Health Services Research Policy,** 22, 1, 2017, 53–64

10. G. Narayanamurthy, A. Gurumurthy, N. Subramanian, & R. Moser, *Assessing the readiness to implement lean in healthcare institutions, A case study,* **International Journal of Production Economics,** 197, 2018, 123–142

11. A.V. Roth & L.J. Menor, *Insights into service operations management, a research agenda,* **Production and Operation Manage**r 12, 2, 2003, 145–164

12. S. Haz´ee, Y.V. Vaerenbergh, C. Delcourt, & S. Kabadayi, *Service delivery system design for risk management in sharing-based product service systems, a customer-oriented approach.* **International Journal of Operations and Production Management.** 40, 4, 2020, 459–479

13. K.N. Lemon, &, P.C. Verhoef, *Understanding customer experience throughout the customer journey.* **Mark Journal,** 80, 6, 2016, 69–96

14. F. Seyitoğlu, & S.A Ivanov, *conceptual framework of the service delivery system design for hospitality firms in the (post-)viral world: The role of service robots*. **International Journal of Hospitality Management,** 91,102661, 2020

15. D.R. Fesenmaier, & Z. Xiang, *Design Science in Tourism, Foundations of Destination Management.* Springer, 2017

16. AA. Jaaron, & C.J. Backhouse, *Fostering sustainable performance in services through systems thinking.* **Service Industries Journal,** 39, 15–16, 2019, 1072–1098

17. S. Ivanov, & C. Webster, Robots, *Artificial Intelligence and Service Automation in Travel, Tourism and Hospitality.* **Emerald Publishing, Bingley,** UK. 2019

18. C.S. Liao, & H.K. Chuang, *Tourist preferences for package tour attributes in tourism destination design and development*. **Journal of Vacation Marketing,** 26, 2, 2020, 230–246

19. M.D. Tregua, A. Auria, & H. Costin, *10yearschallenge, how co-creation permeated tourism research. A bibliometric analysis.* **European Journal of Tourism Research,** 24, 2409, 2020

20. F.N. Owusu, S. Nwankwo, & B. Dason, *Measuring service quality and patient satisfaction with access to public and private healthcare delivery.* **International Journal of Public Sector Management,** 23, 3, 2010, 203-220

21. Z. Zhu, B. Heng, & K. Teow, *Simulation study of the optimal appointment number for outpatient clinics.* **International Journal of Simulation Modelling (IJSIMM).** 8, 3, 2009, 156-165

22. Z. Xie, & C. Or, *Associations Between Waiting Times, Service Times, and Patient Satisfaction in an Endocrinology Outpatient Department: A Time Study and Questionnaire Survey*, **National Library of Medicine**, Jan, 2017

23. S. Vahdat, *The complex effects of adipokines in patients with kidney disease.* **Journal of Research in Medical Sciences,** 23, 1, 2018, 60

24. S, Manfred, *Congestion control for differentiated healthcare service delivery in emerging heterogeneous wireless body area networks.* **IEEE Wirel Communications,** 21, 2, 2017, 81-90

25. K.O. Frimpong, A. Wilson, & N.O. Frimpong, *Service experiences and dyadic value co-creation in healthcare service delivery, a CIT approach.* **Journal of Service Theory and Practice.** 25, 4, 2015, 443-462

26. A.E. Naini, S. Vahdat, Z.P. Hedaiati, S. Shahzeidi , A.H. Pezeshki, & H. Nasri, *The effect of vitamin D administration on serum leptin and adiponectin levels in end-stage renal disease patients on hemodialysis with vitamin D deficiency: a placebo-controlled double-blind clinical trial.* **Journal of Research in Medical Sciences,** 21, 2016, 1-1

27. M.P. Silver, *Patient perspectives on online health information and communication with doctors: a qualitative study of patients 50 years old and over.* **Journal Medical Internet Research,** 17, 1, 2015,19

28. M.N. Hajli, *Developing online health communities through digital media.* **International Journal of Information Management.** 34, 2, 2021, 311-314

29. A. Peine, & E.H. Moors, *Valuing health technology, habilitating and prosthetic strategies in personal health systems.* **Technological Forecast and Social Change.** 93, 2015, 68-81

30. L. Rajabion, A.A. Shaltooki, M. Taghikhah, A. Ghasemi, & A. Badfar, *Healthcare big data processing mechanisms: the role of cloud computing,* **International Journal of Information Management,** 49, 2019, 271-289

31. E. Martínez-Caro, J.G. Cegarra-Navarro, A. García-Pérez, & M. Fait, *Healthcare service evolution towards the Internet of Things: an end-user perspective.* **Technological Forecasting and Social Change.** 136, 2018, 268-276

32. K. Osei-Frimpong, A. Wilson, & F. Lemke, *Patient co-creation activities in healthcare service delivery at the micro level, the influence of online access to healthcare information.* **Technological Forecasting and Social Change.** 126, 2018, 14-27

33. Geneva, *World Health Organization, Delivering quality health services, a global imperative for universal health coverage, Organization for Economic Co-operation and Development,* 2018

34. S.B. Sachdev, & H.V. Verma, *Relative importance of service quality dimensions a multisectoral study,* **Journal of Services Research,** 4, 1, 2004

35. P. Padma, C. Rajendran, & S.L. Lokachari, *Service quality and its impact on customer satisfaction in Indian hospitals, perspectives of patients and their attendant, Benchmarking,* **An International Journal,** 17, 6, 2010, 807-841

36. H. Chahal, & N. Kumari, *Consumer perceived value, the development of a multiple item scale in hospitals in the Indian context,* **International Journal of Pharmaceutical and Healthcare Marketing,** 6, 2, 2012, 167-190

37. N.X. Nguyen, K. Tran, & T.A. Nguyen, Impact of Service Quality on In-Patients' Satisfaction, Perceived Value, and Customer Loyalty: A Mixed-Methods Study from a Developing Country. **Patient Prefer Adherence**. 15, 2021, 523-2538

38. O.L. Kuye, & O.E. Akinwale, *Conundrum of bureaucratic processes and healthcare service delivery in government hospitals in Nigeria,* **Journal of Humanities and Applied Social Sciences,** 3, 1, 2021, 25-48

39. K.T. Segel, *Bureaucratic is Keeping Health Care from Getting Better,* **Harvard Business Review,** October, 2017

40. O.L. Kuye, & O.E. Akinwale**,** *Conundrum of bureaucratic processes and healthcare service delivery in government hospitals in Nigeria***, Journal of Humanities and Applied Social Sciences,** 3, 1, 2020

41. E.O. Ezeani, *Fundamentals of public administration,* **Snaap Press Ltd,** Enugu.2018

42. M.I. Irfan, *Survival and dysfunctions of bureaucracy, a critical analysis of public bureaucracy in Sri Lanka, Advances in Sciences and Humanities,* 2, 4, 2016, 31-39

43. R.N. Nwankwo, M.O. Ananti, & M.H. Adubueeze, *Bureaucratic corruption and practice of public administration in Nigeria,* **International Journal of Economics Commerce and Management,** 111, 12, 2015, 680-697

44. A. Agweyu, T. Masenge, & D. Munube, *extending the measurement of quality beyond service delivery indicators,* **BMG Global health,** 5, 2, Dec, 2020

45. C.K. Gomathy, *Effects of employees attitude to work on productivity.* **International journal of scientific research in engineering and management,** 06, 2022

46. S.P. Yanti, T.P. Pengaruh, & K. Keterampilan, *Bank Negara Indonesia Cabang Makassar.* **Master Thesis Universitas** Hasanuddin. 2012

47. D.L. Estacio, *Job Attitude as a Factor on Employees Performance,* **social psychology**, 5, 3, 2018

48. A. Damianus, A. Luciano, A. Ubasa, & T. Magallanes, *Attitude toward the work and its influence on the Individual work performance of employees: Basis for Attitude Management,* **Technium Social Science Journal**, 18, 1, 2021, 378-394

49. T.A. Smith, D.J. Schleicher, W.J. Casper, J.D. Watt, & G.J. Greguras, *It's All in the Attitude, The Role of Job Attitude Strength in Job Attitude-Outcome Relationships*. **The Journal of applied psychology,** 100, 4, 2015, 1259-1274

50. F.D. Zeena, & P. Suresh, *Employee Attitude towards Organisational Commitment, A Literature Survey.* **Journal of Business and Management,** 20, 1, January, 2018, 21-27

51. M.T. Shafazawana, Y.Y. Cheah, M.S. Zuliawati, & S. Kavitha, *Managing Job Attitude, The Roles of Job Satisfaction and Organizational Commitment on Organizational Citizenship Behaviors.* ***Procedia*** **Economics and Finance,** 35, 2016, 604-611

52. S. Ahmed, *Attitudes towards English Language Learning among EFL Learners at UMSKAL* **Journal of Education and Practice,** 6, 18, 2015, 2222-1735

53. M. Rokeach, *Attitudes: Nature, in D. L. Sills (Ed.), International Encyclopedia of the Social Sciences,* **Macmillan and Free Press, New York.** 1968, 450

54. J.A. Bargh, *Four horsemen of automaticity: Awareness, efficiency, intention, and control in social cognition,* **Handbook of social cognition,** R. S. Wyer Jr. and T. K. Srull (Ed.), Erlbaum, Hillsdale, NJ, 1994, 1-40

55. J.S.B.T. Evans, & K.E. Stanovich, *Dual-process theories of higher cognition: Advancing the debate,* **Perspectives on Psychological Science**, 8, 3, 2013, 223-241

56. P. Legris, J. Ingham, & P. Collerette, *Why do people use information technology? A critical review of the technology acceptance model, Information & Management,* 40, 3. Accessed 2003, 191-204

57. W. Wood, J.M. Quinn, & D.A. Kashy, *Habits in everyday life: Thought, emotion, and action,* **Journal of Personality and Social Psychology** 83, 6, April 2022, 1281-1297

58. A.H. Eagly, & S. Chaiken, *The psychology of attitudes, Harcourt Brace Jovanovich College Publishers,* **Fort Worth, TX**, 1993

59. C.M. Falbe, & G. Yukl, *Consequences for managers of using single influence tactics and combinations of tactics,* **Academy of Management Journal,** 35, 3, 1992, 638-652

60. C. Muschalik, I. Elfeddali, & M.J. Candel, *et al. Does the discrepancy between implicit and explicit attitudes moderate the relationships between explicit attitude and (intention to) being physically active?*. **BMC Psychology,** 7, 52, August, 2019

61. M.W. Vasey, C.N. Harbaugh, A.G. Buffington, C.R. Jones, & R.H. Fazio, *Predicting return of fear following exposure therapy with an implicit measure of attitudes, Behaviour Research and Therapy,* 50, 12, 2016, 767-774

62. I. Ajzen, *Nature and operation of attitudes,* **Annual Review of Psycholog,** 52, 1, Accessed 2001, 27-58

63. M.A. Zayyad, & M. Toycan, *Factors affecting sustainable adoption of e-health technology in developing countries, an exploratory survey of Nigerian hospitals from the perspective of healthcare professionals,* **Peer Reviewed Journal,** 1 Mar, 2018

64. S.R. Simon, R. Kaushal, P.D. Cleary, C.A. Jenter, L.A. Volk, E.G. Poon, E.J. Orav, D.H. Williams, & D.W. Bates, *Correlates of electronic health record adoption in office practices: a statewide survey.* **Journal of the American Medical Informatics Association,** 14, 1, 2009, 110-117

65. M.R. Kgasi, & B.M. Kalema, *Assessment e-health readiness for rural South African areas.* **Journal of Industrial and Intelligent Information,** 2, 2, 2014, 131-135

66. E.O. Justice, *E-healthcare/telemedicine readiness assessment of some selected states in Western Nigeria.* **International Journal of Engineering and Technology**, 2, 2, 2012 195-201

67. T.M. Ostrom, *The relationship between the affective, behavioral, and cognitive components of attitude.* **Journal of experimental social psychology,** 5, 1, 1969, 12-30

68. D.T. Mizokawa, & N. Hansen-Krening, *The abc's of attitudes toward reading, Inquiring about the reader's response.* **Journal of Adolescent & Adult Literacy,** 44, 2000, 72-79

69. C. Gobinda, M. Julie, G. Val, & W. Peter, *Transforming Digital Worlds:* 13th **International Conference,** 10766, Mar, 25-28, 2018

70. E.P. Backes, & R.J. Bonnie, *The Promise of Adolescence, Realizing Opportunity for All Youth. Washington (DC),* **National Academies Press (US),**16 May, 2019

71. A.A. Ibrahim, & O.P. Sunday, *Effects of Work Motivation and Self-Esteem on Career Fulfillment Among Health Information Management Personnel in Federal Teaching Hospitals in Southern Nigeria,* **Journal of Human Resource Management**, 8,2, 2020, 85-95

72. A. Bitagi, *Information resources utilization for research by scientist in agricultural* **research institute in Nigeria***,* 2017

73. V. Milinevska, & N. Kudrenko, *The concept and types of information systems in management of enterprise.* **National University of Food Technologies**. 26, 2020, 1-5

74. K.I. Adebisi, *The role and Information and Communication Technology in the Management and Entrepreneurship Education in Nigerian tertiary institution Vocational* **Business Educator***,* 2, 1, 2013

75. S.O. Nwafor, *Information Technology. A modern tool in the Administration of Universities in Rivers State.* **Nigerian Journal of Educational Administration and Planning,** 5, 2, 2015, 184-188

76. S. Valverde, *Major transitions in information technology.* Philos Trans R Soc Lond B **Biological Science** 371, 1701, 2016

77. L. Dagiliene, & K. Šutiene, *Corporate sustainability accounting information systems: a contingency-based approach.* **Sustainability Accounting, Management and Policy Journal,** 31 May, 2019

78. F. Ibrahim, D.N.H. Ali, & N.S.A. Besar, *Accounting Information Systems (AIS) in SMEs: Towards an Integrated Framework.* **International Journal of Asian Business and Information Management (IJABIM),** *11,* 2, 2020, 51-67

79. S. Michel, A. Michaud-Trévinal & F. Cocula, *Net Impacts in Front Office IS: a First Operationalization of Delone and McLean Model in the Banking Sector*. **The Electronic Journal of Information Systems Evaluation**, 22, 2, 2019, 92-112

80. M. Kirmizi,and & B. Kocaoglu, *The key for success in enterprise information systems projects: development of a novel ERP readiness assessment method and a case study.* **Enterprise Information Systems***,* 14, 1, 2020, 1-37

81. S. Petter, W. DeLone, & E. McLean, *Measuring information systems success: models, dimensions, measures, and interrelationships.* **European journal of Information Systems,** 17, 3, 2008, 236-263

82. W.H. DeLone, & E.R. McLean, *Information systems success measurement. Foundations and Trends in Information Systems, 2*, 1, 2016, 1-116

83. S.L. Shagari, A. Abdullah, & R.M. Saat, *Accounting information systems effectiveness: Evidence from the Nigerian banking sector.* **Interdisciplinary Journal of Information, Knowledge, and Management,** 12, 2017, 309- 335

84. W.H. DeLone, & E.R. McLean, *Information systems success: The quest for the dependent variable.* **Information Systems Research***,* 3, 1, 1992, 60-95

85. S. Petter, W. DeLone, & E.R. McLean, *Information systems success: The quest for the independent variables.* **Journal of Management Information Systems,** 29, 4, 2013, 7-62

86. J. Lindgren, *Diffusion of systemic innovations,* **Halmstad University Press,** 5, 1, 2018, 19-28

87. R.M. Walker, F. Damanpour, & C.A. Devece, *Management innovation and organizational performance: The mediating effect of performance management.* **Journal of Public Administration Research and Theory,** 21, 2, 2015, 367–386

88. N. Anderson, K. Potocnic, & J. Zhou, *Innovation and Creativity in Organizations: A State-of the Science Review,* **Prospective Commentary, and Guiding Framework**. 40, 5, march, 2014

89. T.K. Wang, H.J. Ju, & B.J. Jang, *The influencing factors on innovation of local governments: Focusing on the moderating effect of the external-focus culture.* **The Korea Local Administration Review,** 31, 4, 2017, 199–220

90. B.S. Afërdita, *Management Information System and Competitive Advantage,* **Mediterranean Journal of Social Sciences,** 6, 1, January, 2015

91. S. Ko, W. Kim, & K. Lee, *Exploring the Factors Affecting Technology Transfer in Government Funded Research Institutes:* **The Korean Case. J. Open Innov. Technol. Mark. Complex,** 7, 228, 2021

92. S.M. Park, & K.T. Hwang, *A study on the infusion of public administrative information systems: Focusing on the social security information system.* **Informatization Policy**, 25, 2, 2018, 46–66

93. M. S. Sahimi, A. Ahmad, & A. A. Bakar, *"The Iterative Alternating Decomposition Explicit (IADE) method to solve the heat conduction equation,"* **International Journal of Computer Mathematics,** 47, Accessed 2013, 219-229

94. A.A.I. Andayani, E. Martono, & M. Muhamad, *Community Empowerment through Village Development and its Implications for Regional Socio-Cultural Resilience,* **Journal of National Resilience,** 23, 1, 2017

95. N. Gorla, T.M. Somers, & B. Wong, *Organizational impact of system quality, information quality, and service quality,* **Journal of Strategic Information Systems,** 19,2010, 207–228

96. L.F. Pitt, R.T.Watson, & C.B. Kavan, *Service quality, A measure of information systems effectiveness.* **MIS Quarterly,** 19, 2, 1995, 173–188

97. D.H. Peters, A. Garg, G. Bloom, D.G. Walker, W.R. Brieger, & M.H. Rahman, *Poverty and access to health care in developing countries.* **Annals of the New York Academy of Sciences,** 1136, 1, 2008, 161-171

98. A. Omotosho, J. Emuoyibofarhe, P. Ayegba, & C. Meinel, *E-Prescription in Nigeria*: *A Survey.* **Journal of Global Pharma Technology,** 10, 12, 2019, 58 – 64

99. *World Health Organization, Global Diffusion of eHealth: Making Universal Health Coverage Achievable.* **Report of the Third Global Survey on eHealth. Geneva, Switzerland,** 2016

100. K.I. Adenuga, N.A. Iahad, & S. Miskon, *Towards reinforcing telemedicine adoption amongst clinicians in Nigeria.* **International Journal of Medical Informatics.** 104, 2017, 84–96

101. J.V. Gurp, O. Soyannwo, K. Odebunmi, & S. Dania, etal, *Telemedicine's Potential to Support Good Dying in Nigeria:* **A Qualitative Study**. 10, 6, 2015

102. P.E. Idoga, M. Toycan, H. Nadiri, & E. Çelebi, *Assessing factors militating against the acceptance and successful implementation of a cloud based health center from the healthcare professionals' perspective: a survey of hospitals in Benue state, northcentral Nigeria.* **BMC Medical Informatics and Decision Making,** 19, 2019, 14–34

103. R.O. Mason, *Measuring information output: a communication systems approach,* **Information & Management,** 1, 5, 1978, 219–234

104. M.E. Jennex, L. Olfman, P. Pituma, & P. Yong-Tae, *An organizational memory information systems success model: an extension of DeLone and McLean's I/S success model, in:* **Proceedings of the 31st Hawaii International Conference on System Sciences, IEEE Computer Society Press, Hawaii, United States,** 1998

105. U.R. Kulkarni, S. Ravindran, & R. Freeze, *A knowledge management success model: theoretical development and empirical validation,* **Journal of Management Information Systems** 23, 3, 2006, 309–347

106. W.H. DeLone, & E.R. McLean, *Measuring e-commerce success: applying the DeLone & McLean information systems success model,* **International Journal of Electronic Commerce** 9, 1, 2004, 31–47

107. B.L. Myers, L.A. Kappelman, & V.R. Prybutok, *A comprehensive model for assessing the quality and productivity of the information systems function towards a contingency theory for information systems assessment,* **Information Resources Management Journal,** 10, 1, 1997, 6–25

