



ASSESSING PROPERTY MAINTENANCE PRACTICE IN UNIVERSITY OF ILORIN TEACHING HOSPITAL (UITH), KWARA STATE.

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ABSTRACT

Property maintenance needs to be considered seriously if property is to live up to its expected life span. Public properties in Nigeria have suffered long period of poor maintenance culture which makes the properties to become obsolete earlier than necessary and inhabitable when compare with private properties. Proper maintenance of the hospital building provide habitable and healthy environment for patient quick recovery, where a hospital is not just a mere building, but a complex social institution that handles the dynamics of life and death situations during the process of rendering health care. This study assessed the property maintenance practice in University of Ilorin Teaching Hospital with a view to ascertain its effectiveness. The study adopted a quantitative approach. Questionnaire were designed and properly administered to 90 respondents comprises of maintenance staff who are also among the users of the hospital buildings for the collection of primary data used in this study. Respondents were surveyed employing census sampling technique to generate data on the socio economic background of respondents, operational state of building elements, factors affecting management practice and current management practice. The data collected was subjected to descriptive statistics, frequency tables, weighted mean score and percentage analysis. The study revealed that, problems that militate against maintenance practice in university of Ilorin teaching hospital include; lack of maintenance policy, inadequate provision of funds for maintenance, corruption, misuse of facilities by

occupants, lack of timely response to maintenance request and change in government. Also, there is no adequate staff to meet up with maintenance management of the hospital. It was recommended that there should be a well structure maintenance policy, more staff should be employed and staff should be guided with maintenance policy to improve the maintenance management. Adequate and regular inspection of the facilities in the hospital should be done from time to time so as to arrest any unforeseen circumstances and avoid any major breakdowns.

Keywords: Property, Property Maintenance, Maintenance Practice, Ilorin, Nigeria.

INTRODUCTION

Property maintenance means different things to different people. The term has been defined and redefined by different authors. However, the various definitions suggest that property maintenance revolves around building care. Nevertheless, property maintenance is define as the required processes and service undertaken to preserve, protect, enhance and care for hospital building and services after completion in accordance with the prevailing standards to enable the building and services to serve their intended functions throughout their entire life span without drastically unsettling their basic features and use (Lateef, Khamidi and Idrus, 2010). Maintenance is the art of controlling the rate at which structure deteriorate towards a state of un-serviceability and collapse (Smith 2003).

A rapid growth of housing construction is often used as an index for measuring county's development and this has led to increase in the number of modern houses. As a result, more maintenance work is required in other to cope with the construction trend. Due to the growth of housing with the lack of building standards, more maintenance, rehabilitation, and renovation work have become necessary to ensure the serviceability and safety of the constructed houses. In addition, the existing houses need to be sustained as long as possible. Therefore, method should be evolved to reduce maintenance cost (Awolabi, 2014). Olagunju (2012) identified structural condition, roof condition, toilet facilities, discharge of waste, water component, exterior wall condition, condition of walkways within the building premise, electrical wire and switches condition,

interior wall surface condition as the factors that influence the level of maintenance of public building standard.

As technology changes with regard to hospitals, so do maintenance requirements. Technology is time dependent. As time progresses, so does technology changes. With many developments coming to light every day, health care facility must be prepared to accommodate whatever the future holds (Geisler, 2002). Maintenance management of hospital buildings is one of the complex subjects in the field of facilities management (Adenuga, 2012). Contributing to this is the complex nature of hospital buildings, the delicate mechanical and electrical systems, and inadequate maintenance budgets. The qualities of the physical environment in which patients receive care affect patient recovery rate, staff satisfaction, and organization productivity. Such effects can be positive or negative (Malkin and Wiley, 1992). Government-owned hospitals are confronted with unique challenges that threaten their existence. Through an examination of the history, characteristic, and structures of public hospitals, it was found that such institutions by their nature lack the capacity to compete in market-driven economy (Bloom, Propper, Seiler, & Van Reenen, 2015). It is against this background this study tends to evaluate the property maintenance practice in University of Ilorin Teaching Hospital (UITH) Kwara State.

RESEARCH QUESTIONS

In order to assess the property maintenance practice of University of Ilorin Teaching Hospital (UITH), the following research questions were formulated:

- i. What are the current maintenance management practices in University of Ilorin Teaching Hospital?
- ii. What is the current condition of properties in University of Ilorin Teaching Hospital?
- iii. What are factors affecting maintenance management practice in University of Ilorin Teaching Hospitals?

STATEMENT OF THE PROBLEM

Building maintenance is a subject that has to be considered seriously if building is to live up to its expected life span. Public properties in Nigeria have suffered a long period of poor maintenance culture which makes the properties to

become obsolete earlier than necessary and inhabitable when compare with private properties. As a result many researchers were carried out studies on various aspects of building maintenance practice. Among which were those conducted by Izobo-Martins, Dare-Abel, & Ayo-Vaughan (2014) observed that the maintenance of public buildings in Nigeria were not been given the required attention. The Government focuses more on the construction of new buildings while the maintenance of the old structures which commences immediately after the construction is completed is not given much attention. Also, Tunde and Babatunde, (2014) carried out research on Problems and Prospects of Public Property Maintenance, a case study of National Industrial Court, Abuja, the observation from their analysis of the public property management problems is that corruption through inflation of the materials during repairs and maintenance constitute the leading problems (28%) of public property management problem.

