INFLUENCE OF STAFF ATTITUDE AND INFORMATION FLOW SYSTEMS ON HEALTH MANAGEMENT SYSTEM IN GENERAL HOSPITALS IN NIGER STATE

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M.Tech/SICT/2017/6724

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ABSTRACT

The general aim and objectives of the study is to establish the influence of staff attitudes and information flow systems in Health Management System in general hospital in Niger State, the gap, staff attitudes has produced, challenges encountered and a way forward in general hospitals in Niger State. Descriptive survey design was used and a self-administered questionnaire for data collection. The population of the study comprised of both the hospital staff and patients which were 1045 and 2209 respectively. Using Kerjgie and Morgan table, 278 and 327 was sufficient for the study. A total of 605 copies of the instrument were distributed, but 383 were retrieved. It is discovered that (45.5%) of the staff agreed to the mode of information transmission is by verbal direction to places of treatment, and (49.7 %) making announcements while in the vicinity. In addition, the level of information flow appears to be very weak in general hospitals in Niger State with (7.9%), Positive staff attitude can enhance services rendered, is revealed with (53.7%), staff preferred profession stimulate high exhibition of behavior which revealed that (55.1%) are practicing by will, while inadequate information to be communicated increase patients' ill status with (43.7%). The use of radio and television jingles will reduce communication gap to patients, Announcement in each outlet or passage to notify /make awareness to patients of their whereabouts in the hospital will help in sensitizing the patient, The use of electronic computers to receive and send information from any unit of the hospital regarding a patient during visit, help reduce the long stay/ traffic at the various sections in the hospital. The management of the general hospitals in Niger State should provide medical personnel with wide knowledge of ICT, for adequate use and effective service delivery.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the Study

The essential goal of the Nigeria healthcare system is to enhance the provision, efficiency, effectiveness and general quality of healthcare services provided by the healthcare system. The Nigeria healthcare system is established and maintained by the three tiers of government, that is the Federal, State, Local governments, private sector, as well as religious and non-governmental organizations. The Federal government, Federal Universities, teaching hospitals and the Federal Medical Centers (FMCs) provide specialized support for their healthcare system. The State government provides technical support and is responsible for secondary healthcare through the General hospitals and state owned universities and teaching hospitals. (Iroju, 2014). Similarly, the Local government is responsible for primary healthcare, which is organised through the wards, district healthcare centers (Iroju *et al.,* 2013). The primary health centers are usually the first point of contact of patients, but due to the poor funding, sufficient man-power at a time to attend to situations and space for accommodating patients, and they are referred to as secondary healthcare facilities. Furthermore, Iroju (2014) emphasised that the private sector provides a larger percentage of healthcare services due, to poor coordination and funding of the healthcare system by the three tiers of government. Hence, 75% of the 3275 secondary health facilities in Nigeria are privately owned (Annan, 2002).

Healthcare managements in Nigeria is responsible for countless numbers of classified staff and their wellbeing, starting from the minister to the cleaner in the hospital or clinic, each playing a vital role or function to ensure the success of the system or guarantee the framework. The minister is concerned with the execution of the policies that govern the health sector are worried about the execution of these strategies. At the state level, the commissioner is at the helm of affairs in the policy formulation and implementation. However, most of the policies are made to ensure proper and timely access to healthcare in the states, and are executed in the general hospitals, where the beneficiaries who are the patients go for health care services. Nonetheless, a large portion of the arrangements are made to guarantee appropriate and opportune to admittance to medical care in the states and therefore, it is important that the health management services are executed in the state and executed in the clinics where the recipients who are the patients go for medical services administrations. Subsequently, it is significant that the wellbeing of the board's administration to be efficient at the level.

A general hospital which is a secondary medical service provider in the state, attracts majority of patients, and is headed by a Chief Medical Director with various departments. Each department depends on the other for effective delivery of medical services. Ahmady *et al.* (2016) stated that, there are four particular department constituted to support each other in running the general hospital effectively, these are; The Administrative and General Services, headed by the Director Administration and General Services with the responsibility of administration, accounting matters, staff welfare, manpower development, recruitment, and promotion as well as treating disciplinary cases. The Hospital Services, headed by the Director Hospital Services and the department is responsible for coordinating and supervising the activities of all zonal/hospital/equipment and structure, it is a liaison office between the Non-

Governmental Organizations (NGOs) and the Health Management Board. The units is in addition concerned with planning research and statistics and ensure that all the resources needed for access to quality health service is in place. The third is the Medical Services, headed by a Director, coordinating and supervising the medical activities in the secondary health care facilities, the laboratory and other related activities. The Pharmacy Department supports the hospital by ensuring accountability and transparency in the operation of Drug Revolving Fund (DRF) scheme, and ensures the usage of good, quality drugs, and pharmaceuticals in the state owned facilities made available all the time and at affordable price to patients. This is headed by the Director Pharmaceuticals.

The Nursing Department is responsible for nursing service matters, which is usually headed by the Chief Nursing Officer or a Matron. The whole affiliation is proposed to provide and give quality clinical/ healthcare referred to as Health Management System. The beneficial aspect occurs during the process of treatment, it is referred to as process quality. Process quality then refers to the action of health professionals in the process of providing health care. Staff attitude towards patients, holding and waiting period in the hospital, and the way in which treatment is passed and communicated to patients are important examples of process quality of care. Poor staff attitude could intimidate patients and or make them compromise from asking relevant questions that could make treatment beneficial. Long waiting periods for treatment represent opportunity cost to many patients especially those in the informal sector who may have to give up a whole day's income in order to seek care in the hospital. Besides, long waiting period, delay treatment and hence can deteriorate / crumble health status. Finally, when treatment, such as drug dosage, is not clearly communicated to the patient, this resulting in wrong treatment which increase deterioration in patient's health. In separate studies,

Bannerman, *et.al.* (2010) noted that the attitude of health workers has been described by the literature as rude, uncaring, and indifferent. Amporfu, Eugenia, *et al*. (2013), the GHS commissioned several researches on quality of care, where poor staff attitude and long periods of waiting were the most common complaints made by patients Healthcare facilities are been advised to keep unfriendly workers away from patients (Owusu and Ampratwum, 2013). The poor staff attitude has persisted or keeps occurring despite increase in salaries, this has not swayed the demeanor of staff the right route towards improving appropriate health management system across health care workers in Nigeria.

The Federal and State governments do budget a large percent of annual budgetary allocation to Health sector, yet this has not influenced the attitude of staff in the right direction towards enhancing appropriate Health Management System across health care facilities in Nigeria. Hence, the problem persists. Clarity of treatment communication is very important for treatment because there may be several treatment options and it is important that the patients be well informed about the requirements for adopting the treatment and the possible reactions to treatment. For example, some medications do not work well when taken on empty stomach and can reduce energy level and hence constrain some activities. Such information should be, unquestionably provided to patient to ensure the adoption of the right behaviour.

Given that salary increment has not improved process quality in the Ghanaian health sector, there might be the need to strengthen the accountability relationship between the healthcare managements (policy makers) and healthcare providers as well as between healthcare facility administrators and health workers. The inspiration of this assessment is to find out the poor staff attitudes and information flow systems on Health Management System in General Hospitals in Niger State. Strong accountability relationship is especially important in the public sector because staff attitudes could be

affected by several factors depending on the type of health facility that is providing healthcare. In a public healthcare facility, healthcare is provided as a merit good and so is operated in a non-market setting with the objective of providing healthcare service to the public. The ownership of public health facilities does not belong to those providing the service to the citizenry and funded by taxpayers' money. The relationship between the operators of the facility and the policy maker is as principal agent relationship. The principal, the policy maker, hires the agent, the workers of the health facility, to provide services in accordance with the objectives of the principal. Since the principal cannot observe all treatment activities of the agent, there exists asymmetric information between the two and hence the need for a principal to adopt some mechanisms to induce the desired response from the agents; i.e., strengthen the accountability relationship between the principal and the agent.

The strength of the accountability relationship between the principal and the agent are affected by institutional factors such as the principal's effectiveness as well as agent incentives (Kimenyi, *et al.,* 2012). Principal's effectiveness refers to the type of governance adopted by the principal to induce the desired behaviour from the agent. The agent incentives refer to the reward system that the principal uses to induce the desired behaviour of the provision of high process quality (Kimenyi, *et al.,* 2012). Hence, the principals then uses these institutional factors to induce the desired behaviour from the agent. Since good institutional factors ensure good accountability, process quality is likely to be high when institutional factors favours strong accountability relationship between the principal and the agent. Therefore, it is imperative for policy makers to examine the relationship between patients and healthcare practitioners in order to ensure optimal healthcare delivery.

Staff attitude include; the tone of voice, instructional strategies employed for conveying medical instructions to patients, cumbersome nature of accessing healthcare facilities, delayed treatments, aggressive attitudes by staff during treatment, lateness to work, irregular ward attendance to patients, use of foul language to patients by doctors, nurses and cleaners and host of others. This influences the quality and outcome of care in the hospitals. Health Management System is therefore the overall procedures that ensure proper delivery of health services of the citizens. Many of the procedures involve the transmission of information through files and folders. This ensures paper record keeping of the activities in hospitals as it affects patients and the general management of the hospital. The procedure can be transmitted today in electronic formats. However, irrespective of the mode of storage, and transmission, healthcare information need to be exchanged amongst diverse healthcare providers such as physicians, nurses, pharmacists and laboratory technologists within or across healthcare institutions for effective healthcare delivery. This is because, information created by an healthcare provider could be used by another for decision making irrespective of their geographical locations. For instance, a physician can order for an imaging procedure of a patient in a radiology center. The radiologist takes the picture and sends the image back to the physician who uses the image for decision making (Ojerinde & Iroju, 2015). Therefore, presence of appropriate information flow among the management of the hospital and from management to their patients is needed.

Information flow means the standard procedure of communication in a formal setting. In the Nigeria healthcare system, the standard procedure of communication between patients and medical healthcare practitioners is through verbal and written communication. Upon arriving at the hospital, the patient retrieves or obtains cumulative medical record folder carrying a unique identification number from the

Medical Record Department. The Medical Records Department transfers the patient's folder to the medical doctor for Physical Examination and diagnoses. The doctor may request the patient to run a number of tests at the laboratory department the outcome of which is communicated to him in written form for onward treatment and prescription. In some cases, patients are admitted for intensive care; therefore, such in-patients are expected to come along with a caregiver and a sponsor. While the caregiver stays and attends to inpatients in terms of sanitary and feeding obligations, the sponsor or financier is required to procure doctor's prescription from the Pharmacy for onward administration by the nurse at the ward. The sponsor also provides basic needs to the patient in terms of feeding arrangement and provision of toiletries throughout their stay at the hospital. Patients on admission could eventually be discharged if well while those that require further attention are referred to the next level of care. All the above processes are discharged by the various set of practitioners to the receiver, and this can only be achieved when it is rightly communicated to the receiver through appropriate channels. Hence, the flow of information amongst diverse healthcare practitioners is either, in non-electronic format or electronic format.

The flow of information in non-electronic formats involve the exchange of information amongst healthcare practitioners in paper based forms while the flow of information in electronic formats involves the use of Information and Communication Technology (ICT) tools to exchange information. Nevertheless, the flow or exchange of information within a Health Management System is plagued with several challenges especially in developing countries such as Nigeria. This is because data collection is majorly manual. Furthermore, there is significant fragmentation and duplication in data collection and storage. Hence, healthcare organizations find it difficult to manage information effectively as it flows within healthcare (Ojerinde & Iroju, 2015).

Information exchange is usually untimely, sometimes due to the attitude of staff and information systems. Consequently, this result in inappropriate decision making and healthcare management, inapt research, inappropriate quality assessment, ineffective planning, increase in medical errors and cost as well as a decline in the quality of patients' care. Hence, there is an information gap created. This could be, attributed to the poor staff attitude, which make patients suffer from inadequate in treatment and information. There is also irregularity in medical compliant because, patients practically notice inadequacy in information flow between the hospital staff and himself, as such, may find it difficult to let out all the complains he/she has to the doctor. This is an information gap. Medically, information gap is understood as, population-specific differences in the presence of disease, health outcomes or access to healthcare. (Riley, 2012). Information gap exist in forms of undetailed information, impolite and unfriendly means of response, lack of structured communication system, etcetera. Due to the negligent in the part of the management in checking and balancing the communication system and attitude of the staff, the situation keeps repeating itself and it is almost becoming a tradition. Some are so use to it to the extent they are displayed openly, especially the nurses at the delivery section. In view of this, this research would examine the influence of staff attitudes and information flow systems on the Health Management System in general hospital in Niger State.

1.2 Statement of the Research Problem

There has been an increasing challenge in accessing medical healthcare in Nigeria due to poor staff attitudes and lack of well-structured information flow systems in hospitals. Vecchio, *et.al.* (2018), mentioned that, many hospitals in developed countries are experiencing increasing pressure due to rising numbers of patients presentation and emergency Room (ER) admission. Although, the statistics show that many ER

presentation are non-urgent and often do not require specific hospital treatment, but it is, due to lack of detailed information concealed by the patients, which causes death if it actually was major case. The medical staff are saddled with the responsibilities in providing care and appropriate/ well-structured information flow systems in the Healthcare Management System that cannot be over emphasised. Kneck, *et.al.* (2019), aimed at exploring information pathways within an integrated healthcare. It revealed that, patients were excluded from information flow, but services are better-delivered and productive interaction between informed patients and experienced and accountable clinicians etcetera. Hence, there has been a clarion call on the need for positive staff attitudes and well-structured information flow systems to reduce communication gaps as well as bottlenecks hindering effective communication between patients and healthcare centre and between healthcare institutions and relevant stakeholders. Poor staff attitudes and lack of well-structured information flow systems has been blamed for non-compliance to the smooth implementation of the Health Management System in Nigeria. It is believed that staff attitudes and structured information flow systems has accounted for slow pace in attending to emergency cases of patients as well as slow rate of reporting and handling disease outbreaks in recent times resulting in chronic health concerns and sometimes death. Most of these deaths could be effectively and efficiently avoided, if healthcare centre incorporate positive staff attitudes and structured information flow systems for easy access within and across healthcare institutions, stakeholders, medical researchers, policy makers and other relevant agencies that may need public health indexes for prompt intervention. This situation has informed this research endeavor to investigate the influence of staff attitudes and information flow systems on Health Management System in General Hospitals in Niger State.

1.3 Aim and Objectives of the study

The general aim and objectives of the study is to establish the influence of staff attitudes and information flow systems on the Health Management System in General Hospital in Niger State. Thus, the specific objectives of the study include:

1. Identifying the prevailing information flow systems in General Hospitals in Niger State
2. Determining the influence of information flow on Health Management System in General Hospitals in Niger State.
3. Determining the influence of staff attitudes on Health Management System in General Hospitals in Niger State.
4. Determining the information gap, staff attitudes has produced in Health Management System in General Hospitals in Niger State.
5. Determining the level of literacy of staff and patients in the use of ICT communication system in Health Management System in General Hospitals in Niger State.