108. P.B. Seddon, S. Staples, R. Patnayakuni, & M. Bowtell, *Dimensions of information systems success, Communications of the Association for Information Systems* 2, 1999, 2–39

109. P.B. Seddon, *A respecification and extension of the DeLone and McLean model of IS success,* **Information Systems Research** 8, 3, 1997, 240–253

110. T. McGill, V. Hobbs, & J. Klobas, *User-developed applications and information systems success: a test of DeLone and McLean's model,* **Information Resources Management Journal** 16, 1, 2003, 24–45

111. P.B. Lowry, G.G. Karuga, & V.J. Richardson, *Communications of the Association for Information Systems,* **Assessing leading institutions, faculty, and articles in premier information systems research journals.** 20, 16, 2007, 142–203

112. J. Iivari, *An empirical test of the DeLone–McLean model of information system success. DATA BASE for Advances in Information Systems,* 36, 2, 2005, 8–27

113. A. Rai, S.S. Lang, & R.B. Welker, *Assessing the validity of IS success models: An empirical test and theoretical analysis.* **Information Systems Research***,* 13, 1, 2002, 5–69

114. P.B. Seddon, & M.Y. Kiew, *A partial test and development of the DeLone and McLean model of IS success.* **In Proceedings of the Fifteenth International Conference on Information Systems. Vancouver: Association for Information Systems,** 1994, 99–110

115. D. Sedera, G. Gable, & T. Chan, *A factor and structural equation analysis of the enterprise systems success measurement model.* **In Proceedings of the Twenty-Fifth International Conference on Information Systems.** Washington, DC: Association for Information Systems, 2004

116. N. Au, E.W.T. Ngai, & T.C.E. Cheng, *A critical review of end-user information system satisfaction research and a new research framework***. Omega***,* 30, 6, 2002, 451–478

117. S. Petter, & E.R. McLean, *A meta-analytic assessment of the DeLone and McLean IS success model: An examination of IS success at the individual level.* **Information & Management,** 46, 3, 2009, 159–166

118. A. Rai, S.S. Lang, & R.B. Welker, *Assessing the validity of IS success models: an empirical test and theoretical analysis,* **Information Systems Research***,* 13, 1, 2002, 5–69

119. T.M. Ostrom, *The Relationship Between the Affective, Behavioral, and Cognitive Components of Attitude.* **Journal of Experimental Social Psychology,** 5, 1, 1969,12–30

120. A.H. Eagly, & S. Chaiken, *Attitude Structure and Function. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.),* **Handbook of Social Psychology***, New York, NY: McGraw-Hill,* 1998, 269-322

121. K. Edwards, *The Interplay of Affect and Cognition in Attitude Formation and Change.* **Journal of Personality and Social Psychology,** 59, 2, Accessed 2015, 202–216

122. M.M.G. Ladero, C.G. Casquet, & J. Singh, *Understanding Factors Influencing Consumer Attitudes toward Cause-Related Marketing.* **International Journal of Nonprofit and Voluntary Sector Marketing,** 20, 1, 2015, 52–70

123. S. Ruiz, & M. Sicilia, *The Impact of Cognitive and/or Affective Processing Styles on Consumer Response to Advertising Appeals.* **Journal of Business Research,** *57*,6, 2004, 657–664

124. A. Pomering, & S. Dolnicar, *Assessing the Prerequisite of Successful CSR Implementation: Are Consumers Aware of CSR Initiatives?* **Journal of Business Ethics,** *85*, 2, 2009, 285–301

125. E.N.M. Nameghi, & M.A. Shadi, *Affective and Cognitive: Consumers Attitude toward Practicing Green (Reducing, Recycling & Reusing).* **International Journal of Marketing Studies,** *5*, 1, 2013, 157–164

126. J. Guerreiro, P. Rita, & D. Trigueiros, *Attention, Emotions and Cause-Related Marketing Effectiveness.* **European Journal of Marketing,** *49*,11/12, 2015, 1728–1750

127. K.D. Konlan, J.A. Saah, A.R. Doat, R.M. Amoah, J.A. Abdulai, & I. Mohammed, *Influence of nurse-patient relationship on hospital attendance. A qualitative study of patients in the Kwahu Government Hospital*, *Ghana,* **Heliyon**, 7, 2, 2021

128. L. Alderson, *The Truth Behind Construction's Mental Health,* Available from https://www constructionnews.co.uk/10019419. 2017

129. S.J. Breckler, *Empirical validation of affect, behaviour and cognition as distinct components of attitude,* **Journal of Personality Social Psychology,** 47, 6, 1984-1191

130. R.M. Sutton, & K. Douglas, *Conspiracy theories and the conspiracy mindset: Implications for political ideology.* **Current Opinion in Behavioral Sciences,** 2020, 2352-1546

131. A. C. Landon, M. H. Jacobs, C. A. Miller, J. J. Vaske & B. D. Williams, *Cognitive and Affective Predictors of Illinois Residents' Perceived Risks from Gray Wolves,* **Society & Natural Resources***,* 2019

132. G. Ma, J. Lin, N. Li, & J. Zhou, *Cross-cultural assessment of the effectiveness of eco-feedback in building energy conservation.* **Energy and Buildings***,* 134, 2017, 329–338

133. A.R. Baron, R.N. Branscombe, & D. Byrne, Social psychology (12th ed.). **Pearson Education**. 2009

134. L.A. Asamani, C.A. Badu, A. Joana, & Maxwell, *Work attitude of Ghanaian nurses for quality health care service delivery,* **International Journal of Research Studies in Management,** 7, 1, 2018, 37-46

135. V.M. Dzomeku, A. Ba-Etilayoo, T. Perekuu, & R.E. Mantey, *In-patient satisfaction with nursing care: A case study at Kwame Nkrumah University of science and technology hospital.* **International Journal of Research in Medical and Health Sciences,** 2, 1, 2013

136. W.K. Asenso-Okyere, I. Osei-Akoto, A. Anum, & A. Adukonu, *The behaviour of health workers in an era of cost sharing: Ghana's drug cash and carry system,* **Tropical Medicine and International Health,** 4, 8, Accessed 2018, 586–593

137. W.Y. Abdel Wahed, E.M. Hefzy, M.I. Ahmed, & N.S. Hamed, *Assessment of Knowledge, Attitudes, and Perception of Health Care Workers Regarding COVID-19, A Cross-Sectional Study from Egypt.* **Journal of Community Health**, 45, 6, 2020, 1242-1251

138. J. Peterson, *The Role of Health Information Management Professionals in the Use of Geographic Information Systems*. **Perspective in Health Information Management,** 2017

139. S.K. Chow, W.Y. Chin, H.Y. Lee, H.C. Leung, & F.H. Tang, *Nurses' perceptions and attitudes towards computerization in a private hospital.* **Journal of Clinical Nursing,** 2015, 1685–96

140. Y.K. Alotaib, & F. Federico, *The impact of health information technology on patient safety.* **Saudi Medical Journal,** 38, 12, 2017, 1173-1180

141. E. Stern, C. Colvin, & N. Gxabagxaba , et al. *Conceptions of agency and constraint for HIV-positive patients and healthcare workers to support long-term engagement with antiretroviral therapy care in Khayelitsha.* **African Journal of AIDS Research,** 16, 1, 2017, 19–8

142. W.T. Maphumulo, & B.R. Bhengu. *Challenges of quality improvement in the healthcare of South Africa post-apartheid: a critical review,* **Curationis**, 42, 1, 2019, 1–9

143. B.L. Genberg, S. Shangani, & K. Sabatino, et al. *Improving engagement in the HIV care cascade: a systematic review of interventions involving people living with HIV/AIDS as peers.* **AIDS and Behaviour,** 20, 10, 2016, 2452–2463

144. M.J. Johnson, & C.R. May. *Promoting professional behaviour change in healthcare: what interventions work, and why? A theory-led overview of systematic reviews***. BMJ Open,** 5, 9, 2015

145. S. Kaplan, K.S. Nteso, & N. Ford, et al. *Loss to follow-up from antiretroviral therapy clinics:* **a systematic review and meta-analysis of published studies in South Africa,** 20, 1, 2019

146. M.A. Bisnauth, N. Davies, S. Monareng, H. Struthers, J.A. McIntyre, & K. Rees, *Exploring healthcare workers' experiences of managing patients returning to HIV care in Johannesburg,* **South Africa. Glob Health Action**, 15, 1, 2022

147. UNAIDS, Joint United Nations Programme on HIV/AIDS. South Africa country profile, 21 May, 2021

148. M.P. Fox, J. Bo, & A.T. Brennan, et al. *Estimating retention in HIV care accounting for patient transfers: a national laboratory cohort study in South Africa.* **PLoS Medicine,** 15, 6, 2018

149. R. Moyo, & A. Salawu, Patients' *perception of doctor-patient health communication in a rural community.* **Communitas***,* 22, 2017, 98–112

150. J. Mason, N. Freemantle, & I. Nazareth, et al. *When is it cost-effective to change the behavior of health professionals?* **Jama**, 286, 23, 2013, 2988–2992

151. M.A. Bisnauth, N. Davies, S. Monareng, H. Struthers, J.A. McIntyre, & k. Rees, *Exploring healthcare workers' experiences of managing patients returning to HIV care in Johannesburg, South Africa.* **Glob Health Action,** 51, 1, 2022 Dec

152. A. Grimsrud, H. Bygrave, & M. Doherty, et al. *Reimagining HIV service delivery: the role of differentiated care from prevention to suppression.* **Journal of International AIDS Society,** 19, 1, 2016

153. V. Friedman, C. Wright, A. Molenaar, T. McCaffrey, L. Brennan, & M. Lim, *The Use of Social Media as a Persuasive Platform to Facilitate Nutrition and Health Behavior Change in Young Adults: Web-Based Conversation Study,* **Journal of Medicine Internet Research,** 24, 5, 2022

154. P.B. Leisen, *The nature of the service quality and satisfaction relationship, empirical evidence for the existence of satisfiers and dissatisfiers, Managing Service Quality:* **An International Journal,** 18, 6, 2008, 537-558

155. I. Bakan, T. Buyukbese, & B.Ersahan, *The impact of total quality service (TQS) on healthcare and patient satisfaction: an empirical study of Turkish private and public hospitals,* **The International Journal of Health Planning and Management,** 29, 3, 2014, 292-315

156. J.J. Cronin, & S.A. Taylor, *Measuring service quality: a reexamination and extension,* **Journal of Marketing,** 56, 3, 1992, 55-68

157. F. Manzoor, L. Wei, A. Hussain, M. Asif, & S. Shah, *Patient Satisfaction with Health Care Services, An Application of Physician's Behavior as a Moderator.* **International Journal of Environmental Research Public Health,** 16, 18, 9 Sep. 2019

158. A. Shabbir, & S.A Malik, *"Measuring patients' healthcare service quality perceptions, satisfaction, and loyalty in public and private sector hospitals in Pakistan",* **International Journal of Quality & Reliability Management,** 33, 5, 2016, 538-557

159. H. Chahal, & S. Mehta, *"Modeling patient satisfaction construct in the Indian health care context",* **International Journal of Pharmaceutical and Healthcare Marketing,** 7, 1, 2013, 75-92

160. A. Naidu*, "Factors affecting patient satisfaction and healthcare quality",* **International Journal of Health Care Quality Assurance,** 22, 4, Accessed 1 June, 2009, 366-381

161. A. Karaca, & Z. Durna, *Patient satisfaction with the quality of nursing care,* 6, 2, 4 Jan, 2019

162. F. Manzoor, L. Wei, A. Hussain, M. Asif, & S.I.A. Shah, *Patient Satisfaction with Health Care Services; An Application of Physician's Behavior as a Moderator*. **International Journal of Environmental Research and Public Health,** 16, 18, 2019

163. A. Njilele C. Ukwe, J. Okonta, & O. Ekwunife, *Development of a patient satisfaction questionnaire for HIV/AIDS patients in Nigeria.* **International Journal of Clinical Pharmacy** 34, 1, 2012, 98–104

164. M.O. Akunne, M.J. Okonta, C.V. Ukwe, T. L. Heise, & O.I. Ekwunife, *Satisfaction of Nigerian patients with health services:* **a protocol for a systematic review**, 8, 256, 2019

165. D.A. Adewole, S. Reid, T. Oni, & A.S. Adebowale. *Factors Influencing Satisfaction with Service Delivery Among National Health Insurance Scheme Enrollees in Ibadan, Southwest Nigeria.* **Journal of Patient Experience**, 9, 2022

166. T. Abebe, D. Erku, B. Gebresillassie, K. Haile, & A. Mekuria. *Expectation and satisfaction of HIV/AIDS patients towards pharmaceutical care provided at Gondar University Referral Hospital, Northwestern Ethiopia*: a cross-sectional study. **Patient Prefer Adherence**, 10, 2016, 2073–82

167. Madula etal, *Healthcare provider-patient communication: a qualitative study of women's perceptions during childbirth*. Madula et al. **Reproductive Health,** 15, 2018, 135

168. P. Madula, F.W. Kalembo, & H. Yu, *et al, Healthcare provider-patient communication: a qualitative study of women's perceptions during childbirth*. **Reproductive Health**, **15**, 135, 2018

169. L. D'Ambruoso, M. Abbey, & J. Hussein, *women's accounts of maternity services during labour and delivery in Ghana.* **BMC Public Health,** 5, 140, 2005

170. E.S. Bazant, & M.A. Koenig, *Women's satisfaction with delivery care in Nairobi's informal settlements.* **International Journal Quality Health Care,** 21, 2022, 79-86

171. P.A. Afulani, L. Buback, F. Essandoh, J. Kinyua, L. Kirumbi, & C.R. Cohen, *Quality of antenatal care and associated factors in a rural county in Kenya: an assessment of service provision and experience dimensions.* **BMC Health Services Research,** 19, 1, 2019, 684

172. P. Madula, F.W. Kalembo, & H. Yu, *et al, Healthcare provider-patient communication: a qualitative study of women's perceptions during childbirth*. **Reproductive Health**, **15**, 135, 2018

173. L. Seljeskog, J. Sundby, & J. Chimango, *Factors influencing women's choice of place of delivery in rural Malawi: an explorative study.* **African Journal of Reproductive Health,** 10, 3, 2006, 66–75

174. C. Kambala, T. Morse, S. Masangwi, & P. Mitunda, *Barriers to maternal health service use in Chikhwawa. Southern Malawi,* **Malawi Medical Journal,** 23, 1, 2011, 1–5

175. R.J. Chadwick, D. Cooper, & J. Harries, *Narratives of distress in south African public maternity settings: a qualitative study.* **Midwifery**, 30, 2014, 862–8

176. S.A. McMahon, A.S. George, J.J. Chebet, I.H. Mosha, R.N.M. Mpembeni, & P.J Winch, *Experiences of and response to disrespectful maternity care and abuse during childbirth; a qualitative study with women and men in Morogoro region.* **Tanzania BMC Pregnancy Childbirth,** 14, 268, 2014

177. K. Austad, A. Chary, B. Martinez, M. Juarez, M.Y. Juarez, C. Ixen, & P. Rohloff, *Obstetric care navigation: a new approach to promote respectful maternity care and overcome barriers to safe motherhood*. **Reproductive Health,** 14, 148, 2017

178. F. Mgawadere, R. Unkels, & A. Kazembe, *et al, Factors associated with maternal mortality in Malawi: application of the three delays model,* **BMC Pregnancy Childbirth, 17**, 219, 2017

179. T. Kabakian-Khasholian, & A. Portela, *Companion of choice at birth: factors affecting implementation.* **BMC Pregnancy Childbirth 17,** 265, 2017

180. D. Sauls, *Effects of labour support on mothers, babies, and birth outcomes.* **Journal of Obstetrics, Gynecologic and Neonatal Nursing,** 31, 2002, 733–41

181. P. Rosen, *Supporting women in labour: analysis of different types of caregivers.* **Journal of Midwifery Women's Health,** 49, 2004, 24–31

182. M.A. Bohren, G.J. Hofmeyr, C. Sakala, R.K. Fukuzawa, & A. Cuthbert, *Continuous support for women during childbirth.* **Cochrane Database System Review**, 7,7, 2017

183. D. Kifle, T. Azale, Y.A. Gelaw, & Y.A. Melsew. *Maternal health care service seeking behaviours and associated factors among women in rural Haramaya District, Eastern Ethiopia: a triangulated community-based cross-sectional study.* **Reproductive Health,** 14, 16, 2017

184. I.I. Okafor, E.O. Ogwu, & S.N. Obi. *Disrespect and abuse during a facility-based childbirth in a low-income country.* **International Journal of Gynecology and Obstetrics** 128, 2015, 110–3

185. M.D. Bolde, A. Bangoura, B.A. Diallo, O. Sall, H. Bolde, A.S. Niakate, J.P. Vogel, & M.A. Bohren, *A qualitative study of women's and health providers' attitudes and acceptability of mistreatment during childbirth in health facilities in Guinea.* **Reproductive Health**, 14, 4. 2015

186. M. Bohren, E.C. Hunter, H.M. Munthe-Kaas, J.P. Souza, J.P. Vogel, & A.M. Gulmezoglu, *Facilitators and barriers to facility-based delivery in low- and mid-income countries: a qualitative evidence synthesis.* **Reproductive Health,** 11, 71, 2014

187. D. Weinstock, *Deer in the headlights: improving patient literacy.* **Journal of Medical Practice Management,** 30, 4, 2015, 273–5

188. H. Al Shamsi, A.G. Almutairi, S. Al Mashrafi, & T. Al Kalbani, *Implications of Language Barriers for Healthcare: A Systematic Review*. **Oman Medical Journal,** 35, 2, 2020

189. F. Okonofua, R. Ogu, K. Agholor, O. Okike, R. Abdus-salam, M. Gana, A. Randawa, E. Abe, A. Durodola, & H. Galadanci, TheWHARC, WHO, FMOH,MNCH *Implementation Study Team. Qualitative assessment of women's satisfaction with maternal health care ,referral hospitals in Nigeria,* **Reproductive Health,** 14, 44, 2017

190. G. Kamwendo, *Language policy in health services: a sociolinguistics study of Malawian referral hospital:* **Helsinki University Printing House**, 2004

191. H. Al Shamsi, A.G. Almutairi, S. Al Mashrafi, & T. Al Kalbani, *Implications of Language Barriers for Healthcare:* A Systematic Review. **Oman Medical Journal,** 35, 2, April, 2020, 30

192. O.T. Arungwa, *Effect of communication on nurse-patient relationship in National Orthopaedic Hospital, Igbobi, Lagos*, **Journal of Nursing management,** 25, 2, 2014, 37–46

193. British Computer Society. BCS digital literacy for life programme, http://www.bcs.org/category/17853. 2017

194. D. M. Abdulah, & K.A. Perot, *Barriers and benefits of adopting electronic health records (ehrs) in public hospitals,* **Health Problems of Civilization,** 16, 1, 2022, 2353-6942

195. L.A Huryk, *Factors influencing nurses' attitudes towards healthcare information technology.* **Journal of Nursing Management,** 18, 5, 2010

196. S. Nikou, A. Molinari, & G. Widén, *The interplay between literacy and digital technology: fuzzy-set qualitative comparative analysis approach,* **the information behaviour conference**, 25, 4, DECEMBER, 2020

197. A. Kuek, & S. Hakkennes, *Healthcare staff digital literacy levels and their attitudes towards information systems***, Health informatics journal,** April 15, 2019

198. F.D. Davis, *Perceived usefulness, perceived ease of use, and user acceptance of information technology.* **MIS Quarterly***,* 13, 3, 1989, 319–340

199. S.J. Dash, S.K. Shakyawar, & M. Sharma, etal, *Big data in healthcare: management, analysis and future prospects.* **Journal of Big Data** 6, 54, 2019

