Employee Perception of Maintenance Practices at Selected Public Healthcare Facilities in Niger State, Nigeria

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Abstract: Maintenance practice involves deliberate and orderly way that deals with planning, evaluation, organizing, and monitoring of maintenance activities and their expenses. An excellent maintenance management framework combines with learned and proficient maintenance staff can avoid safety and health issues and environmental harm; yielding longer assets life with less breakdowns, lower working costs and higher personal satisfaction for the users and occupants. Experienced and highly trained workers are inspired with a very friendly atmosphere and they are also in turn individual friendly.Lack of maintenance of our healthcare facilities is evident in the deplorable condition of the structures and equipment.This study assessed maintenance practices of maintenance staff at six (6) selected healthcare facilities in Niger State through a structured questionnaire. Data collected was analysed with Minitab 17 statistical software using descriptive statistics. The analysis revealed among others that majority of maintenance practice were preventive in nature, and that the maintenanceproblems in the healthcare facilities of Niger State was caused bylack of lack of funding and lack of successful adaptation of ineffective maintenance programmes and practices. The study recommended a proactive and aggressive approach to reduce the occurrence of defects in and around the healthcare facilities. It was also recommended that individual healthcare centres should solicit for both private and public funding for maintenance activities since they have partial autonomy to generate revenue internally for their operation.

Keywords: healthcare facilities, maintenance practice. preventive maintenance.

Introduction

Maintenance practice is a deliberate and orderly way that deals with planning, evaluation, organizing, and monitoring of maintenance activities and their expenses (Technical Information Document (TID), 2000). An excellent maintenance management framework combined with learned and proficient maintenance staff can reduce safety and health issues and environmental harm; yielding longer assets life with less breakdowns, lower working costs and higher personal satisfaction for the users and occupants (TID, 2000). Experienced and highly trained workers are inspired with a very friendly atmosphere and they are also in turn individual friendly.

The importance of healthcare facilities or hospitals has been identified in the literature (Streifel, 2002; Ulrich, 1992; Onifade, 2003; Geisler, 2002). For instance, Streifel (2002) explained that these facilities are needed to prevent the spread of infection and provide adequate control of diseases. Ulrich (1992) also described healthcare facilities as medical-care atmosphere that measurably enhance individual results on health issue, decrease or remove ecological stresses, provide clear direction on issues impacting appropriate wellness care. The hospitals also offer healthcare surgery and psychiatric testing, including pregnancy testing, inpatient, and outpatient services.

Smith (2003) claimed that all healthcare facilities usually have common goals regardless of the location, size or budget: performance and cost-effectiveness, flexibility, expandability, therapeutic atmosphere, cleanliness, sanitation, accessibility, controlled circulation, aesthetics, security, safety and sustainability. According to Smith (2003), a well-organized style can help expertise, economic system conveniences and comfort; a non-functional style can impede actions of all kinds, detract from high quality of suitable care, and raise outlays to intolerable levels. Hardy and Lamner (1996) explained that lack of these goals can impede actions of all kinds and cause distraction from provision of quality care. Johassen et al. (2001) noted that the provision of health and suitable care is continuously changing world over and that the speed of change is ever rushing.

Several studies investigated maintenance practices of healthcare facilities (Igal et al., 2005; Shohet, 2003; Adenuga, 2007). For instance, Igal et al., (2005) analyzed integrated maintenance monitoring of hospital facilities. Igal et al., 2005 suggested a multi-system structural model and the performance of maintenance with guidelines and substitute sources of labour (outsourcing versus in-house). Shohet (2003) also identified key performance indicators for maintenance of healthcare facilities and suggested a condition-based maintenance (CBM) which was a common solution for the maintenance in a highly complicated system under tight economic circumstances. Adenuga (2007) also reviewed the operational state of hospital facilities in Lagos State as average and recommended proactive measures to reduce the nature of maintenance problem.