1.4 Research Questions

The following questions were raised to guide the study:

1. What is the prevailing system of communication with Patients, in the Health Management System in General Hospitals in Niger State?
2. What is the influence of information flow channels on Health Management System in General Hospitals Niger State?
3. What is the influence of staff attitudes on Health Management System in General Hospitals in Niger State?

4. What extent of the information gap; staff attitude has produced in Health Management System in General Hospitals in Niger State?
5. What literacy level is expected by staff and patients to have access to the use of ICT and electronic system in the Health Management System in General Hospital in Niger State?

1.5 Research Hypotheses

The following null hypotheses was be tested at, 0.05 level of significance to guide the study.

1. There is no significant relationship between staff attitudes and the Health Management System in General Hospitals in Niger State.
2. There is no significant relationship between appropriate information flow and Health Management System in General Hospitals in Niger State.
3. There is no significant relationship between patients' information and Health Management System in General Hospitals in Niger state.
4. There is no significant relationship between patients and Health Management System in General Hospitals in Niger state.

1.6 Significance of the Study

The outcome of this study will be beneficial to the following categories;

Healthcare Centre: - the study will provide a blueprint on how to improve information flow in the hospitals.

Information managers/scientists:- the will allow the information managers/scientists to realise the importance of health management information system.

Researchers:- the health sector will be able to appreciate the importance of information flow in the research cycle of health related issues.

Government: - the government through the ministry of health will be able to chart the right course of action and make good policies that will enhance better healthcare delivery.

The study used the established and available pattern of information flow within and across healthcare centre in Niger State and made relevant recommendation on how to improve it to attain efficient and effective health management system in Niger State with a view to achieving their statutory functions.

In addition, this study provides a basis for well-structured / convenient information flow systems that will enhance the Health Management System in healthcare centre in Niger State.

1.7 Scope of the study

This research work focuses on investigating the influence of staff attitudes and information flow systems on the Health Management System in general hospitals in Niger State. The sample comprised of 278 and 327 selected healthcare personnel and patients respectively spread across selected secondary healthcare facilities (general hospital Bida, general hospital Minna, and general hospital Kwantagora) in Niger State, Nigeria.

1.8 Operational Definition of Terms

These terms are the key to the study and mostly frequented in the body of the work.

Appropriate information: Information could be considered appropriate when there is satisfaction from data received from the staff. This is; Provision of

accurate healthcare information or data for timely and effective decision making, among healthcare personnel.

Health Management System: this is a ministry established to check balance services to be given or rendered to patients accurately and effectively. The system also advance in a medium of recording all medical records on services rendered by the staff on various patients' data, diagnosis and reports in the management system.

ICT: this means "Information and Communication Technology". These are electronic gadgets that are used as an enhancement and support for the treatments of patents.

Information flow: this is an acceptable format of passing information within and across healthcare institutions and other relevant stakeholders in the healthcare sector. This medium is used to communicate and enlighten the patients on the health status.

Staff attitudes: this is a behaviour exhibited by the staff to the patient. This encompasses the manner of approach, the tone of voice, time accuracy to work, and use of foul languages by staff to patients seeking treatment in hospitals.

Information gap: information gap is a difference created or in existence within a circle or system which hinders the productivity, success and or satisfaction in the service delivery of that circle or system.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Conceptual Framework

Information is very vital for effective management and development of better healthcare services at all levels of health pyramid. Although, healthcare information should be able to improve the efficiency of healthcare systems, and enhance the quality and sufficiency of healthcare services and improve the patients' satisfaction. Hence, healthcare information are typically passed to patients as services such as; diagnosis, treatment, education, research, billing and insurance, health system planning, program evaluation, policy formation, as well as public health monitoring. In addition, healthcare information must be meaningful, reliable, accurate, timely, complete and valid for successful achievement in services rendered. (Lungo, 2003).

Healthcare information are usually found in consultation notes, case notes, hospital admission records, discharge summaries, test results, x-rays, photographs and image slides such as those generated by magnetic resonance imaging (MRI) and the computerized tomography (CT) scanners. Although, healthcare information usually was stored on paper files, physical files and now can be stored in digital or electronic formats. However irrespective of the mode of storage, healthcare information need to be exchanged amongst diverse healthcare providers such as physicians, nurses, pharmacists and laboratory technologists within and or across the healthcare institutions and finally passed or communicated to the patients for effective healthcare delivery purposes and treatment success. This is because, information created by a healthcare provider should be able to be used or accessed by another healthcare institution for effective decision making irrespective of their geographical locations if it is been documented and wired

or networked for easy access. Hence, the flow of information amongst diverse healthcare practitioners can be either in non-electronic formats or in electronic format.

The flow of information in non-electronic formats involves the exchange of information amongst healthcare practitioners in paper-based forms while the flow of information in electronic formats involves the use of information and communication technology (ICT) tools to exchange information. Nevertheless, the flow or exchange of information within a health information system is plagued with several exchanges especially in developing countries such as Nigeria; this is due to inadequate skilled manpower to use the gadgets, phobia, electricity challenges, funds and budgets and so on.

2.2 Information Flow System

2.2.1 Information flow in healthcare management system

The term information flow means the standard procedure of communication in a formal setting. In the Nigeria healthcare system, the standard procedure of communication between patients and medical healthcare practitioners is through verbal and written communication. Medical information is usually stored in paper files, physical files and in digital or electronic formats. Anyway, irrespective of the method of storage, healthcare information needs to be exchanged amongst diverse healthcare providers such as physicians, nurses, pharmacists and research center technologists among healthcare institutions for effective healthcare conveyance. This is because healthcare suppliers for a continuous and perfect decision-making irrespective of their geological locations can use information provided by a patient formally. For instance, a physician can arrange for an imaging technique of a patient in a radiology focus. The radiologist takes the image and sends the picture back to the physician who uses the picture for decision-making. This might be done from different healthcare facilities.

Upon arriving at the hospital, the patient retrieves or procures a cumulative medical record folder carrying a unique identification number from the Medical Record Department. The Medical Records Department transfers the patient's folder to the medical doctor for Physical Examination and diagnoses. The doctor may request the patient to run a number of tests at the laboratory department the outcome of which is communicated to him in written form for onward treatment and prescription. In some cases, patients are admitted for intensive care; therefore, such in-patient is expected to come along with a caregiver and a sponsor. While the caregiver stays and attends to in-patients in terms of sanitary and feeding obligations, the sponsor or financier is required to procure doctor's prescription from the Pharmacy for onward administration by the auxiliary nurse at the ward. The sponsor also provides basic needs to the patient in terms of feeding arrangement and provision of toiletries throughout their stay at the hospital. Patients on admission will eventually be discharged if recuperated while those that are yet to recover are referred to the next level of healthcare institution. Figure 2.1 depicts the Nigeria Healthcare Centre patient's information flow chart.

Hospital Information Flow Chart System

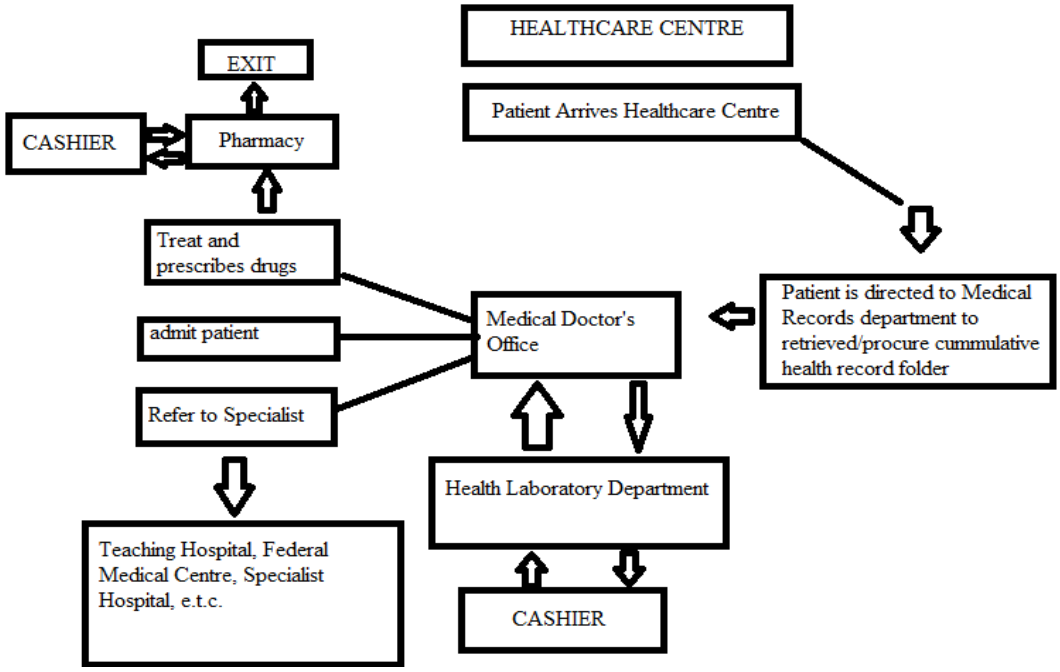

Figure 2.1: Flow Chart Representing Information Flow Of A Hospital (Researchers Construct Field Survey, 2019).

Based on the system flow of health services in Nigeria, Information Exchange showed that it is Paper Based. In Nigeria healthcare system, data is usually gathered, processed, and stored in paper-based systems, legacy systems and restrictive systems that are heterogeneously created. Thus, making records tedious to find or locate and time wasting which makes the patients impatient while waiting. The following is a discussion on the hospital system flow chart above.

2.3 Information Flow Systems in Healthcare System in Nigeria:

Upon arriving at the healthcare centre, patient's treatment card/file that contains previous health records, Laboratory test results, doctor's prescription and x-ray results is demanded by Medical Records Department. For existing patients, a unique reference card carrying unique identification number issued at the time of initial healthcare registration is demanded for onward transmission to see a medical doctor. For new patients, they are required to pay for the patient's medical record card where patient's bio-data, medical information and significant others are filled. The patient treatment card is then returned to the doctor for patient's consultation. The doctor diagnose patients at patient consulting room, patient may be required to undergo laboratory examination(s) or take an x-ray or ultra scan as the case may be. Having arrived at the laboratory or x-ray centre, the patient cost of test or x-ray/ultra scan is communicated and the amount is written on a sheet of paper and directed to the cashier to pay for the required test.

Upon successful payment of the bill, a receipt is handed over to the patient and he returns to the laboratory attendant for test procedure where the laboratory attendant collects the required sample for examination. The test outcome is written on a

laboratory report sheet and affix inside the cumulative folder for doctors consideration and prescription. The test result(s) is considered by the Doctor and he/she undertakes a treatment plan by prescribing drug(s) and/or injection or admit patient for intensive care or issue referral note to patient to go and see specialist for cases beyond or outside area of HMS/her specialization.

For doctor's prescription, patient is directed to go to the pharmacist to buy the drugs. He arrived at the pharmacy and handover the folder to the pharmacist for costing. The cost of the prescribed drugs is written on a paper and the patient is further required to effect the payment at the cashier pay point. The evidence of payment is returned to the pharmacist for issuance of the drugs. The pharmacist packages the drugs and indicates the dosage prescribed on each drug and guides the patient on how and when to take their drugs.

For patient admission, patient is directed to the ward for intensive care. Upon admission of patient by nurse on duty, the patient financier/care giver is directed to the pharmacy to get the doctor's prescription. The steps enumerated in (VI) are followed and the drugs are brought to the nurse on duty for administration while the doctor on call performs a routine periodic check on patients. As patients responds well to treatment and attain full fitness, the doctor issue discharge note and such patient is discharged. The discharge note is presented to the hospital security unit for permission to exit the healthcare centre. Furthermore, for referral cases, the doctor issues a case note containing the state of patients' health, and what is required of the healthcare centre.

Considering the multiple steps that is required of the patient before medical attention is given, Hence, the need for appropriate information flow cannot be over emphasized. The provision of appropriate information flow is very vital for the effective

management and development of better healthcare services at all levels of the healthcare pyramid. Health Management Systems is a combination of healthcare, business management, and information systems. As the healthcare conveyance system is held to more prominent responsibility, healthcare suppliers and bodies must exhibit quality results, financial duty, and proficient and successful practices. To do this, healthcare management systems experts gather and dissect information, join creative management strategies, and use new technologies to re-engineer healthcare services.

2.3.1 Health management system

Healthcare management systems experts are the designers, trailblazers, and business visionaries for the continually advancing healthcare conveyance system. Furthermore, Healthcare Management System (HMS) is typically used for diagnosis, treatment, education, research, billing and insurance, health system planning, program evaluation, policy formulation, public health education as well as public health monitoring. Hence, Healthcare Management System has to work harder in improving the efficiency of healthcare systems, enhance the quality of healthcare services and achieve a patients' satisfaction. Consequently, to attain that, Healthcare Management System must provide meaningful, reliable, accurate, timely, complete and valid healthcare information for healthcare personnel or users (Lungo, 2003). All the procedures are relevant and reliable only if the following observations and or challenges are reviewed. However, there are observations on some challenges/ shortcomings of information flow in healthcare system and appraise the strategies for managing information flow within and across diverse Healthcare Management System in Niger State.

The effective communication/information exchange amongst healthcare practitioners inside and across healthcare organizations is poor. This however adversely affects

patients care as the timely access to patient's information is hindered. Hence, avoidable deaths and injuries usually occur as a result of poor communication amongst healthcare practitioners (Iroju *et al.* 2013). Furthermore, as patients' information grows exponentially over the years, they are usually destroyed by healthcare practitioners, due to lack of physical space. Also, Untimely delivery of patients' information where Patients' information is not usually conveyed expeditiously to healthcare practitioners at the point of care. Also, information is usually conveyed manually to the healthcare providers by the patients. For instance, a patient is usually expected to take the result of a laboratory test to the healthcare specialist that requests for it. This process is usually manual and time-consuming. Although the staggering expense of transportation in areas like the core riverside areas in places like Niger Delta and others may prevent the delivery of such data by the patients. Consequently, decisions concerning patients' healthcare are delayed. This in turns affects the patient's health negatively.