According to Obeng-Odoom and Amedzro (2011), the problem of maintenance management that is plaguing Africa as a whole is as a result of “African poor maintenance culture”. Perhaps this is why in BBC discussion titled “is Africa’s Architecture dying?” many of those who commented on the topic felt that the problem with Africa was not its architecture but its poor maintenance practice (BBC 2006 cited in Obeng-Odoom and Amedro, 2011). Odediran, Opatunji, & Eghenure (2012) carried out research on, maintenance of residential Buildings users' practices. Also, Nah, *et al* (2012) determined property management implementation problems within Malaysian public schools. Oseghale (2014) assessed the impact of maintenance strategies on the performance of industrial facilities in selected industrial estates in Lagos state, Nigeria. James, Gani, *et al* (2014) Carried out Study on assessing the effectiveness of maintenance practices in public schools. Studies were conducted regarding management and maintenance practice, but many of the researchers are more concerned of problems of maintenance practice, effectiveness of maintenance practice, knowledge management maintenance, and maintenance by users practice on residential buildings, housing estate, heritage museum and public schools. Virtually, none of these studies considered the factors affecting the maintenance cultures and the reasons for poor maintenance of University of Ilorin Teaching Hospital (UIH). Which is a gap this study intends to bridge by assessing the existing maintenance practice, factors affecting the maintenance cultures and

the reasons for poor maintenance of University of Ilorin Teaching Hospital (UITH)?

AIM AND OBJECTIVES OF STUDY

The aim of the study is to assess property maintenance practice in University of Ilorin Teaching Hospital with a view to ascertain its effectiveness. In achieving this, its objectives are:

- i. Examine the present condition of properties in University of Ilorin Teaching Hospital;
- ii. Ascertain the current maintenance practice in University of Ilorin Teaching Hospital; and
- iii. Examine the factors that are affecting maintenance management practice of University of Ilorin Teaching Hospital.

SCOPE OF THE STUDY

The study only covered the maintenance management practices of University of Ilorin Teaching Hospital (UITH) permanent site. Because of the large numbers of building and structure within the Teaching Hospital, only building 1- Renal care / Pharmacy/ Physiotherapy / ICT/Revenue unit, building 2- Family Medicine department, building 3- Accident and Emergency, building 4- VIP ward and building 5- ENT/Ophthalmology/Hematology/ Microbiology laboratory are selected for this study. It had been recently renovated by the University maintenance unit.

LITERATURE REVIEW

Concept of Building

Building is a relatively permanent enclosed construction composed of stone, brick, wood, or other proper substance connected together, over a plot of land, having a roof and usually windows and often more than one level, used for any of a wide variety of activities, as living, entertaining, or manufacturing. In the world all over, people spend 90% of their lives in buildings. This therefore makes it a very important and valuable asset to be neglected. According to Oladapo, (2005) Buildings are required to provide a conducive and save environment for various human activities. The extents to which buildings

provide the required environment for the required activity is a measure of the functionality of the building types.

Nous Hospital Consultants, (2002) regarded a hospital as not a mere building, but a complex social institution, composed of many groups representing a wide variety of interests and diverse needs that utilize the services of various medical, paramedical and support personnel to render all needed health care to the patients in its custody. It employs a wide variety of modern technologies and engineering services to support the process of healthcare using numerous biological, pharmaceutical, chemical and bio-chemical substances. It handles the dynamics of life and dead situations during the process of rendering healthcare. Nimlyat, & Kandar (2015) described hospital building as a healing indoor environment needed in healthcare to prevent infection control.

Pubic Building Maintenance

The goal of every health institution is to provide patient care, produce medical and health manpower. In furtherance of the goal, staffs and expertise based on the highest skill are motivated in an environment that is clean, conducive and patient friendly. Hospital buildings are places where care and care should be available to the public but due to lack of maintenance, public hospital building have become a place where people working in built environment and patients have allergic like reactions to unspecified stimuli, reactions like dizziness, nausea, irritation of mucous membranes, eye and/or nasopharyngeal irritation and sensitivity to bad odour from human waste, poor toilet facilities, insufficient cleaning methods (Iyagba 2005). One of the greatest economic and social problem of Nigeria as a nation is the general absence of a maintenance culture (Iyagba, 2005). The issue of poor maintenance culture and “I don’t care” attitude, like a disease that has eaten deep into the marrow of Nigeria and is manifested in the way public buildings are managed. Buildings are set up and expected to live their life span without a bit of management. As a result many studies was conducted regarding pubic building maintenance among which, is a research by Zubairu (2001) the extent to which the various factors contribute to maintenance problems in government office buildings in Nigeria is as follows: Inadequate architecture design 6%, inadequate structural design 7%, inadequate electrical design 9%, inadequate mechanical design 11%, poor construction 12%, use of poor quality components and materials 14%, natural

deterioration due to age and environment 18%, misuse by occupants 18%, others 5%.