Friendly atmosphere inspires experienced and highly trained workers and this makes the individuals to be friendly. Healthcare facilities are places suitable for care and treatment, lack of appropriate upkeep of healthcare facilities have become a place where individuals have allergic-like responses to unspecified stimuli: responses like dizziness, nausea, discomfort of mucous membrane, eye and/or nasopharyngeal discomfort and sensitivity to bad odour from individual waste, poor toilet features, and inadequate cleaning methods (Iyagba, 2005).

With reference to the older healthcare structures, especially, Onifade (2003) claimed that those which were previously well-known for their strength and act have now become less attractive

because of lack of regular and adequate planning and mismanagement of the facilities. Onifade (2003) warned that if no proper step is put in place, the entire structures and facilities will corrode and will only be replaced in function if the means are available. Turrel (1999) suggested that the performance of hospital structures and its elements rely mostly on on-going and regular planned maintenance based on a well-organized maintenance programme considering the complex nature of medical healthcare structures, the sensitive technical electrical systems and insufficient maintenance budgets.

The conditions of public healthcare facilities in Nigeria are extremely unacceptable as a result of total neglect (Iyagba and Adenuga, 2005). Despite the millions of naira being spent to erect all these facilities, soon as commissioned, they are left to face premature but steady and rapid deterioration, decay and dilapidation. Iyagba and Adenuga(2005) confirmed that the conditions of public healthcare facilities in Nigeria as a result of total neglect are extremely unacceptable. According to Amobi (2006), most healthcare facilities in Nigeria are suffering from insufficient maintenance and as such they are in very poor and deplorable conditions. Banful (2004) claimed that the financial consequences of neglecting maintenance is often not only seen in terms of reduced asset life and premature replacement but also in increased operating cost and waste of related, natural, and financial resources. Geisler (2002) suggested that healthcare facilities must be prepared to accommodate whatever the long run holds considering the many developments coming to light every day.

Maintenance is related to the background of any project. Unfortunately, development plans and approved recurrent and capital estimates in public hospitals in Nigeria have revealed that thought have not been given to maintenance work (Onifade, 2003). A considerable analysis has been performed on aspects responsible for the insufficient maintenance of public housing, and there has been limited investigation on the subject with regards to healthcare structures. There is still a research gap especially in the northern part of Nigeria with regards to maintenance of hospital facilities. Adenuga (2012) performed an analysis of maintenance management practice in public hospital environment in south western Nigeria, and identified the important skills for maintenance supervisors in a medical center built atmosphere. Adenuga (2012) suggested that federal and state government authorities stop ignoring the problems in the healthcare service sector and develop strategies for effective maintenance practice.

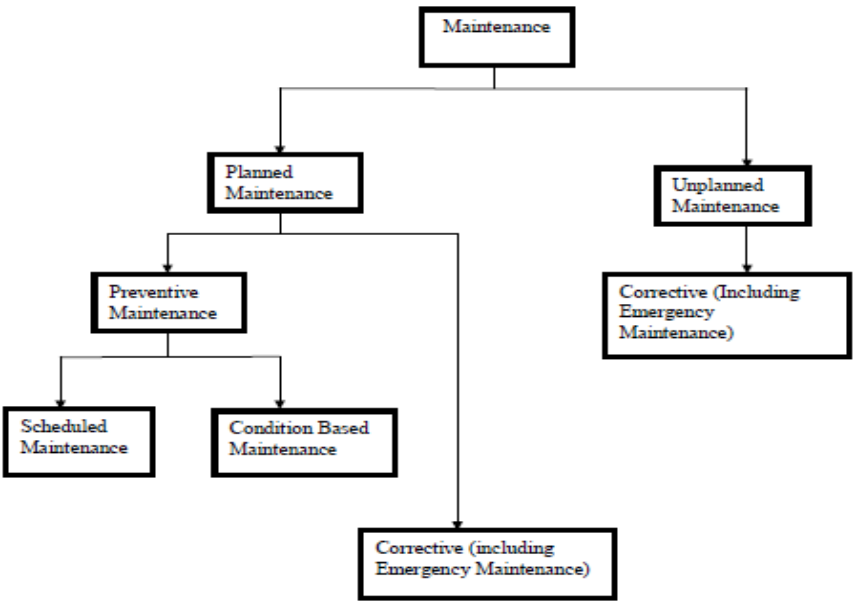

Figure 1: Types of Maintenance (Source: B.S 3811: 1984)