200. I.S. Sharma, B. Kumari, A. Ali, K.I. Rajesh & K. Girish, etal, Mobile technology, **Journal of Family Medicine and Primary Care,** 11, 1, 2022, 37-43

201. C.S. Kruse, B. Smith, H. Vanderlinden, & A. Nealand, *Security Techniques for the Electronic Health Records.* **Journal of Medical Systems,** 41, 8, 2017

202. N. A. Azeez, & C. Van der Vyver, *Security and privacy issues in e-health cloud-based system: A comprehensive content analysis*, **Egyptian Informatics Journal**, 20, 2, 2019, 97-108

203. F. Gao, S. Thiebes, & A. Sunyaev, *Rethinking the Meaning of Cloud Computing for Health Care: A Taxonomic Perspective and Future Research Directions*. **Journal of Medical Internet Research**, 20, 7, 2018

204. A. Bakheet Aldosari, A.M. Sheema, A. Hanan, & A. Abdullah, *Assessment of factors influencing nurses acceptance of electronic medical record in a Saudi Arabia hospital,* **Elsevier Informatics in Medicine Unlocked** 10, 2018, 82–88

205. K. MacLure, & D. Stewart. *Digital literacy knowledge and needs of pharmacy staff: a systematic review.* **Journal of Innovation in Health Informatics,** 23, 3, 2016, 840

206. C.J. Campbell, & D.E. McDowell. *Computer literacy of nurses in a community hospital:* **Journal of Continuing Education in Nursing.** 42, 8, 2011, 365–370

207. R.F. Chen, & J.L. Hsiao, *Health Professionals' Perspectives on Electronic Medical Record Infusion and Individual Performance: Model Development and Questionnaire Survey Study*. **JMIR Medical Informatics,** 9, 11, 2021

208. S. Gurdas Topkaya & N. Kaya, *Nurses' computer literacy and attitudes towards the use of computers in health care.* **International Journal of Nursing Practice,** 21, 2, 2015, 141–149

209. S. Kim, K.M. Lee, & H. Hwang, et al. *Analysis of the factors influencing healthcare professionals' adoption of mobile electronic medical record (EMR) using the unified theory of acceptance and use of technology (UTAUT) in a tertiary hospital.* **BMC Medical Informatics and Decision Making,** 16, 12, 2016

210. A.I. Ojo, & S.O. Popoola, *Some correlates of electronic health information management system success in Nigerian teaching hospital,* **Biomedical Information Insights**, 7, 2015, 1-9

211. J.Y. Wang, H.Y. Ho, & J.D. Chen, et al. *Attitudes toward inter-hospital electronic patient record exchange: discrepancies among physicians, medical record staff, and patients.* **BMC Health Services Research,**15, 264, 2015

212. D.S. Tawfik, A. Sinha, M. Bayati, K.C. Adair, T.D. Shanafelt, J.B. Sexton, & J. Profit, *Frustration With Technology and its Relation to Emotional Exhaustion Among Health Care Workers: Cross-sectional Observational Study*. **Journal of Medical Internet Research**, 23, 7, 2021

213. E.C. Schenk, D.M. Mayer, & E. Ward-Barney, et al. *RN perceptions of a newly adopted electronic health record.* **Journal of Nursing Administration,** 46, 3, 2016, 139–145

214. R.J. Holden, O. Asan, & E.M. Wozniak, et al. *Nurses' perceptions, acceptance, and use of a novel in-room pediatric ICU technology: testing an expanded technology acceptance model.* **BMC Medical Informatics and Decision Making,**, 16, 1, 2016, 145

215. H.S. Ngusie, S.Y. Kassie, & A.A. Chereka, *et al. Healthcare providers' readiness for electronic health record adoption:* a cross-sectional study during pre-implementation phase. **BMC Health Services Research,** 22**,** 282, 2022

216. M.M. Islam, T.N. Poly, &Y.J. Li, *Recent Advancement of Clinical Information Systems: Opportunities and Challenges.* **Year book of Medical Informatics,** 27, 1, 2018, 83-90

217. Y. Zhang, P. Yu, & J. Shen, *The benefits of introducing electronic health records in residential aged care facilities:* A multiple case study. **International journal of medical informatics**. 81, 2012, 690-704

218. R.J. Johnson. *A comprehensive review of an electronic health record system soon to assume market ascendancy:* **Journal of Health Communication** 1, 4, 2016

219. P.Y. Yen, A.S. McAlearney, C.J. Sieck, J.L. Hefner, & T.R. Huerta, *Health Information Technology (HIT) Adaptation: Refocusing on the Journey to Successful HIT Implementation.* **JMIR Medical Informatics**, 5, 3, 2017

220. J. Alipour, Y. Mehdipour, & A. Karimi. *Factors Affecting Acceptance of Hospital Information Systems in Public Hospitals of Zahedan University of Medical Sciences:* A Cross-Sectional Study. **Journal of Medicine and Life,** 12, 4, 2019, 403-410

221. A.M. Mosadeghrad, *Factors influencing healthcare service quality*. **International Journal of Health Policy Management**, 3, 2. 2014, 77-89

222. M. Petersone, A.V. Krastins, & K. Ketners, *In-Service Training System Organization Improvement at Customs Administrations BT – Entrepreneurship, Business and Economics,* **Springer International Publishing***,* 2016, 201–216

223. R. Lafta, W. Al-Ani, & S. Dhiaa, et al. Perceptions, *experiences and expectations of Iraqi medical students.* **BMC Medical Education.** 18, 1, March, 2018, 53

224. R..T. Hameed, O.A. Mohamad, O.T. Hamid, & N. Tapus, *Design of e Healthcare Management System Based on Cloud and Service Oriented Architecture*, 2015, 1–4

225. P.J. Hsieh, H.M. Lai, & Y.L. Hong, *Explaining Physicians' Acceptance and Resistance to the NHI Pharma cloud:* **A Theoretical Model and Empirical**, 2015, 247

226. P.J. Hsieh, *An empirical investigation of patients' acceptance and resistance toward the health cloud: the dual factor perspective*. **Computers in Human Behaviour.** 63, 2016, 959–969

227. Dr. M.E. Ing. Benny, Prof. de Waal, & dr. Pascal Ravesteijn, **Conference on Management, Leadership and Governance***,* 14, October, 2018, 18-19

228. J.W. Lian*, Establishing a cloud computing success model for hospitals in Taiwan.* **Inquiry in Journal Healh Care Organization Provision, Finance**, 54, 2017

229. K.A. Ratnam, P.D.D. Dominic, & T. Ramayah, T, *A structural equation modeling approach for the adoption of cloud computing to enhance the Malaysian healthcare sector systems-level quality improvement.* **Journal of Medical Systems,** 38, 82,2014

230. A.M. AlBar, & M.R. Hoque, *Factors affecting cloud ERP adoption in Saudi Arabia*: an empirical study. 2017

231. V. Venkatesh, & X. Zhang, *Unified theory of acceptance and use of technology:* US vs China. **Journal of Global Information Technology Management** 13, 2010, 5–27

232. E.M. Rogers, *A prospective and retrospective look at the diffusion model.* **Journal of Health Communication,** 9, 2004, 13–19

233. Y. Wu, C.G. Cegielski, B.T. Hazen, & D.J. Hall, *Cloud computing in support of supply chain information system infrastructure:* understanding when to go to the cloud. **Journal of Supply Chain Management,** 2013, 25–41

234. S. Mellikeche, O. Boussekey, G. Martin, E. Campoy, &, P. Degoulet , *Evaluation of the unified model of information systems continuance (UMISC) in two hospital environments,* **International Journal of Medical Informatics,** 2018

235. S. Ibrahim, *"Registered Nurses' Intention To Use Electronic Documentation Systems:* A Mixed Methods Study", 2019

236. J. Peterson, *The Role of Health Information Management Professionals in the Use of Geographic Information Systems*. **Perspectives in Health Information Management**, 14, 2017

237. S. Morrison-Smith, & J. Ruiz, *Challenges and barriers in virtual teams: a literature review*, **Springer**, 2020

238. A. Mohammad, etal. *Modelling the utilization of cloud health information systems in the Iraqi public healthcare sector.* **Telematics and Informatics, Publishing Elsevier** 36, 2019, 132–146

239. S. S. Binyamin, J.R. Malcolm, & S. Smith. *The Influence of Computer Self-efficacy and Subjective Norms,* **International Journal of Information and Education Technology,** 8, 10, October 2018

240. S. Asrul , T. K. A. Rahman, N. Nawaningtyas, A. Budiyantara, & N. Wiliani, *The effect of technology readiness in IT adoption on organizational context*, 2331, 1, 2 April, 2021

241. H.C. Chen, P. O'Sullivan, A. Teherani, S. Fogh, B. Kobashi, & O. Ten Cate, *Sequencing learning experiences to engage different level learners in the workplace,* **Medical Teacher**, 37, 2015, 1090-1097

242. B. Mittelstadt, N. Fairweather, N. Ben, McBride, & M. Shaw, *Privacy, risk and personal health monitoring,* in: ETHICOMP, **Conference Proceedings**. 2013, 340–351

243. T. Allison, & Davis, Blakley & Webb, Justin & Short, Jeremy. *Persuasion in crowdfunding: An elaboration likelihood model of crowdfunding performance.* **Journal of Business Venturing.** 32, 2017, 707-725

244. I.T. Agaku, A.O. Adisa, O.A. Ayo-Yusuf, & G.N. Connolly. *Concern about security and privacy, and perceived control over collection and use of health information are related to withholding of health information from healthcare providers*. **Journal of America Medical Informatics Association** 2014, 374–378

245. N. I. Ismail, N. H. Abdullah, A. Shamsudin, & N. A. N. Ariffin, *Implementation differences of Hospital Information System (HIS) in Malaysian public hospitals*, **International Journal of Social Sciences Humanities,** 3, 2, 115–120, 2013

246. N. A. Mohamadali, N. Faizah, & A. Aziz, *The technology factors as barriers for sustainable Health Information Systems (HIS),* A review, **Procedia Computer Science,** 124, 2018, 370–378

247. N. Zakaria & S. A. Mohd Yusof, *Understanding Technology and People Issues in Hospital Information System (HIS) Adoption: Case study of a tertiary hospital in Malaysia*, **Journal of Infection and Public Health,** 9, 6, 2016, 774–780

248. Y.K. Alotaibi, & F. Federico, *The impact of health information technology on patient safety*, **Saudi Medical Journal,** 38, 12, 2017, 1173-1180

249. S. Silow-Carroll, J. N. Edwards, and D. Rodin, *Using electronic health records to improve quality and efficiency:* The experiences of leading hospitals. Issue Brief **(Commonwealth Fund)**, 17, 2012, 1–40

250. L. G. Jensen & C. Bossen, *Factors affecting physicians' use of a dedicated overview interface in an electronic health record:* The importance of standard information and standard documentation, **International Journal of Medical Information,** 87, 2016, 44–53

251. L. Dan , C. Jianqian, Jing Kong, G. Cao, & M. Zhang, *The efficiency analysis and spatial implications of health information technology:* **A regional exploratory study in China,** 3 Dec, 2019

252. M. Hubert, M. Blut, C. Brock, R.W. Zhang, V. Koch, & R. Riedl, *"The influence of acceptance and adoption drivers on smart home usage",* **European Journal of Marketing,** 53, 6, 2019, 1073-1098

253. V.M. Dzomeku, A. Ba-Etilayoo, T. Perekuu, & R.E. Mantey, *In-patient satisfaction with nursing care: A case study at Kwame Nkrumah University of science and technology hospital.* **International Journal of Research in Medical and Health Sciences**, 2, 1, 2013

254. R.B. Nsiahi, A.D. Solomon, N.Dominic , T.Wisdom, L.N. Gbiel, & S.O. Gifty , etal, *Differences in Knowledge and Practice of Health Information Management among Health Care Managers in Urban and Rural Districts of Ghana,* **International Journal of Research and Innovation in Social Science (IJRISS),** 6,5, 2022, 2454-6186

255. M. Bimerew, O. Adejumo, & M. Korpela, *Health information officers views of mental health information processing and utilisation within an integrated primary healthcare service in Cape Town, South Africa.* **African Journal for Physical, Health Education, Recreation and Dance, Supplement** 1, 1, 2015, 197-210

256. C.O. Ogochukwu, *ICT knowledge and utilization as determinants of job performance of Health Information Managers in health institutions in South-East Nigeria,* **International Journal of Library and Information Science,** 13, 2, 2021

257. L.A. Owolabi, & E.A. Olusegun, *Conundrum of bureaucratic processes and healthcare service delivery in government hospitals in Nigeria,* 3, 1, 2020, 2632-279

Chapter Three

Methodology

This chapter presents the methods used in carrying out the thesis

3.1 Research Design

The study adopted a descriptive survey research design as it answers the question asked by the problem under investigation, the purpose is to collect detailed information that describes existing phenomenon in other to identify the problems or justify current conditions and practices. Descriptive design adequately and systematically describes a population, situation or phenomenon. Descriptive research designs allow for a wide variety of research methods to investigate one or more variables. Descriptive design facilitates appropriate identification of characteristics, frequency, trends and categories[1].

3.2 Population of Study

The study population consists of eighty (80) Health Information Management Professionals in two (2) selected Hospitals, National Orthopaedic Hospital Igbobi, with fifty (50) professionals, and Federal Neuro-psychiatric Hospital, yaba, Lagos State, with thirty (30) professionals. These Hospitals among others were selected due to the fact that they make use of the system.

Table 3.2: Population Table

Federal health institutions, Lagos State	Number of Employees
National Orthopaedic Hospital, Igbobi	50
Federal Neuro-psychiatric Hospital, Yaba	30
Total	**80**

3.3 Sample and Sampling Techniques

For this study total enumeration was used. In total, eighty (80), professionals from two (2) selected Hospitals in Lagos state were included in the study. Multistage sampling technique was used to select the respondent for this study, which include: purposive, total enumeration, and convenient[2]. In the first stage the researcher selected respondent based on its discretion. National orthopaedic Hospital Igbobi and Federal Neuro-psychiatric Hospital, yaba were selected among the four (4) Federal Hospitals in Lagos State purposely because they both make use of the system. Secondly, the researcher chose to examine the entire health information management professionals in these hospitals, National Orthopaedic Hospital, Igbobi consists of fifty (50), while Federal Neuro-psychiatric Hospital, consists of thirty (30) professionals, therefore, a total of eighty (80) health information management professionals were used for this study. Lastly, respondents were selected from both Hospitals based on the researcher's convenience, and questionnaire were administered to only staff present at the time of distribution.

3.4 Description of the Research Instrumentation

A structured questionnaire was used to gather data from the respondents for analysis. The study adopted the Likert scale response format in which options were provided for respondents to choose from. It is constructed to ensure that the objectives and problems stated in chapter one is explored.

The questionnaire is divided into four sections: A, B, C, and D.

Section A: this section was developed by the researcher to collect demographic information of respondents and this contains bio-data of respondents measured through four indices; gender, age, professional cadre, and years of experience, which deals with the demographic variables (i.e., bio-data) of the population of the study.

Section B: This section consists of items to elicit information about Service Delivery in health care. The items selected were adapted from existing literature as a guide in formulating the questions[3]. Likert scale of four-point responses were used, which include: Strongly Agree (SA), Agree (A), Disagree (DA), and Strongly Disagree (SDA). The research instrument with Cronbach value of 0.940 was adopted to measure service delivery. Questions on health workers' availability, health workers' knowledge, as well as facility infrastructures were addressed. Such as; short staffing has a potential for patient delay, formal training enhances competence.

Section C: This section consists of items to get information on the Attitude of health care workers. Items used here were adapted from existing literature[4]. Likert scale of four-point responses was used, which includes: Strongly Agree (SA), Agree (A), Disagree (DA), and Strongly Disagree (SDA). The research instrument with Cronbach value of 0.79 was adopted to measure the attitude of health information management professionals. Questions on workers'

affection, behavioural, and cognitive attitudes were addressed. Such as; I feel fulfilled rendering services to patients, I communicate well with patients, I do not think there is career fulfilment in health information management.

Section D: This section addressed Information System Utilization. Items used here were adapted from existing literature[5]. Likert scale of four-point responses was used, which includes: Strongly Agree (SA), Agree (A), Disagree (DA), and Strongly Disagree (SDA). The research instrument with Cronbach value of 0.81 was adopted to measure information system utilization. Questions on Information and Service quality were addressed. Such as: the use of information system helps generate complete data, the information system in use is not user-friendly.

3.5 Validity of the Research Instrument

To validate this instrument, the content of the instruments were gathered through related literature review and adaptation from questionnaires that have been used by other researchers. Contents and construct validity was done. Content validity was used to assess the internal validity of the research instruments which were ascertained through the supervisor and five other experts in the information management field. Corrections made were incorporated in constructing the final questionnaire which was given out to the respondents for the study.

3.6 Reliability of the Research Instrument

In ensuring the reliability of the data collection instrument, the questionnaires were tested by subjecting it to the inspection of experienced health information management professionals who gave their opinions as to whether the hypotheses used to measure the concepts were valid to ensure it covers all variables under study. A Cronbach's alpha value of > 0.7 but, 1 score for a questionnaire is determined to be trust worthy. The researcher subjected the questionnaire to a

reliability test to check the internal consistency of all items measuring each variable in the study. The reliability of the instrument was done through a pilot study, thirty (30) questionnaires were administered to health information management professionals in General Hospital Ikeja, Lagos to detect the response and reliability rate of the questionnaire and to justify what study is set to attain. Data obtained were subjected to Cronbach's alpha reliability test to establish consistency. The outcome of the reliability test demonstrates that Cronbach Alpha's coefficient of 0.940, 0.79, and 0.81 argues that the instrument is dependable for the primary research.

3.7 Method of Data Collection

Primary data was collected to address the objectives of the study through a structured questionnaire in line with existing literature.

A letter of introduction was obtained from the Head, Department of Information Management, Lead City University which was used to seek permission to conduct the survey from the management of National Orthopaedic Hospital, Igbobi, and Federal Neuro-psychiatric Hospital, yaba, Lagos. Due to the number of respondents from both hospitals, a three (3) day training was conducted for four (4) research assistants to ease the administration, retrieval, and initial sorting of copies of the questionnaires.

3.8 Method of Data Analysis

The researcher analyzed the data collected using descriptive and inferential statistics for the items in all the sections of the questionnaire. The use of descriptive statistics is appropriate because it helps describe and summarize data in terms of frequency distribution, mean, and percentage of response about variables under study, thereby answering the research questions. To test the hypotheses formulated, regression analyses was adopted for hypotheses one to three to

test the relative influence on attitude of health information management, and information system utilization to measure the dependent variable (service delivery). The data collected for the study were analyzed using Statistical Package for Social Sciences (SPSS), version 25. All hypotheses in the study were tested at the level of 0.05 significance.

Endnotes

1. S. McCombes, *Descriptive Research Design Definition, Method, & Examples.* May 15, 2019

2. A.S. Singh & M. Masuku. *Sampling Techniques and Determination of Sample Size in Applied Statistics Research,* An Overview. **International Journal of Commerce and Management**, 2, 11, November 2014, 1-22

3. K.M. Mpaata, J.C. Okiria, & B. Lubogoyi, *Resources Availability and Quality of Patient Care Services in Public Hospitals in Uganda: "Expert Patients" Perspectives,* **International Journal of Science and Research (IJSR)**, 78,96, 2017, 2319-7064

4. G. Srinives, S. Kumar, R. Mohanrag, G. Sekkizhar, T. Muthuvel, V. Lal, B. Koemm, & C. Kasang. *Development and validation of a scale to assess attitudes of health care providers affected by leprosy in Southern India*. 12,9, Semptember, 2018

5. Z. Ebnehoseini, M. Jangi, M.Tara, & H. Tabesh, *Investigation the success rate of hospital information system (HIS): Development of a questionnaire and case study,* **Journal of Healthcare Quality Research,** 36, 2, March–April 2021, 103-112

Chapter Four

Results and Discussion of Findings

The aim of this chapter is to present the results of the collected and analyzed data to achieve the objectives of the study. The data was obtained to answer the research questions and test the hypotheses formulated for the study. This was achieved with the use of a structured questionnaire which dictates that descriptive statistics was used to answer the research questions and inferential statistics used for the study hypotheses. The decision rule is that all items with a mean score equal to or greater than 2.5 is accepted as significant while any item with a mean score less than 2.5 is considered not significant and rejected.