However, Adewunmi and Ogunba, 2008, fairly disagree with the issue of lack of adequate provision of funds as reasons for the condition of public buildings in Nigeria but will rather state that corruption by highly placed individuals in the public sector is responsible for this problem. On a scale from 10 (highly clean) to 0 (highly corrupt) on the perceived levels of public sector corruption in 174 countries in the world by Transparency International in 2010, Nigeria was ranked 2.4. This clearly shows the high level of corruption exhibited in the public sector and by public officers. Corruption especially in the public sector has brought about instability and failure of most of the public institutions.

Another study was conducted by, Adenuga and Ibiyemi (2010) on assessment of the state of maintenance of public hospital buildings in South West Nigeria. The study adapted a survey technique while their findings revealed that the state of maintenance of public hospital buildings, including services are above average in their operational performance. Structure and fabric (i.e. block walls, floor slabs, beams and columns and roof structure) were highly rated among other in their operational state. Buildings were well located therefore creating sufficient air circulation for efficient performance of the operations. The majority of public hospitals have their environment well sanitized with good clean water supply. Most of the internal elements (i.e. painting, wall/floor, tiles, door, ceiling and windows) were found also to be above average in their operational state. There is humidity control and good protection from noise. Among other variables rated very high in their performance were the uses of lifts (vertical transportation), fire protection, telecommunication systems and electricity supply. Both the federal and state-owned hospital rated structure and fabric very high in their performance. Both rated the use of lifts, telecommunication systems, electricity supply and sanitary fittings very low in their performance. From the hypothesis tested, it was revealed that there is significant difference in the operational state of building including service between the federal and state-owned hospital in the southwest Nigeria.

Adeni, *et al* (2012) was carried out study on embedding sustainable facilities management in the management of public building in Nigeria. The used of questionnaire was adopted in the study, the study found out that, as a result of no/poor maintenance strategies for maintaining public buildings, the average

condition of public building in Nigeria is fair (on a scale 1-poor to 5-excellent). Talib, *et al* (2014) researched on assessment of factors affecting building maintenance and defects of public building in Penang, Malaysia. The research work adopted the use of structured questionnaires while in their findings, lack of preventive maintenance and insufficient funds to maintenance the building, lack of building maintenance standard, non-availability of replacement part and components, and not responded to maintenance request within 1st to 5th ranking rating of major reasons. While the factors of building defect were also ranked as the most significant factors i.e. lack of building maintenance, over looked site conditions, defective material, environment conditions and moisture from wet area.

Enshassi, Sharafa and Alkilami (2015) Conducted research on assessment of operational maintenance in public hospital buildings in the Gaza Strip. The aim of the research is to assess the current practice of maintenance process and management in public hospitals building in the Gaze Strip. A questionnaire survey was adopted in the study, and the results of their study present an overview of the current situation of the maintenance process in public hospital buildings in the Gaze Strip. The findings indicated that while the corrective maintenance is implemented in all the 13 public hospitals, preventive maintenance is employed along with corrective maintenance, only in three hospitals. Also their result shows that most hospitals in the Gaze Strip have no maintenance plan for medical equipment; they do not have quality control system for repair and preventive maintenance. It is recommended to employ experience maintenance staff in other to prepare adequate maintenance plan and detailed check list, which is required for preventive maintenance. The Management should organize specialized training courses in maintenance management for their staff in other to improve their effectiveness and efficiency. Hospital in Gaza should make sure that they all spare parts available in their storages for immediate action when required.

Also Nura *et al* (2017) carried out an assessment of the effectiveness of maintenance practices in public schools. The study adopted qualitative frame work. However a case study design approach was adopted for this research to assess the effectiveness of maintenance practice in public schools with particular reference to Shehu Shagari College of Education, Sokoto was investigated using survey instrumentation. The findings from the study

established that the most wide spread maintenance problem are cracks on the floors and walls, faded paint, and leaking roofs. Building maintenance problems are more pronounced in the hostel and staff quarters than class rooms/offices as a result of the two main factors: pressure on the building, facilities by some users and lack of good management. Finally, the maintenance management problems are influenced by labor and management relationship, lack of good management, lack of funds and improper maintenance habit among others. The study concluded there is a need for the institution to embrace preventive maintenance practice as a high priority rather than ad-hoc maintenance. Building managers should incorporate preventive maintenance tasks into a work-order system and keep systematic maintenance records, either by computer or manually and they should plan building inspection since doing so can provide insight into future maintenance needs and avoid unnecessary cost.

Maintenance Practice

Buildings are required to provide a conducive and safe environment for various human activities. This, essentially, is the question of function (Oladapo, 2005). Public buildings are in very poor and deplorable conditions of structural and decorative disrepair. In spite of millions of Naira spent to erect all these buildings, they are left, as soon as commissioned to face premature but steady and rapid deterioration, decay and dilapidation (Adenuga, 2005).

In a research work of Sunday, Oladele and Franko (2012) on maintenance of residential buildings in Nigeria. Descriptive statistics was used in analyzing the data obtained from the research. Their finds discovered that majority of the respondents carried out one from of maintenance activities or the other. Majority do not have maintenance manual and lack of adequate finance from the university management which is the major factor that affects the practice of maintenance among the concerned staff. They concluded that most of the residential buildings in the study area are facing problems of maintenance management. The respondents reported that they have carried out maintenance activities at one time or the other and that most of the residential buildings in the study area do not have maintenance manual.

