

Internal Audit and Operational Performance in Public Teaching Hospitals in Oyo State Nigeria

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ABSTRACT

The paper examined the effect of internal audit on operational performance in public teaching hospitals in Oyo state Nigeria. The study proxy health performance which is dependent variable by medical equipment utilization and internal audit which is independent variable was proxy by internal audit independence, staff competence, management involvement and the scope of work. The data was collected through the administration of questionnaire directly to the ninety nine (95) respondents. Data collected was analysed using percentage counts, Pearson correlation analysis and multiple linear regression technique. The result showed that internal audit is significant to the operational performance of public teaching hospital in Oyo State Nigeria. It was recommended that the management of public teaching hospital should make fund available for internal audit department to carry out their duties as deem fit and public teaching hospitals should be required by law to allow government information to be publicly published.

Keywords: internal audit, operational performance, Teaching Hospital

INTRODUCTION

Human health is important because only a healthy person can make a meaningful contribution to the advancement of a country. Health institutions were created to offer services to the residents of a particular community. Public health institutions can be divided into three categories: primary health centers, secondary health centers, which include general and specialty hospitals, and university teaching hospitals. A healthy community will result in a strong economy. Teaching hospitals are tertiary healthcare facilities for treating chronic health conditions that cannot be managed in primary and secondary care settings. These conditions are sent to teaching hospitals for treatment. Lasebikan, Ede, Lasebikan, Anyaehie, Oguzie and Chukwujindu (2020), opined that, the tertiary hospital also has the biggest concentration of specialists in the various medical specialties, therefore it acts as a referral hub for complicated cases from other primary and secondary hospitals in the public and private sectors.

In addition, these establishments serve as training grounds for a variety of health sector human resource cadres, including paramedical workers, doctors of all specialties, and medical students. A teaching hospital is a facility that has been constructed, is staffed with both medical and non-medical professionals, equipped with the necessary medical tools and testing apparatus, and houses patients while undergoing medical and surgical treatment as well as serving as a teaching tool for medical students. Given the enormous sums of money used to finance teaching hospitals in Nigeria, it is imperative that these institutions are managed well

to ensure value for money. Therefore, it is necessary to establish a reliable internal control system to safeguard the organizations' assets as well as the system as a whole. Peter, YaoKong and Fatoumata (2017), stated that, the code of ethics for all public employees, integrity and ethical values are fundamental requirements for holding a public office. To oversee the operation of all systems and protect the organization's assets, internal audit was established by management and is directly accountable to the management. Mirelle, Marieke, Gert, Wilma., Steven, Petra and Hub (2018), stated that internal auditing is described as a peer-to-peer evaluation process used by healthcare organizations to involve healthcare professionals in the plan-do-check-act (PDCA) quality improvement cycle. Andrea, Paola, Chiara and Nicola (2020), explained that a structured approach and essential procedure of the quality management system (QMS), internal auditing has the power to influence system performance and advancements.. Indeed Sambo and Benneth (2018) explained clearly that internal control systems are techniques adopted to ensure proper receipts and expenditures in an organization. Internal audit serves as management watch dog in organizations.

Statement of the Problems.

Internal audit in the public teaching hospital is an important unit in an organization as the control of the whole system is managed by internal audit department but little literature had been written to review the effectiveness of the internal audit on the operational performance in the public teaching hospitals. There are numerous researchers who have examined how internal audits improve the performance of both public and private organizations, including hospitals, but no one has been able to specifically look, the effect of internal audit on operational performance in public teaching hospitals in Nigeria. Asaolu , Adedokun and Monday (2016) provided empirical evidence on the effect of internal audit function on good governance in public organisations in the Southwestern Nigeria while Abu-Saeed and Kabir (2012) investigated the role of internal audit unit in fraud prevention in government owned hospitals in a Nigerian setting. Naziru Suleiman (2015) examined the internal audit and the effectiveness and efficiency of operations in hospitals. All of these had been dealt with either the public organisations or general hospital without considering the peculiarity of teaching hospital being public/ private interwoven. Analysing the effect of internal audit on operational performance in public teaching hospitals in Oyo State, Nigeria, this study seeks to close the gap created in the previous related studies.