The healthcare system is extremely complex, as it requires the collective efforts of diverse healthcare providers amid consideration. Moreover, patients get care from more than one healthcare institution. Nevertheless, patients' information is essentially stored in diverse silos of paper-based systems across various healthcare organizations in the Nigerian context. Besides, healthcare organizations are not also incorporated. Consequently, this has prompted significant discontinuity and duplication of patients' information and thus impedes the capacity of diverse healthcare practitioners to share data. Thus, an expert may repeat a medical methodology since he does not have earlier information about the patient. Then, it is hard to establish a relationship amongst all entities of care in the Nigeria healthcare system and healthcare providers are presented with inadequate and inconsistent information amid care. After all the tedious procedures, poor or no feedback mechanism is a concern. There is usually weak or no

feedback mechanism amongst healthcare providers when patients are referred from one healthcare institution to the next and finally, the care of a patient usually ends in a specific healthcare institution as soon as the patient is referred to another point of care. This is because there is no follow up on a patient immediately after referral. Hence, there is usually no continuity in the flow of information amongst diverse points of care usually from private health institutions and government owned healthcare institutions.

Medical Errors; Patients usually get care from more than one healthcare provider who can be situated in diverse geographical locations. Thus, patients' information is usually scattered in diverse healthcare institutions. This process is any way associated with medical errors because of deficient accessibility of patients' information and broken healthcare processes. Hence, the World Health Organization (Ayodele, 2011) ranked Nigeria 187 of 191 of member states.

Healthcare services especially at the public sectors should automatically cover every patient, but there are some medical treatment that even those with the liberty of insurance do not get the cover and have to scout for more funds to be able to get the treatment done and those unfortunate to raise it loose their life. Therefore, this is one of the significant challenges of Nigeria healthcare system on the rising cost of healthcare. The ineffective communication of data, information, and knowledge amongst the stakeholders in the circle of healthcare is a significant factor that also leads to the increased cost of healthcare in Nigeria. Meanwhile, the absence /inadequacy of this bring reduction in the quality services rendered.

2.3.2 Information flow system using information and communication technology (ICT)

Astounding healthcare is usually accomplished when there is a relationship as well as effective communication amongst the considered providers associated with a patient's consideration. Also, healthcare providers must mull over patients' satisfaction. Nevertheless, the in-appropriate flow of information amongst diverse points of consideration, results in diminished nature of healthcare services in Nigeria. There is little or no communication channel enough to inform the patients which causes more deficiency in the channel of hastening treatment. If proper measure is planned, to reach out to the receivers, by making a reprehensive model to inform patients coming towards various areas. More so, appropriate information flow can be achieved especially using ICT and needs for “Technical knowhow”. In Nigeria, the outburst of information, technical knowhow or the use of information and electronic gadgets for transmission of information is still poor. Majority still have the phobia of using these gadgets for resource sharing and computers and information transfer. Furthermore, the use of the ICT gadgets depends on the literacy level of the staff to operate or communicate successfully. Literacy level is yet another major issue. The literacy level of both patients and the healthcare manager, even though some particular signs and other forms of informing the patients exist in the hospitals, their literacy level does not condone their understanding, what to do at a time or where to approach for a particular case at a time.

2.3.3 Staff attitude

This is a psychological behavior shown by the staff of an organization, due to basic contact. This is exhibited in way, which might be poor or comforting to the receiver. In hospitals, different forms of attitude are experienced due to the interface between the staff and the patient. As the study is also bent on finding out the types of attitude shown

and experienced by the patients, to commend and improving on the suiting attitude vis-a-vi the poor attitude. As explained above, attitudes come in different forms , which are likely to be; staff lateness to work, poor strategies on record management, rudeness or impolite responses, undetailed or inadequate communication to the receiver, warm hospitality *etc.*

Karatepe and Avci (2017) in a study that shared the view on the point of lateness attitude and that it plays as a mediator in the relationship between work engagement and turnover intentions. In addition, study discussed communication and responses to patients during a preceptorship program on nurses working in urban areas of hospitals. It was mentioned that it is usually caused due to lessening of criticism, authoritativeness, sympathetic reproach etcetera. (Jeoung *et al.,* 2014). Lastly, in being hospitable to patients, Losekoot and Clair (2016), mentioned that some patients receive the medical treatment needed but leaves feeling depersonalized and alienated with overall treatment. This is to make them experience feelings of comfort, of being at ease and of being healed.

2.4 Theoretical Framework

In psychology, attitude is a psychological construct, a mental and emotional entity that inheres in, or characterizes a person (Richard, 2016). They are complex and an acquired state through experiences. It is an individual's predisposed state of mind regarding a value and it is precipitated through a responsive expression towards a person, place, thing, or event (the attitude object) which in turn influences the individual's thought and action. Key topics in the study of attitudes include attitude strength, attitude change, consumer behaviour, and attitude-behaviour relationships (Lynn and Pierre 2012; Elizabeth and Lynn, 2014).

2.4.1 Theories of attitude formation

Definition of Attitude: The dictionary meaning of 'attitude is settled behaviour as indicating opinion'. Thurstone (1928) defined attitude as "the sum total of man's inclination and feelings, prejudice or bias, preconceived notions, ideas, fears, threats and convictions about any specific topic". Attitude is a subjective and personal affair. The term 'opinion' symbolizes an attitude. In fact it is the verbal expression of attitude. (cite) Apart from the term attitude, different authors have defined attitude differently. A few of these definitions are: Attitudes are individual's mental processes which determine both the actual and potential responses of each person in a social world. Since an attitude is always directed towards some object, it may be defined as "the state of mind of the individual towards a value".

Therefore, Attitude is a mental and neural state of readiness organized through experience exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related. Attitude is the pre-disposition of the individual to evaluate some symbol, object, or aspect of his world in a favourable manner. Attitude is an enduring system of positive or negative evaluations, emotional or feelings, and pro and con action tendencies with respect to a social object. An attitude is the degree of positive or negative affect associated with some psychological object. An attitude, roughly, is a residuum of experience, by which further activity is conditioned and controlled. We may think of attitudes as acquired tendencies to act in specific ways toward objects. Social psychologist, unfortunately, do not agree on the precise definition of an attitude. However, four definitions are more commonly accepted than others. One conception is that an attitude is how positive or negative, favorable or unfavourable, or pro or con a person feels towards an object. This definition views attitude as a feeling or an evaluative reaction to objects.

2.4.2 Social psychology view of attitude

An attitude is an evaluation of an attitude object, ranging from extremely negative to extremely positive. Most contemporary perspectives on attitudes also permit that people can also be conflicted or ambivalent toward an object by simultaneously holding both positive and negative attitudes toward the same object. This has led to some discussion of whether individual can hold multiple attitudes toward the same object (Wood, 2000).

An attitude can be a positive or negative evaluation of people, objects, events, activities, and ideas. It could be concrete, abstract or just about anything in your environment, but there is a debate about precise definitions. Eagly and Chaiken (2012) for example, define an attitude as a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor. Ajzen (2001) Attitude may influence the attention to attitude objects, the use of categories for encoding information and the interpretation, judgment and recall of attitude-relevant information. Vogel *et al.* (2014) these influences tend to be more powerful for strong attitudes that are accessible and based on elaborate supportive knowledge structure. The durability and impact of influence depend upon the strength formed from consistency of heuristics. Then, Attitudes can guide encoding information, attention and behaviors, even if the individual is pursuing unrelated goals.

2.4.3 Attitudes and psychology

The attitude of a person is determined by psychological factors like ideas, values, beliefs, be perception, etc. All these have a complex role in determining a person's attitude. “Attitudes serve multiple functions, some related to self-concept which is self-defined. Self-defining attitudes tend tone extreme, positive and unambivalent, (Psychology and Psychiatry Journal 2017; Angermeyer *et al.*, 2017). Beliefs can be

patently and unequivocally false. For example, surveys show that a third of U.S. adults think that vaccines cause autism, despite the preponderance of scientific research to the contrary (Dixon *et al.,* 2015). Dixon *et al.* (2015) it was found that beliefs like these are tenaciously held and highly resistant to change. Another important factor that affects attitude is symbolic interactions; these are rife with powerful symbols and charged with effect which can lead to a selective perception. Persuasion theories says that, in politics successful persuaders convince its message recipients into a selective perception or attitude polarization for turning against the opposite candidate through a repetitive process that they are in a noncommittal state and it is unacceptable and doesn't have any moral basis for it and for this they only require to chain the persuading message into a realm of plausibility (Dixon *et al.,* 2015, Gopnik, 2015 and O'Keefe, 2016).

2.4.4 Attitudes component model

Breckler (1984) an influential model of attitude is the multi-component model, where attitudes are evaluations of an object that have affective, behavioural, and cognitive components (the ABC model):

i. Affective component: The affective component of attitudes refers to your feelings or emotions linked to an attitude object. Affective responses influence attitudes in a number of ways. For example, many people are afraid/ scared of spiders. This negative affective response is likely to cause you to have a negative attitude towards spiders.
ii. Behavioural component: The behavioral component of attitudes refers to the way the attitude we have influences how we act or behave.
iii. Cognitive component: The cognitive component of attitudes refers to the beliefs, thoughts, and attributes that we would associate with an object. Many times a

person's attitude is been based on the negative and positive attributes they associate with an object.

2.4.5 Theory of reasoned action

The theory of reasoned action (TRA) is a model for the prediction of behavioral intention, spanning predictions of attitude and predictions of behavior. The subsequent separation of behavioral intention from behavior allows for explanation of limiting factors on attitudinal influence (Ajzen, 1980). The theory of reasoned action was developed by Martin Fishbein and IcekAjzen (1975, 1980), derived from previous research that started out as the theory of attitude, which led to the study of attitude and behavior. The theory was "born largely out of frustration with traditional attitude–behavior research, much of which found weak correlations between attitude measures and performance of volitional behaviors" (Hale, Householder & Greene, 2003, p. 259). Also, Mattingly (2012), stated, the predictor of behavioural intentions in the theory if reasoned action, subjective norms, includes the social pressures to perform or not perform the behavior and is determined by ones normative beliefs which are comprised of injunctive and descriptive norms.

2.4.6 Theory of planned behaviour and attitude change

The theory of planned behavior, was proposed by Icek Ajzen in 1985 through his article "From intentions to actions: A theory of planned behaviour." The theory was developed from the theory of reasoned action, which was proposed by Martin Fishbein together with IcekAjzen in 1975. The theory of reasoned action was in turn grounded in various theories of attitude such as learning theories, expectancy-value theories, consistency theories, and attribution theory. According to the theory of reasoned action, if people evaluate the suggested behavior as positive (attitude), and if they think their significant others want them to perform the behavior (subjective norm), this results in a higher

intention (motivation) and they are more likely to do so. A high correlation of attitudes and subjective norms to behavioral intention, and subsequently to behavior, has been confirmed in many studies.

The theory of planned behavior contains the same component as the theory of reasoned action, but adds the component of perceived behavioral control to account for barriers outside one's own control (Madden, 1992). Also, the attitude of a planned behaviour based on information given was studied and revealed that information passed about a certainty and the risk of digestion to attitude change, the risk in changing behaviour towards the behavior have significant impact more on risk information. Findings on risk and benefits of knowledge on attitude formation towards information given and moderating effects of knowledge level of attitude change caused by receiving information, it was reported that the comparison proved that risk information has a greater and long lasting impact on attitude and behavioural changes towards the information. (Zhu *et al.*, 2015).

Suresh (2013) also proved that "according to theory of planned behaviour, a human behaviour is a function of an individual's intention to perform a behavior in question. Moreover, came up with a model as shown in figure 2.2.

Model Diagrams

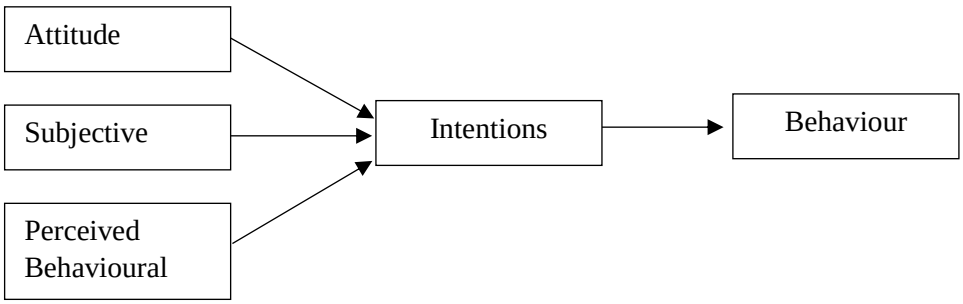

Figure 2.2 Model of Plan Behavior (Suresh, 2013).

2.5 Review of Related Empirical Literature.

Motivation and inspiration of attitude and mentality encourages the staff to attend and take care of the patient in a more caring and mindful way. This is achieved if staff is happy/ cheerful, satisfied/ fulfilled. The circumstance permits both patients and staff to enjoy, appreciate the correspondence and the rate of the performance improves. However, situation like caring for elderly patients needs more attention and dedication, and because of old age attitude of the patients, it is sometimes difficult to achieve. Nilson, *et al.* (2012), stated, hospital staff attitude towards patients with cognitive impairment are of concern, especially where older people are the users. Investigation further stated that, the higher perceived strain in caring for older patients with this cognitive impairment is because the staff are younger and mostly work as an assistant nurses. Thus, this brings the neglect of right attitude. The study used a Method A cross-sectional survey design was used to collect data from staff (n = 391). The study focuses on the hospital staff attitude towards patients with cognitive impairment on caring for older patients, hence, has the relation with this study, which focuses on the influence of poor staff attitude and information flow systems on health management system in general hospitals in Niger State. The review, has a close number of population and used both the staff and patient for the study.

A study reveals that nurses expose less empathy towards the patients in comparison with psychiatrist and psychologist and show discriminatory treatments of some patients based on emotional attitudes and experiences in treatment difficulties. A survey design was used alongside questionnaire and the analysis revealed 3 factors (33% of explained variance). Factor 1 (13.5% of variance, α = 0.87) included 21 items that seem to represent the required treatment characteristics of BPD patients (loading of each item >0.30). Factor 2 (11.5% of variance, α = 0.71) contained 13 items that related to

attitudes toward BPD suicidal tendencies (loading >0.33). Factor 3 (8.0% of variance, α = 0.70) consisted of 7 items that seemed to express antagonistic judgments of BPD patients and their behavior (loading >0.30). Also, Borderline patients-emotional attitudes inventory is an inventory formulated for the above cited study by the authors in a similar manner. It consisted of 20 items concerning emotional attitudes toward BPD patients on a 5-point Likert scale (Table 2).A factor analysis with varimax rotation performed on the BPD-Emotional Attitudes (EA) scale yielded 3 factors (50.7% of explained variance). Factor 1 (21.6% of variance, α = 0.84) included 9 items (loading >0.40) concerning negative emotions toward BPD patients. Factor 2 (17.0% of variance, α = 0.75) consisted of 6 items (loading >0.40) that related to difficulties experienced while treating BPD patients. Factor 3 (12.1% of variance, a = 0.60) included 5 items (loading >0.40) that described empathy feelings toward BPD patients. The study as well focuses on Staff attitudes toward patients with borderline personality disorder where staff attitude shows the relation with this study on influence of staff attitude and information flow systems on health management system in general hospitals in Niger State. (Bodner *et al*., 2011).