Also, Oladokunn and Ojo (2012) research on an evaluation of the problems of commercial property management practice in Nigeria. The study adopted the descriptive method of percentages, mean and proportion method as well as

relative importance index (R II) for analysis. The study also found that the key factor/issues perceived as problems of commercial property management in the Lagos state, in order of priority include: high rent, cumulative maintenance problems, electricity and plumbing needs, cash flow requirement and cost of construction with positive relative importance index 1.8, 0.98, 0.75, and 0.65 respectively.

Ugwu, Okafor, and Nwoji (2018) conducted a study on maintenance culture and its impact on the construction of residential building in Nigeria. This research cut across two sources, primary and secondary source. The primary source involves mainly physical observation of the buildings while the secondary was derived from published and unpublished documents related to the study. It was concluded that poor funding, delay in the release of funds for maintenance, poor workmanship, natural effects such as temperature, moisture, gaseous constituents and pollutants, substandard materials, design errors, natural deterioration due to age and environments, lack of maintenance culture were all identified as factors that contributed to maintenance problems in residential building in Nigeria.

In another study by Abdulazeez, Abbas and Mansur (2014) they carried out study on analysis of the level of professionalism of personnel in the application of total quality management approach in Building Maintenance practices at three Federal University of North Central Geopolitical zone which comprised University of Abuja (Uniabuja), University of Ilorin (Unilorin,. And Federal University of Technology, Mina (Futminna), the descriptive statistical tools was used when analyzing the data collected, where it was found out that, most Universities are dominated by unqualified, ill-trained and unprofessional personnel. And it was concluded that most of the maintenance managers are highly certificated, they still remain deficient in applying quality improvement principles in the maintenance operations because of lack of adequate professional workshops, trainings and awareness programmed. The researcher fairly agree with the findings especially in the area where domination of unqualified ill-trained and unprofessional personnel, since mostly in Nigeria appointing of maintenance personnel was not base on competencies or field, where sometimes personnel from irrelevant profession will be appointed and also given them no any workshop training for maintenance awareness.

Also another study was carried out by, Zul-Atfi and Narimah (2013) on maintenance management practices for building facility in eight polytechnic Malaysia. The conventional method practice was used in the study, Where the study indicated; poor services delivery, inadequate finance, poor maintenance planning and maintenance backlogs. There is also need to overcome less manpower competencies of maintenance management practice which existed within all eight polytechnics. And concluded that, the factor of non specific complain, defect repetition, limited budgets, time gap of building repairs and less competent manpower are the main problems on the case study finding. The researcher agree that less manpower competencies can lead to poor services delivery, poor maintenance planning and maintenance backlog.

Maintenance Management

Maintenance management of hospital buildings is one of the complex subjects in the field of facilities management (Adenuga, 2012) Contributing to this is the complex nature of hospital buildings, the delicate mechanical and electrical systems, and inadequate maintenance budgets. The qualities of the physical environment in which patients receive care affect patient recovery rate, staff satisfaction, and organization productivity. Such effects can be positive or negative (Malkin and Wiley, 1992).

In view of the above many research was conducted on maintenance management among which were research conducted by Olanrewaju, Muh'd and Arazi (2009) on systematic building maintenance management for Malaysian University Campuses. The questionnaire survey was used in the study, the study further revealed that, the expenditure on maintenance is inadequate but poor management of the resources and maintenance services is also contributing greatly to the poor service delivery. The study have concluded that, building only have value if they continuous to provide the intended services adequately, failure of which will render the existence of the building insignificant if not even useless. The researcher agree with the finding, where it was found out that, poor management of the resources and maintenance services is contributing greatly to the poor services delivery.

Norshila and Mydin (2012), who carried out research on maintenance management system of Administration heritage Buildings in Malaysia,. Structured interview was used in the study, where it was revealed that, there is

several important factors which need to consider at maintenance management issues caused by administration system faults. The consequence of poor managements system has been considered from the minimum level of maintenance work such as many problems occurred on heritage building. The researcher agrees with the finding that revealed administration system faults contribute to poor maintenance management system.

While in another study by Olufemi, Olabode and Ajibola (2012) on evaluation of the scenarios of facilities maintenance management of sport complex in south west Nigeria. Quantitative research method was adopted in the study; the study revealed some factors affecting performance in the maintenance of sports complexes among which are: Funding, Organization Structure, Political Factors, Ownership types, and security. The study concluded that it is only when adequate fund is provided and fully utilized in the maintenance of sport complex that one will enjoy the initial investment in them and the consequent accruing benefits from the complexes will be achieved. The researcher agree with these three factors that affecting performance of the maintenance in sport complex especially funding, where insufficient funding can greatly lead to poor performance of maintenance.

Also another research by Abdulkareem, Ibrahim and ogunlana (2014) on knowledge management application that will assist in increasing the effectiveness of the Building maintenance Process in kuwait. Field data and survey method was adopted in the study; the study found out that, the proposed knowledge management system will be based on the form of contract used by the majority of public organization. The researcher concluded that, several issues were witnessed in the public building maintenance sector in Kuwait that reduces efficiency in performance. By applying the concept and tools of knowledge and developing a knowledge management system, the value for money spend by the public departments can be improved. The researcher agrees that, knowledge management system is used majority by public organization.