Figure 1 explains the theoretical framework for the study. As shown, the maintenance practices identified in BS 3811 (1984)categorises and explained terms as shown in Figure 1 as follows:

(i) Planned maintenance: "The upkeep prepared and achieved with consideration, administration and upkeep documents using a pre-specified policy. "Such policy must be extensive, well organised method covering all brief and phrase concerned.

(ii) Unplanned maintenance: This explains the performance of unexpected work or malfunction of loss. For instance, the ripping- off building through the action of a storm mostly constitute unexpected loss. It can also be known as unforeseen and inevitable maintenance.

(iii) Preventive maintenance: "The maintenance performed at pre-specified durations or corresponding to prescribed criteria and designed to decrease the probability of failing or the performance deterioration of products."

(iv) Corrective maintenance: "The maintenance performed on a building after damage is done, to recover facilities to serve its useful life".

(v) Emergency maintenance: "The upkeep required instantly to

prevent serious consequences." This is known as day-to-day upkeep, as a result of such occurrences like gas leaking.

(vi) Condition-based maintenance: "The protective upkeep initiated due to identification of defects of items during routine monitoring."

(vii) Schedule maintenance: "The protective upkeep performed to a pre-specified period of effort, number of functions and mileage."

(viii) Running maintenance: "Maintenance which could be done whilst products is still functioning".

The aim of the study was to assess the maintenance practices at selected healthcare facilities in Niger State, Nigeria. The objectives of the study were (a.) to evaluate maintenance problems as perceived by the maintenance staff at the selected healthcare facilities; (b.) to assess the level of commitment from management of the selected healthcare facilities; and (c.) to determine the reasons for the ineffective maintenance practices employed at these different healthcare facilities.

Four research questions were identified for this study as follows: (i) What are the major causes of maintenance problems in Niger State healthcare facilities? (ii) What maintenance guidelines and methods are used by the maintenance departments at the selected healthcare facilities? (iii) How committed are the management to solving maintenance problems at the selected healthcare facilities? (iv) What is the effect of maintenance problems on maintenance staff performance and productivity?

Study Area

The investigation considered state owned healthcare facilities in the three senatorial zones of Niger State. It investigated the maintenance at six selected healthcare facilities. These include (1) the General Hospital, Minna; (2) Umar Sanda Hospital, Bida; (3) General Hospital, Kuta; (4) General Hospital, (5) Kontagora; General Hospital Rijau (Tungan Magajiya) and (6) General hospital, Lapai.

Methodology

The population for this research consisted of maintenance staff from the six selected public hospital facilities in Niger State. Both inductive and deductive research methods were employed for the study.

Data was collected using 115 questionnaire sent to the staff of maintenance departments at the selected Healthcare facilities. A total of 58 questionnaires were returned giving a 50.4% response rate which was very adequate for the research. The sample size was calculated using 95% of the population size as illustrated in Table 1.

The researchers also interviewed the Director of Maintenance in seven of the healthcare structures analysed, to provide sufficient details as regards maintenance management practices, including maintenance budget and funding issues. These responses could not be gotten from the maintenance staff. The responses are presented in Table 13 under data analysis.

Probability sampling was used in this research to randomly administer questionnaire on the maintenance staff and users of the public hospital facilities. Stratified sampling method was also used to select from the sample frame categories. Simple random sampling was used to administer question on the maintenance staff of the different health care facilities sampled. Stratified sampling technique was used to select the health care facilities from the three zones in Niger State. Three hospitals were selected from the urban zones while three health maintenance areas were selected from the rural zones to compare the maintenance practices from the urban – rural perspective.