Shehata *et al.* (2016), stated in the study which evaluates the knowledge and attitudes towards different aspects of stroke among workers in Cairo. A survey method was used and a structured questionnaire to attain data. The result of 111 participants, and 92 questionnaires were returned, most participants had heard of stroke (91.3%), mostly through encountering a family member with stroke rather than through mass media are (10.9%). Hypertension was the most commonly identified stroke risk factor at (66.3%), clinical workers were more likely to identify risk factors. The most common identified stroke symptoms were sharing of speech at (38.5%). Also elevated blood pressure is (38.5%), clinical workers were more likely to identify symptoms sharing of speech of

(p=0.042) and altered state of consciousness of (p<0.001). The most frequent response to an attack of stroke was transferring the patient to a hospital at (59.8%). It revealed that knowledge and perception of stroke in Cairo university workers appeared to be poor especially among non-clinical workers. Therefore, the study evaluates the knowledge and attitudes towards different aspects of stroke among workers in Cairo. The study reveals that communication and awareness of information between medical and non-medical staff is weak, whereas this study focuses on the influence of poor staff attitude and information flow systems on health management system in general hospitals in Niger State, which also found out that communication, awareness and information flow systems in the hospitals are weak.

A study, knowledge and attitude of healthcare workers about middle-east respiratory by Khan *et al.* (2014) shows that healthcare workers in a region have a good knowledge and positive attitude towards middle east respiratory syndrome (MERS). A cross sectional study was performed in two hospitals of Qassim region in Saudi Arabia. A total of 280 healthcare workers were selected to participate in this study. Knowledge and attitude were assessed by using self-administered and pretested questionnaire. Descriptive statistics were carried out to express participants' demographic information, mean knowledge score and mean attitude score of HCWs. Inferential statistics (Mann-Whitney U test and Kruskal Wallis tests, p & lt; 0.05) were used to examine differences between study variables. Chi-squares tests was used to assess the association between study variables and attitude questions. The findings show that participants demonstrated good knowledge and positive attitude towards MERS, the correlation between knowledge and attitude was significant. However, those less educated on the management at (42.4%), source of (66%) and consequences of MERS at (67.3%), while majority of them were well aware of the hallmark symptoms at (96%). Precautionary

measures at (96%) and hygiene issues at (94%), majority of the respondents showed positive attitude towards the use of protective measures. This study focuses on knowledge and attitude of healthcare workers about Middle East respiratory, where it shows a related numbers of population of staff, the statistical design method and the analysis test of chi-squares test, with the research which focused on influence of poor staff attitude and information flow systems on health management system in general hospitals in Niger State.

Avci *et al.* (2016) made a finding on attitude and behaviour of hospital workers on healthy diet and lifestyle in eastern Turkey. It stated that, the study used a total of 440 physicians, nurses and other hospital employees working in the university hospital. They were invited to participate in this descriptive Research study, where data was collected using questionnaire, and the instruments covered nutrition consuming frequency, nutrition consuming behaviours, general health conditions, body weight and height, blood pressure, alcohol, cigarettes consumption, exercise socio-demographic characteristics, smoking more than 10 cigarettes a day among the employee has the percentage of 83.3%, 76.7%, and 46.9% respectively. The highest rate of hypertension was seen in other employees at (24.3%), eating fast food daily among physicians, nurses and other employees were (10.5%, 7.4%, and 0%) respectively etc. The study write on "the attitude and behaviour of hospital workers on healthy diet and lifestyle in eastern Turkey", this relates to the research, focus on influence of poor staff attitude, and information flow systems on health management system in general hospitals in Niger State. Thus, showing contagious habits, which is neglected by the staff and proves to be dangerous to not only the pious staff but also patients with psychological effects.

In addition Reijula *et al.* (2016) revealed in their study, "insight into healthcare design" lessons learned in two university hospitals, that hospitals are forced to improve their

productivity and efficiency, while coping with limited resources, this is because hospitals in developing countries have been subjected to increasing economic pressure and it illustrates challenges of insight associations with healthcare facility design to public hospitals. This paper presents a qualitative study, in which, people involved in a major role in the H1 and H2 FD projects were interviewed using audio recordings (n = 14). Structured interviews were used. The findings revealed that both hospitals hand managed to carry out successful indoor environmental design. However, logistics, navigation, health information technology scheduling, budgeting and outsourcing challenges had arisen. An out-patients care approach and customer driven operational needs are beneficial and guide facility design in the targeted hospitals. The study shows the insight into healthcare design and lessons learnt in two university hospitals, and this research focuses on influence of staff attitude and information flow systems on healthcare management system in general hospitals in Niger State. It is related with the structured interview used by both study.

Considerable portion of the reviewed literature, centered on the Nigerian situation, as regards the poor performance of healthcare management system (HMS). Sights issues which include; demographic diversity and cultural effects on healthcare, lack of support in infrastructure, corruption, and lack of technical support services, problems with human capital, an import-dependent economy, and the high the cost of capital in the Nigerian capital market. According to America Health Information Management Association (AHIMA, 2006) the performance of an HMS links not only to technical determinants such as data quality, system design, or adequate use of information technology. Other determinants are:

A. Organizational and environmental determinants that relate to the information culture within the country context, the structure of the HMS, the roles and responsibilities of the different actors and the available resources for HMS.
B. The behavioral determinants such as the knowledge and skills, attitudes, values, and motivation of those involved in the production, collection, collation, analysis, and dissemination of information.

For HMS to be effective in its application, it requires a wide Internet connectivity with a high-speed capability for data transfer and retrieval. No doubt, the absence of the implementation of HMS has deteriorated some vital and crucial aspects of patients' safety and the quality of care in Nigeria and in African countries generally. The lack of knowledge and familiarity with electronic equipment likewise plays a major role when it comes to implementation. Poor data quality is a persistent challenge across Health Management System. Data systems are usually unstructured to maintain the vanguard health care professionals in their decision-making. Instead, data collection is often mandated from "the top" – a national Ministry of Health or a vertical health program (Nonaka and Takeuchi, 1995). In Lippeveld (2001) the focus was on investigating issues and challenges in HMS implementation for each category of HMS by using in-depth interviews. Study conducted showed that even with the introduction of three (3) categories of HMS namely: Intermediate Hospital Information System (IHMS), Basic Hospital Information System (BHMS) and Total Hospital Information System (THIS), among Malaysian public hospitals by the Malaysian Government, it was gathered that only 15.2% of the Malaysian public hospitals are implementing the system. Moreover, there is limited number of empirical studies on HMS implementation in Malaysia. Likewise from their analysis, several issues had influenced the overall HMS implementation in Malaysian public hospitals such as limited financial sources,

maintenance by different department, HMS implementation order by the Malaysian Ministry of Health, addition of new systems, confidentiality issues, low acceptance level, low satisfaction level, different vendors, infrastructure issues, system breakdown, duplication of data, etc.

From the United Nations report, Nigeria is ranked the second highest in maternal mortality in the world. In Vital Wave Consulting (2009), he noted that in Mozambique, most of the health facilities are situated in remote areas where there is limited or no access to technology and infrastructure advancement. There is lack of feedback, training, and support at all levels of data collection and lack of skills to analyze data. Most of these health facilities are situated in remote areas where there is limited or no access to technology and infrastructure advancement. This has contributed to major problems in the provision of health services to the population.

Based on the above study, Mohammed (2015) found out in a study conducted on the Impact of Information Communication and Technology (ICT) in Hospital Management System of Yobe State Hospital Management Board in Nigeria. The study, which involved 39 resident doctors and 49 administrators as subject of their search revealed that 100% of the sample held that Yobe State hospital management board under study applies SLAM (Strategic hospitals Automation Management) software in their hospitals. Also, 18 (38.0%) of the respondents made use of CD-ROM compact-disk read only memory), 10 (21.0%) respondents use the online database; 8 respondents representing 17.0% use World Wide Web, while 7 respondents representing 14.6% use Internet and lastly only 5 (10.4%) respondents use search engine. The study revealed that the majority of the respondents use CD-ROM. The data revealed that 28 (58.3%) of the respondents strongly agree that automation has eased their hospital operations. In addition, 12 respondents representing 25% agreed that, automation has eased their

hospital operations. Although, 5 (10.4%) of respondents disagree; 3 (6.3%) of the respondents strongly disagree that automation has eased their hospital operation. 30 (62.5%) respondents which form the majority of the respondents strongly disagree that automation has slow down their hospital operation; followed by 15 (31.3%) respondents disagree; 2 (4.1%) strongly agree and 1 respondents representing 2.1% agree that automation has slow down their hospital operation. Therefore, the Impact of Information Communication and Technology (ICT), in Hospital Management System of Yobe State Hospital Management Board in Nigeria, is related to the study influence of staff attitude and information flow systems in health management system in general Hospitals in Niger State. This is because the use of ICT and or electronic gadgets in delivering hospital services has proved positive and better in enhancing and achieving healthcare satisfaction as I have recommended.

In addition, Everson and Adler-milstein (2018) stated in a study; that there is a need for inter-hospital sharing through electronic format for comprehensive and no or less duplication of treatment which reduces the rate of medical error, security and loss of patient treatment information. Descriptive statistics was used to compare the sampled hospitals. 23% of respondents reported worse information sharing with their highest shared patient hospital (HSP), than with other hospitals. 17% indicated better sharing with their (HSP) hospital and 48% indicated no difference between their (HSP) hospital and others. Hence, the study relates by the use of similar statistical tool and the need to use electronic communication system for relief of information stack, adequacy and competency as used and recommended in the present study, influence of staff attitude and information flow systems in health management system in general hospitals in Niger State. As stated in the previous reviews where using of modern and electronic means to enhance healthcare service delivery and improve communication pattern in

relating and communicating to patients. In the absence of adopting and implementing these means, there is always a gap, differences and distances created within. Boehmer *et al.* (2019) supported in a study which they identify several gap in evidence that serve for further study. The intervention reviewed 35.1% of the peer-reviewed literature and 20.7% of grey literature report. It also addressed the fragmentation and communication between patients and providers with percentages of 25.5% and 36.2% respectively. This is in relation to the present study, which embarks on a study treating communication pattern and gaps existing between patients and staff. Lastly, Rockville (2017) furthered the study of the peer-reviewed literature that medical prescription, management, drug interaction and adherence at (57.4%) and antibiotic, opioid and other medication overuse at (10.6%) are relatively more common in the peer-reviewed literature. The corresponding percentages are 36.3% and 2.1% respectively.

2.6 Summary of Literature Reviewed

The review of related literature highlighted some key variables identified in the topic under review. The researcher explored the available literature on the influence of poor staff attitudes and information flow systems on the Health Management System in general hospitals in Niger State, Nigeria. The review was centered on the hospital information flow platform and how such have promoted or slowed down patients' access to medical healthcare. The study made a number of conceptual clarification based on the topic and discussed theoretical literature on the Nigeria Healthcare System. The information flow modalities among various healthcare institution and referral arrangement were discussed

Healthcare Information System which narrowed down on the diagnosis, treatment, education, research, billing and insurance, health system planning, program evaluation, policy formulation, public health education as well as public health monitoring . The

researcher designed Nigeria Hospital Information flow chart depicting the routine way to care. Thus, a number of challenges on information flow in Nigeria Hospital were discussed. Cross boarder studies that compared information flow across countries were discussed. In view of the role of ICT on the appropriate information flow in hospital, computerization of the healthcare information system will positively influence appropriate information flow in hospitals.

The researcher noted that the performance of an HMS is linked not only to technical determinants such as data quality, system design, or adequate use of information technology. Other determinants such as organizational and environmental determinants; in relation to the information culture within the country's context, the structure of the HMS; the roles and responsibilities of the different actors; and the available resources for HMS. In addition, behavioral determinants such as the knowledge and skills, attitudes, values, and motivation of those involved in the production, collection, collation, analysis, and dissemination of information are vital to the output of HMS. A study, supported the present study, the research revealed that 100% of the sampled hospitals, applies SLAM (Strategic hospitals Automation Management) software in their hospitals. Implying that ICT plays a huge role in information dissemination by the Hospital Management Board.

Information gaps created by hospital staff was discussed and study reveal that, gaps are been created in different forms (information gap, communication gap, treatment record gap), and these differences are due to the occasion of criticism, authoritativeness, racial and socio-economic reasons, etcetera. Based on the studies reviewed, it implies that hospital and the management need to buckle-up and device or adopt the changes that are suggested in this present research, to provide convenience for both the management, staff and patients for easy information dissemination, treatment procedures and service

delivery. After a thorough literature review, no study was found to have been conducted on staff attitude and information flow systems on health management system in general hospital in Niger State. That therefore, justifies this study.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Research Design

The researcher adopted the survey design using both descriptive and correlational analysis of design for the study because most quantitative research falls into two categories that include studies that describe events and studies aimed at discovering inferences or causal relationships. This design was employed because it is out to gather information already existing among the population under study and involves, structured oral interview schedule for the patients and structured questionnaire for the staff. It also samples the opinion of the selected population.

3.2 Population of the Study

The population of this study used 1045 doctors, nurses, pharmacists, laboratory scientist, technicians and auxiliary staff, 2209 patients. As shown in Table 3.1

Table 3.1 Population Size

	Population
Staff	1,045
patients	2,209

3.3 Sample Size and Sampling Technique

The sample size of this study is a total of 605 for both staff and patients. Krejcie and Morgan table was used to get the sample size from 1045 hospital staff and 2209 patients. From the table, for a population of 1000, a sample size of 278 is sufficient, while for a population of 2200, a sample size of 327 is sufficient. Purposive sampling was used to select the patients and hospital staff respondents for the final data collection. Purposive sampling was used for two reasons. Firstly, some of the patients and caregivers might not be in the condition to respond, so the researcher has

purposively select the patients that will be willing to respond. Secondly, authorisation will be required from the nurses/doctors in-charge to ascertain the patients that will be capable of responding.

3.4 Sampled Population

Stratified sampling was used to get the sample population of the hospital staff for the hospitals, the hospitals were then divided into strata of three zones and one hospital was chosen from each strata. The hospital with the highest population of patients was selected from each stratum. Table 3.2 shows the sample table while 3.3 shows sample size.