Challenges associated with Maintenance Management Practices

Three considerations for developing maintenance policy are building maintenance objectives, benefits and policies (Armstrong, 1987). The main purpose is to obtain benefits with integration of adequate maintenance policies. It concerns with proper procedures for planning building maintenance activities.

Alner and Fellows (1990) summaries that safety is the primary concern for the planning of maintenance strategy to ensure building and associated services are in safe condition, fit for use and comply with the law and all statutory requirements. Maintenance work is carried out to maintain the value of the physical assets of the building stocks and quality. Thus, these factors are considered important for development of maintenance policy. However, apart from the value consideration, Burns (1997) argues that there should be ground rules for the allocation of maintenance resources available to management. Maintenance policies are beneficial to the organization as a whole, it must relate to the cost involved for getting maintenance funding. Maintenance strategy is adopted in order to extend the life cycle of buildings and its fittings services. Maintenance personnel choose different maintenance strategies depending on allocation maintenance resources. The maintenance policy is the integration of different strategic approaches, which include corrective, preventive and condition-based maintenance (Horner *et al*, 2007). Ollila and Malmipuro (2009) identify that the main types of categories of maintenance consisted of reactive, preventive, predictive and proactive maintenance. However, Lee, & Scott (2009) argues that the maintenance strategies should be based on the detailed design of the maintenance cycle for different types of organisations. Lee, & Scott (2009) split this into five types of maintenance strategy, including time-based, performance-based, breakdown-based, renovation-based and integration-based. Furthermore, Tse (2002) is of the opinion that most of the maintenance practices are failure-driven, time-based, condition-based, reliability-centered and predictive. The basic maintenance strategies include preventive, corrective and condition-based maintenance. According to Lee, & Scott (2009) time-based, performance-based, breakdown-based, renovation-based and integration-based are also developed from the three basic maintenance strategies. Planned Preventive Maintenance (PPM) has been described as the most effective maintenance strategy against the frequency of breakdown (Seeley, 1976). However, PPM is considered an ineffective solution because it makes too early and unnecessary replacement (Spedding, 1987). The argument of this maintenance strategy is becoming the focus of economic downturn, resulting in cutting operation cost to organisations. Moreover, the study about the effectiveness of PPM with empirical data to support its efficiency is limited (Horner *et al*, 1997). Wood (1999) introduces just-in time

theory developed from the production industry applying to building maintenance.

From the strategic perspective, there is little understanding about the relationships of PPM with the core business objectives (Loosemore and Hsin, 2001). On the contrary, it is recommended for the better use of the PPM in order to optimise maintenance resources (Shen and Lo, 1999). Tse (2002) argues that maintenance practices in Hong Kong concentrate on time-based and failure-driven strategies, but without adopting a comprehensive maintenance approach, and that maintenance is still in a primitive stage. From the technological perspective, most of the studies focus on the study of technology application to condition-based maintenance and performance-based maintenance with centered reliability maintenance, and forward maintenance and predictive maintenance are all based on the condition surveys (Pitt, 1997).

Maintenance Management Functions

The function in this area is mainly of a technical nature and concerned with the planning and control of construction resources to ensure that necessary repairs and renewals are carried out with maximum efficiency and economy. The major decision relate to the following as spelt out in BS 3811 cited in Seeley (1985);

- Determining Standard
- Planning Inspections
- Identifying and Specifying the work necessary
- Estimating the cost of the work
- Planning the work
- Organizing the executive of the work

Determining Standards

For this, it is necessary to have information on the overall objectives of the organization and of statutory and other external requirement so that compatible standards can be fixed. The expression of these standards in qualitative and quantitative terms demands knowledge of the effects of varying degree of disrepair on user activities and levels of visual acceptance.

Planning Inspections

Fixing the periodicity of inspections requires knowledge of the rates of deterioration of the building elements so that defects are revealed before they

reach critical stage. The minimum period will be determined by the inspection cost which should clearly not exceed the cost consequence of failure.

Identifying and Specifying the Work Necessary

This is achieved by compiling the information received on the condition of the building from inspectors and other sources with the standards laid down. It demands knowledge of the causes of defects and of the remedial measures which would be appropriate for the circumstance.

Estimating the Cost of the Work

As far as possible the estimates should be based on historic cost data obtained from within the organization for previous similar jobs, but in the absence of such data, cost from external sources and experienced budget have to be used.

Planning the Work

This is mainly in respect of fixing appropriate start and finish times for the individual jobs. It also requires information on the effect of the timing of the work on user activities, its agency, the availability of resources and the labour time required for each operation.

Organizing the executive of work

The major decision here is whether to employ labour directly for the purpose or to engage an outside contractor; for this, information will be required on the relative merits of these alternatives from the point of view of both cost and convenience

RESEARCH METHODOLOGY

The research methodology adopted is quantitative. Questionnaire were developed and administered to the respondents. The Sample frame for this study are the staff of different sections in the works and services department, University of Ilorin Teaching Hospital (UIH). The population of staff is 90. The total population of all the staff was adopted because they are all within the manageable range bringing the number sample size to be 90. The sampling method adopted was census sampling technique, which is the most fundamental method and was used in order to obtain information only from the respondents.