In all, eighty (80) copies of the questionnaire were administered, properly filled, retrieved, and analyzed. This means that the return rate is 100% which is adequate for generalization.

4.1 Demographic Data Analysis of Respondents

Table 4.1: Demographic Distribution of Respondents

Variable	Range	Frequency	Percentage%
Gender	Male	25	31.3
	Female	55	68.7
	Total	**80**	**100**
Age	21-25	2	2.5
	26-30	4	5
	31-35	33	41.2
	36-40	16	20
	41-45	11	13.8
	46>	14	17.5
	Total	**80**	**100**
Professional Cadre	Officer	61	76.3
	Technician	19	23.7
	Total	**80**	**100**
Years of Experience	1-5yrs	29	36.3
	6-10yrs	21	26.3
	11-15yrs	7	8.7
	16-20yrs	16	20.0

21yrs & above	7	8.7
Total	**80**	**100**

Source: Field Survey Data, 2022 **Decision Rule: 2.50**

The demographic distribution of the study respondents is presented in table 4.1. The table shows that there are 25 male respondents which constitute 31.3%, while female respondents are 55 which constitute 68.7% of the total respondents. This shows that there were more females than males among the respondents. The demographic data also include the age range to which the respondents belong. Respondents in the age range 21-25 were 2 in number which constitutes 2.5% of the total respondents, this is followed by those in the age range 26-30, those who belong to this category are 4 in number which is 5% of the total respondents, 33 respondents representing 41.2% were between the ages of 31-35, 16 respondents representing 20% were between the ages of 36-40, 11 respondents representing 13.8% were between the ages of 41-45, those between age 46 and above are 14 which constitute 17.5 of the total respondents. This shows that the majority of the respondents are in the age range of 31-35. Furthermore, the analysis shows that 61 (76.3 %) of the respondents belong to the officer cadre while 19 (23.7%) belong to the technician cadre of the health information management department, this implies that there are more officers than technicians. The analysis also indicated that 29 (36.3%) of the professionals fall within 1-5 yrs of experience, 21 (26.3%) fall within 6-10 yrs, 7 (8.7%) fall within 11-15 yrs, 16 (20.0%) fall within 16-20 yrs, while 7 (8.7%) have above 20 yrs work experience, this implies that majority of the respondents have 1-5yrs work experience.

4.2 Presentation of Data

4.2.1 Presentation of Research Questions

Research Question 1: What is the level of service delivery provided by the health information management professionals in selected Federal Health Institutions, Lagos State, Nigeria?

Table 4.2: Descriptive Analysis of Respondents on Service Delivery

Service Delivery	SA	A	D	SD	Mean
Availability of Health Information Management Professionals					
Absenteeism					
The high cost of transportation is a factor that leads to staff taking time off work	17 (21.3%)	20 (25.0%)	30 (37.5%)	13 (16.3%)	2.51
Obtaining sick leave due to illness causes absenteeism	9 (11.3%)	22 (27.5%)	33 (41.3%)	16 (20.0%)	2.30
The use of the system has left many staff idle, leading to absenteeism	5 (6.3%)	16 (20.0%)	42 (52.5%)	17 (12.3%)	2.11
Patient Waiting Time					
Short staffing has a potential for patient delay	50 (62.5%)	23 (28.7%)	4 (5.0%)	3 (3.8.%)	3.50
Sending patients' information to the doctor on their appointment days without the complimentary Xray can cause a delay in patient care	33 (41.3%)	42 (52.5%)	5 (6.3%)	0 (0%)	3.35
System downtime causes a delay in patient care	48 (60.0%)	30 (37.5%)	2 (2.5%)	0(0%)	3.55
Weighted Mean					2.89
Competence/Knowledge of Health Information Management Professional					
Formal training enhances competence	64 (80.0%)	15 (18.8%)	1 (1.3%)	0(0%)	3.79
On-the-job training facilitates competence	58 (72.5%)	21 (26.3%)	1 (1.3%)	0 (0%)	3.72
Continuous training increases knowledge	61 (76.3%)	17 (21.3%)	1 (1.3%)	1 (1.3%)	3.51
Weighted Mean					3.67
Infrastructure/Input					
The structure of the hospital can affect service delivery	30 (37.5%)	29 (36.3%)	21 (26.3%)	0(0%)	3.11

Internet network instability can interrupt workflow	24 (30.0%)	26 (32.5%)	12 (15.0%)	18 (22.5%)	2.70
Electricity inconsistency can affect service delivery	28 (35.0%)	30 (37.5%)	8 (10.0%)	14 (17.5%)	2.90
Weighted Mean					2.90
Grand mean					**3.15**

Source: Field survey Data, 2022 **Decision Rule: 2.50**

From the findings of the descriptive analysis, given the four Likert scales from Strongly Agree, Agree, Disagree, and Strongly Disagree, the decision rule according to scholars has been rated as follows: 3.50 - 4.00 = Strongly Agree, 2.50 – 3.49 = Agree, 1.50 -2.49 = Disagree, below 1.50 is Strongly Disagree. Accordingly, table 4.2 shows the grand mean for all research questions on service delivery which is 3.08. With regards to absenteeism, the level of service delivery among health information management professionals is analyzed and the results are presented in table 4.2.

The responses from the respondents clearly outlined those factors that could affect service delivery. Going by the mean scores of each item, the high cost of transportation is a factor that leads to staff taking time off work (2.51), this implied that the respondents agreed to the fact that increased transportation leads to absenteeism which affects service delivery, this is followed by staff obtaining sick leave due to illness with the mean score 2.30, this also implied that the respondents disagree to the fact that being ill is not enough reason to be absent from work, this is also followed by the introduction of system use, which has made many staff idle thereby causing absenteeism with the mean score 2.11, indicating that respondents did not agree that the introduction of a system leads to idleness.

Furthermore, short staffing has the potential for patient delay with a mean score of 3.50, this implies that the respondent strongly agreed that lack of staff can increase patient waiting time, thereby affecting service delivery, sending patient information to the Doctor without the corresponding x-ray also leads to patient delay with the mean score 3.35, which implies that respondents strongly agree that this factor increases patient long stay at the hospital, the reason being that patient x-ray should be made available prior to their clinic days to avoid taking part of the little time they have to be seen by their doctor to go search for their x-rays, another factor that causes patient delay is system downtime with the mean score 3.55, which implies that respondents strongly agreed to the fact that patient care is being delayed when there is a network problem. In the aspect of training, respondents strongly agree to the fact that formal training is a necessity as it enhances competence with a mean score of 3.79, this implies that academic training is necessary for every health information practitioner as it enables them to obtain a license to practice, respondents also strongly agreed to the fact that on-the-job training facilitates competence with the mean score 3.72, this implies that the need to be trained on the job cannot be over emphasized, as it increases the level of knowledge and skill of the professional thereby providing service delivery, respondents has also strongly agreed that continuous training increases knowledge with the mean score 3.51, this implies that training and retraining goes a long way in developing the knowledge and skill of professionals, activities such as workshops for learning, seminars, continuous professional development (CPD) should be encouraged for better service delivery.

The structure of the hospital is another aspect that can influence service delivery, as the respondents strongly agreed with the mean score of 3.11, this further implies that the way the hospital is built, in terms of how easy it is to locate certain departments, for example, the medical

records department should not be far from the cashpoints and the clinic, also signpost should be available to give proper directions, respondent has also strongly agreed that internet network instability can interrupt the work process with a mean score of 2.70. When there is a network failure, the work process is put to a halt, the respondents have strongly agreed that electricity inconsistency can affect service delivery with a mean score of 2.90, this, however, implies that until there is some form of power, either NEPA or power generated through other means, work cannot go on smoothly. However, the grand mean score of service delivery is 3.15 which indicates that absenteeism, patient waiting time, training and retraining, as well as infrastructure/input affects service delivery.

Research Question 2: What is the attitude of health information management professionals in selected Federal Health Institutions, Lagos State, Nigeria?

Table 4.3: Descriptive Analysis of Responses on Attitude of Health Information Management Professionals.

Attitude	SA	A	D	SD	Mean
Affective					
I feel fulfilled rendering services to patients as a health information management professional	54 (67.5%)	20 (25.0%)	4 (5.0%)	2 (2.5%)	3.57
I feel the need to take special care when dealing with patients	45 (56.3%)	32 (40.0%)	1 (1.3%)	2 (2.5%)	3.50
I feel the need to attend to any kind of patient irrespective of the illness	39 (48.8%)	27 (33.8%)	12 (15.0%)	2 (2.5%)	3.29
Weighted Mean					3.45
Behavioural					
I exhibit a sense of professionalism when carrying out my duty	56 (70.0%)	22 (27.5%)	2 (2.5%)	0 (0%)	3.68
I am supportive of patient care	43 (53.8%)	37 (46.3%)	0 (0%)	0 (0%)	3.54

I communicate well with patients because I know that health information management renders humanitarian services	47 (58.8%)	31 (38.8%)	2 (2.5%)	0 (0%)	3.56
Weighted Mean					3.59
Perceptive					
I do not think there is career fulfillment in health information management	31 (38.8%)	33 (41.3%)	16 (20.0%)	0 (0%)	3.19
I think health information management professionals are not well paid	40 (50.0%)	24 (30.0%)	14 (17.5%)	2 (2.5%)	3.28
I think health information management professionals are not well motivated	50 (62.5%)	16 (20.0%)	14 (17.5%)	0 (0%)	3.45
Weighted Mean					3.31
Grand mean					**3.45**

Source: Field survey Data, 2022 **Decision Rule: 2.50**

The data presented in table 4.3 highlight the responses of health information management professionals' attitudes when delivering services to patients. it can be seen that respondents strongly agreed to the fact that they feel fulfilled rendering services to patients with a mean score of 3.57, this further implies that their affective attitude positively influences service delivery, respondents have also strongly agreed that they take special care when attending to patients with the mean score 3.50, this implies that they feel the need to be more cautious and careful when attending to patients to avoid a potential problem, respondents have strongly agreed that they can attend to any kind of patient irrespective of their illness with the mean score of 3.29. With a mean score of 3.68, respondents strongly agreed to exhibit a sense of professionalism when discharging their duties, this shows that they portray the right behaviour to work, they also strongly agreed to be supportive of patient care with a mean score of 3.54, the respondents strongly agreed to communicate well with the patient with the mean score of 3.56, knowing fully well that health information management renders humanitarian services positively influence their behaviour.

Respondents do not believe that there is career fulfillment in the profession with a mean score of 3.19, they strongly agreed to the fact that health information management professionals are not well paid and motivated with the mean score of 3.28 and 3.45 respectively, which could affect their attitude towards service delivery. Overall, the grand mean of health information management professionals' attitude is 3.45 which is above average on a four-point Likert Scale. Hence, this implies that the Affective, Behavioural, and Cognitive attitudes of health information management professionals can affect service delivery.

Research Question 3: In what ways have information system utilization helped to improve information quality in selected Federal Health Institutions, Lagos State, Nigeria?

Table 4.4: Descriptive Analysis of Responses on Information System Utilization

Information System Utilization	SA	A	D	SD	Mean
Information Quality	41	25	14	0 (0%)	3.34
The use of an information system helps to generate complete data for patient care	(51.2%)	(31.3%)	(17.5%)		
The use of an information system helps to generate accurate data for patient care	42 (52.5%)	26 (32.5%)	12 (15.0%)	0 (0%)	3.38
The use of an information system facilitates access to timely data, relevant to patient care	41 (51.2%)	27 (33.8%)	12 (15.0%)	0 (0%)	3.36
Weighted Mean					3.36
System Quality					
The Information system is not user-friendly to enable me carry out all my functions relating	40 (50.0%)	25 (31.3%)	11 (13.8%)	4 (5.0%)	3.26

to health information with ease					
Information systems respond promptly, thereby providing a faster means of retrieving data needed for treatment by the doctors	40 (50.0%)	28 (35.0%)	2 (2.5%)	10 (12.5%)	3.23
Information gotten from the system is reliable	27 (33.8%)	35 (43.8%)	8 (10.0%)	10 (12.5%)	2.99
Weighted Mean					3.16
Grand mean					3.26

Source: Field survey Data, 2022 **Decision Rule: 2.50**

Table 4.4 shows the results of data collected on information system utilization. The use of information systems shows that it helps generate complete, accurate, and timely data relevant to patient care with the mean score of 3.34, 3.38, and 3.36 respectively, which is above average. Respondents strongly agreed to the fact that information system is not user-friendly to enable them to carry out their functions easily with a mean score of 3.26, they strongly agreed that information system responds promptly when it comes to retrieving data from the system and is reliable with the mean score of 3.23 and 2.99 respectively, which is above average. Overall, the grand mean of information system utilization is 3.26 which is above average, which depicts that Information quality and System quality significantly services delivery.

4.3 Presentation of Hypotheses

The following null hypothesis was tested at a 0.05 level of significance.

Ho1: There is no significant influence on attitude of health information management professionals on service delivery in selected Federal Health Institutions, Lagos State, Nigeria.

Table 4.5: Summary Results of the Influence of Attitude of Health Information Management Professionals on Service Delivery in selected Federal Health Institutions, Lagos State, Nigeria

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.335[a]	.112	.101	.724

a. Predictors: (Constant), Attitude of Health Information Management Professionals
b. Dependent Variable: Service Delivery

Source: Researcher's Field Survey Result, 2022

Coefficients

Model	Unstandardized Coefficients	Standardized Coefficients	T	Sig.

	B	Std. Error	Beta		
(Constant)	.280	.107		2.613	.011
Availability	.304	.097	.335	3.141	.002

a. Dependent Variable: Service Delivery

ANOVA[a]

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	5.165	1	5.165	9.867	.002[b]
Residual	40.835	78	.524		
Total	46.000	79			

a. Dependent Variable: Service Delivery

Source: Researcher's Field Survey Result, 2022.

Table 4.5 present the result of linear regression analysis for the influence of the attitude of health information management professionals on service delivery in National Orthopaedic Hospital Igbobi, and Federal Neuro-psychiatric Hospital, yaba, Lagos State, Nigeria. The adjusted R^2 was used to establish the predictive power of the study's model. The model shows an R score of 0.335 with an Adjusted R^2 of 0.101 which suggests that the attitude of Health Information Management Professionals accounts for a 10.1% variation in Service Delivery in both Hospitals. In addition, the results of the ANOVA test revealed that the attitude of health information management professionals has a significant effect on service delivery, this can be explained by the F-value (9.867) and low p-value (0.002) which is statistically significant at a 95% confidence interval. From the data presented in the coefficient table, it can be seen that the attitude of health information management professionals (ß=0.280, t=2.613, $p<0.05$) has a significant statistical value which indicates that it has an influence on service delivery. This means that the attitude of

health information management professionals while carrying out their professional obligations determines the quality of care received by the patient. Hence, the result posited that a positive attitude brings about good service delivery and vice versa. The null hypothesis which states that there will be no significant influence of the attitude of health information management professionals on service delivery in National Orthopaedic Hospital, Igbobi, and Federal Neuro-psychiatric Hospital, Yaba, Lagos, Nigeria, is therefore rejected.

Ho2: There is no significant influence of information system utilization on service delivery in selected Federal Health Institutions, Lagos State, Nigeria.

Table 4.6: Summary of Results on the Influence of Information System Utilization on Service Delivery in selected Federal Health Institutions, Lagos State, Nigeria

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.584[a]	.341	.332	.650

a. Predictors: (Constant), Information system utilization
b. Dependent Variable: Service Delivery
Source: Researcher's Field Survey Result, 2022

Coefficients

Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	.484	.097		5.011	.000
Information System	.609	.096	.584	6.351	.000

Utilization

a. Dependent Variable: Service Delivery

ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	17.040	1	17.040	40.339	.000[b]
Residual	32.948	78	.422		
Total	49.987	79			

a. Dependent Variable: Service Delivery

b. Predictors: (Constant), Information System Utilization

Source: Researcher's Field Survey Result, 2022

Table 4.5 present the result of linear regression analysis for the influence of information system utilization on service delivery in National Orthopaedic Hospital, Igbobi, and Federal Neuro-psychiatric Hospital, yaba, Lagos Nigeria.

The adjusted R^2 was used to establish the predictive power of the study's model. The model shows an R score of 0.584 with an Adjusted R^2 of 0.332 which suggests that the Information System Utilization accounts for 33.2% variation in Service Delivery in both Hospitals. In addition, the results of the ANOVA test revealed that Information System Utilization has a significant effect on service delivery, this can be explained by the F-value (40.339) and low p-value (0.000) which is statistically significant at a 95% confidence interval. From the data presented in the coefficient table, it can be seen that Information System Utilization (ß=0.484, t=5.011, $p<0.05$) has a significant statistical value which indicates that it has an influence on service delivery. This means that the implementation of information systems can positively influence many aspects of health care provision. Hence, the result posited that information

system utilization significantly influences service delivery. The null hypothesis which states that there will be no significant influence of information system utilization on service delivery in National Orthopaedic Hospital, Igbobi, and Federal Neuro-psychiatric Hospital, yaba, Lagos Nigeria, is therefore rejected.

Ho3: There is no significant combined influence on the attitude of health information management professionals and information system utilization on service delivery in selected Federal Health Institutions, Lagos State, Nigeria.

Table 4.7: Summary result of the influence of attitude of health information management professionals and information system utilization on service delivery in selected Federal Health Institutions, Lagos State, Nigeria

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.454[a]	.206	.186	.689

a. Predictors: (Constant), Information System Utilization, Attitude of Health Information Management Professionals
b. Dependent Variables: Service Delivery
Source: Researcher's Field Survey Result, 2022

ANOVA[a]

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	9.493	2	4.747	10.012	.000[b]
Residual	36.507	77	.474		
Total	46.000	79			

a. Dependent Variable: Service Delivery

b. Predictors: (Constant), Information System Utilization, Attitude of Health Information Management Professionals

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.399	.109		3.653	.000
Attitude of Health Information Management Professionals	.461	.106	.509	4.361	.000
Information System Utilization	-.367	.121	-.353	-3.021	.003

a. Dependent Variable: Service Delivery

Source: Researcher's Field Survey Result, 2022

Table 4.8 shows the results of multiple regression analysis of the linear combination test of Attitude of Health Information Management, and Information System Utilization on Service Delivery. This is done to determine their combined influence on Service Delivery. The result yielded a coefficient of multiple regression of R=0.454 and multiple R-square of 0.206. The result also revealed that adjusted R^2=0.186. The result shows that the joint contribution of Health Information Management Professionals' Attitudes and Information System Use can lead to an 18.6% change in Service Delivery. ANOVA test revealed that the Attitude of Health Information Management Professionals and Information System Utilization has a significant effect on service delivery, this can be explained by the F-value (10.012) and low p-value (0.000) which is statistically significant at a 95% confidence interval.

However, from the coefficient table, it can be seen that the Attitude of Health care Workers (ß=0.461, t=4.361, p>0.05 is a significant predictor of Service Delivery, also, Information System Utilization, (ß=-0.367, t =-3.021, p<0.05) is a significant predictor of Service Delivery. This means that for every 1-unit reduction in information system utilization, there will be a 0.367 decrease in service delivery, the same applies when there is an increase. Hence, a decrease in information system utilization leads to a decrease in service delivery. Therefore, there is a significant perceived joint influence of the Attitude of Health Information Management Professionals and Information System Utilization on Service Delivery in National Orthopaedic Hospital, Igbobi, and Federal Neuro-psychiatric Hospital, Yaba, Lagos, Nigeria.