Table 3.2 Sampled Hospitals

Strata	List of Hospitals	Sampled Hospital
Zone/A	General Hospital Bida, General Hospital Mokwa, General Hospital Agaie, General Hospital Lapai, General Hospital Gulu	General hospital bida
Zone B	General Hospital Minna, General Hospital Suleja, General Hospital Kuta, General Hospital Sabon-wuse, General Hospital Kafin koro.	General hospital minna
ZONE C	General Hospital New-Bussa, General Hospital Bangi, General Hospital Kontagora, General Hospital Auna, General Hospital Nasko, General Hospital Wushishi.	General hospital k/gora

Sources: Niger state hospital management board record sheet, copies (April/May 2019)

Table 3.3 Sample Size

Strata	Sampled Hospitals	Population of Staff	Sampled Size	Population of Patients	Sampled Size
Zone/A	Genral Hospital Bida	381	101	173	27
Zone B	General Hospital Minna	498	132	1348	199
Zone C	General Hospital Kontagora	166	44	688	101
Total		1045	278	2209	327

The sample size 278 staff and 327patients derived from krejice and Morgan table was distributed amongst the hospital based on their population using this formular; Population of each hospital divided by total population of the sampled hospitals multiplied by sample size}.

$$\frac{populationofeachhospital}{totalpopulationofthesampledhospitals} \times samplesize$$

3.5 Research Instruments

The researcher-designed instrument (questionnaire) was used as instrument for data collection for the hospital staff, while, structured oral interview schedule was used for patients for this study. A self-designed closed ended structured questionnaire "influence of staff attitude and information flow systems in health management system in general hospitals in Niger State". The questionnaire for the study was of two (2) sets, each with different questions for their response. The questions asked were according to the stated research questions. The research instruments are attached at the appendix. (Appendix B, pages 78-85)

3.6 Validation of the Research Instrument

The structured questionnaire and the structured oral interview schedule were returned and validated with the help of the researcher's supervisor; two lecturers from Library and Information Technology Minna. Each validator was requested to peruse and evaluate the instrument, if it correlates or addresses the aims and objectives of the study, and if it is suitable for data collection. Hence, corrections were effected and proved the instruments suitable for use and for data collection.

3.7 Reliability of Research Instrument

In order to test the reliability of the Appropriate Hospital Information Flow (AHIF), it was subjected to a pilot study of 30 respondents randomly drawn from General Hospital Suleja, the choice of the above medical centre was due to its status in the community of healthcare service delivery in the state and its exclusion from the sampled healthcare of study. Cronbach Alpha coefficient of reliability was used to ascertain the reliability of the instrument. To further validate the questionnaire instrument, the modified instrument underwent pre-test using split-half method. A pilot study that was conducted using (30), copies of the questionnaire which was administered to the staff and some patients to determine the level of its reliability. Responses of the questionnaire were analysed using Cronbach Coefficient Alpha formula. The overall reliability of the tested questionnaire was 0.732 respectively.

3.8 Method of Data Collection

The researcher collected letter of introduction from the Head of Department, Library and Information Technology, Federal University of Technology, Minna to the three selected general hospitals in Niger state. The letter was attached to the copies of the questionnaire and interview schedule administered. Both the questionnaire and interview schedule was administered by the researcher and three staff from each

hospital. The targeted medical personnel and patients were served with the questionnaire and their responses were retrieved subsequently for analysis.

3.9 Method of Data Analysis

To enable the researcher analyse the data adequately, descriptive and inferential statistical tools for analysis was adopted. Frequency distribution, percentages, mean and standard deviation were used for the analysis. A descriptive statistical package for social sciences (SPSS version 20) and chi-square test tool was used to test the hypothesis.

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Response Rate

This chapter focuses on analysis and presentations of result table and graphs on the topic on Influence of Staff Attitude and Information Flow Systems in Health Management System in General Hospital in Niger State. SPSS 23 and MINITAB 17 Statistical package was utilized in this work.

A total of 605 copies of questionnaires were administered to staff and patients from three (3) selected General Hospital in Niger State. Out of the 605 copies of the questionnaires administered, 383 were properly filled, retrieved and valid for the purpose of the research. Out of the 383 returned questionnaires, the staff filled 167 and 216 were filled by the patient's respondents. Table 4.1 shows the demographic characteristics of respondents.

Table 4.1 Demographic characteristics of the Respondents (staff) on influence of staff attitudes and information flow systems on HMS in general hospital in Niger state N (167)

	Response	Frequency	Percent
Sex	Male	79	47.3
	Female	88	52.7
Specialization	medical doctor	30	18.0
	Nurse	96	57.5
	science laboratory and technician	23	13.8
	Pharmacist	9	5.4
	auxiliary staff	9	5.4

The results from Table 4.1 shows the demographic characteristics of staffs from the sampled hospitals on influence of staff attitude and information flow systems on health management system in general hospital in Niger state. The table reveals that 52.7% of the staffs are females and 47.3% are males. Out of the sampled staff we observe that the larger percentage of the staff specialization is nurse with 57.5%. While 18.0% are medical doctors and 13.8% are technicians.

4.2 Analysis of Research Questions on Staff Responses

Decision Rule: mean values less than 2.5 are regarded as less prevalent, while those equal to 3.16 are regarded frequent and those greater than3.16 are more prevalent.

4.2.1 Research question one

What is the prevailing system of communicating with patients in the Health Management System in general hospitals in Niger State? Table 4.2 treat the prevailing system of communication with patients in the Health Management System.

Table 4.2 What is the prevailing system of communicating with patients in the HMS in general hospitals in Niger State? N(167)

S/N	Statements	SA 4	A 3	D 2	SD 1	FX	$\bar{X}$	STD	Decision
1	We give them individual verbal instruction on where they can receive first treatment	76(45.5)	86(51.5)	4(2.4)	1(0.6)	571	3.41	0.57	Accepted
2	We provide sign post on the next place to go for the patients.	60(35.9)	66(39.5)	41(24.6)	0(0)	520	3.11	0.77	Accepted
3	We make public announcement for awareness to patients.	83(49.7)	59(35.5)	21(12.6)	4(2.4)	555	3.32	0.78	Accepted
4	Our attendants are always available to provide the necessary information and guides for patients.	39(23.4)	95(56.9)	31(18.6)	2(1.2)	505	3.02	0.68	Accepted
5	We have electronic information board to guide patients.	46(27.5)	65(38.9)	30(18)	26(15.6)	465	2.78	1.01	Accepted
6	We transmit information in English as a general way of communication.	78(46.7)	78(46.7)	4(2.4)	7(4.2)	561	3.35	0.72	Accepted
7	We transmit information in local languages to communicate to certain patients.	93(55.7)	60(35.9)	12(7.2)	2(1.2)	578	3.46	0.68	Accepted
8	We make use of sign languages to communicate to patients	29(17.4)	27(16.2)	62(37.1)	49(29.3)	465	2.78	1.05	Accepted

The result from the Table 4.2 shows the frequency of prevailing system communicating with patients in Niger State hospitals. From the table, the researcher observed that in each case, a larger percentage of the sampled respondents Strongly Agreed and Agree that, staff give them individual verbal instruction to patients on where they can receive first treatment at 3.41 5%. By making public announcement for awareness to patients at 3.32%, also, the attendants are always available to provide the necessary information and guides for patients at 3.02%, transmitting information in English as a general way of communication at 3.35% and transmitting information in local languages to communicate to certain patients at 3.46%. Also, patient respondents rejected the following statements, providing sign post on the next place to go for the patients at 3.32%, Making use of sign languages to communicate to certain patients at 2.78%, and we have electronic information board to guide patients at 2.78%. Although the respondents accepted that an electronic board was provided, but it was observed that it is not functioning.

4.2.2 Research question two

What is the level of influence of information flow channels on Health Management System in general hospitals Niger State? Table 4.3 shows the level of influence of information flow channels on HMS.

Decision Rule: mean values less than 2.5 are regarded as less influential, while those equal to 3.33 are regarded frequent and those greater than 3.33 are more influential

Table 4.3 What is the level of influence of information flow channels on HMS in general hospitals in Niger State?

S/N	Statements	SA 4	A 3	D 2	SD 1	FX	$\bar{X}$	STD	Decision
1	With Appropriate Information Flow, Are Patients Properly Directed From One Place To The Other	74(44.3)	75(44.9)	12(7.2)	6(3.6)	551	3.29	0.75	Accepted
2	With Appropriate Information Flow, The Delay In Consultation Time Reduced	59(35.3)	82(49.1)	25(15)	1(0.6)	533	3.19	0.70	Accepted
3	With Appropriate Information Flow, There Is Proper Transmission Of Patient's Information Within The Hospital Personnel	68(40.7)	88(52.7)	11(6.6)	0(0)	558	3.34	0.59	Accepted
4	With Appropriate Information Flow, The Crowd/Traffic Along The Corridors Of The Hospital Reduced Or Stopped	58(34.7)	76(45.5)	28(16.8)	5(3)	521	3.11	0.79	Accepted
5	With Appropriate Information Flow, The Duty Roasters Are Properly Communicated To The Staff And Followed Dully	102(61.1)	58(34.7)	6(3.6)	1(0.6)	595	3.50	0.59	Accepted
6	With Appropriate Information Flow, Patients Are Enlightened/ Aware Of Their Health Status	72(43.1)	88(52.7)	7(4.2)	0(0)	566	3.38	0.56	Accepted
7	With Appropriate Information Flow, Patients Are Properly Advised To Strictly Adhere To Instructions On Medication	87(52.1)	71(42.5)	4(2.4)	5(3)	574	3.41	0.69	Accepted

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The result from the Table 4.3 shows the frequency of level of influence of information flow channels on health management systems in Niger State hospitals. From the table, the researcher observed that, in each case, a larger percentage of the sampled respondents Strongly Agreed and Agree that there is proper transmission of patient's information within the hospital personnel at 3.34%, With appropriate information flow, the duty roasters are properly communicated to the staff and followed dully with 3.50%, with appropriate information flow, patients are enlightened/ aware of their health status, with 3.38% and with appropriate information flow, patients are properly advised to strictly adhere to instructions on medication with 3.41%. Also accepted the following statements; with appropriate information flow, are patients properly directed from one place to the other with 3.29%, with appropriate information flow, the delay in consultation time reduced at 3.19%, and with appropriate information flow the crowd/traffic along the corridors of the hospital reduced or stopped at 3.11%.

4.2.3 Research question three

What is the influence of staff attitudes on Health Management System in general hospitals in Niger State? Table 4.4 shows the influence of staff attitudes on HMS.

Decision Rule: mean values less than 2.5 are regarded as less influential, while those equal to 3.063 are regarded influential and those greater than 3.063are more influential.

Table 4.4 What is the influence of staff attitudes on HMS in general hospitals in Niger State?

s/no		SA	A	D	SD	FX	$\bar{X}$	STD	Decision
	Statements	**4**	**3**	**2**	**1**				
1	This is your preferred profession	92(55.1)	67(40.1)	4(2.4)	4(2.4)	581	3.47	0.66	Accepted
2	Untimely resumption to work affect the patient's recovery negatively	72(42.5)	71(42.5)	17(10.2)	7(4.2)	542	3.24	0.80	Accepted
3	Inappropriate response increase communication gap between the patient and staff	71(42.5)	71(42.5)	14(8.4)	11(6.6)	536	3.20	0.85	Accepted
4	Inadequate communication of treatment strategy/plan at consultation, to the patient escalates patient's illness	73(43.7)	64(38.3)	29(17.4)	1(0.6)	543	3.25	0.75	Accepted
5	Quick attendance to patients at the medical record station calms the patient's consciousness before consultation	59(34.7)	82(49.1)	24(14.4)	2(1.2)	532	3.18	0.71	Accepted
6	Non-listening attitude of medical staff often delay treatment	63(37.7)	75(44.9)	28(16.8)	1(0.6)	534	3.19	0.73	Accepted
7	Hospital cleaners pass abusive words to patients	79(47.3)	30(18)	33(19.8)	25(15)	497	2.97	1.12	Accepted
8	Warders use fowl languages and render less assistance to patients	58(34.7)	36(21.6)	61(36.5)	12(7.2)	474	2.83	0.98	Accepted
9	Nurses' response to the patients is impolite while questions and directions are asked by patients	63(37.7)	69(41.3)	29(17.4)	6(3.6)	523	3.13	0.82	Accepted
10	Doctors are unfriendly with the patients and do not give directive	46(27.5)	50(29.9)	60(35.9)	11(6.6)	465	2.78	0.92	Accepted
11	The staff generally do not respond to patients when they require information	56(33.5)	44(26.3)	39(23.4)	28(16.8)	462	2.76	1.09	Accepted
12	The pharmacy technicians dispense drugs, but do not explain adequately its harmful and side effects to patients	73(43.7)	45(26.9)	39(23.4)	10(6)	515	3.08	0.95	Accepted
13	The laboratory staff do not support other staff with information needed, rather answerable to the doctor	50(29.9)	66(39.5)	46(27.5)	5(3)	495	2.96	0.83	Accepted
14	The staff neglect attending to the patients immediately, rather more involved in group gossips	56(33.5)	53(31.7)	23(13.8)	35(21)	464	2.77	1.12	Accepted

The result from the Table 4.4, shows, the frequency on influence of staff attitudes on health management systems in Niger State. From the table, the researcher observed that, in most cases, a larger percentage of the sampled respondents Strongly Agreed and Agree on the following; The pharmacy technicians dispense drugs, but do not explain adequately its harmful and side effects to patients with 3.08%, Nurses' response to the patients is impolite while questions and directions are asked by patients with 3.13%, Non-listening attitude of medical staff often delay treatment with 3.19%, Quick attendance to patients at the medical record station calms the patient's consciousness before consultation with 3.18%, Inadequate communication of treatment strategy/plan at consultation, to the patient escalates patient's illness at 3.25%, Inappropriate response increase communication gap between the patient and staff with 3.20%, Untimely resumption to work affect the patient's recovery negatively 3.24%.

4.2.4 Research question four

What extent is the information gap; staff attitude has produced in Health Management System in general hospitals in Niger State? Table 4.5 shows the information gap; staff attitude has produced in HMS.

Decision Rule: mean values less than 2.5 are regarded as less extent, while those equal to 3.33 are regarded extent and those greater than 3.33 are more extent.

Table 4.5 What is the extent of information gap, staff attitude has produced in the HMS in general hospitals in Niger State

S/N	Statements	SA 4	A 3	D 2	SD 1	FX	$\bar{X}$	STD	Decision
1	Quick response by the nurses has improve the health status of the patients	60(35.9)	100(59.9)	5(3)	2(1.2)	552	3.30	0.58	Accepted
2	Hospitality by the staff of the hospital enhance patient recovery	70(41.9)	95(56.9)	0(0)	2(1.2)	567	3.39	0.55	Accepted
3	Polite response to patient helps them to understand information better	82(49.1)	81(48.5)	4(2.4)	0(0)	579	3.46	0.54	Accepted
4	Adequate and detailed explanation on drugs administered make the patient's conscious while taking the drugs	70(41.9)	72(43.1)	19(11.4)	6(3.6)	540	3.23	0.79	Accepted
5	Adequate and detailed information from the lab scientist gives the patients idea of the extent of the illness or test conducted	63(37.7)	85(50.9)	18(10.8)	1(0.6)	544	3.25	0.66	Accepted

The result from the Table 4.5 shows the staff responses onthe extent of gap staff attitude has produced in health management system in Niger State. From the table, it shows in most cases a larger percentage of the sampled respondents Strongly Agreed and Agree that, the hospitality showed by the staff of the hospital enhance patient recovery at 3.39% and polite response to patient helps them to understand information better at 3.46%. Also disagreed the following statement, quick response by the nurses has improve the health status of the patients at 3.30% but it was observed that the quick response can only calm or ease the stress the patient is going through. Adequate and detailed explanation on drugs administered make the patient's conscious while taking the drugs at 3.25%, adequate and detailed information from the lab scientist gives the patient idea of the extent of the illness or test conducted. They also accepted the following statement; adequate and detailed information from the lab scientist gives the patients idea of the extent of the illness or test conducted at 3.23%.