The problem identified had brought about the following research questions, to what extent does relationship exist between internal audit and quality of service delivery in public teaching hospitals? to what extent does internal audit have significant influence on management activities in public teaching hospitals in Oyo State?

The study broadly seeks to examine the effect of internal audit on operational performance in public teaching hospitals in Oyo State, Nigeria and specifically aims to:

I examine the level of relationship between internal audit and quality of service delivery in public teaching hospitals in Oyo State, Nigeria

II investigate how internal audit influences management activities in public teaching hospitals in Oyo State, Nigeria

Therefore, based on the specific aims of the study, the study developed the following null hypothesis:

H_{01} there is no any significant relationship between internal audit and quality of service delivery in public teaching hospitals in Oyo State, Nigeria.

H₀₂. Internal audit does not have any significant influence on management activities in public teaching hospitals in Oyo State, Nigeria.

LITERATURE REVIEW

Internal Audit: The IIA defines IA as an “independent, objective assurance and consulting activity designed to add value and improve an organization’s operations. It helps an organization accomplish its objectives by bringing a systematic disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes” (IIA 2020). This definition revealed the extent of present day internal auditing which includes value for money, evaluation of risk, managerial effectiveness and governance processes. . Asaolu, Adedokun.and Monday. (2016) defined internal auditing is an independent, objective assurance and consulting activity designed to assess the effectiveness of the control environment, add value, and improve an organization’s operations. Internal audit evaluates the adequacy of the system of internal controls and makes recommendations to management to improve these controls. From this definition will understand that internal auditing is independent, established to have an effective control environment and to add value to the operations of the organisations. Internal auditing is an agent of the management to see to how the systems are working in the organistions. It ensures the effectiveness of internal control mechanism. Sambo and Benneth (2018) cited Aguolu (2004) explained internal control system as the set of accounting and administrative controls practice that helps to ensure that approved and appropriate decisions are made in an organization. The application of internal auditing is necessary in order to ensure proper accountability and judicious use of available fund. Naziru (2015) viewed internal auditing as the management function which independently evaluates the adequacy, effectiveness and efficiency of the systems of control within an organization. Internal audit is measured by internal audit independence, staff competence, management involvement and the scope of work.

Internal Audit Independence.

The degree at which the internal auditors have freedom to make their view known to the management without any delay in performing their function, no interference from management in making decisions on their view. The independence can only be achieved by allowing the internal audit department to perform its responsibilities free from interference; avoiding conflict of interests; having direct contact with the board and senior management; having unrestricted access to records, employees and departments; the appointment and removal of the heads of internal audit not being under the direct control of executive management (IIA, 2008).

Staff Competence.

There are required knowledge and skills which an internal Auditor expected to possess and their knowledge must extend to all areas of teaching hospital activities. Asaolu, Adedokun.and Monday (2016) stated that, for internal auditors to effectively carry out their duties and responsibilities, they need to possess the requisite knowledge, skills and other competencies. Internal auditors must be professionally qualified and have the prerequisite knowledge, they need to be skillful in the performance of their duties.

Management Involvement.

The involvement of the management must not be to influence the decisions and opinion of the internal auditors but rather must be to allow the audit department have any information needed for the discharge of their duties. Management must not politicize the recruitment of internal Auditors rather competence of the staff must be paramount at entrance point of any internal audit staff.

Scope of Work.

Internal Auditors should have access to all information needed to carry out their assignments all staff of the hospital accord the internal Auditors access to all assets of the hospital for their routine inspection. Asaolu, Adedokun.and Monday. (2016) explained that scope of work is an important factor in determining the effectiveness of internal audit in an organisation. This will have to do with the area covered,

the standards with which the audit is planned, executed and reported.