Applying the formula, the sample sizes was derived as shown in Table 1: The sample size for this study was calculated using an equation by Glenn (2013) as follows:

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

Where; n = Sample size

N = Population size in the sample unit

e = Level of precision which is $\pm$ 5% (0.05), at 95% confidence level.

Table 1: Calculation of study sample size

S/n	Description of Population	Population size	Source of population	Sample size at 95% Confidence level 95% confidence level
1	Maintenance staff	30	General Hospital, Minna	28
2	Maintenance staff	25	Umar Sanda Hospital, Bida	24
3	Maintenance staff	12	General Hospital, Kuta	12
4	Maintenance staff	26	General Hospital, Kontagora	24
5	Maintenance staff	10	General Hospital Rijau (TunganMagajiya)	10
6	Maintenance staff	18	General Hospital, Lapai	17
	Total	**121**		**115**

Data collected was analysed with Minitab 17 statistical software. Descriptive statistics (frequencies, percentages and mean rankings) were used to analyse the data.

Data Presentation

A reliability analysis was conducted using Cronbach's Alphafor the scales. As summarized in Table 2, several scales that represent the constructs appeared to have a good degree of reliability since each computed statistic was above 0.70.Table 2also shows the values of Cronbach's alpha for each construct of the questionnaire and the entire questionnaire. For the construct, values of Cronbach's Alpha were in the range of 0.725 and 0.866. This range is considered good and acceptable; the result ensures the reliability of each construct of the questionnaire. Cronbach's Alpha equals 0.885 for the entire questionnaire which indicates a good degree of reliability of the entire questionnaire, as supported by Cohen, Manion and Morrison (2000). Hence, it is proved that the questionnaire is valid, reliable, and suitable for the population sample.

Table 2: Reliability Analysis using Cronbach's Alpha

Construct	Cronbach's Alpha
Nature of maintenance practice Adopted in healthcare facilities	0.725
Extent to which healthcare management provide training for its personnel	0.866
Extent to which healthcare management provide level of motivation to maintenance personnel	0.732
Extent to which maintenance personnel consider the operational state of the healthcare building components	0.792
Major causes of maintenance problems in the healthcare	0.758
Total	0.885

Source: Field Survey (2013).

Table 3: Length of Service as Maintenance Department Staff

Duration	Frequency	Percentage
Less than 10 years	18	31.0
10-19 years	27	46.6
20-29 years	10	17.2
30 years and above	3	5.2

Total	58	100.0

Source: Field Survey (2013).

Table 3 describes the length of service as maintenance staff which reflects that 27 (46.6%) of the respondents had between 10– 19yearsworking experience, while 10 (17.2%) of the maintenance staff were above 20 years. Only 3 respondents had over 30 years' experience.

Table 4: Frequency of training to improve the skills and productivity of technicians and maintenance staff.

The option for training performance	Frequency	Percentage
Every month	0	0
Quarterly	38	76
Yearly	3	6
Every 2 years	9	18
Never	0	0
Total	50	100

Source: Field Survey 2013.

Table 4 reveals how often technicians and maintenance operatives acquire good training to improve their skills. 38 (76%) of the respondent claimed that training is provided at quarterly bases. All the respondents receive on training or another at least once in two years. This will enhance their training and development on the improvement of public hospital facilities in Niger state.

Table 5 reveals the type of training received by the maintenance staff. As shown, 46 of the 58 respondents (79%) of the total maintenance staff received training and attend conference to improve their technical skills, while 12 of the 58 respondents (21%) claimed to have certified professional course. This is not adequate for maintenance personnel to meet the technical nature of maintenance problems in the hospital. The response is also contradictory to the fact that all the respondents received at least one training within every two years.

Table 5: Type of Training received to Improve Technical Skill.

Training Option	Frequency	Percentage
Seminar/Conference	46	79
Certified Professional Course	12	21
Total	58	100

Source: Field Survey 2013.