4.4 Discussion of Findings

This section discusses the findings of this study in relation to past studies, which are discussed and organized according to earlier stated hypotheses and in relation to past studies. The analyzed data in this chapter in line with the research questions and hypotheses have led to new findings which are discussed as follows;

The first research question focuses on the level of service delivery provided by the health information management professionals at the National Orthopaedic Hospital, Igbobi, and Federal Neuro-psychiatric Hospital, Yaba, Lagos. The result depicts that absenteeism impedes service delivery in the hospital with a mean score of 2.51, which is above average and considered acceptable on a 4-point Likert scale. However, research done at a teaching hospital in Saudi

Arabia revealed that over 861 professionals have record of absenteeism, which is considered as a serious issue that exacerbates problems in healthcare delivery by lowering service quality, lengthening patient wait times, and preventing people from seeking treatment[1]. Similarly, the current study shows patient waiting time affects service delivery with a mean score of 3.50 which is way above average and significant. Hence, A study carried out in a primary health centre revealed that most of the respondents were satisfied with the service provided, however, indicated long waiting hours to finally receive their medication as a major problem that is responsible for their dissatisfaction[2,3].

Still on the first research question that focuses on service delivery, this study has shown that training is significant and can affect service delivery with a mean score of 3.79. Scholars in a research carried out at a private hospital have emphasized the need to invest in training, assess the skill level of the user, provide focused training, and provide diverse modes of training to satisfy user requirements which have all been cited as critical considerations to date[4,5]. Health information management professionals' self-efficacy and subsequent engagement with the Information System have been found to be enhanced when ICT competence and confidence are increased, the need for formal training is therefore required for health information management professionals to master their EMR-related activities. When adequate and supportive training is provided in the healthcare organization, health information management professionals will be more motivated to learn and less resistant to change[4,5]. This study has also depicted that the structure of the hospital can affect service delivery with a mean score of 3.11, this is similar to a study done in Malaysia that suggested certain structures be put in place to enhance service delivery such as the cost of infrastructure, medical-related equipment, and software[6].

The analysis has also shown that internet network instability can disrupt workflow in the hospital with a mean score of 2.71, which is above average. Literature revealed that many health systems were built on workflows that include fragmented IT systems, paper medical records, and duplicated test results, this means that most medical professionals tend not to always have access to information generated by the health information management professionals due to network downtime, especially when they need to make a quick decision about patient care. Therefore, cloud computing was found to alter current health management practices in both developing and developed countries[7].

The second research question focuses on the attitude of health information management professionals at the National Orthopaedic Hospital, Igbobi, and Federal Neuro-psychiatric Hospital, yaba, Lagos, Nigeria. This study shows that communication is significant with a mean score of 3.56, which is above average. Similar to a study done in public hospitals in Malawi shows that patients who experience good communication were satisfied. The more satisfied a patient is, the more likely he/she adheres to treatment[8]. The findings of this study have also indicated that health information management professionals do not believe that there is career fulfillment, 38.8% strongly agreed to this fact, 41.3% agreed, while 20% disagreed, also the mean score of 3.19 which is above average making it significant for this study. However, Literature has proven that career fulfillment is an upward movement of work experience and perception of achievements during the life span of a worker. The career fulfillment of health information management personnel is crucial for a positive attitude towards effective health service delivery, when a worker lacks fulfillment in the workplace, there is the chance that effective service delivery would not be achieved and the goals of the hospitals will be unaccomplished. Therefore, factors such as goal accomplishment, promotion opportunities,

education and training, recognition, and worker's motivation might determine the extent to which health information management personnel become fulfilled in their career which could positively influence their attitude[9].

Respondents strongly agreed to the fact that health information management professionals are not well motivated with a percentage of 62.5, which also determine the extent to which health information management professionals become fulfilled in their career, also to a large extent affects their perceived attitude negatively. Motivation is therefore the fuel that drive people towards achieving their desired objectives and goals. The findings of this study have also been supported by previous studies which opine that work motivation is the force that maintains and changes the intensity, quality, and direction of behaviors toward arousing the interest of workers by constantly and willingly executing their assigned responsibilities without any coercion or little or no supervision from superior. Therefore, for health information management professionals to perform optimally in their chosen career, the hospital management has to put in place some motivating factors such as awards, promotion, career advancement, salary, and benefits tailored toward individual personnel's needs[9]. Thus, keeping health information management professionals motivated and fulfilled in their careers will assist in the smooth running of the health sector with the right attitude to work.

The third research question focuses on ways in which information system utilization helped to improve information quality in National Orthopaedic Hospital, Igbobi, and Federal Neuro-psychiatric Hospital, yaba, Lagos, Nigeria. The finding of this study indicates that complete, accurate, and timely data relevant to patient care is significant with a mean score of 3.34, 3.38, and 3.36 respectively, which is above the average mean of 2.50. However, previous studies implied that information systems helped them do their job better, improve the safety and quality

of patient care, prevent duplication, increase ease of access, help with speedy decision-making, and increase efficiency[10,11]. Contrary to this study, researchers have identified frustrations with Information System use, disagreeing and arguing the fact that IS improves patient care and increases efficiency[12,13]. Health information management professionals also implied that Information System is technically difficult and time-consuming[14].

Respondents strongly agreed and agreed that 50%, and 31.3% respectively to the fact that the Information system is not user-friendly and does not allow functions relating to health information to be carried out easily, while 13.8%, and 5% disagreed and strongly disagreed respectively to this fact, with the mean score of 3.26 which shows the level of significance. Hence, researchers have revealed that health information management professionals' adoption of computerization would be improved if user-friendly systems and suitable training were provided in consideration of their needs to provide high-quality healthcare information[15,16].

Hypothesis one result was analyzed using linear regression, which examines the influence of the attitude of health information management professionals on service delivery in selected Federal Health Institutions, Lagos State, Nigeria. It was revealed that the attitude of health information management professionals significantly influences service delivery. the attitude of health information management professionals while carrying out their professional obligations determines to an extent the quality of care received by the patient. Hence, the result posited that a positive attitude brings about good service delivery and vice versa.

Research was carried out among workers in a construction company in the UK. 70% of construction professionals were reported to have suffered from job-related stress, anxiety, or depression which affected their work attitude towards work, as they are not mentally stable,

leading to a poor service delivery[17]. Researchers have asserted that factors such as goal accomplishment, promotion opportunities, education and training, recognition, and worker motivation might determine the extent to which health information management professionals become fulfilled in their career which positively affects their attitude, as they are well encouraged leading to a good service delivery[9]. It is therefore safe to say that the good or bad of services rendered are highly influenced by the attitude of the professional.

Hypothesis two result was analyzed using linear regression, which examines the influence of information system utilization on service delivery in selected Federal Health Institutions, Lagos State, Nigeria. The analysis has depicted that the use of a computer in providing care significantly influences service delivery. previous research has suggested that using emerging technology to improve healthcare service practices could provide more opportunities for tracking, prevention, detection, and treatment of diseases. As a result, information technology (IT) is a critical precondition for providing effective healthcare services[18]. The effective use of computing applications in health sectors can make it possible for health information management professionals to monitor and follow up on patients' health status[19]. Previous studies about Information Systems on the other hand, have yielded mixed results, the health information management professionals, Nurses, physicians, social workers, nutritionists, unit clerks, and patient attendants have all expressed support for Information Systems and implied that Information Systems helped them do their jobs better, improve the safety and quality of patient care, prevent duplication, increase ease of access, help with speedy decision-making, and increase efficiency in these studies[20]. However, in other studies, they have identified frustrations with Information System use, disagreeing and arguing the fact that Information System improves patient care and increases efficiency[21].

Hypothesis three result was analyzed using multiple regression, which examines the influence of the attitude of health information management professionals and information system utilization on service delivery in selected Federal Health Institutions, Lagos State, Nigeria. The analysis revealed that the attitude of health information management professionals and the use of information systems is a significant factor to influencing service delivery. The attitude of health information management professionals has a significant impact on the quality of care provided, also system compatibility, ease of understanding, and use have a significant impact on service delivery. Findings have further revealed that the health information officers at the Primary Health Care level did not have adequate knowledge and skills in collecting and processing health information, such as accurate recording and conducting simple analysis of the health data for use at the facility level, there were concerns about the capability of some health information officers in terms of computer skills, even though they had long service history in the health facility, they had no computer literacy skills training in order to transform the paper-based systems to electronic recording of health data. Factors that need to be addressed for the effective implementation of a new system are training the implementers, such as the health information management professionals, developing a sound management system, and having a strong leadership[22].

Another study however shows that majority of the Health Information Managers have adequate ICT knowledge through training received from self-study, but utilization was poor because most of these health institutions do not have ICT facilities. Nevertheless, they are competent in discharging their duties. Provision of adequate funding for ICT, computerization of health institutions, and training of health information managers on the use of ICT to enhance job performance are recommended[23].

Endnotes

1. S.A. Al-Shammari, E.A. Bamgboye, & I.O. Olubuyide, *Sickness Absenteeism among Employees of a Teaching Hospital in Saudi Arabia*, 114, 1, 2013

2. A. Njilele C. Ukwe, J. Okonta, & O. Ekwunife, *Development of a patient satisfaction questionnaire for HIV/AIDS patients in Nigeria,* **International Journal of Clinical Pharmacy,** 34, 1, 2012, 98–104

3. M.O. Akunne, M.J. Okonta, C.V. Ukwe, T. L. Heise, & O.I. Ekwunife, *Satisfaction of Nigerian patients with health services:* **a protocol for a systematic review**, 8, 256, 2019

4. M.M. Islam, T.N. Poly, & Y.J. Li, *Recent Advancement of Clinical Information Systems: Opportunities and Challenges,* **Yearbook of Medical Informatics,** 27, 1, 27, 2018, 83-90

5. D.S. Tawfik, A. Sinha, M. Bayati, K.C. Adair, T.D. Shanafelt, J.B. Sexton, & J. Profit, *Frustration With Technology and its Relation to Emotional Exhaustion Among Health Care Workers: Cross-sectional Observational Study*. **Journal of Medical Internet Research**, 23, 7, 2021

6. K.A. Ratnam, P.D.D. Dominic, & T. Ramayah, T, *A structural equation modeling approach for the adoption of cloud computing to enhance the Malaysian healthcare sector systems-level quality improvement,* **Journal of Medical Systems,** 38, 82, 2014

7. R.T. Hameed, O.A. Mohamad, O.T. Hamid, & N. Tapus, *Design of e Healthcare Management System Based on Cloud and Service Oriented Architecture*, 2015, 1–4

8. E.S. Bazant, & M.A. Koenig, *Women's satisfaction with delivery care in Nairobi's informal settlement,* **International Journal Quality Health Care,** 21, 2022, 79-86

9. A.A. Ibrahim, & O.P. Sunday, *Effects of Work Motivation and Self-Esteem on Career Fulfillment Among Health Information Management Personnel in Federal Teaching Hospitals in Southern Nigeria,* **Journal of Human Resource Management**, 8,2, 2020, 85-95

10. R.F. Chen, & J.L. Hsiao, *Health Professionals' Perspectives on Electronic Medical Record Infusion and Individual Performance: Model Development and Questionnaire Survey Study*. **JMIR Medical Informatics,** 9, 11, 2021

11. J.Y. Wang, H.Y. Ho, & J.D. Chen, et al. *Attitudes toward inter-hospital electronic patient record exchange: discrepancies among physicians, medical record staff, and patient,* **BMC Health Services Research,**15, 264, 2015

12. S.K. Chow, W.Y. Chin, & H.Y. Lee, et al. *Nurses' perceptions and attitudes towards computerisation in a private hospital.* **Journal of Clinical Nursing,** 21, 2012, 11-12

13. E.C. Schenk, D.M. Mayer, & E. Ward-Barney, et al. *RN perceptions of a newly adopted electronic health record.* **Jounal of Nursing Admin,** 46, 3, 2016, 139–145

14. R.J. Holden, O. Asan, & E.M. Wozniak, et al. *Nurses' perceptions, acceptance, and use of a novel in-room pediatric ICU technology: testing an expanded technology acceptance model.* **BMC Medical Informatisc and Decision Makers,** 16, 1, 2016, 145

15. Y.K. Alotaib, & F. Federico, *The impact of health information technology on patient safety.* **Saudi Medical Journal,** 38, 12, 2017, 1173-1180

16. J. Alipour, Y. Mehdipour, & A. Karimi. *Factors Affecting Acceptance of Hospital Information Systems in Public Hospitals of Zahedan University of Medical Sciences:* A Cross-Sectional Study, **Journal of Medicine and Life,** 12, 4, 2019, 403-410

17. L. Alderson, *The Truth Behind Construction's Mental Health,* Available from https://www constructionnews.co.uk/10019419. 2017.

18. I.S. Sharma, B. Kumari, A. Ali, K.I. Rajesh & K. Girish, etal, Mobile technology, **Journal of Family Medicine and Primary Care,** 11, 1, January, 2022, 37-43

19. S.J. Dash, S.K. Shakyawar, & M. Sharma, etal, *Big data in healthcare: management, analysis and future prospects,* **Journal of Big Data,** 6, 54, 2019

20. J.Y. Wang, H.Y. Ho, & J.D. Chen, et al. *Attitudes toward inter-hospital electronic patient record exchange: discrepancies among physicians, medical record staff, and patient,* **BMC Health Services Research,**15, 264, 2015

21. E.C. Schenk, D.M. Mayer, & E. Ward-Barney, et al. *RN perceptions of a newly adopted electronic health record,* **Journal of Nursing Administration,** 46, 3, 2016, 139–145

22. M. Bimerew, O. Adejumo, & M. Korpela, *Health information officers views of mental health information processing and utilisation within an integrated primary healthcare service in Cape Town, South Africa.* **African Journal for Physical, Health Education, Recreation and Dance, Supplement** 1:1, October 2015, 197-210

23. C.O. Ogochukwu, *ICT knowledge and utilization as determinants of job performance of Health Information Managers in health institutions in South-East Nigeria,* **International Journal of Library and Information Science,** 13, 2, 2021

Chapter Five

Conclusion

This chapter presents and discusses the summary of findings, conclusions, recommendations, contributions to knowledge, and suggestions for further studies.

5.1 Summary of Findings

The main objective of this study is to investigate the influence of the attitude of health information management professionals and information system utilization on service delivery in two Federal Health Institutions in Lagos state, Nigeria. This study has 5 chapters so as to achieve its main Objectives. Chapter one presented the background to the study which affirms that all hospitals look forward to growing their capability continuously by ensuring workers portray the right attitude to work, as well as a working system in other to improve service delivery. Several studies have been done on the attitude, and information system utilization on service delivery globally to investigate the attitude of health information management professionals and information system utilization on service delivery in different research contexts.

The data obtained were sorted, tagged, and analyzed to establish the statistical significance of the influence of attitude of health information management professionals and information system utilization on service delivery in two federal health institutions in Lagos State, and final acceptance of the hypotheses was made from the interpretation of analyses of data obtained and conclusions of the research, the following may be summed up as primary empirical findings of this study:

1. The attitude of health information management professionals greatly impacts the operational effectiveness of the selected federal health institutions in Lagos State, Nigeria, yet the effect is modest.
2. Information system utilization has a positive significant influence on the service quality of the selected federal health institutions in Lagos State, Nigeria. The effect is also modest.
3. Information system utilization influences the responsiveness of the selected federal health institutions in Lagos State, Nigeria, with more effect reported.

4. The attitude of health information management professionals and information system utilization has a strong effect on service delivery of the selected federal health institutions in Lagos State, Nigeria.
5. Lack of trained personnel, little or no staff motivation, and network failure are discovered as the key restraints impeding workflow in the selected federal health institutions in Lagos State, Nigeria.

5.2 Conclusion

The study was carried out to investigate the influence of the attitude of health information management professionals (affective, behavioural, and cognitive) and information system utilization (information and system quality) on service delivery (availability of health information management professionals, competence/knowledge of health information management professionals, infrastructure/input) in two Federal Health Institutions in Lagos State, Nigeria.

This research revealed that there was a statistically significant influence of the attitude of health information management professionals and information system utilization on service delivery of federal health institutions in Lagos State, Nigeria. However, underpinning the result demonstrates that all the elements of health information management professionals' attitudes and information system utilization had contributed to the service delivery in the two federal hospitals in Lagos State. This is a cause of worry for federal health institutions if it wishes to accomplish considerable development and compete with global standards. With the introduction of training, thereby equipping professionals with the necessary skill needed to perform a job function as well as the introduction of a user-friendly system to work with, it is believed that these two may enhance service delivery.

Based on the empirical findings, this study concluded that there is a statistically significant influence of the attitude of health information professionals and information system utilization on service delivery in selected two federal health institutions in Lagos State, Nigeria. Furthermore, the findings show that absenteeism is a serious issue that exacerbates problems in healthcare delivery by lowering service quality and lengthening patient wait times. it is necessary to incorporate the needed skill with a proper information system among the two federal health institutions under investigation for better service delivery.

5.3 Recommendations

Based on the outcome of this investigation, the following suggestions are given;

1. Board of directors has a major effect on the service delivery of the selected federal hospitals in Lagos State, Nigeria, they are responsible to fill all of the needs of the organization effectively by setting strategic goals and objectives that focus on the quality of care for the patients. They should also ensure that staff is being recruited, trained, and developed to effectively deliver service to patients. The board of directors of hospitals are sometimes referred to as trustees because they are entrusted with overseeing the hospital's best interest.
2. Underlining the significant influence of the information system utilization on service delivery, the medical director of the hospitals should ensure it acquires and train their staff on information communication technology equipment, also funds should be solicited to provide enough systems to go around every department in the hospital and ventilated office to enhance service quality for the patients.

3. From the obtained result, the attitude of health information management professionals' greatly influences service delivery. Management of hospitals should encourage professionals by properly motivating them in other to bring out the best of their attitude in the course of service delivery.
4. From the analysis done, the federal government should ensure that priority is being given to the health sector when allocating resources, in terms of finance, manpower, and material resources.
5. The head of the health information management department should ensure that the attendance register is strictly adhered to by the staff to show their regularity and punctuality on a day-to-day basis. This is to know the staff who absconded from work, in other to take disciplinary action, thereby ruling out absenteeism, misconduct, and poor performance. It also helps to know the staff present to help cover units where staff is absent.

5.4 Contributions to Knowledge

The work makes a substantial addition to literature philosophically, theoretically, and practically based on the conceptual evaluation done. This work makes deep addition to the knowledge conceptually and empirically in numerous aspects. The research identified and addressed conceptual gaps in the literature surrounding the attitude of health information management professionals, information system utilization, and service delivery of two selected federal hospitals in Lagos State, Nigeria. The conceptual framework of this study equally offers conceptual contribution as it was constructed by the researcher to analyze the gaps identified in the literature. Being the first model to combine dependent (service delivery), and independent variables (attitude of health information management

professionals, and information system utilization) with measures ranging from dimensions of the attitude of health information management professionals (affective, behavioural, and cognitive) and information system utilization (information and system quality) on service delivery (availability of health information management professionals, knowledge/competence of health information management professionals, and infrastructure/input). The model also can be adapted to suit future studies.

From the theoretical standpoint, the ABC (affective, behavioural, and cognitive) model of attitude and DeLone and McLean's information system success model were strengthened. The ABC model has emphasized that cognition has been one of the key factors in attitude formation along with the emotion factor. The core idea of the ABC model is that emotion and cognition interact and interplay in shaping or forming attitudes. Therefore, for hospitals to achieve superior and standard performance, the mindset and the perception of staff have to be positively influenced through training/seminars as well as motivating staff in other to bring out the best in them.