4.2.5 Research question five

What literacy level expected by staff and patients, to have access to the use of ICT and electronic systems in the Health Management System in general hospital in Niger State? Table 4.6 shows the level literacy expected by staff and patients, to have access to the use of ICT and electronic systems in the HMS.

Decision Rule: mean values less than 2.5 are regarded as high level of literacy, while those equal to 3.35 are regarded frequent and those greater than 3.35 are high level of literacy.

Table 4.6 What level of literacy expected by staff and patients to have access to the use of ICT in the HMS in Niger state. N(167)

S/N	Statements	SA 4	A 3	D 2	SD 1	FX	*X*	STD	Decision
1	The literacy level of staff improve the health status of the patients	88(52.7)	75(44.9)	3(1.8)	1(0.6)	584	3.49	0.56	Accepted
2	A specified field of study needed to inform a specified selected patient for treatment	61(36.5)	83(49.7)	22(3.2)	1(0.6)	538	3.22	0.68	Accepted
3	The literacy skill of the staff hasten the treatment and recovery of the patients	63(37.7)	91(54.5)	10(6)	3(1.8)	548	3.28	2.29	Accepted
4	The literacy level of staff helped to manage patient information accurately and efficiently	84(50.3)	80(47.9)	3(1.8)	0(0)	582	3.48	0.53	Accepted
5	The criteria for the use of electronic equipment need specific qualification	4(2.4)	21(12.9)	68(40.7)	74(44.3)	546	3.26	0.69	Accepted

The result from the Table 4.6, shows the staff responses on literacy expected by staff and patients to be able to ascertain the use of ICT in the health management system in Niger state. The table, shows that, a larger percentage of the sampled respondents Strongly Agreed and Agree with the researcher's findings on the literacy level of staff has helped to manage patient information accurately and efficiently with 50.3%, and 47.9% respectively. The literacy level of staff improve the health status of the patients with 3.49%. A specified field of study is not needed to inform a specified or selected patient for treatment, the literacy skill of the staff hasten the treatment and recovery of the patients with 3.28%, while some rejected the following statement; The criteria for the use of electronic equipment does not need specific qualification with 3.26%.

4.3 Patients Response Rate

Demographic characteristic of the Respondents (patients) on staff attitudes and information flow systems on health management system in general hospital in Niger state N (216). Table 4.7 discuss the distribution of respondents by gender while Table 4.8 discuss the significance of the respondents by their level of Education.

Table 4.7 Distribution of respondents by gender

	Response	Frequency	Percent
Sex	Male	112	51.9
	Female	104	48.1

The results from this Table show the demographic characteristics of patients from the sampled hospitals in Niger state**.** From This table we observe that 51.9% of the patients are males and 48.1% are females.

Table 4.8 Distribution of respondents by their level of Education

	Response	Frequency	Percent
Educational level			
	No formal education	53	24.5
	Primary education	41	19.0
	Secondary education	77	35.6
	Tertiary education	45	20.8

The data in Table above revealed that 35.6% of the respondents have secondary certificate as their academic qualification while 24.5% of the respondents have no formal education. 19% of the patients have primary certificate and another 20.8% of the have tertiary certificate. This indicates that majority of the respondents are well learned with a firm grasp of the reality in the education sector.

4.4 Analysis of Research Questions on Patient Responses

4.4.1 Research question one

What is prevailing system of communicating with patients in the Health Management System in general hospitals in Niger State? Table 4.9 discuss the prevailing system of communication with patients in the HMS (patients)

Decision Rule: mean values less than 2.5 are regarded as less prevalent, while those equal to 3.24 are regarded frequent and those greater than3.24 are more prevalent.

Table 4.9 What is the prevailing system of communicating with patients in the HMS in Niger State hospitals?

N/A	Statements	SA 4	A 3	D 2	SD 1	FX	X	STD	Decision
1	By visiting the general hospital	26(12)	172(79.6)	14(6.5)	4(1.4)	652	3.01	0.49	Accepted
2	By locating the various unit of the hospital on your own	43(19.9)	154(71.3)	15(6.9)	4(1.9)	668	3.09	0.57	Accepted
3	The hospital staff give you directions of where next to go for or after treatment	114(52.8)	78(36.1)	19(8.8)	5(2.3)	733	3.39	0.74	Accepted
4	By getting acquainted to the various sections by visiting frequently or just at the time of need	103(47.7)	105(48.6)	7(3.2)	1(0.5)	742	3.43	0.58	Accepted
5	Noticing the signs and navigations in the hospitals / are the sign posts helpful in directing you	8(3.7)	3(1.4)	72(33.3)	133(61.6)	706	3.26	0.59	Accepted
6	By the sign posts in local languages or English	19(8.8)	2(0.9)	78(36.1)	117(54.2)	703	3.25	0.65	Accepted

The result from the Table 4.9 shows the frequency of prevailing system of Communicating with patients in HMS in Niger State hospitals. The researcher observed that in each case, a larger percentage of the sampled respondents Strongly Agreed and Agree that the frequency of research carried out onprevailing system of passing information to patients in Niger State hospitals. That is; by visiting the general hospital, with 3.01%, by locating the various unit of the hospital on your own with 3.09%, the hospital staff gives you directions of where next to go for or after treatment with 3.39%, by getting acquainted to the various sections by visiting frequently or just at the time of need with 3.43% and disagreed noticing the signs and navigations in the hospitals with 3.26%, by the sign posts in local languages or English with 3.25%.

4.4.2 Research question two

What is the level of influence of information flow channels on Health Management System in general hospitals Niger State? Table 4.10 shows the level of influence of information flow channels on HMS (patients).

Decision Rule: mean values less than 2.5 are regarded as less influential, while those equal to 3.063 are regarded influential and those greater than 3.23 are more influential.

Table 4.10 What is the influence of information flow channels in the HMS in general hospitals in Niger State?

Statements	SA 4	A 3	D 2	SD 1	FX	$\bar{X}$	STD	Decision
1. The information on the signpost is detailed	17(7.9)	6(2.8)	112(51.9)	81(37.5)	731	3.38	0.75	Accepted
2. The hospital staff give detail directions to where is needed to go for treatment or after treatment	14(6.5)	6(2.8)	63(29.2)	133(61.6)	685	3.17	0.66	Accepted
3. The navigations are clear enough to direct patients to a stated medical section	15(6.9)	4(1.9)	43(19.9)	154(71.3)	668	3.09	0.57	Accepted
4. The pharmacist technicians give detail prescription on drugs administered	17(7.9)	4(1.9)	64(29.6)	131(60.6)	687	3.18	0.59	Accepted
5. The lab scientist give detail explanation on test conducted in the hospital	13(6.0)	3(1.4)	57(26.4)	143(66.2)	686	3.17	0.65	Accepted
6. The doctor gives satisfactory information while explaining your health status	112(51.9)	88(40.7)	14(6.5)	2(0.9)	742	3.43	0.58	Accepted

The result from the Table 4.10 shows the frequency on influence of information flow channels in the health management systems in Niger State hospitals. The researcher observed that in most cases, a percentage of the sampled respondents Strongly Agreed and Agree, that the hospital staff give detail directions to where is needed to go for treatment or after treatment at 3.17%,The doctor gives satisfactory information while explaining your health status 3.43%. a larger percentage disagreed that, the information on the signpost is detailed with 3.38%, The pharmacist technicians give detail prescription on drugs administered with 3.18%, The lab scientist give detail explanation on test conducted in the hospital with 3.17%, The navigations are clear enough to direct patients to a stated medical section with 3.09%.

4.4.3 Research question three

What is the influence of staff attitudes on Health Management System in general hospitals in Niger State? Table 4.11 shows the influence of staff attitudes on HMS (patients).

Decision Rule: mean values less than 2.5 are regarded as less influential, while those equal to 2.5 are regarded influential and those greater than 2.5 are more influential.

Table 4.11 what is the influence of Staff Attitude to patients in HMS in general hospitals in Niger State

S/N	Statements	SA 4	A 3	D 2	SD 1	FX	*X*	STD	Decision
1	The hospital cleaners pass abusive words to patients because, patients are cooperative	5(2.3)	73(33.8)	68(31.5)	70(32.4)	445	2.06	0.86	Rejected
2	Warders use fowl languages and render less assistance to patients because, the information is not adequately understood	18(8.3)	62(28.7)	83(38.4)	53(24.5)	477	2.20	0.90	Rejected
3	Nurses respond to the patients impolitely while questions and directions are asked by patients because, it is not part of their job	32(14.8)	42(19.4)	85(39.4)	57(26.4)	481	2.22	1.00	Rejected
4	Doctors communicate with the patients and give directive on health status in a frowning mode	28(13.0)	44(20.4)	73(33.8)	71(32.9)	461	2.13	1.01	Rejected
5	Pharmacy technicians dispense drugs and do not explain adequately its side effects when used	31(14.4)	38(17.6)	104(48.1)	43(19.9)	489	2.26	0.93	Accepted
6	Laboratory staff support other staff with information needed, rather than only answerable to the patients	42(19.0)	128(59.3)	32(14.8)	14(6.5)	630	2.91	0.77	Rejected
7	The staff neglect attending to the patients, rather they are more involved in group gossips especially the nurses	30(13.9)	46(21.3)	116(53.7)	24(11.1)	514	2.37	0.85	rejected
8	Sometimes the hospital staff are more inclined to their phone charting instead of giving attention to patients	15(6.9)	45(20.8)	111(51.4)	45(20.8)	462	2.13	0.82	

The result from the Table 4.11 shows the frequency on influence of Staff Attitude to patients in General hospitals in Niger State. The researcher observed that, in most cases, a larger percentage of the sampled respondents Strongly disagreed and disagree that, hospital staff are more inclined to their phone, charting instead of giving attention to patients with 2.13%, The hospital cleaners pass abusive words to patients because, patients are cooperative large number of respondents also disagree with the statement with 2.06%, Nurses respond to the patients impolitely while questions and directions are asked by patients because, it is not part of their job with 2.22%, the respondents disagree That warders use fowl languages and render less assistance to patients because with 2.20%, the information is not adequately understood. They also disagreed that Doctors communicate with the patients and give directive on health status in a frowning mode with 2.13%, but agreed that Laboratory staff support other staff with information needed, rather than only answerable to the patients with 2.91%.

4.4.4 Research question four

What extent is the information gap; staff attitude has produced in Health Management System in general hospitals in Niger State? Table 4.12 shows the information gap; staff attitude has produced in HMS (patients).

Decision Rule: mean values less than 2.5 are regarded as less extent, while those equal to 3.24 are regarded extent and those greater than 3.24 are more extent.

Table 4.12 What is the extent of information gap, staff attitude has produced in HMS in general hospitals in Niger State

Statements	SA 4	A 3	D 2	SD 1	FX	X	STD	Decision
1. Quick response by the nurses has improve the health status of the patients	65(30.1)	143(66.2)	7(3.2)	1(0.5)	704	3.25	0.53	Accepted
2. Hospitality shown by the staff of the hospital enhance patient recovery	57(26.4)	147(68.1)	9(4.2)	3(1.4)	690	3.19	0.56	Accepted
3. Polite response to patient helps them to understand information better	93(43.1)	101(46.8)	20(9.3)	2(0.9)	717	3.31	0.67	Accepted
4. Adequate and detailed explanation on drugs administered make the patient's conscious while taking the drugs	40(18.5)	170(78.7)	5(2.3)	1(0.5)	681	3.15	0.45	Accepted
5. Adequate and detailed information from the lab scientist gives the patients idea of the extent of the illness or test conducted	78(36.1)	131(60.6)	5(2.3)	2(0.9)	717	3.31	0.56	Accepted

The result from the Table 4.12, shows, the staff responses on the extent of information gap, staff attitude has produced, in the health management system in Niger State.The table shows that the larger percentage of the sampled respondents strongly agreed and agree that the Quick response by the nurses has improve the health status of the patients with 3.25%, Hospitality shown by the staff of the hospital enhance patient recovery with 3.19%, Polite response to patient helps them to understand information better with 3.31%, Adequate and detailed explanation on drugs administered make the patient's conscious while taking the drugs with 3.15%, Adequate and detailed information from the lab scientist gives the patients idea of the extent of the illness or test conducted with 3.31%.

4.4.5. Research question five

What is the literacy level expected by staff and patients to have access to the use of ICT and electronic system in the Health Management System in general hospital in Niger State? Table 4.13 shows the level of literacy expected by staff and patients to have access to the use of ICT and electronic in the HMS (patients).

Decision Rule: mean values less than 2.5 are regarded as less extent, while those equal to 3.24 are regarded extent and those greater than 3.24 are more extent.

Table 4.13 What level of literacy is expected by staff and patients in the use of ICT in HMS in general hospital in Niger State.

S/N	Statements	SA 4	A 3	D 2	SD 1	FX	*X*	STD	Decision
1	I am graduate, I understand the information on the signpost	13(6.0)	132(61.1	69(31.9)	2(0.9)	588	2.72	0.58	Accepted
2	I can read and write, I know where to go before or after treatment in the hospital	24(11.1)	162(75.0)	25(11.6)	5(2.3)	637	2.94	0.56	Accepted
3	I am smart enough to understand the directions of the navigation	49(22.7)	145(67.1)	19(8.8)	3(1.4)	672	3.11	0.59	Accepted
4	I have health knowledge, I understand the explanation the doctors on my health status	91(42.1)	105(48.6)	17(7.9)	3(1.4)	716	3.31	0.67	Accepted
5	I have the relative to explain better what was written on my medical report	105(48.6)	94(43.5)	14(6.5)	3(1.4)	733	3.39	0.67	Accepted

The result from the Table 4.13 shows the staff responses on literacy level expected by patients to make use of ICT in the Hospital system in Niger state. From the table, it shows in most cases a larger percentage of the sampled respondents Strongly Agreed and Agree that by being smart enough information is understand on directions of the navigation with 3.11%, by having health knowledge information is understood while the explanation is given by the doctors on health status with 3.31%, and having the relative to explain better what was written on my medical report with 3.39%. Also, by able to read and write, the patient knows where to go before or after treatment in the hospital with 2.94%, and because the patient is a graduate, he/she understand the information on the signpost with 2.72%.