Table 6: Motivation of Maintenance Staff by Management

Level of motivation	Frequency	Percentage
Staff regular payment of salary	16	27.6
Regular promotions	9	15.5
Good allowances	12	20.7
Opportunities for training/development	7	12.1
Safe/health working condition	2	3.4
Good working tools/equipment/materials	4	6.9
Job security	3	5.2
Job recognition	5	8.6
Total	58	100

Source: Field Survey (2013).

Table 6 shows the response rate on the level of motivation provided by hospital management which 27.6% was rated for staff regular payment of salary and 20.7% were for good allowances. This indicates that maintenance personnel are well motivated by the hospital management. Safe health working condition was rated low with 2 (3.4%).

Table 7: Detection of Maintenance Problems in Hospital Building.

Detecting maintenance problems	Frequency	Percentage
After a building component fail	5	8.6
Routine inspection	28	48.3
When complain is made	25	43.1
Total	58	100

Source: Field Survey (2013).

The analysis in Table 7 shows that maintenance staff carries out inspection on hospital facilities with 28 (48.3%) of the total respondents, while 25 (43.1%) claimed that only when they received complain from the management.

Table 8: Nature of Maintenance work on Healthcare Facilities

Nature of work	Frequency	Percentage
Renovation	24	41.4
Extension	21	36.2
Replacement	13	22.4
Total	58	100

Source: Field Survey 2013.

Table 8illustrates the analysis and type of maintenance work in hospital facilities in Niger State. It was shown that 41.4% mostly carried out renovation work on hospital facilities. Next in the table were extension and replacement with ratings of 36.2% and 22.4% respectively. This was attributed to the age of the facilities and population from the users.

Table 9: Maintenance Guideline and Methods.

Maintenance operatives	Frequency	Percentage
Maintenance manual	22	37.9
Maintenance policy	36	62.1
Total	58	100

Source: Field Survey (2013).

Table 9: reveals the level of maintenance work by the operatives. 37.9% of the respondents claimed to have maintenance manual that guides maintenance operation and better performance. While 62.1% indicates that public hospital facilities have formal maintenance operation policies that enhanced performance of building for effective healthcare services.

Table 10: Maintenance Record System.

Records of Maintenance Work	Frequency	Percentage
Filling System	44	75.9
Use of Computer	4	6.9
Book Keeping System	10	17.2
Total	58	100

Source: Field Survey 2013.

Table 10 reveal the system adopted by the maintenance operatives for keeping their record. As shown, 75.9% of the respondents claimed to keep maintenance records with the use of filling system, followed by book keeping system rated 17.2%.

Table 11: Maintenance Practice Adopted in Healthcare Building.

Maintenance practices	Frequency	Percentage
Corrective	16	27.6
Preventive	34	58.6
Planned	3	5.2
Proactive	5	8.6
Total	58	100

Source: Field Survey 2013.

Table 12: Rating the Effect of Maintenance Problems on Maintenance Staff

Effect on maintenance staff	Frequency	Percentage
Very High (4)	11	18.9
High (3)	25	43.1
Low (2)	15	25.9
No effect (1)	7	12.1
Total	58	100

Source: Field Survey (2013).

Table 11 indicates the type of maintenance practice adopted in public hospitals in Niger State. The respondent rated preventive type of maintenance with 58.6%. Next were corrective with 27.6%. Planned and proactive types of maintenance were rated the least with 5.2% and 8.6%,respectively. This indicates that different kind of maintenance is being practiced in the public hospital.Planned and proactive types of maintenance were rated the least with 5.2% and 8.6% respectively. 43.1% of the respondents rated high on staff wok performance.

Table 12 reflects maintenance problem on maintenance staff wok performance on public hospital facilities. 43.1% was rated high by the respondents. This implies that maintenance problems have great effect on staff performance and productivity.