Also, DeLone and McLean's information system success model is current and most studied by researchers, they have withstood the test of time, and received the most citations among the top three Information System (IS) journals. The DeLone and McLean (D&M) information systems (IS) success model seeks to provide a comprehensive understanding of Information System success by identifying and explaining the relationships among their most critical dimensions of success, which includes system quality, information quality, system use, user satisfaction, individual impact, and organizational impact. The study's results are in concomitance with these theoretical perspectives.

Empirically, the study is able to add to the recent literature on the interaction among attitudes of health information management professionals, information system utilization, and service delivery. However, empirical studies from developing countries like Nigeria seem to be few in this regard, but more when it has to do with the generality of health workers. This means not much research has been done on health information management in Nigeria. Hence, the findings of the three (3) null hypotheses examined in the study become a basis for reference for future studies on the attitude of health information management professionals, information system utilization, and service delivery. Moreover, the study provides findings that scholars can use later to buttress the empirical submissions in their study.zs

Specifically, aim four of the research demonstrated that the attitude of health information management professionals has an influence on service delivery, also aim five of the research indicated that information system utilization has an influence on service delivery of the federal health institutions in Lagos State. Overall, these aforementioned points lay emphasis on the fact that this study offers a significant contribution to knowledge and has practical implications for the management of the hospitals in Lagos that were investigated.

5.5 Suggestions for Further Research

This study focused on the influence of attitude of health information management professionals, and information system utilization on service delivery in two selected federal health institutions in Lagos State, Nigeria. Nevertheless, to further broaden the frontiers of knowledge, the following areas of study are suggested for further research.

1. The present study was carried out in two different federal hospitals in Lagos State, further studies in the area of the attitude of health information management professionals and service delivery can as well be carried out in state hospitals so as to be able to extend the knowledge gained from this work to all the hospital within the state.
2. This study investigated the attitude of health information professionals, information system utilization, and service delivery in two selected federal hospitals in Lagos State, Nigeria. A comparative study with hospitals in Nigeria and other African countries such as Ghana may be considered in the nearest future.
3. The attitude of health information management professionals was used in the present study as an independent variable. Further research may consider using other health workers such as doctors, nurses, pharmacists, medical lab scientists, physiotherapists, and other health teams to establish their influence on service delivery.
4. The present research was carried out in government hospitals, further research work may look into private hospitals to examine the attitude of professionals in different private hospitals.
5. This study focuses only on the perspective of the health information management professionals in providing care, further research work may consider the perspective of the patient as well in terms of feedback to know if they feel fulfilled with the service provided.

Bibliography

Books

Ajzen I., & Fishbein M., **The handbook of attitudes Mahwah**, N.J. Lawrence Erlbaum Associates, 2015. 173-221

Bargh J.A., *Four horsemen of automaticity: Awareness, efficiency, intention, and control in social cognition,* **Handbook of social cognition,** R. S. Wyer Jr. and T. K. Srull (Ed.), Erlbaum, Hillsdale, NJ, 1994, 1-40

Eagly A.H., & Chaiken S., *Attitude Structure and Function. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.),* **Handbook of Social Psychology**, *New York, NY: McGraw-Hill,* 1998, 269-322

Ivanov S., & Webster C., Robots, *Artificial Intelligence and Service Automation in Travel, Tourism and Hospitality.* **Emerald Publishing, Bingley,** UK. 2019

Kamwendo G., *Language policy in health services: a sociolinguistics study of Malawian referral hospital:* **Helsinki University Printing House**, 2004

Kaplan S., Nteso K.S., & Ford N., et al. *Loss to follow-up from antiretroviral therapy clinics:* a **systematic review and meta-analysis of published studies in South Africa**, 20, 1, 2019

World Health Organization, Global Diffusion of eHealth: Making Universal Health Coverage Achievable, **Report of the Third Global Survey on eHealth. Geneva, Switzerland,** 2016.

Conference

Backes E.P., & Bonnie R.J., *The Promise of Adolescence, Realizing Opportunity for All Youth. Washington (DC),* **National Academies Press (US),**16 May, 2019

Benny Dr. M.E. Ing., de Waal Prof., & Pascal Ravesteijn dr., **Conference on Management**, *Leadership and Governance,* 14, October, 2018, 18-19

Ezeani E.O., *Fundamentals of public administration,* **Snaap Press Ltd,** Enugu.2018

Gobinda C., Julie M., Val G., & Peter W., *Transforming Digital Worlds*: **13th International Conference**, 201, 2018, 25-28

Jennex M.E., Olfman L., Pituma P., & Yong-Tae P., *An organizational memory information systems success model: an extension of DeLone and McLean's I/S success model, in:* **Proceedings of the 31st Hawaii International Conference on System Sciences, IEEE Computer Society Press, Hawaii, United States,** 1998

Kiyumi A.l, Matar R.H., & Gerard, *Health information management professionals [Present circumstances and future expectations].* In Takahashi, O (Ed.) **Proceedings of the 18th IFHIMA International Congress. International Federation of Health Information Management Association, Japan,** 2016, 518-529

Lindgren J., *Diffusion of systemic innovations,* **Halmstad University Press,** 5, 1, 2018, 19-28

Mittelstadt B., Fairweather N., Ben N., McBride, & M. Shaw, *Privacy, risk and personal health monitoring,* in: ETHICOMP, **Conference Proceedings,** 2013, 340–351

Nikou S., Molinari A., & Widén S., *The interplay between literacy and digital technology: fuzzy-set qualitative comparative analysis approach,* **the information behaviour conference**, 25, 4, DECEMBER, 2020

Seddon P.B., & Kiew M.Y., *A partial test and development of the DeLone and McLean model of IS success.* **In Proceedings of the Fifteenth International Conference on Information on Information Systems.** Washington, DC: Association for Information Systems, 2004

Sedera D., Gable G., & Chan T., *A factor and structural equation analysis of the enterprise systems success measurement model.* **In Proceedings of the Twenty-Fifth International Conference** Backes E.P., and Bonnie R.J., *The Promise of Adolescence, Realizing Opportunity for All Youth.* Washington (DC), **National Academies Press (US),**16 May, 2019

Journals

Abdel Wahed W.Y., Hefzy E.M, Ahmed M.I, & Hamed N.S., *Assessment of Knowledge, Attitudes, and Perception of Health Care Workers Regarding COVID-19*, *A Cross-Sectional Study from Egypt.* **Journal of Community Health**, 45, 6, 2020, 1242-1251

Abdulah D. M., & Perot K.A., *Barriers and benefits of adopting electronic health records (ehrs) in public hospitals,* **Health Prob Civil.** 16, 1, 2022, 2353-6942

Abebe T., Erku D., Gebresillassie B., Haile K., & Mekuria A.. *Expectation and satisfaction of HIV/AIDS patients towards pharmaceutical care provided at Gondar University Referral Hospital, Northwestern Ethiopia*: a cross-sectional study. **Patient Prefer Adherence**, 10, 2016, 2073–82

Adebisi K.I., *The role and Information and Communication Technology in the Management and Entrepreneurship Education in Nigerian tertiary institution Vocational Business Educator,* 2, 1, 2013

Adeleke I.T., Lawal A.H., Adio R.A. & Adebisi A., *Information Technology Skills and Training Needs of Health Information Management Professionals in Nigeria.* **Health Information Management journal,**·March 2014

Adenuga K.I., Iahad N.A., & Miskon S., *Towards reinforcing telemedicine adoption amongst clinicians in Nigeria,* **International Journal of Medical Informatics,** 104, 2017, 84–96

Adewole D.A., Reid S., Oni T., & Adebowale A.S., *Factors Influencing Satisfaction with Service Delivery Among National Health Insurance Scheme Enrollees in Ibadan, Southwest Nigeria,* **Journal of Patient Experience**, 9, 2022

Afërdita B.S., *Management Information System and Competitive Advantage,* **Mediterranean Journal of Social Sciences,** 6, 1, January, 2015

Afulani P.A., Buback L., Essandoh F., Kinyua J., . Kirumbi L, & Cohen C.R., *Quality of antenatal care and associated factors in a rural county in Kenya: an assessment of service provision and experience dimensions,* **BMC Health Serv Res.**19, 1, 2019, 684

Agaku I.T., Adisa A.O., Ayo-Yusuf O.A., & Connolly G.N., *Concern about security and privacy, and perceived control over collection and use of health information are related to withholding of health information from healthcare providers*. **Journal of America Medical Informatics Association,** 2014, 374–378

Agweyu A., Masenge T., & Munube D., *extending the measurement of quality beyond service delivery indicators,* **BMG Global health,** 5, 2, 2020

Ahmed S., *Attitudes towards English Language Learning among EFL Learners at UMSKAL,* **Journal of Education and Practice,** 6, 18, 2015, 2222-1735

Ajzen I., *Nature and operation of attitudes,* **Annual Review of Psychology,** 52, 1, 2001, 27-58

Akunne M.O, Okonta M.J, Ukwe C.V., Heise T.L., & Ekwunife O.I., *Satisfaction of Nigerian patients with health services:* **a protocol for a systematic review**, 8, 256, 2019

AlBar A.M., & Hoque M.R., *Factors affecting cloud ERP adoption in* **Saudi Arabia**: an empirical study. 2017

Alderson L., *The Truth Behind Construction's Mental Health,* Available from https://www constructionnews.co.uk/10019419. 2017

Alipour J., Mehdipour Y., & Karimi A.. *Factors Affecting Acceptance of Hospital Information Systems in Public Hospitals of Zahedan University of Medical Sciences:* A Cross-Sectional Study. **Journal of Medical Life,** 12, 4, 2019, 403-410

Allison T., & Davis, Blakley & Webb, Justin & Short, Jeremy. *Persuasion in crowdfunding: An elaboration likelihood model of crowdfunding performance,* **Journal of Business Venturing,** 32, 2017, 707-725

Alotaibi Y.K., & Federico F., *The impact of health information technology on patient safety,* **Saudi Medical Journal,** 38,12, 2017, 1173-1180

Al-Shammari S.A., Bamgboye E.A., & OlubuyideI.O., *Sickness Absenteeism among Employees of a Teaching Hospital in Saudi Arabia*, Volume 114, 1 2013

Al-Shamsi H., Almutairi A.G., Al Mashrafi S., & Al Kalbani T., *Implications of Language Barriers for Healthcare:* A Systematic Review. **Oman Medical Journal,** 35, 2, April, 2020, 30

Alzaydi Z.M., Al-Hajla A., Nguyen B., & Jayawardhen C., *A review of service quality and service delivery Towards a customer co-production and customer-integration approach,* **Business Process Management Journal**, 24, 1, 2018, 295-328

Amboree L.T., Montealegre J., Fujimoto K., Mgbere O., Darkoh C., & Wermuth P., *Exploring Preventive Healthcare in a High-Risk Vulnerable Population,* **International Journal of Environmental Research and Public Health,** 19, 8, April, 2022

Ambruoso L. D', Abbey M., & Hussein J., *women's accounts of maternity services during labour and delivery in Ghana,* **BMC Public Health,** 5, 140, 2005

Andayani A.A.I., Martono E., & Muhamad M., *Community Empowerment through Village Development and its Implications for Regional Socio-Cultural Resilience,* **Journal of National Resilience,** 23, 1, 2017

Anderson N., Potocnic K., & Zhou J., *Innovation and Creativity in Organizations: A State-of the Science Review,* **Prospective Commentary, and Guiding Framework***,* 40, 5, 2014

Arungwa O.T., *Effect of communication on nurse-patient relationship in National Orthopaedic Hospital, Igbobi, Lagos*. **WA Journal of Nursing,** 25, 2, 2014, 37–46

Asamani L.A., Badu C.A., Joana A., & Maxwell, *Work attitude of Ghanaian nurses for quality health care service delivery,* **International Journal of Research Studies in Management,** 7, 1, 2018,37-46

Asenso-Okyere W.K., Osei-Akoto I., Anum A., & Adukonu A., *The behaviour of health workers in an era of cost sharing: Ghana's drug cash and carry system,* **Tropical Medicine and International Health,** 4, 8, Accessed 2018, 586–593

Asrul S. , Rahman T. K. A., Nawaningtyas N., Budiyantara A., & Wiliani N., *The effect of technology readiness in IT adoption on organizational context*, 2331, 1, 2021

Au N., Ngai E.W.T., & Cheng T.C.E., *A critical review of end-user information system satisfaction research and a new research framework,* **Omega***,* 30, 6, 2002

Austad K., Chary A., Martinez B., Juarez M., Juarez M.Y., Ixen C., & Rohloff P., *Obstetric care navigation: a new approach to promote respectful maternity care and overcome barriers to safe motherhood*, **Reproductive Health,** 14, 148, 2017

Azeez N.A, & Van der Vyver C., *Security and privacy issues in e-health cloud-based system: A comprehensive content analysis*, **Egyptian Informatics Journal**, 20, 2, 2019, 97-108

Bakan I., Buyukbese T., & Ersahan B., *The impact of total quality service (TQS) on healthcare and patient satisfaction: an empirical study of Turkish private and public hospitals,* **The International Journal of Health Planning and Management,** 29, 3, 2014, 292-315

Bakheet Aldosari A., Sheema A.M., Hanan A., & Abdullah A., *Assessment of factors influencing nurses acceptance of electronic medical record in a Saudi Arabia hospital,* **Elsevier. Informatics in Medicine Unlocked,** 10, 2018, 82–88

Baron A.R., Branscombe R.N., & Byrne D., **Social psychology** (12th ed.). Pearson Education, Accessed 2016

Bazant E.S., & Koenig M.A., *Women's satisfaction with delivery care in Nairobi's informal settlements.* **International Journal of Quality Health Care,** 21, 2022, 79-86

Bimerew M., Adejumo O., & Korpela M., *Health information officers views of mental health information processing and utilisation within an integrated primary healthcare service in Cape Town, South Africa,* **African Journal for Physical, Health Education, Recreation and Dance, Supplement** 1:1, 2015, 197-210

Binyamin S. S., Malcolm J.R., & Smith S.. *The Influence of Computer Self-efficacy and Subjective Norms,* **International Journal of Information and Education Technology,** 8, 10, 2018

Bisnauth M.A., Davies N., Monareng S., Struthers H., McIntyre J.A., & Rees k., *Exploring healthcare workers' experiences of managing patients returning to HIV care in Johannesburg, South Africa,* **Glob Health Action,** 51, 1, 2022 Dec

Bitagi A., *Information resources utilization for research by scientist in agricultural* **research institute in Nigeria**, 2017

Bohren M.A., Hofmeyr G.J., Sakala C., Fukuzawa R.K., & Cuthbert A., *Continuous support for women during childbirth* **Cochrane Database System Review**, 7,7, 2017

Bolde M.D., Bangoura A., Diallo B.A., Sall O., Bolde H., Niakate A.S., Vogel J.P., & Bohren M.A., *A qualitative study of women's and health providers' attitudes and acceptability of mistreatment during childbirth in health facilities in Guinea,* **Reproductive Health**, 14, 4. 2015

Breckler S.J., *Empirical validation of affect, behaviour and cognition as distinct components of attitude,* **Journal of Personality Social Psychology,** 47, 6, 1984,1191

Campbell C.J., & McDowell D.E.. *Computer literacy of nurses in a community hospital:* **Journal of Continuing Education in Nursing,** 42, 8, 2011, 365–370

Chadwick R.J., Cooper D., & Harries J, *Narratives of distress in south African public maternity settings:* a qualitative study**. Midwifery**, 30, 2014, 862–8

Chahal H., & Kumari N., *Consumer perceived value, the development of a multiple item scale in hospitals in the Indian context,* **International Journal of Pharmaceutical and Healthcare Marketing,** 6, 2, 2013, 167-190

Chahal H., & Mehta S., *"Modeling patient satisfaction construct in the Indian health care context",* **International Journal of Pharmaceutical and Healthcare Marketing,** 7, 1, Accessed 2020, 75-92

Chen H.C., Sullivan P. O', Teherani A., Fogh S., Kobashi B., & Ten Cate O., *Sequencing learning experiences to engage different level learners in the workplace,* **Medical Teacher**, 37, 2015, 1090-1097

Chen R.F., & Hsiao J.L., *Health Professionals' Perspectives on Electronic Medical Record Infusion and Individual Performance: Model Development and Questionnaire Survey Study*, **JMIR Medical Informatics,** 9, 11, 2021

Chow S.K., Chin W.Y., Lee H.Y., Leung H.C., & Tang F.H., *Nurses' perceptions and attitudes towards computerization in a private hospital,* **Journal of Clinical Nursing,** 21, 11-12, 2015, 1685–1696

Cronin J.J., & Taylor S.A., *Measuring service quality: a reexamination and extension,* **Journal of Marketing,** 56, 3, 1992, 55-68

Dagiliene L., & Šutiene K., *Corporate sustainability accounting information systems: a contingency-based approach.* **Sustainability Accounting, Management and Policy Journal,** 31 May, 2019

Damianus A., Luciano A., Ubasa A., & Magallanes T., *Attitude toward the work and its influence on the Individual work performance of employees: Basis for Attitude Management,* **Technium Social Science Journal**, 18, 1, 2021, 378-394

Dan L., Jianqian C. , Jing Kong, Cao G. , & Zhang M., *The efficiency analysis and spatial implications of health information technology:* **A regional exploratory study in China**, 3 Dec, 2019

Dash S.J., Shakyawar S.K., & Sharma M., etal, *Big data in healthcare: management, analysis and future prospects.* **Journal of Big Data** 6, 54, 2019

Davis F.D., *Perceived usefulness, perceived ease of use, and user acceptance of information technology.* **MIS Quarterly***,* 13, 3, 1989, 319–340

DeLone W.H., & McLean E.R., *Information systems success measurement. Foundations and Trends in Information Systems,* **Journal of Management Information Systems**, *2*, 1, 2016, 1-116

Dzomeku V.M., Ba-Etilayoo A., Perekuu T., & Mantey R.E., *In-patient satisfaction with nursing care: A case study at Kwame Nkrumah University of science and technology hospital,* **International Journal of Research in Medical and Health Sciences,** 2, 1, 2013

Eason K., &Waterson P., *The implications of e-health system delivery strategies for integrated health care, lessons from England,* **International Journal of Medical Informastrategiestics,** 82, 5, 2013, 96-106

Ebnehoseini Z., Jangi M., Tara M., & Tabesh H., *Investigation the success rate of hospital information system (HIS): Development of a questionnaire and case study,* **Journal of Healthcare Quality Research,** 36, 2, March–April 2021, 103-112

Edwards K., *The Interplay of Affect and Cognition in Attitude Formation and Change,* **Journal of Personality and Social Psychology,** 59, 2, Accessed 2015, 202–216

Estacio D.L., *Job Attitude as a Factor on Employees Performance,* **social psychology**, 5, 3, 2018

Evans J.S.B.T., & Stanovich K.E, *Dual-process theories of higher cognition: Advancing the debate,* **Perspectives on Psychological Science**, 8, 3, 2013, 223-241

Falbe C.M., & Yukl G., *Consequences for managers of using single influence tactics and combinations of tactics,* **Academy of Management Journal,** 35, 3, 1992, 638-652

Fesenmaier D.R., & Xiang Z., *Design Science in Tourism, Foundations of Destination Management.* **Springer**, 2017

Fox M.P., Bo J., & Brennan A.T., et al. *Estimating retention in HIV care accounting for patient transfers: a national laboratory cohort study in South Africa.* **PLoS Medicine,** 15,6, 2018

Friedman V., Wright C., Molenaar A., McCaffrey T., Brennan L., & Lim M., *The Use of Social Media as a Persuasive Platform to Facilitate Nutrition and Health Behavior Change in Young Adults: Web-Based Conversation Study,* **Journal of Medical Internet Research,** 24, 5, 2022