4.5 Analysis of Research Hypotheses

4.5.1 Research hypotheses one

There is no significant relationship between staff attitudes and the Health Management System in general hospitals in Niger State.

Table 4.14 shows that the ρ - value of 0.00 was obtained at 0.05 level of significance and 381 degree of freedom with chi-square (χ^2) value (57.11), the ρ (0.00) < 0.05 indicate that null hypothesis is not rejected for these items. This shows that there is no significant relationship between staff attitudes and the Health Management System in general hospitals in Niger State.

Table 4.14 Chi-square test for relationship between staff attitudes and the Health Management System in general hospitals in Niger State.

Aggregate Variable		Mean	SD	Df	χ^2	p-value	Decision
Staff attitudes	383	3.45	0.87	381	57.11	0.00	No significant difference
Health Management System	383	3.13	0.74				

At 0.05 level of significance SD =Standard Deviation *N= Significant

4.5.2 Research hypotheses two

There is no significant relationship between appropriate information flow and Health Management System in general hospitals in Niger State.

The Table 4.15 shows that the ρ - value of 0.01 was obtained at 0.05 level of significance and 381 degree of freedom(df) with chi-square (χ^2) value (51.23), the ρ (0.01) < 0.05 indicate that null hypothesis is not rejected for these items. This shows that there is no significant relationship between appropriate information flow and Health Management System in general hospitals in Niger State.

Table 4.15 Chi-square test for relationship between appropriate information flow and Health Management System in general hospitals in Niger State.

Aggregate Variable	N	Mean	SD	Df	χ^2	p-value	Decision
appropriate information flow	383	2.85	0.71	381	51.23	0.01	No significant difference
Health Management System	383	2.78	0.70				

At 0.05 level of significance SD =Standard Deviation *N= Significant

4.5.3 Research Hypotheses three

There is no significant relationship between patients' information and health care management system in general hospitals in Niger State.

Table 4.16 shows that the ρ - value of 0.07 was obtained at 0.05 level of significance and 381 degree of freedom(df) with chi-square (χ^2) value (37.95), the ρ (0.07) > 0.05 indicate that null hypothesis must be rejected for these items. This shows that there is a significant relationship between patients' information and health care management system in general hospitals in Niger State.

Table 4.16 Chi-square test for relationship between patients' information and health care management system in general hospitals in Niger State.

Aggregate Variable	N	Mean	SD	Df	χ^2	p-value	Decision
Patients' information	383	2.11	0.64	381	37.95	0.07	There is significant difference
Health Management System	383	3.39	0.56				

At 0.05 level of significance SD =Standard Deviation *NS= Not Significant

4.5.4 Research Hypotheses four

There is no significant relationship between patients and health management system in general hospitals in Niger State.

Table 4.17 shows that the ρ - value of 0.02 was obtained at 0.05 level of significance and 381 degree of freedom(df) with chi-square (χ^2) value (34.67), the ρ (0.02) < 0.05 indicate that null hypothesis is not rejected for these items. This shows that there is no significant relationship between patients and health management system in general hospitals in Niger State.

Table 4.17 Chi-square test for relationship between patients and health management system in general hospitals in Niger State.

Aggregate Variable	N	Mean	SD	Df	χ^2	p-value	Decision
Patients	383	3.22	0.42	381	34.67	0.02	No significant difference
Health Management System	383	3.19	0.61				

At 0.05 level of significance SD =Standard Deviation *N= Significant

4.6 Discussion of Findings

Research Question 1: What is the prevailing system of passing information to patients in Health Management System in general hospitals in Niger State? The study shows the medium in relating information in the circle of health management and patients. It is discovered that the ***X***(3.41%) of the staff agreed to pass information to patients whilst verbally directing them to places of treatment, and ***X***(3.32 %) making announcements

while in the vicinity. the patients respondents also agreed to the fact that the prevailing system of dissemination of information is through verbal instructions with ***X***(3.39 %).

Research Question 2: What is the level of influence of information flow channels on Health Management System in general hospitals in Niger State? The study found out that the level of information flow is very weak in general hospitals in Niger State because the patient respondents indicates, the information on the signpost is not detailed enough to relate information needed with ***X***(3.38 %), neither is the navigations clear enough to direct patients to a stated medical section ***X***(3.09 %). The pharmacist dispenses the drugs, and do not give detail prescription on drugs administered. But the staff responses with appropriate information flow, patients are enlightened/ aware of their health status with ***X***(3.38%), with appropriate information flow, there is proper transmission of patient's information within the hospital personnel ***X***(3.34 %)

Research Question 3: What is the influence of staff attitudes on Health Management System general hospital in Niger State in Niger State? The study was able to find out that both respondents accepted that pharmacy technicians dispense drugs, but do not explain adequately its harmful and side effects to patients with ***X*****(3.08%)**, while the staff respondents indicates that Nurses' response to the patients is impolite while questions and directions are asked by patients with ***X*****(3.13%)**, also, Quick attendance to patients at the medical record station calms the patient's consciousness before consultation with ***X*****(3.18%)**, Inadequate communication of treatment strategy/plan at consultation to the patient escalates patient's illness with ***X*****(3.25%)**, Inappropriate response increase communication gap between the patient and staff with ***X*****(3.20%)**, Untimely resumption to work affect the patient's recovery negatively ***X*****(3.24%)**. The patient respondents also agreed the staff neglect to attend to them and group gossips with ***X*****(2.37%)**.

Research Question 4: What is the extent of gap, staff attitude has produced in Health Management System in general hospitals in Niger State? The study found out that the gap the staff attitude has produced was positive, becasuse the study reveals with larger percentage of respondents both the staff and patients indicates, that quick response by the nurses has improve the health status of the patients with ***X*(3.25%)**, Polite response to patient helps them to understand information better with ***X*(3.31%)**, and Adequate and detailed explanation on drugs administered make the patient's conscious while taking the drugs with ***X*(3.15%)**. also, Adequate and detailed information from the lab scientist gives the patients idea of the extent of the illness or test conducted with ***X*(3.31%)**.

Research Question 5: Determining the level of literacy of staff and patients in the use of ICT communication system in Health Management System in general hospitals in Niger State. The study shows that there is a high level of literacy in the use of electronic / ICT gadgets in discharging patient's services by the staff respondents and the patients are quite low. Furthermore, the literacy level of staff helped to manage patient information accurately and efficiently, also, The literacy level of staff improve the health status of the patients with ***X*(3.48%)**.while some disagreed that the following statements, a specified field of study would be needed to inform a specified /selected patient for treatment with ***X*(3.15%)**, The literacy skill of the staff hasten the treatment and recovery of the patients with ***X*(3.28%)**., The criteria for the use of electronic equipment need specific qualification with ***X*(3.26%)**. The patient respondents also disagreed that being skilled and knowledgeable does not information the patient adequately with ***X*(3.31%)**.

4.7 Discussion of Hypotheses

H_{01}: Staff attitudes and the Health Management System in general hospitals in Niger State. The test of the null hypothesis one reveals that, there is a no significant relationship, between staff attitudes and the Health Management System in general hospitals in Niger State with the ρ (0.00) < 0.05. This implies that staff show positive attitudes in attending to the patients and it has helped, when Quick responses by the nurses improve the health status of the patients, Polite responses to patient helps them to understand information better, and Adequate and detailed explanation on drugs administered make the patient's conscious while taking the drugs.

H_{02} Relationship between information flow systems and Health Management System in general hospital Niger State. The test of null hypothesis reveals that there is no significant relationship between information flow systems and Health Management System in general hospital Niger State with the ρ (0.01) < 0.05**.** This implies that The study indicates that the level of information flow is very weak in general hospitals in Niger State because, the information on the signpost is not detailed enough to relate information needed and neither is the navigations clear enough to direct patients to a stated medical section. The pharmacist dispenses the drugs, and do not give detail prescription on drugs administered.

H_{03} Relationship between patients' information and health care management system in general hospitals Niger state The test of the null hypothesis reveal that there is a significant relationship between patients' information and health care management system in general hospitals Niger State with the ρ (0.07) > 0.05**.** This implies that patients information are always incomplete and in accurate, whilst communication structure is not well attended to; like challenges of finding the right person to ask a

question, understanding explanations due to literacy level or complexity, knowing health status *etc.*

H_{04} Relationship between patients and health management system in general hospitals in Niger state. The study test of the null hypothesis reveals that there is no significant relationship between the patients and the health management system in general hospital in Niger State with the ρ (0.02) < 0.05.This indicates that patients are able to confide in the staff and are able to receive their treatments regardless of the circle involved before the success of the services.

4.8 Summary of findings

Based on the results of the analysis, the following are the summary of major findings:

1. The study show that the major communication medium to the patients are by pass information to patients verbally whilst directing them to places of treatment, and making announcements while in the vicinity
2. From the second research statement, the study proves that level of information flow is very weak in general hospitals in Niger State because, the information on the signpost is not detailed enough to relate information needed, neither is the navigations clear enough to direct patients to a stated medical section and physicians illustration for drugs.
3. The findings show that response to the patients is impolite while patients ask questions and directions, and if quick attendance to patients at the medical record station is accurate, it would calm the patient's consciousness before consultation.
4. The study reveals that the gap the staff attitude has produced is positive, because the study reveals with larger percentage of respondents both the staff and patients, that Quick response by the nurses has improved the health status of the patients.

5. The study states that the literacy level of staff helped to manage patient information accurately and efficiently, and the criteria for the use of electronic equipment does not need specific qualification.
6. The findings on the hypothesis one testing revealed that there is no significant relationship, between staff attitudes and the Health Management System in general hospitals in Niger State.
7. The findings on the hypothesis two testing revealed that there is no significant relationship between information flow systems and Health Management System in general hospital Niger State.
8. The findings on the hypothesis three testing revealed that there is a significant relationship between patients' information and health care management system in general hospitals Niger State.
9. The findings on the hypothesis three testing revealed that there is no significant relationship between the patients and the health management system in general hospital in Niger State.

CHAPTER FIVE

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

From the findings of the study it could be deduced that, the sample respondents (staff) accepted that We give them individual verbal instruction on where they can receive first treatment and public announcement are made for awareness to patients, while providing a sign post showing the next place to go for the patients treatment and ward attendants availability to provide the necessary information and guides for patients, was rejected. Respondents also accepted that with appropriate information flow, there is proper transmission of patient's information within the hospital personnel, with appropriate information flow, patients are enlightened/ aware of their health status and with appropriate information flow, and patients are properly advised to strictly adhere to instructions on medication. With appropriate information flow, the delay in consultation time reduced, and with appropriate information flow, the crowd/traffic along the corridors of the hospital reduced or stopped. Furthermore, the study shows that respondents accepted that pharmacy technicians dispense drugs, but do not explain adequately its harmful and side effects to patients, and Nurses' response to the patients is impolite while questions and directions are asked by patients, and a rejected decision was shown on Adequate and detailed information from the lab scientist gives the patients idea of the extent of the illness or test conducted, and Adequate and detailed explanation on drugs administered make the patient's conscious while taking the drugs. Although from the patients respondents, study shows that the most prevailing means of information is by The hospital staff giving directions of where next to go for or after treatment, The doctor gives satisfactory information while explaining your health status had also the most frequency and mean, Laboratory staff support other staff with

information needed, rather than only answerable to the patients. Sometimes the hospital staff are more inclined to their phone charting instead of giving attention to patients, Nurses respond to the patients impolitely while questions and directions are asked by patients because, it is not part of their job, Warders use fowl languages and render less assistance to patients because, the information is not adequately understood was rejected. They also encountered problems mostly based on the communication of patient when not detailed and getting the rightful staff to ask questions while in the hospital.

5.2 Recommendations

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

1. The management of general hospitals in Niger State, should strive to provide adequate healthcare information flow systems and services in various forms to reach out to patients, this will make both prospective patients and in patients visit the hospital as the most preferred, as information needs are satisfactory and flexible.
2. ICT literacy is yet another issue. The management of the general hospitals in Niger State should provide medical personnel with wide knowledge of ICT usage, for adequate use and effective service delivery for both patients and staff in the hospital.
3. The management of general hospitals in Niger State should take proper measures to tackle impolite and poor attitude of staff and encourage those that render satisfied services.
4. The management of general hospitals in Niger State should organize seminars and orientation programs for staff to keep sensitizing them on how a quick responses can help the health status of a patient.
5. The management of general hospitals in Niger State should regardless of qualifications put effort to employ staff with adequate skills in operating ICT

equipment in order to achieve a better service delivery. In addition, the management of general hospitals in Niger State should provide and employ the securities and gadgets at the entrance of each outlet for easy identification.

6. Health Information professionals should be encouraged by the Niger State Government to provide accurate, timely and current information to the staff and health management system.
7. There should be a free flow of information between the staff and health management system in general hospitals in Niger State. This will boost their productivity in service delivery.
8. Communication strategies should be employed by the health management system to ensure information discharged to them and patients will lead to a positive change in behavior.
9. Anonymous medium such as suggestion box should be made available in General Hospitals. This will enable patients to have effective flow and reduction in information gap between patients and health management system.

5.3 Implication of the Study

The study has been able to establish how the attitude of hospital staff negatively affect the flow of information from staff to patients and vis-visa. This implies that patients due to some offensive languages from staff are finding it difficult to, fully divulge the information of their ailments to the doctor. Consequently, the healthcare system being required is not completely achieved.

5.4 Contribution to knowledge

1. The study contributed to knowledge by revealing that, out of the numerous pattern of communication stated in the study, only verbal means of communication was mainly used.

2. The study contributed to knowledge by indicating that, there is no system of checkmating information gap, details and satisfaction of patients.
3. The study contributed to knowledge by revealing that the staff attitude towards patients is poor, thereby affecting the service delivery.

5.5 Suggestion for further study

The study therefore suggested that:

1. The influence of staff attitudes and information flow system in health management system in general hospital in North Central Nigeria should be studied,
2. The influence of staff attitudes and information flow system in health management system in primary health care system in Niger State should also be studied and
3. The attitude of patients as it affects proper flow of information between the patients and hospital staff should be investigated.