Data Analysis

Table 13 gives the breakdown of the overall ranking of 15 major causes of maintenance problems identified by maintenance staff of the public hospital facilities in Niger state. As shown, lack of successful maintenance programmes was ranked first by maintenance staff with a mean score of 3.62, followed by the scale of efforts, extent of facilities and resources for maintenance operations on quality of management in

the hospital with a mean score of 2.98. Insufficient funds for maintenance job with a mean score of 2.84. Others that follow were difficulty in procurement of spare parts due to unavailable funds, Inflation of cost of maintenance by the operatives, lack of skilled personnel in the maintenance department, attitude of users and misuse of facilities, complexity of design and non-involvement of maintenance expert during design stage, no long–term arrangements made for the supply of essential parts for replacement, no adoption of appropriate maintenance cycle for building maintenance, absence of form of planned maintenance programmes, natural deterioration due to age and environment, persistent breakdown through indiscipline and ignorance, lack of discernible maintenance culture. The factors that ranked last contributing to maintenance problems were the 'use of poor quality components and materials' with a mean score of 2.00.

Table 14 reveals interview responses from seven maintenance directors. The interview focuses on funding and budget. As shown, six of the 7 maintenance directors (85.7%) claimed that they have a budget for maintenance of healthcare facilities, while only one (14.3%) did not have a budget for maintenance. It was clear that the healthcare budget for maintenance work is in form of long term budget with 57.1% response from the directors of maintenance. The annual estimated budget for healthcare facilities ranges between 16 - 20 million naira. The study also

Table 13: The ranking of major causes of maintenance problems in Niger State Healthcare facilities

Factors	Maintenance Mean score	Staff Overall Rank
Lack of successful maintenance programmes by the maintenance department	3.98	1
The scale of efforts, extent of facilities and resources for maintenance operations on the quality of management in the hospital	2.98	2
Insufficient funds for maintenance jobs	2.84	3
Difficulty in procurement of spare parts due to unavailable funds	2.76	4
Inflation of cost of maintenance by the operatives	2.74	5
Lack of skilled personnel in maintenance department	2.57	6
Attitude of users and misuse of facilities	2.36	7
Complexity of design and non involvement		

of maintenance expert during design stage	2.35	8
No long-term arrangements made for the supply of essential parts for replacement	2.24	9
No adoption of appropriate maintenance cycle for building maintenance	2.21	10
Absence of a form of planned maintenance programmes	2.19	11
Natural deterioration due to age and environment	2.10	12
Persistent breakdown through indiscipline and ignorance	2.04	13
Lack of discernible maintenance culture	2.03	14
Use of poor quality components and materials	2.00	15

Source: Researchers' Field Survey (2013).

Table 14: Directors Interview Responses regarding Maintenance Management Practices

S/No	Funding	Options	Frequency	Per cent
1	Does the hospital have a budget for its maintenance?	Yes	6	85.7
		No	1	14.3
		Total	7	100
2	Is the budget inform of	Long Term	4	57.1
		Medium Term	2	28.6
		Short Term	1	14.3
		Total	7	100
3	Idenfity the range of estimated annual maintenance budget for the hospital	5-10 Million	1	14.3
		11 - 15 Million	1	14.3
		16 - 20Million	2	28.6
		21- 25Million	1	14.3
		26Million and above	2	28.6
		Total	7	100
4	Are the approved funds sufficient to carry out maintenance needs in the Hospital	Yes	2	28.6
		No	4	57.1
		Not Really	1	14.3
		Total	7	100
5	How long does it takes to	Immediately	3	42.9

	approve funds for maintenance			
		2 weeks	2	28.6
		2 months	2	28.6
		3 months	1	14.3
		Total	7	100
6	How is the fund released for the maintenance	In bulk	1	14.3
		Part payment	6	85.7
		Total	7	100
7	How are the funds generated?	Government funding	4	57.1
		Internal generated revenue	1	14.3
		Appeal funds/donations	1	14.3
		All of the above	1	14.3

Source: Researchers' Field Survey (2014).

revealed that funds for maintenance work are not sufficient to meet the demand and nature of maintenance work. However, the funds for maintenance work are released to them on time, in form of part payment, to carry out maintenance work on the healthcare facilities. The interview also revealed that funds are principally generated through government budget. It also indicates that the hospital has a partial autonomy to generate revenue internally for its operation.