Frimpong K.O., Wilson A., & Frimpong N.O., *Service experiences and dyadic value co-creation in healthcare service delivery, a CIT approach,* **Journal of Service Theory Practice,** 25, 4, 2015, 443-462

Gao F., Thiebes S., & Sunyaev A., *Rethinking the Meaning of Cloud Computing for Health Care: A Taxonomic Perspective and Future Research Directions*. **Journal of Medical Internet Research**, 20, 7, 2018

Gauthier B., & Ritva R., *Methodological Approaches to the Study of Institutions and Service Delivery. A Review of PETS, QSDS and CRCS in Africa,* **African Economic Research***,* 5, 2011

Genberg B.L., Shangani S., & Sabatino K. , et al. *Improving engagement in the HIV care cascade: a systematic review of interventions involving people living with HIV/AIDS as peers.* **AIDS and Behaviour,** 20, 10, 2016, 2452–2463

Geneva, *World Health Organization, Delivering quality health services, a global imperative for universal health coverage, Organization for Economic Co-operation and Development,* 2018

Geogia Archives, *Electronic Document Management System Technologies. Records and information management services*. Accessed, April, 2017. Available at: http://www.sos.ga.gov/archives/pdf/records

Gomathy C.K., *Effects of employees attitude to work on productivity,* **International journal of scientific research in engineering and management,** 06, 2022

Gorla N., Somers T.M., & Wong B., *Organizational impact of system quality, information quality,*

and service quality, **Journal of Strategic Information Systems,** 19,2010, 207–228

Gregory P.M., Sara A., & Sherry M., ***Canada Health system****,* 22, 3, 2020

Grimsrud A., Bygrave H., & Doherty M., et al. *Reimagining HIV service delivery: the role of differentiated care from prevention to suppression,* **Journal of the International AIDS Society** 19, 1, 2016

Guerreiro J., Rita P., & Trigueiros D., *Attention, Emotions and Cause-Related Marketing Effectiveness,* **European Journal of Marketing,** *49*,11/12, 2015, 1728–1750

Güntürkün P., & Schons L.M., *Engaging Customers in Co-Production Processes: How Value-Enhancing and Intensity-Reducing Communication Strategies Mitigate the Negative Effects of Co-Production Intensity,* **Journal of Marketing,** 79, 6, 2015

Gurdas Topkaya S. & Kaya N., *Nurses' computer literacy and attitudes towards the use of computers in health care,* **International Journal of Nursing Practice,** 21, 2, 2015, 141–149

Gurp J.V., Soyannwo O., Odebunmi K., & Dania S., etal, *Telemedicine's Potential to Support Good Dying in Nigeria:* **A Qualitative Study**. 10, 6, 2015

Hajli M.N., *Developing online health communities through digital media.* **Int J Inf Manag.** 34, 2, 2021, 311-314

Hameed R..T., Mohamad O.A., Hamid O.T., & Tapus N., *Design of e Healthcare Management System Based on Cloud and Service Oriented Architecture*, 2015, 1–4

Haz´ee S., Vaerenbergh Y.V., Delcourt C., & Kabadayi S., *Service delivery system design for risk management in sharing-based product service systems, a customer-oriented approach,* **International Journal of Operation and Production Management,** 40, 4, 2020, 459–479

Holden R.J., Asan O., & Wozniak E.M., et al. *Nurses' perceptions, acceptance, and use of a novel in-room pediatric ICU technology: testing an expanded technology acceptance model,* **BMC Medical Informatics and Decision Making,** 16, 1, 2016, 145

Hsieh P.J., *An empirical investigation of patients' acceptance and resistance toward the health cloud: the dual factor perspective*. **Computers in Human Behaviour,** 63, 2016, 959–969

Hsieh P.J., Lai H.M., & Hong Y.L., *Explaining Physicians' Acceptance and Resistance to the NHI Pharma cloud:* **A Theoretical Model and Empirical**, 2015, 247

Hubert M. , Blut M., Brock C., Zhang R.W., Koch V., & Riedl R., *"The influence of acceptance and adoption drivers on smart home usage",* **European Journal of Marketing,** 53, 6, 2019, 1073-1098

Huryk L.A, *Factors influencing nurses' attitudes towards healthcare information technology.* **Journal of Nursing Management,** 18, 5, 2010, 606–612

Ibrahim A.A., & Sunday O.P., *Effects of Work Motivation and Self-Esteem on Career Fulfillment Among Health Information Management Personnel in Federal Teaching Hospitals in Southern Nigeria,* **Journal of Human Resource Management**, 8,2, 2020, 85-95

Ibrahim F., Ali D.N.H., & Besar N.S.A., *Accounting Information Systems (AIS) in SMEs: Towards an Integrated Framework.* **International Journal of Asian Business and Information Management (IJABIM),** *11,* 2, 2020, 51-67

Ibrahim S., *"Registered Nurses' Intention To Use Electronic Documentation Systems:* **A Mixed Methods Study**", 2019

Idoga P.E., Toycan M., Nadiri H., & Çelebi E., *Assessing factors militating against the acceptance and successful implementation of a cloud based health center from the healthcare professionals' perspective: a survey of hospitals in Benue state, northcentral Nigeria,* **BMC Medical Informatics and Decision Making,** 19, 2019, 14–34

Iivari J., *An empirical test of the DeLone–McLean model of information system success,* **database for Advances in Information Systems***, 36, 2, 2005, 8–27*

Irfan M.I., *Survival and dysfunctions of bureaucracy, a critical analysis of public bureaucracy in Sri Lanka, Advances in Sciences and Humanities,* 2, 4, 2016, 31-39

Islam M.M., Poly T.N., & Li Y.J., *Recent Advancement of Clinical Information Systems: Opportunities and Challenges,* **Yearsbook Medical Informatics** 27, 1, 2018, 83-90

Ismail N. I., Abdullah N. H., Shamsudin A., & Ariffin N. A. N., *Implementation differences of Hospital Information System (HIS) in Malaysian public hospitals*,‖ **International Journal of Social Sciences Humanities,** 3, 2, 115–120, 2013

Jaaron AA., & Backhouse C.J., *Fostering sustainable performance in services through systems thinking.* **Service Industries Journal,** 39, 15–16, 2019, 1072–1098

Jensen L. G. & Bossen C., *Factors affecting physicians' use of a dedicated overview interface in an electronic health record:* The importance of standard information and standard documentation, **International Journal of Medical Informatics,** 87, 2016, 44–53

Jin M.X., Kim S.Y., Miller L.J., Behari G., & Correa R, **Telemedicine***, Current Impact on the Future.* Cureus. 20, 12, 2020

Johnson M.J., & May C.R.. *Promoting professional behaviour change in healthcare: what interventions work, and why? A theory-led overview of systematic reviews.* **BMJ Open,** 5, 9, 2015

Johnson R.J.. *A comprehensive review of an electronic health record system soon to assume market ascendancy:* **Journal of Health Communication,** 1, 4, 2016

Justice E.O., *E-healthcare/telemedicine readiness assessment of some selected states in Western Nigeria,* **International Journal of Engineering and Technology**, 2, 2, 2012, 195-201

Kabakian-Khasholian T., & Portela A., *Companion of choice at birth: factors affecting implementation.* **BMC Pregnancy Childbirth 17,** 265, 2017

Kambala C.,. Morse T., Masangwi S., & Mitunda P., *Barriers to maternal health service use in Chikhwawa. Southern Malawi* **Malawi Medical Journal,a** 23, 1. 2011, 1–5

Karaca A., & Durna Z., *Patient satisfaction with the quality of nursing care,* 6, 2, 2019

Kgasi M.R., & Kalema B.M., *Assessment e-health readiness for rural South African area,* **Journal of Industrial and Intelligent Information,** 2, 2, Accessed 2022, 131-135

Kifle D., Azale T., Gelaw Y.A., & Melsew Y.A.. *Maternal health care service seeking behaviours and associated factors among women in rural Haramaya District, Eastern Ethiopia: a triangulated community-based cross-sectional study,* **Reproductive Health,** 14, 16, 2017

Kim S., Lee K.M., & Hwang H., et al. *Analysis of the factors influencing healthcare professionals' adoption of mobile electronic medical record (EMR) using the unified theory of acceptance and use of technology (UTAUT) in a tertiary hospital.* **BMC Medical Informatics and Decision Making,** 16, 12, 2016

Kirmizi M., & Kocaoglu B., *The key for success in enterprise information systems projects: development of a novel ERP readiness assessment method and a case study.* **Enterprise Information Systems***,* 14, 1, 2020, 1-37

Ko S., Kim W., & Lee K., *Exploring the Factors Affecting Technology Transfer in Government Funded Research Institutes: The Korean Case,* **Journal of Open Innovation: Technology, Market and Complexity,** 7, 228, 2021

Konlan K.D, Saah J.A., Doat A.R., Amoah R.M., Abdulai J.A., & Mohammed I., *Influence of nurse-patient relationship on hospital attendance. A qualitative study of patients in the Kwahu Government Hospital*, *Ghana,* **Heliyon**, 7, 2, 2021

Kruse C.S, Smith B., Vanderlinden H., & Nealand A., *Security Techniques for the Electronic Health Records,* **Journal of Medical Systems,** 41, 8, 2017

Kuek A., & Hakkennes S., *Healthcare staff digital literacy levels and their attitudes towards information systems***, Health informatics journal,** April 15, 2019

Kulkarni U.R., Ravindran S., & Freeze R., *A knowledge management success model: theoretical development and empirical validation,* **Journal of Management Information Systems** 23, 3, 2006, 309–347

Kuye O.L., & Akinwale O.E., *Conundrum of bureaucratic processes and healthcare service delivery in government hospitals in Nigeria,* **Journal of Humanities and Applied Social Sciences,** 3, 1, 2021, 25-48

Ladero M.M.G., Casquet C.G., & Singh J., *Understanding Factors Influencing Consumer Attitudes toward Cause-Related Marketing.* **International Journal of Nonprofit and Voluntary Sector Marketing,** 20, 1, 2015, 52–70

Lafta R., Al-Ani W., & Dhiaa S., et al. Perceptions, *experiences and expectations of Iraqi medical students.* **BMC Medical Education,** 18, 1, March, 2018, 53

Landon A.C., Jacobs M.H., Miller C.A., Vaske J.J., & Williams B.D., *Cognitive and Affective Predictors of Illinois Residents' Perceived Risks from Gray Wolves,* **Society & Natural Resources***,* 2019

Legris P., Ingham J., & Collerette P., *Why do people use information technology? A critical review of the technology acceptance model,* **Information & Management***,* 40, 3. 2003, 191-204

Leisen P.B., *The nature of the service quality and satisfaction relationship, empirical evidence for the existence of satisfiers and dissatisfiers, Managing Service Quality:* **An International Journal,** 18, 6, 2008, 537-558

Lemon K.N., & Verhoef P.C., *Understanding customer experience throughout the customer journey.* **Journal of Marketing**, 80, 6, 2016, 69–96

Lian J.W.*, Establishing a cloud computing success model for hospitals in Taiwan.* **Inquiry: Journal of Health Care Organization Provision, and Financing**, 54, 2017

Liao C.S, & Chuang H.K., *Tourist preferences for package tour attributes in tourism destination design and development*. **Journal of Vacation Marketing,** 26, 2, 2020, 230–246

Lowry P.B., Karuga G.G., & Richardson V.J., *Communications of the Association for Information Systems,* **Assessing leading institutions, faculty, and articles in premier information systems research journals,** 20, 16, 2007, 142–203

Ma G., Lin J., Li N., & Zhou J., *Cross-cultural assessment of the effectiveness of eco-feedback in building energy conservation.* **Energy and Buildings***,* 134, 2017

MacLure K., & Stewart D.. *Digital literacy knowledge and needs of pharmacy staff: a systematic review,* **Journal of Innovation in Health Informatics,** 23, 3, 2016, 840

Madula P., Kalembo F.W., & Yu H., *et al, Healthcare provider-patient communication: a qualitative study of women's perceptions during childbirth*. **Reproductive Health**, **15**, 135, 2018

Manfred S., *Congestion control for differentiated healthcare service delivery in emerging heterogeneous wireless body area networks.* **IEEE Wireless Communication,** 21, 2, 2017, 81-90

Manzoor F., Wei L., Hussain A., Asif M., & Shah S., *Patient Satisfaction with Health Care Services, An Application of Physician's Behavior as a Moderator,* **International Journal of Environmental Research and Public Health,** 16, 18, 9, 2019

Maphumulo W.T., & Bhengu B.R. . *Challenges of quality improvement in the healthcare of South Africa post-apartheid: a critical review.* **Curationis,** 42, 1, 2019, 1–9

Martínez-Caro E., Cegarra-Navarro J.G., García-Pérez A., & Fait M., *Healthcare service evolution towards the Internet of Things: an end-user perspective,***Technological Forecasting and Social Change,** 136, 2018, 268-276

Mason J., Freemantle N., & Nazareth I., et al. *When is it cost-effective to change the behavior of health professionals?* **Journal of the America Medical Association**, 286, 23, 2013, 2988–2992

Mason R.O., *Measuring information output: a communication systems approach,* **Information & Management***,* 1, 5, 1978, 219–234

McCombes S, *Descriptive Research Design Definition, Method, & Examples.* May 15, 2019

McGill T., Hobbs V., & Klobas J., *User-developed applications and information systems success: a test of DeLone and McLean's model,* **Information Resources Management Journal,** 16, 1, 2003, 24–45

McMahon S.A., George A.S., Chebet J.J., Mosha I.H., Mpembeni R.N.M., & Winch P.J., *Experiences of and response to disrespectful maternity care and abuse during childbirth; a qualitative study with women and men in Morogoro region,* **Tanzania BMC Pregnancy Childbirth,** 14, 268, 2014

Mellikeche S., Boussekey O., Martin G., Campoy E., & Degoulet P., *Evaluation of the unified model of information systems continuance (UMISC) in two hospital environments,* **International Journal of Medical Informatics,** 2018

Mgawadere F., Unkels R., & Kazembe A., *et al, Factors associated with maternal mortality in Malawi: application of the three delays model,* **BMC Pregnancy Childbirth,** 17, 219, 2017

Michel S., Michaud-Trévinal A., & Cocula F., *Net Impacts in Front Office IS: a First Operationalization of Delone and McLean Model in the Banking Sector*, **The Electronic Journal of Information Systems Evaluation**, 22, 2, 2019, 92-112

Milinevska V., & Kudrenko N., *The concept and types of information systems in management of enterprise.* **National University of Food Technologies***,* 26, 2020, 1-5

Mizokawa D.T., & Hansen-Krening N., *The abc's of attitudes toward reading, Inquiring about the reader's response*. **Journal of Adolescent & Adult Literacy,** 44, 2000, 72-79

Mohamadali N. A., Faizah N., & Aziz A., *The technology factors as barriers for sustainable Health Information Systems (HIS),* **A review,‖ Procedia Computer Science**, 124, 2018, 370–378

Mohammad A., etal. *Modelling the utilization of cloud health information systems in the Iraqi public healthcare secto,.* **Telematics and Informatics, Publishing Elsevier,** 36, 2019, 132–146

Morrison-Smith S., & Ruiz J., *Challenges and barriers in virtual teams:* a literature review. 2020.

Mosadeghrad A.M, *Factors influencing healthcare service quality*, **International Journal of Health Policy Management**, 3, 2. 2014, 77-89

Moyo R., & Salawu A., Patients' *perception of doctor-patient health communication in a rural community,* **Communitas***,* 22, 2017, 98–112

Mpaata K.M, Okiria J.C., & Lubogoyi B., *Resources Availability and Quality of Patient Care Services in Public Hospitals in Uganda: "Expert Patients" Perspectives,* **International Journal of Science and Research (IJSR)**, 78,96, Accessed 2017, 2319-7064

Muschalik C., Elfeddali I., & Candel M.J., *et al. Does the discrepancy between implicit and explicit attitudes moderate the relationships between explicit attitude and (intention to) being physically active?*. **BMC Psychology,** 7, 52, August, 2019

Myers B.L., Kappelman L.A., & Prybutok V.R., *A comprehensive model for assessing the quality and productivity of the information systems function towards a contingency theory for information systems assessment,* **Information Resources Management Journal,** 10, 1, 1997, 6–25

Naidu A.*, "Factors affecting patient satisfaction and healthcare quality",* **International Journal of Health Care Quality Assurance,** 22, 4, 2021, 366-381

Naini A.E., Vahdat S., Hedaiati Z.P., Shahzeidi S. , Pezeshki A.H., & Nasri H., *The effect of vitamin D administration on serum leptin and adiponectin levels in end-stage renal disease patients on hemodialysis with vitamin D deficiency: a placebo-controlled double-blind clinical trial,* **Research Journal of Medical Sciences,** 21, 2016, 1-1

Nameghi E.N.M., & Shadi M.A., *Affective and Cognitive: Consumers Attitude toward Practicing Green (Reducing, Recycling & Reusing).* **International Journal of Marketing Studies,** *5*, 1, 2013, 157–164

Narayanamurthy G., Gurumurthy A., Subramanian N., & Moser R., *Assessing the readiness to implement lean in healthcare institutions, A case study,* **International Journal of Production Econonomics,** 197, 2018, 123–142

Ngusie H.S., Kassie S.Y., & Chereka A.A., *et al. Healthcare providers' readiness for electronic health record adoption:* a cross-sectional study during pre-implementation phase, **BMC Health Services Research,** 22**,** 282, 2022

Nguyen N.X., Tran K., & Nguyen T.A., Impact of Service Quality on In-Patients' Satisfaction, Perceived Value, and Customer Loyalty: A Mixed-Methods Study from a Developing Country. **Patient Prefer Adherence**, 15, 2021, 523-2538

Njilele A. Ukwe C., Okonta J., & Ekwunife O., *Development of a patient satisfaction questionnaire for HIV/AIDS patients in Nigeria.* **International Journal of Clinical Pharmacy,** 34, 1, 2012, 98–104

Nsiahi R.B., Solomon A.D., Dominic N. , Wisdom T., Gbiel L.N., & Gifty S.O. , etal, *Differences in Knowledge and Practice of Health Information Management among Health Care Managers in Urban and Rural Districts of Ghana,* **International Journal of Research and Innovation in Social Science (IJRISS),** *6,5, 2022, 2454-6186*

Nwafor S.O., *Information Technology. A modern tool in the Administration of Universities in Rivers State.* **Nigerian Journal of Educational Administration and Planning,** 5, 2, 2015, 184-188

Nwankwo R.N., Ananti M.O., & Adubueeze M.H., *Bureaucratic corruption and practice of public administration in Nigeria,* **International Journal of Economics Commerce and Management,** 111, 12, 2015, 680-697

Ogochukwu C.O., *ICT knowledge and utilization as determinants of job performance of Health Information Managers in health institutions in South-East Nigeria,* **International Journal of Library and Information Science,** 13, 2, 2021

Ojo A.I, & Popoola S.O, *Some correlates of electronic health information management system success in Nigerian teaching hospital,* **Biomedical Information Insights**, 7, 2015, 1-9

Okafor I.I., Ogwu E.O., & Obi S.N.. *Disrespect and abuse during a facility-based childbirth in a low-income country.* **International Journal of Gynecology and Obstetrics,** 128, 2015, 110–3

Okonkwo O.C., *ICT knowledge and utilization as determinants of job performance of Health Information Managers in health institutions in South-East Nigeria,* **International Journal of Library and Information Science**, 13, 2, 2021, 21-33

Okonofua F., Ogu R., Agholor K., Okike O., Abdus-salam R., Gana M., Randawa A., Abe E., Durodola A., & Galadanci H., TheWHARC, WHO, FMOH,MNCH *Implementation Study Team. Qualitative assessment of women's satisfaction with maternal health care referral hospitals in Nigeria.* **Reproductive Health,** 14, 44, 2017