After the considerable collection of data, the method of data analysis employed to analyse the data gathered from the field was frequency tables, weighted mean score and percentage analysis using SPSS Version 22.

THE STUDY AREA

The University of Ilorin Teaching Hospital (UITH) belongs to the second generation of teaching hospital which were established by law on the 2nd May, 1980. It took off in July, 1980 and started operation using as its temporary site the then General Hospital and Maternity, Ilorin which were owned by Kwara state Government. The permanent site of the hospital was declared opened by His Excellency, President of the Federal Republic of Nigeria, Chief, Olusegun Obasanjo in May, 2007 while complete movement took place in April, 2010. The vision of the hospital is to provide world class health service in Nigeria, also to provide customer friendly and innovation service in which every client counts and every staff member matters as their mission.

The management one-point agenda is total quality health care that guarantees patient's satisfaction. There are thirty eight (38) department i.e. Clinical, Accident and Emergency, Anesthesia, Behavioral Science, Community Health, Dietetics unity, Health, Epidemiology, family Medicine, In vitro Fertilization, Medicine, Nursing Service, Obstetrics and Gynecology, Optalmology, Paediatrics, Pain and Palliative, Pharmacy, Physiotherapy, Radiology, Surgery, NHIS, Non Clinical, Accounting, Audit, Board and Tender, Corporate Affairs, Ethic and Research, ITC, Personal and Training, Servicom, Store, Works, Legal, Laboratories, Chemical Pathology, Microbiology/Parasitology, Histopathology, Hematology. The hospital also has thirty eight (38) schools which are School of Orthopaedic, Post Basic Nursing, Nephrology, Nursing, Medicine, Surgery, Radiology, and Community Health among others.

PRESENTATION AND DISCUSSION OF RESULTS

Table 1: Analysis of Questionnaire Administered

	Frequency	Valid Percent	Cumulative Percent
Returned Questionnaires	74	82.2	83.2
Not Return	13	14.4	96.6
Invalid	3	3.4	100.0

Total	90	100.0	
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Source: Field Survey, 2019.

Ninety (90) questionnaires were administered to respondents, out of which seventy-four (74) responds were returned with substantial information; representing 82.2 percent while thirteen (13) were not returned representing 14.4 percent also three (3) were damaged representing 3.4 percent. Thus seventy-four questionnaires can be adequately representing the opinion of the population.

Table 2 Research Question 1: What is present condition of properties in (University of Ilorin Teaching Hospital) UITH Kwara State.

This subsection reports the findings of RQ 1; what is present condition of properties in University of Ilorin Teaching Hospital) UITH Kwara State.

TABLE 2.1: Structural elements (beams, columns, upper floor slabs and stairs).

	Frequency	Valid Percent	Cumulative Percent
Very bad	0	0.0	0.0
Bad	3	4.1	4.1
Average	21	28.4	32.5
Good	47	63.5	96.0
Very good	3	4.1	100.0
Total	74	100.0	

Source: Field Survey, 2019.

Based on the table above, it is suffice to state that, most of the respondents (that is about 63.5%) disclosed that, most of the structure elements(beams, columns, upper floor slabs and stairs) in the study area are in good condition.

Table 2.2: Walls (External and Internal)

	Frequency	Valid Percent	Cumulative Percent
Very bad	0	0.0	0.0
Bad	2	2.7	2.7
Average	10	13.5	16.2
Good	34	46.0	62.2

Very good	28	37.8	100.0
Total	74	100.0	

Source: Field survey, 2019.

From the table above, the result shows that most of the respondents (that is about 46%) are of the opinion that, the structural condition of the wall both internal and external are in good condition. Therefore, the research observed that, the walls are in good conditions join with 37% respondents with the opinion that it's very good.

Table 2.3: Finishes (Wall finishes, floor finishes and ceiling finishes)

	Frequency	Valid Percent	Cumulative Percent
Very bad	0	0.0	0.0
Bad	0	0.0	0.0
Average	14	18.9	18.9
Good	32	43.2	62.1
Very good	28	37.9	100.0
Total	74	100.0	

Source: Field survey, 2019.

From the table above the result shows that, most of the respondents (that is about, 43.2%) are of the opinion that the finishes are in good condition. Therefore, the research observed that, join with the opinion of 37.9% the finishes of the buildings within the study area are all in good conditions.

Table 2.4: Doors (external and internal doors).

	Frequency	Valid Percent	Cumulative Percent
Very bad	0	0.0	0.0
Bad	1	1.4	1.4
Average	10	13.5	14.9
Good	47	63.5	78.4
Very good	16	21.6	100.0
Total	74	100.0	

Source: Field Survey, 2019.

From the table above, it could be seen that majority of the respondents (that is about 63.5%) are of the opinion that the doors of the study area are in good conditions and need little or no maintenance work as at the date of administer the questionnaire.