Analysis of the data shown in Table 3 revealed that 27 (46.6%) of the respondents had working experience of between 10-19years as maintenance staff, while 10 (17.2%) of the maintenance staff were above 20 years. Only three respondents had over 30 years of experience.

Analysis of the data shown in Table 4 revealed the levels at which technicians and maintenance operatives acquired good training to improve their skills. 76% of the respondent claimed that training is provided at quarterly bases. It also showsthat 79% of the total maintenance staff received training and attended conference to improve their technical skills, while 21% claimed to have certified professional course.

Analysis of the data shown in Table 6 revealed that the response rate on the level of motivation provided by hospital management which 27.6% was rated for staff regular payment of salary and 20.7% were for good allowances. This indicates maintenance personnel are well motivated by the hospital management. This shows that maintenance personnel are faced with poor and unsafe working condition that was rated low at 3.4%.

Analysis of the data shown in Table 7 revealed that maintenance staff carried out inspection on hospital facilities with 48.3% of the total respondents, while

43.1% claimed that only when they received complain from the management. The frequency however, is not adequate for hospital facilities. Maintenance staff should inspect regularly and report defect for rectification.

Analysis of the data shown in Table 9 revealed that the 37.9% of the respondents claimed to have maintenance manual that guides maintenance operation, while 62.1% indicates that public hospital facilities have formal maintenance operation policies.This shows that maintenance problem reported by the users and repaired is being kept for record purposes.

The analysis of data shown in Table 14revealed the maintenance management practices of funds in the healthcare facilities. As shown, 85.7% of the maintenance directors claimed that they have a budget for maintenance of healthcare facilities and the budget for maintenance work is in form of long term budget with 57.1%. The estimated budget for healthcare facilities ranges between 16- 20 million. The study also revealed that funds for maintenance work are not sufficient to meet the demand and nature of maintenance work.

Conclusion

This study investigated maintenance management practices at selected public healthcare facilities in Niger State. The analysis revealed major maintenance problems and maintenance constraints. Research finding confirmed that budgetary limitation and funding issues are partly to blame for the poor maintenance condition of the surveyed healthcare facilities. It was suggested that since the administrators of these facilities have autonomy to generate funding, these organizations should take advantage of such opportunities.

Another observation was the inadequacy of maintenance personnel training, tomeet the technical challenges of maintenance problems, especially in the healthcare facilities.Analysis of the finding revealed that maintenance staffs rated maintenance problems high as a factor which affects their work performance,.

A final observation in regard tothe maintenance management practice was the record keeping system. Research finding revealed that 44 (75.9%) of the maintenance records is kept by manual filing and only 4 (6.9%) of the respondents claimed that their maintenance records is kept by the use of computer. In other to improve the effectiveness of the maintenance practices employed, Adenuga (2012) suggested that federal and state government authorities stop ignoring the problems in the healthcare service sector and develop strategies for effective maintenance practice. Based on the research findings, the following recommendations are suggested:

i. Maintenance managers and their team should adopt proactive approach to reduce the occurrence of defects and high rate of maintenance problem. It is also important that maintenance management work together with top hospital administration management, to provide more effective organizational structure and adequate training of maintenance personnel that will lead to better maintenance

management of healthcare facilities and exposed maintenance personnel ahead on current maintenance technologies and innovation.

ii. Government should provide adequate funding for the running of public hospitals as well as ensure that such funds is judiciously utilized. Private individuals and organizations should endeavours to assist government health related issues by involving in fund raising activities.

iii. Government should equally make it as a matter of policy for private and public hospitals that there should be a maintenance policy guiding their maintenance programmes.

iv. Putting in place a computerized maintenance management system (CMMS), for improved record keeping of maintenance activities.

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