Oleribe O.O., Momoh J., Uzochukwu B.S., Mbofana F., Adebiyi A., Barbera T., Williams R., & Taylor-Robinson S.D., *Identifying Key Challenges Facing Healthcare Systems In Africa And Potential Solutions.* **International Journal of General Medicine**, 6, 12, Nov, 2019, 395-403

Omotosho A., Emuoyibofarhe J., Ayegba P., & Meinel C., *E-Prescription in Nigeria*: ***A Survey.*** **Journal of Global Pharma Technology,** 10, 12, 2019, 58 – 64

Osei-Frimpong K., Wilson A., & Lemke F., *Patient co-creation activities in healthcare service delivery at the micro level, the influence of online access to healthcare information.* **Technological Forecasting and Social Change,** 126, 2018, 14-27

Ostrom T.M., *The Relationship Between the Affective, Behavioral, and Cognitive Components of Attitude.* **Journal of Experimental Social Psychology,** 5, 1, 1969,12–30

Osundina K.S., & Opeke R.O., *PATIENTS' WAITING TIME: INDICES FOR MEASURING HOSPITAL EFFECTIVENESS* **International Journal of Advanced Academic Research,** 3, 10, October, 2017, 2488-9849

Owolabi L.A. , & OlusegunE.A., *Conundrum of bureaucratic processes and healthcare service delivery in government hospitals in Nigeria,* 3, 1, 2020, 2632-279

Owusu F.N., Nwankwo S., & Dason B., *Measuring service quality and patient satisfaction with access to public and private healthcare deliver,* **International Journal of Public Sector Management,** 23, 3, 2014, 203-220

Padma P., Rajendran C., & Lokachari S.L., *Service quality and its impact on customer satisfaction in Indian hospitals, perspectives of patients and their attendant, Benchmarking,* **An International Journal,** 17, 6, 2010, 807-841

Peine A., & Moors E.H., *Valuing health technology, habilitating and prosthetic strategies in personal health systems.* **Technological Forecasting and Social Change,** 93, 2015, 68-81

Peters D.H., Garg A., Bloom G., Walker D.G., Brieger W.R., & Rahman M.H., *Poverty and access to health care in developing countries,* **Annals of the New York Academy of Sciences,** 1136, 1, 2008, 161-171

Peterson J., *The Role of Health Information Management Professionals in the Use of Geographic Information Systems*, **Perspective in Health Information Management,** 2017

Petter S., DeLone W., & McLean E.R., *Information systems success: The quest for the independent variables.* **Journal of Management Information Systems,** 29, 4, 2013, 7-62

Pitt L.F., Watson R.T., & Kavan C.B., *Service quality, A measure of information systems effectiveness,* **MIS Quarterly,** 19, 2, 1995, 173–188

Pomering A., & Dolnicar S., *Assessing the Prerequisite of Successful CSR Implementation: Are Consumers Aware of CSR Initiatives?* **Journal of Business Ethics,** *85*, 2, 2009, 285–301

Rai A., Lang S.S., & Welker R.B., *Assessing the validity of IS success models: an empirical test and theoretical analysis***, Information Systems Research***,* 13, 1, 2002, 5–69

Rajabion L., Shaltooki A.A., Taghikhah M., Ghasemi A., & Badfar A., *Healthcare big data processing mechanisms: the role of cloud computing,* **International Journal of Information Management,** 49, 2019, 271-289

Ratnam K.A., Dominic P.D.D., & Ramayah T., *A structural equation modeling approach for the adoption of cloud computing to enhance the Malaysian healthcare sector systems-level quality improvement.* **Journal of Medical Systems,** 38, 82,2014

Rogers E.M., *A prospective and retrospective look at the diffusion model.* **Journal of Health Communicatiions,** 9, 2004, 13–1

Rommel C., Sanqui, Y. Mary, & Declaro-Ruedas A., *Knowledge and Attitudes towards Healthcare Information Technology,* **Asian Journal of Education and Social Studies,** 7,1, 2020, 26-32

Rosen P., *Supporting women in labour: analysis of different types of caregivers.* **Journal of Midwifery Women's Health,** 49, 2004, 24–31

Roth A.V. & Menor L.J., *Insights into service operations management, a research agenda,* **Production and Operation Management**, 12, 2, 2016, 145–164

Ruiz S., & Sicilia M., *The Impact of Cognitive and/or Affective Processing Styles on Consumer Response to Advertising Appeal,* **Journal of Business Research,** *57*,6, 2004, 657–664

Sahimi M. S., Ahmad A., & Bakar A. A., *"The Iterative Alternating Decomposition Explicit (IADE) method to solve the heat conduction equation,"* **International Journal of Computer Mathematics,** 47, 2013, 219-229

Sauls D., *Effects of labour support on mothers, babies, and birth outcomes,* **Journal of Obstetrics, Gynecologic and Neonatal Nursing,** 31, 2002, 733–41

Schenk E.C., Mayer D.M., &Ward-Barney E., et al. *RN perceptions of a newly adopted electronic health record,* **Journal of Nursing Administration,** 46, 3, 2016, 139–145

Seddon P.B., *A respecification and extension of the DeLone and McLean model of IS success,* **Information Systems Research**, 8, 3, 1997, 240–253

Seddon P.B., Staples S., Patnayakuni R., & Bowtell M., *Dimensions of information systems success,* **Communications of the Association for Information Systems** 2, 1999, 2–39

Segel K.T., *Bureaucratic is Keeping Health Care from Getting Better,* **Harvard Business Review,** October, 2017

Seljeskog L.L, Sundby J., & Chimango J., *Factors influencing women's choice of place of delivery in rural Malawi: an explorative study,* **African Journal of Reproductive Health,** 10, 3, 2006, 66–75

Seyitoğlu F., & Ivanov S.A., *conceptual framework of the service delivery system design for hospitality firms in the (post-)viral world: The role of service robots*, **International Journal of Hospitality Management,** 91,102661, 2020

Shabbir A., & Malik S.A, *"Measuring patients' healthcare service quality perceptions, satisfaction, and loyalty in public and private sector hospitals in Pakistan",* **International Journal of Quality & Reliability Management,** 33, 5, 2016, 538-557

Shafazawana M.T., Cheah Y.Y., Zuliawati M.S., & Zuliawati S. Kavitha, *Managing Job Attitude, The Roles of Job Satisfaction and Organizational Commitment on Organizational Citizenship Behavior,* ***Procedia*** **Economics and Finance,** 35, 2016, 604-611

Shagari S.L., Abdullah A., & Saat R.M., *Accounting information systems effectiveness: Evidence from the Nigerian banking sector.* **Interdisciplinary Journal of Information, Knowledge, and Management,** 12, 2017, 309- 335

Sharma I.S., Kumari B., Ali A., Rajesh K.I., & Girish K., etal, Mobile technology, **Journal of Family Medicine and Primary Care,** 11, 1, January, 2022, 37-43

Silow-Carroll S., Edwards J. N., & Rodin D., *Using electronic health records to improve quality and efficiency:* The experiences of leading hospitals, **Issue Brief (Commonwealth Fund)**, 17, 2020, 1–40

Silver M.P., *Patient perspectives on online health information and communication with doctors: a qualitative study of patients 50 years old and over,* **Journal of Medical Internet Research,** 17, 1, 2015,19

Simon S.R., Kaushal R., Cleary P.D., Jenter C.A., Volk L.A., Poon E.G., Orav E.J., Williams D.H., & Bates D.W., *Correlates of electronic health record adoption in office practices: a statewide survey,* **Journal of the American Medical Informatics Association,** 14, 1, 2009, 110-117

Singh A.S., and Masuku M., *Sampling Techniques and Determination of Sample Size in Applied Statistics Research.* An Overview, **Internation Journal of Commerce and Management**, 2, 11, 2014, 1-22

Smith T.A., Schleicher D.J., Casper W.J., J.D., & Greguras G.J., *It's All in the Attitude, The Role of Job Attitude Strength in Job Attitude-Outcome Relationships*, **The Journal of applied psychology,** 100, 4, 2015, 1259-1274

Srinives G., Kumar S., Mohanrag R., Sekkizhar G., MuthuvelT., Lal V., Koemm B., & Kasang C,. *Development and validation of a scale to assess attitudes of health care providers affected by leprosy in Southern India*, 12, 9, 2018

Stacie P.L., DeLone2W., & McLean E., *Measuring information systems success models, dimensions, measures, and interrelationships.* **European Journal of Information Systems,** 17, 2008, 236–263

Stern E., Colvin C., & Gxabagxaba N. , et al. *Conceptions of agency and constraint for HIV-positive patients and healthcare workers to support long-term engagement with antiretroviral therapy care in Khayelitsha.* **African Journal of AIDS Research,** 16, 1, 2017, 19–8

Sukums F., Mensah N., Mpembeni R., Kaltschmidt J., Haefeli W.E., & Blank A., *Health workers' knowledge of and attitudes towards computer applications in rural African health facilitie,.* **Global Health Action**, 27 Oct, 2014

Sutton R.M., & Douglas K., *Conspiracy theories and the conspiracy mindset: Implications for political ideology,* **Current Opinion in Behavioral Sciences***,* 2020, 2352-1546

Tawfik D.S., Sinha A., Bayati M., Adair K.C., Shanafelt T.D., Sexton J.B, & Profit J., *Frustration With Technology and its Relation to Emotional Exhaustion Among Health Care Workers: Cross-sectional Observational Study*, **Journal of Medical Internet Research**, 23, 7, 2021

Tregua M.D., Auria A., & Costin H., *10yearschallenge, how co-creation permeated tourism research. A bibliometric analysis.* **European Journal of Tourism Research,** 24, 2409, 2020

UNAIDS, Joint United Nations Programme on HIV/AIDS. South Africa country profile, 21 May, 2021

Vahdat S., *The complex effects of adipokines in patients with kidney disease,* **Research Journal of Medical Sciences,** 23, 1, 2018, 60

Valverde S., *Major transitions in information technology.* **Philosophical Transactions of the Royal Society B: Biological Sciences** 371, 1701, 2016

Vargo S.L,, & Lusc R.F., *Evolving to a new dominant logic for marketing,* **Journal of Marketing,** 68, 1, 2008, 1-17

Varming A.R., Torenholt R., Andersen T., Møller B.L, & Willaing I., *Targeting "hardly reached" people with chronic illness: a feasibility study of a person-centered self-management education approach,* **Patient Prefer Adherence**, 12, 2018, 275-289

Vasey M.W., Harbaugh C.N., Buffington A.G., Jones C.R., & Fazio R.H., *Predicting return of fear following exposure therapy with an implicit measure of attitudes,* **Behaviour Research and Therapy***,* 50, 12, 2016, 767-774

Venkatesh V., & Zhang X., *Unified theory of acceptance and use of technology:* US vs China. **Journal of Global Information Technology Management,** 13, 2010, 5–27

Walker R.M., Damanpour F., & Devece C.A., *Management innovation and organizational performance: The mediating effect of performance management,* **Journal of Public Administration Research and Theory,** 21, 2, Accessed 2015, 367–386

Wang J.Y., Ho H.Y., & Chen J.D., et al. *Attitudes toward inter-hospital electronic patient record exchange: discrepancies among physicians, medical record staff, and patients.* **BMC Health Services Research,**15, 264, 2015

Wang T.K., Ju H.J., & B.J., *The influencing factors on innovation of local governments: Focusing on the moderating effect of the external-focus cultur,.* **The Korea Local Administration Review,** 31, 4, 2017, 199–220

Weinstock D., *Deer in the headlights: improving patient literacy,* **Journal of Medical Practice Management,** 30, 4, 2015, 273–5

Winpenny E. M., Miani C., itchforthE. King P, S., & Rolan M., *Improving women's perceptions during childbirth*, Madula et al. **Reproductive Health,** 15, 2018, 135

Wood W., Quinn J.M., & Kashy D.A., *Habits in everyday life: Thought, emotion, and action,* **Journal of Personality and Social Psychology,** 83, 6, 2022, 1281-1297

Wu Y., Cegielski C.G., Hazen B.T., & Hall D.J., *Cloud computing in support of supply chain information system infrastructure:* understanding when to go to the cloud, **Journal of Supply Chain Management,** 2013, 25–41

Xie Z., & Or C., *Associations Between Waiting Times, Service Times, and Patient Satisfaction in an Endocrinology Outpatient Department: A Time Study and Questionnaire Survey*, **National Library of Medicine**, Jan, 2017

Yanti S.P., Pengaruh T.P., & Keterampilan K., *Bank Negara Indonesia Cabang Makassar.* **Master Thesis Universitas** Hasanuddin, 2012

Yen P.Y., McAlearney A.S, Sieck C.J, Hefner J.L, & Huerta T.R, *Health Information Technology (HIT) Adaptation: Refocusing on the Journey to Successful HIT Implementation,* **JMIR Medical Informatics**, 5, 3, 2017

Zakaria N. & Mohd Yusof S. A., *Understanding Technology and People Issues in Hospital Information System (HIS) Adoption: Case study of a tertiary hospital in Malaysia***,‖ Journal of Infection and Public Health,** 9, 6, 2016, 774–780

Zayyad M.A., & Toycan M., *Factors affecting sustainable adoption of e-health technology in developing countries, an exploratory survey of Nigerian hospitals from the perspective of healthcare professionals.* **PeerJournal,** 1 Mar, 2018

Zeena F.D., & Suresh P., *Employee Attitude towards Organisational Commitment, A Literature Surve,.* **Journal of Business and Management,** 20, 1, 2018, 21-27

Zhang Y., Yu P., & Shen J., *The benefits of introducing electronic health records in residential aged care facilities:* A multiple case study. **International journal of medical informatics**, 81, 2012, 690-704

Zhu Z., Heng B., & Teow K., *Simulation study of the optimal appointment number for outpatient clinics.* **International Journal of Simululation Modelling (IJSIMM).** 8, 3, 2019, 156-165

Appendix

Department of Information Management

Faculty of Information and Communication Sciences

Lead City University, Ibadan

Questionnaire on the attitude of Health Information Management Professionals, Information System Utilization and Service delivery

Dear Respondent.

I am a Master's Degree student conducting research on the Attitude of Health Information Management Professionals, Information System Utilization and service delivery in Federal Health Institutions, Lagos State, Nigeria. I crave your indulgence to help fill this questionnaire as accurately as the questions and statements relate to you. Your response will be treated with strict confidentiality and used only for research purposes.

Thank you.

Section A: Bio-data:

Please tick as and where applicable

a. Professional Cadre: Health information management officer ( ) Health Information Management Technician ( )
b. Age: 21-25 ( ) 26-30 ( ) 31-35 ( ) 36-40 ( ) 41-45 ( ) 46 & above ( )
c. Gender: Male ( ) Female ( )
d. Marital status: Married ( ) Single ( ) Divorced ( ) Separated ( )
e. Religion: Christian ( ) Islam ( ) Traditional ( ) Others ( )
f. Level of Education: Ph.D ( ) Masters ( ) B.Sc. ( ) HND ( ) ND ( )
g. Years of work experience in the facility: 1-5 years ( ) 6-10 years ( ) 11-15 years ( ) 16-20 years ( ) 21 and above ( )

Section B: Service Delivery Scale

Please tick the option that best explains your opinion on the following statements concerning Service Delivery among Health Information Management Professionals. SA-Strongly Agree (4), A-Agree (3), D-Disagree (2), SD-Strongly Disagree (1)

	Service Delivery				
S/N	**Health Information Management Professionals' Availability** ***Absenteeism***	**SA**	**A**	**D**	**SD**
	In your opinion, what is the level of service delivery based on the following?				
1.	The high cost of transportation is a factor that leads to staff taking time off work				
2.	Obtaining sick leave off work due to illness causes absenteeism				
3.	The use of the system has left many staff idle, leading to absenteeism				
	Patient waiting time				
4.	Short staffing has the potential for patient delay				
5.	Sending patients' information to the doctor on their appointment days, without the complimentary Xray can cause a delay in patient				

	care				
6.	System downtime causes a delay in patient care				
	Health Information Management Professionals' Knowledge/Competence				
	Training and Re-training				
7.	Formal training enhances competence				
8.	On-the-job training facilitates competence				
9.	Continuous training increases knowledge				
	Infrastructure/ Input				
10.	The structure of the hospital can affect service delivery				
11.	Internet network instability can interrupt the workflow				
12.	Electricity inconsistency can affect service delivery				

Section C: Attitude of Health Information Management Professionals Scale

Please tick the option that best explains your opinion on the following statements concerning the Attitude of health information management professionals. SA-Strongly Agree (4), A-Agree (3), D-Disagree (2), SD-Strongly Disagree (1)

	Attitude				
S/N	**Affective Attitude**	SA	A	D	SD
	What is your opinion on your attitude towards providing services as a health information management professional based on the following?				
13.	I feel fulfilled rendering services to patients as a health information management professional				
14.	I feel the need to take special care when dealing with patients				
15.	I feel the need to attend to any kind of patient irrespective of the				

	illness				
	Behavioural Attitude				
16.	I exhibit a sense of professionalism when carrying out my duty				
17.	I am supportive of patient care				
18.	I communicate well with patients because I know that health information management renders humanitarian services				
	Cognitive Attitude				
19.	I do not think there is career fulfillment in health information management				
20.	I think health information management professionals are not well paid				
21.	I think health information management professionals are not well motivated				

Section D: Information System Utilization Scale

Please tick the option that best explains your opinion on the following statements concerning Information System Utilization in health care. SA-Strongly Agree (4), A-Agree (3), D-Disagree (2), SD-Strongly Disagree (1)

	Information System Utilization				
S/N	**Information Quality**	SA	A	D	SD
	In what way has information system utilization helped to improve information quality based on the following?				
22.	The use of an information system helps to generate complete data for patient care				
23.	The use of an information system helps to generate accurate data for patient care				
24.	The use of an information system facilitates access to timely data relevant to patient care				

	System Quality				
25.	The Information system is not user- friendly to enable me carry out all my functions relating to health information with ease				
26.	Information systems respond promptly, thereby providing a faster means of retrieving data needed for treatment by the doctors				
27.	Information gotten from the system is reliable				

Source: G. Srinives, S. Kumar, R. Mohanrag, G. Sekkizhar, T. Muthuvel, V. Lal, B. Koemm, C. Kasang. Development and validation of a scale to assess attitudes of health care providers affected by leprosy in Southern India. 12,9, Semptember, 2018.

Bio-data

Personal Data

Name:	Linda Otibhor IFIDON
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E-mail:	lindaifidon10@gmail.com
Phone no:	08039532344
Date and Place of Birth:	April 27th, 1988/ Lagos
Nationality:	Nigeria
State of Origin:	Edo State
Sex:	Female
Marital Status:	Single
Religion:	Christianity

B. Schools Attended with Dates

(a) Lead City University, Ibadan	2021-2022
(b) University of Lagos	2017-2020
(c) Lead City University, Ibadan	2015-2017

(d) School of Health Information Management (LUTH) 2010-2013

(e) School of Health Information Management (UITH) 2007-2009

C. Academic Qualification with Dates

(a) M.Sc. Health Information Management	In view
(b) M.Sc. Public Health	2017-2020
(c) B.Sc. Health Information Management	2015-2017
(d) H.N.D Health Information Management	2010-2013
(e) N.D Health Information Management	2007-2009

D. Work Experience with Dates

National Orthopaedic Hospital, Igbobi, Lagos	2017 to date
Guarantee Trust Bank	2015-2017

E. Hobbies

Reading

Games and Sport

Teaching

_____ _____

Signature **Date**

University Compliance Certification

This is to certify that this Thesis written by Linda Otibhor IFIDON with Matriculation No: LCU/PG/002064 in the department of Information Management, Faculty of Information and Communication Sciences, Lead City University, Ibadan is in full compliance with the approved university format and style.

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Signature **Date**