	Frequency	Valid Percent	Cumulative Percent
Very bad	0	0.0	0.0
Bad	1	1.4	1.35
Average	10	13.5	14.9
Good	57	77.0	91.9
Very good	6	8.1	100.0
Total	74	100.0	

Source: Field Survey, 2019.

In the table above, (about 77%) of the respondents agreed that, the roofs are in good functioning condition.

Table 3 Research Question 2: What is present maintenance management practice in University of Ilorin Teaching Hospital) UITH Kwara State. This subsection reports the findings of RQ 2; What is present maintenance management practice in University of Ilorin Teaching Hospital) UITH Kwara State?

	Frequency	Valid Percent	Cumulative Percent
Unplanned maintenance	2	2.7	2.7
Planned maintenance	33	44.6	47.3
Both maintenance	39	52.7	100.0
Total	74	100.0	

Source: field survey, 2019.

The table above shows that, the respondents (about, 52.7%) agreed that both planned maintenance and unplanned practice are carried out while (44.6%) agreed that planned maintenance practice are carried out. Therefore, the researcher believed that both planned and unplanned maintenance practice are majorly carried out in the study area.

Table 3.1: Time to respond to maintenance request in case of Emergence.

	Frequency	Valid Percent	Cumulative Percent
Immediately	37	50.0	50.0
Take time and have to wait	37	50.0	100.0
Not attended to	0	0.0	100.0
Total	74	100.0	

Source: Field Survey, 2019.

The table above either shows that, the respondents (50%) agreed that, immediately or have to wait are the respond to maintenance request during emergence.

Table 3.2: Time to respond to maintenance request in case of Normal.

	Frequency	Valid Percent	Cumulative Percent
Immediately	7	9.5	9.5
Take time and have to wait	67	90.5	100.0
Not attended to	0	0.0	100.0
Total	74	100.0	

Source: field survey, 2019.

The table above shows that, (about 90.5%) of the respondents agreed that, it takes time dealing with maintenance request in the case of normal need.

Table 3.3: The annual maintenance budget.

	Frequency	Valid Percent	Cumulative Percent
1-5M	49	66.2	66.2
6-10M	3	4.1	70.3
Above 10M	22	29.7	100.0
Total	74	100.0	

Source: field survey, 2019.

From the table above it was observed that, many of the respondents (about 66.2%) agreed that, the annual cost budget for maintenance is within the range of 1-5million naira.

Table 3.4:Lack of maintenance staff

	Frequency	Valid Percent	Cumulative Percent
Enough	6	8.1	8.1
Average	21	28.4	36.4
Not enough	47	63.5	100.0
Total	74	100.0	

Source: field survey, 2019.

From the analysis of the table above, it shows that (about 63.5%) of the respondents agreed that, the works and service department are short of staff while 28.4 agreed that the number of staff are in average term. the works department ensure the proper usage of hospital building by the users. Therefore, the result shows that, the works and service department need more staff to be able to work more efficient.

Table 3.5: Computerize maintenance management system(CMMS) method

	Frequency	Valid Percent	Cumulative Percent
Yes	0	0.0	0.0
No	74	100	100.0
Total	74	100.0	

Source: field survey, 2019.

From the table above, the research observed that (100%) of the respondents have the opinion that, there is no method of using computerize maintenance management system but has been using the manual method of maintenance management system.

Table 4 Research Question 3 : What are the Factors that affect maintenance management practice in UITH. This subsection reports the findings of RQ 3; What are the Factors that affect maintenance management practice in UITH.

Table 4: Lack of maintenance policy.

	Frequency	Valid Percent	Cumulative Percent
Strongly agree	0	0.0	0.0
Agree	55	74.3	74.3
Undecided	4	5.4	79.7
Strongly disagree	8	10.8	90.5
Disagree	7	9.5	100.0
Total	74	100.0	

Source: field survey, 2019.

In the table above, many of the respondents (about 74.3%) have the opinion that, the department is lacking maintenance policy. Therefore the research discovered that, lack of maintenance policy affect the maintenance management practice.

Table 4.1: Inadequate provision of funds for maintenance.

	Frequency	Valid Percent	Cumulative Percent
Strongly agree	5	6.8	6.8
Agree	54	73.0	79.8
Undecided	2	2.7	82.5
Strongly disagree	6	8.1	90.6
Disagree	7	9.4	100.0
Total	74	100.0	

Source: field survey, 2019.

In the table above, (about 73%) of the respondents agreed that, one of the factors affecting maintenance management practice is funds that are not provided for carrying out maintenance works.

Table 4.2: Lack of experienced and well trained building maintenance Engineer.

	Frequency	Valid Percent	Cumulative Percent
Strongly agree	0	0.0	0.0
Agree	1	1.4	1.4
Undecided	28	37.8	39.2
Strongly disagree	13	17.6	56.8
Disagree	32	43.2	100.0
Total	74	100.0	

Source: field survey, 2019.

The table above shows many respondents (about 43.2%) disagreed about, Lack of experienced and well trained building maintenance Engineer. Therefore, the result shows that, there are well trained and experienced staffs within the works and service department in the study area.

Table 4.3: Overcrowding.