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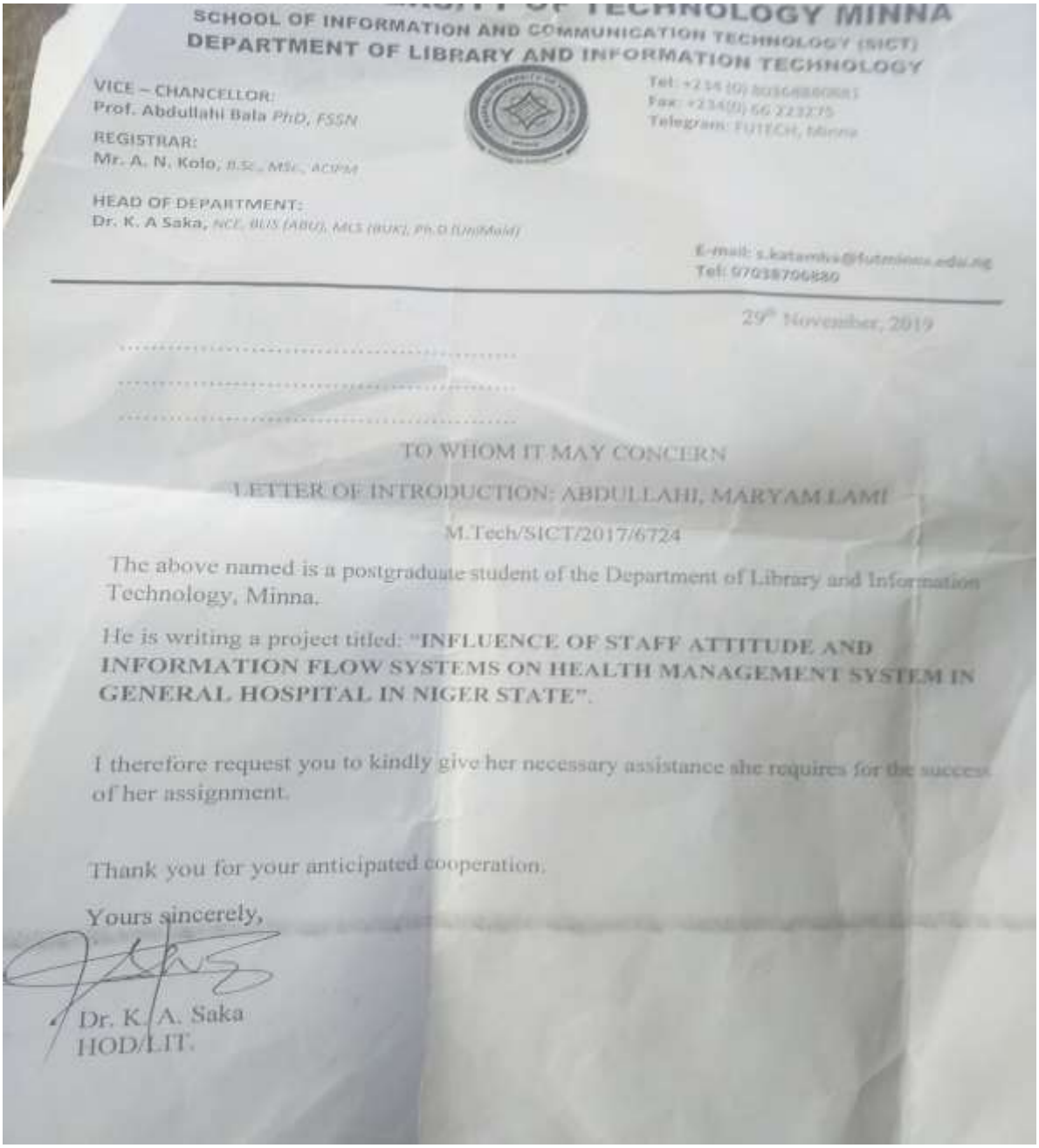
APPENDIX A

LETTER OF FIELD WORK



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29th November, 2019

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.....
.....

TO WHOM IT MAY CONCERN

LETTER OF INTRODUCTION: ABDULLAHI, MARYAM LAMI

M.Tech/SICT/2017/6724

The above named is a postgraduate student of the Department of Library and Information Technology, Minna.

He is writing a project titled: "**INFLUENCE OF STAFF ATTITUDE AND INFORMATION FLOW SYSTEMS ON HEALTH MANAGEMENT SYSTEM IN GENERAL HOSPITAL IN NIGER STATE**".

I therefore request you to kindly give her necessary assistance she requires for the success of her assignment.

Thank you for your anticipated cooperation.

Yours sincerely,

Dr. K. A. Saka
HOD/LIT.

APPENDIX B

QUESTIONNAIRES FOR PATIENTS IN GENERAL HOSPITALS IN NIGER STATE

Department of Library and Information Technology,
School of Post-Graduate Studies,
Federal University of Technology, Minna,
Niger State.
16th november, 2019.

Dear Respondents,

I Abdullahi Maryam Lami, a Post-Graduate student from the institution mentioned above. I am conducting a research on The Influence of staff attitudes and Information Flow systems on Health Management System in General Hospitals in Niger State.

I wish to solicit for your attention in filling the questionnaire to enable me carry out the research successfully. All the data supplied will be treated confidentially and used purely for the academic research work.

I quite appreciate your anticipated and sincere cooperation.

Yours Sincerely,

……..

ABDULLAHI, Maryam Lami

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA

SCHOOL OF INFORMATION AND COMMUNICATION TECHNOLOGY

DEPARTMENT OF LIBRARY AND INFORMATION TECHNOLOGY.

Integration of Patients Observation on Staff Attitude and Communication Pattern in Health Management System in Niger State.

Section A:

Demographic Detail: Please, asterisk (x) the options below as applicable to you

What is your main occupation?

Civil servants ( ) Farming( )Business( ) Trading( ) Unemployed/housewife ( ) Others……

What is the highest level of education you attained?

No formal education ( ) Primary education ()Secondary education ( ) Tertiary education( )

Gender: Male ( ) Female ( )

Note: Agree (A), Strongly Agree (SA), Disagree (D), Strongly Disagree (SD)

Section B: What is the prevailing system of communicating with patients in General Hospital?

1.4.1 Table1

Q1. How Information gets to patients

S/No	Statements	SA	A	D	SD
1.	By visiting the general hospital				
2.	By locating the various unit of the hospital on your own				
3.	The hospital staff give you directions of where next to go for or after treatment				
4.	By getting acquainted to the various sections, by visiting frequently or just at the time of need				
5.	Noticing the signs and navigations in the hospitals / and guiding enough.				
6.	By the sign posts in local languages or English				

Section C: What is level of influence of information flow channels on health management system in Niger State?

1.4.2 Table2

Q2. Level of Information flow system

S/No	Statements	SA	A	D	SD
1	The information on the signpost is detailed or The navigations are clear enough to direct patients to a stated medical section				
2	The hospital staff give detail directions to where is needed to go for treatment or after treatment				
3	The pharmacist give detail prescription on drugs administered				
4	The lab scientist give detail explanation on test conducted in the hospital				
5	The doctor gives satisfactory information while explaining your health status				

Section D: STAFF ATTITUDE

1.4.3 Table3

Q3. What is the influence of poor staff attitude on patients?

S/No	Statements	SA	A	D	SD
1	The hospital cleaners pass abusive words to patients because, patients are cooperative				
2	Warders use fowl languages and render less assistance to patients because, the information is not adequately understood				
3	Nurses respond to the patients impolitely while questions and directions are asked by patients because, it is not part of their job				
4	Doctors communicate with the patients and give less information on health status, in a frowning mode				
5	Pharmacy technicians dispense drugs and do not explain adequately its side effects when used				
	Laboratory staff support other staff with information needed, rather than only answerable to the patients				
7	The staff neglect attending to the patients, rather they are more involved in group gossips especially the nurses				
8	Sometimes the hospital staff are more inclined to their phone charting instead of giving attention to patients				

Section E: What extent is the information gap, staff attitude has produced in health management system in Niger State

1.4.4 Table4

S/No	Statements	SA	A	D	SD
1	Quick response by the nurses has improve the health status of the patients				
2	Hospitality by the staff of the hospital enhance patient recovery				
3	Polite response to patient helps them to understand information better				
4	Adequate and detailed explanation on drugs administered make the patient's conscious while taking the drugs				
5	Adequate and detailed information from the lab scientist gives the patients idea of the extent of the illness or test conducted				

Section F: What is the expected level of Literacy to access or use ICT electronic system in the hospital?

1.4.5 Table5

Q5. What is the literacy level of patients while using ICT

S/No	Statements	SA	A	D	SD
1	I am graduate, I understand the information on the signpost				
2	I can read and write, I know where to go before or after treatment in the hospital				
3	I am smart enough to understand the directions of the navigation				
4	I have health knowledge, I understand the explanation the doctors on my health status				
5	I have the relative to explain better what was written on my medical report				
6	I use my basic knowledge to understand the drugs administered by the pharmacist				

Section G: What are the challenges faced in information flow system in health, management system in Niger State

1.4.6 Table6

S/No	Statements	SA	A	D	SD
1	There is inadequate information communicated by the patients				
2	Lack of understanding by the patient due to literacy level, cultural or personality				
3	Finding the appropriate staff to question				
4	Lack of understanding of the instruction given				

APPENDIX C

QUESTIONNAIRES FOR STAFF IN GENERAL HOSPITALS IN NIGER STATE

Federal University of Technology, Minna

School of Information and Communication Technology

Department of Library and Information Technology.

Staff response on Hospital System of Communication to patients and Suggested ways to Improvement

Name of hospital:

Section A: Demographic details: Please, asterisk (x) the options below as applicable to you.

Gender: Male ( ) Female ( )

Specialization: (I) Medical doctor (II) Nurse (III) Science Laboratory & Technicians (IV) Pharmacist (V) Auxiliary Staff

Note: Agree (A), Strongly Agree (SA), Disagree (D), Strongly Disagree (SD)

Section B: What is the prevailing system of communicating with patients in Niger State hospitals?

1.4.7 Table7

S/No	Statements	SA	A	D	SD
1	We give them individual verbal instruction on where they can receive first treatment.				
2	We provide sign post on the next place to go for the patients.				
3	We make public announcement for awareness to patients.				
4	Our attendants are always available to provide the necessary information and guides for patients.				
5	We have electronic information board to guide patients.				
6	We transmit information in English as a general way of communication.				
7	We transmit information in local languages to communicate to certain patients.				
8	We make use of sign languages to communicate to patients.				

Section C: What is the level of influence of information flow channels on health management systems in Niger State hospitals?

1.4.8 Table8

S/No	Statements	SA	A	D	SD
1	With appropriate information flow, are patients properly directed from one place to the other				
2	With appropriate information flow, the delay in consultation time reduced				
3	With appropriate information flow, there is proper transmission of patient's information within the hospital personnel				
4	With appropriate information flow, the crowd/traffic along the corridors of the hospital reduced or stopped				
5	With appropriate information flow, the duty roasters are properly communicated to the staff and followed dully				
6	With appropriate information flow, patients are enlightened/ aware of their health status				
7	With appropriate information flow, patients are properly advised to strictly adhere to instructions on medication				

Section D: What is the influence of staff attitudes on health management systems in Niger State?

1.4.9 Table9

S/No	Statements	SA	A	D	SD
1	This is your preferred profession				
2	Untimely resumption to work affect the patient's recovery negatively				
3	Inappropriate response increase communication gap between the patient and staff				
4	Inadequate communication of treatment strategy/plan at consultation, to the patient escalates patient's illness				
5	Quick attendance to patients at the medical record station calms the patient's consciousness before consultation				
6	Non-listening attitude of medical staff often delay treatment				
7	Hospital cleaners pass abusive words to patients				
8	Warders use fowl languages and render less assistance to patients				
9	Nurses' response to the patients is impolite while questions and directions are asked by patients				
10	Doctors are unfriendly with the patients and do not				

	give directive				
11	The staff generally do not respond to patients when they require information				
12	The pharmacy technicians dispense drugs, but do not explain adequately its harmful and side effects to patients				
13	The laboratory staff do not support other staff with information needed, rather answerable to the doctor				
14	The staff neglect attending to the patients immediately, rather more involved in group gossips				

Section E: What is the extent of the information gap, staff attitude has produced in health management system in Niger State

1.4.10 Table 10

S/No	Statements	SA	A	D	SD
1	Quick response by the nurses has improve the health status of the patients				
2	Hospitality by the staff of the hospital enhance patient recovery				
3	Polite response to patient helps them to understand information better				
4	Adequate and detailed explanation on drugs administered make the patient's conscious while taking the drugs				
5	Adequate and detailed information from the lab scientist gives the patients idea of the extent of the illness or test conducted				

Section F: What is the expected level of literacy by staff and patients to access and use of ICT in the health management system in Niger state?

1.4.11 Table 11

S/No	Statements	SA	A	D	SD
1	The literacy level of staff improve the health status of the patients				
2	A specified field of study needed to inform a specified / selected patient for treatment				
3	The literacy skill of the staff hasten the treatment and recovery of the patients				
4	The literacy level of staff helped to manage patient information accurately and efficiently				
5	The criteria for the use of electronic equipment need specific qualification				

Section G: What are the challenges faced in information flow system in health, management system in Niger State

1.4.12 Table 12

S/No	Statements	SA	A	D	SD
1	There is inadequate information communicated by the patients				
2	Lack of understanding by the patient due to literacy level, cultural or personality				
3	Finding the appropriate staff to question				
4	Lack of understanding of the instruction given				
5	Lack of communication system between the staff in health management system				

Section H: How can the existing information flow system be improved for better service delivery in the health management systems in Niger State?

1.4.13 Table 13

S/No	Statements	SA	A	D	SD
1	The uses of ICT BASED medium improve the service delivery process of the hospital?				
2	The use of electronic sign posts to inform the patients on the places to go at a point of need?				
3	The use of electronic computers to receive and send information from any unit of the hospital regarding a patient during visit, help reduce the long stay/ traffic at the various sections in the hospital?				
4	Announcement in each outlet or passage notify or make awareness to patients of their whereabouts in the hospital				
5	The use of characters and animations will communicate effectively to patients				
6	The use of radio and television jingles communicate effectively to patients				

APPENDIX D

Cronbach Alpha Reliability Analysis Result

Notes

Output Created		24-SEP-2019 23:22:51
Comments		
Input	Data	C:\Users\dell\Desktop\DEFAULT BACKUP\ ANALYSIS\Students.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	24
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=SB1 SB2 SB3 SB4 SB5 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.01

Scale: ALL VARIABLES

Reliability Statistics

Cronbach's Alpha	N of Items
.748	12

Reliability Statistics

Cronbach's Alpha	N of Items
.889	10

Reliability Statistics

Cronbach's Alpha	N of Items
.652	9

Reliability Statistics

Cronbach's Alpha	N of Items
.725	7

Reliability Statistics

Cronbach's Alpha	N of Items
.628	15

Reliability Statistics

Cronbach's Alpha	N of Items
.592	5

Reliability Statistics

Cronbach's Alpha	N of Items
.887	5

$$\text{Average} = \frac{0.748+0.889+0.652+.0.725+0.628+592+.887}{7} = \frac{5.12}{7} = 0.732$$

The result of the analysis shows that the instrument is reliable and can be used for the study.