	Frequency	Valid Percent	Cumulative Percent
Strongly agree	0	0.0	0.0
Agree	2	2.7	2.7
Undecided	3	4.1	6.8
Strongly disagree	11	14.9	21.7
Disagree	58	78.3	100.0
Total	74	100.0	

Source: field survey, 2019.

The table above revealed that, most of the respondents (about 78.3%) has the opinion that, overcrowding does not affected maintenance management practice in the study area.

Table 4.4: Lack of timely response to maintenance request.

	Frequency	Valid Percent	Cumulative Percent
Strongly agree	1	1.4	1.4
Agree	42	56.8	58.2
Undecided	4	5.4	63.6
Strongly disagree	17	23.0	86.6
Disagree	10	13.4	100.0
Total	74	100.0	

Source: field survey, 2019.

In the above table, (about 56.8%) the respondents agreed that, lack of timely response to maintenance request affect the maintenance management practice of the hospital building in the study area.

Table 4.5: Poor maintenance work done by the maintenance unit of the hospital.

	Frequency	Valid Percent	Cumulative Percent
Strongly agree	0	0.0	0.0
Agree	3	4.1	4.1
Undecided	3	4.1	8.2
Strongly disagree	22	29.6	37.8
Disagree	46	62.2	100.0
Total	74	100.0	

Source: field survey, 2019.

The table above disclosed that, (about 62.2%) of the respondents have the opinion that, there is no poor maintenance work done by the maintenance unit of the hospital. Therefore, the research observed that, proper maintenance works are carried out effectively by the works and service department of the hospital.

Table 4.6: Misuse of facilities by user.

	Frequency	Valid Percent	Cumulative Percent
Strongly agree	53	71.6	71.6
Agree	3	4.1	75.7

Undecided	3	4.1	79.8
Strongly disagree	7	9.5	89.3
Disagree	8	10.7	100.0
Total	74	100.0	

Source: field survey, 2019.

The table above shows that, many respondents (about 71.6%) strongly agreed that, misuse of facilities by user often affects the maintenance management activities.

Table 4.7: Poor architectural/structural design.

	Frequency	Valid Percent	Cumulative Percent
Strongly agree	1	1.4	1.4
Agree	2	2.7	4.1
Undecided	1	1.4	5.5
Strongly disagree	22	29.7	35.2
Disagree	48	64.8	100.0
Total	74	100.0	

Source: field survey, 2019.

From the analysis of the table above, it was discovered that (about 64.8%) of the respondents disagreed that poor architectural/structural design is not one of the factor affect the maintenance management practice. maintenance. However (about 29.7%) of the respondents strongly disagree on poor architectural/structural design.

Table 4.8: Change of government

	Frequency	Valid Percent	Cumulative Percent
Strongly agree	53	71.6	71.6
Agree	2	2.7	74.3
Undecided	6	8.1	82.4
Strongly disagree	4	5.4	87.8
Disagree	9	12.2	100.0
Total	74	100.0	

Source: field survey, 2019.

The analysis of the table above disclosed that, (about 71.6%) of the respondents strongly agreed that, change of government is one of the factors that affect the maintenance management practice.

CONCLUSION AND RECOMMENDATION

CONCLUSION

This study had examined the property maintenance practice in University of Ilorin Teaching Hospital. The findings from the survey carried out indicated that no existing maintenance policy guiding the maintenance work execution. The findings from the analysis has conformed with other researches that the maintenance staff plays a vital role in the maintenance of the hospital where important skills is found to be necessary when considering an effective maintenance staff for hospital maintenance management. The study had demonstrated that inadequate funding, lack of timely response to maintenance request, poor as well as the misuse of the property by the users, change of government, poor architectural/structural design is not one of the factor affect the maintenance management practice found to be among the factors that affect the maintenance management practice. This study thereby concluded that proper maintenance of the hospital building provide habitable and healthy environment for patient quick recovery, where a hospital is not just a mere building, but a complex social institution that handles the dynamics of life and death situations in the process of rendering health care. Furthermore, a mistake in a hospital building management can cost the lives of many human beings at a time.

RECOMMENDATIONS

In the light of the research findings, and conclusions, the following recommendations are made in order to improve on the practice of maintenance management of our public hospital buildings including services in University of Ilorin Teaching Hospital (UITH).

- 1) There should be a well structure maintenance policy and the staff are guided with such policy to improve the maintenance management
- 2) Maintenance staff and users of hospital buildings should be given opportunities for further training on their jobs also on effective use of hospital facilities. This is necessary to reduce the occurrence of defects,

which will consequently bring about better physical and functional hospital building elements and services.

- 3) The maintenance department should ensure that there is/are a precaution to be taken to guaranty quality of materials when they are purchased for maintenance work.
- 4) Adequate and regular inspection of the facilities in the hospital should be done from time to time so as to arrest any unforeseen circumstances and avoid any major breakdowns.
- 5) Adequate workshops and seminars regarding new technological innovation on maintenance programmed should be organized from time to time to upgrade the knowledge of the personnel involved in maintenance.
- 6) The maintenance staff should embark on both the workshop training and public enlightenment to the users due to the sensitivity of the services being rendered in the hospital build environment.
- 7) There should adequate funding to meet with the maintenance management.

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