Operational Performance in Public Teaching Hospital

Operational performance according to Voss, Åhlström,and Blackmon. (1997) refers to the quantifiable characteristics of a process's results, including dependability, production cycle time, and inventory turns. Measures of business performance like market share and customer satisfaction are impacted by operational performance in turn. Performance will be measured by how frequently patients recover from their illnesses, the accessibility of medical equipment, the availability of human resources and management activities, the accessibility of drugs after doctor consultations, and the hospital management's interpersonal relationships with patients and patients' relatives. A health care resource's performance is the level of quality of the medical services it offers, as evaluated by some measurement. The standard of health care is another way to describe health performance. The possibility that intended health outcomes will occur as a result of individual and population health interventions is referred to as quality of care.. Campbell, Roland and Buetow (2000) defined health care as being composed of health care systems and actions taken within them designed to improve health or well-being. Campbell, Roland and Buetow (2000) stated that there are two key elements of effectiveness in health care — clinical effectiveness and the effectiveness of interpersonal care. Gifford, Molleman and van der Linden. (2022) showed how hospital operations, for example, differ from industrial operations in many respects, including their reliance on professional actors who have a high degree of autonomy and play a crucial and significant part in the supplier selection and delivery. Rachel, Taco, Eric and Christein (2022) he said that in acute settings, performance refers to how quickly a patient is seen, evaluated, and a treatment course is decided upon and carried out. Operational performance, according to Lee, Nittala, Jacobs and Yu (2023), is considered as a multidimensional construct that is frequently characterized by the competitive priorities that organizations choose to compete on, such as cost, quality, flexibility, and delivery. Using medical equipment as a proxy for operational performance was used in the study.

Medical Equipment Utilization

Medical Equipment Utilization demonstrates the extent to which a healthcare facility has utilized medical technology to provide high-quality medical treatment. The use of cutting-edge equipment at a healthcare facility is measured by a modern healthcare metric. The amount of cutting-edge medical technology an institution has will have a significant impact on how well its patients perform, even when referrals are not always necessary.

Theoretical Review

Policeman theory states that internal auditors should prevent and detect fraud. Ndimitu, Mwangi, Kisaka, & Mwangi, (2018).opined that, policeman theory asserts that internal auditing is responsible for searching, detecting and preventing fraud. If the system is not internally control the policies will not be followed and the whole system will be flawed and the taxpayers money will be mismanaged. To avoid the fund mismanagement and curb fraud the internal audit department must be established by the management to see to the internal control system of the teaching hospitals. Ndimitu, Mwangi, Kisaka and Mwangi. (2018) cited

Van Peursen (, 2005), explained that policeman theory focuses on a designed internal audit to safeguard the assets of companies and assist in verification of accounting information for decision making purpose. Lucy, Mungai, and Susan (2016) explain further that, under policeman theory, an auditor acts as a policeman focusing on arithmetical accuracy and on prevention and detection of fraud. This theory makes the auditor to detect and prevent errors and fraud in organizations.

Empirical Review

Enofe, Mgbame, Osa-Erhabor and Ehiorobo (2010) studied the role of internal audit in effective management in public sector and based the scope of his study on local government in Edo State. He used Z-test statistical tool to analysis the problem and the primary source of data was used to collect the data. The result showed that internal audit effectiveness play an important role in ensuring effective management in public sector. His study was based only on local government in Edo State the total population of local government in Edo State was not disclosed by the author hence the sample is not known. Activities in local government cannot be liken to the complex nature of the teaching hospitals

Postula, Irodenko and Dubel. (2020) studied internal audit as a tool to improve the efficiency of public service they used a mixed methodology combining the results of qualitative and quantitative research. They also used panel regression model to analyse the problem and the result of the study showed that there is a positive impact of internal audit efficiency metrics on the completion of public service tasks at an operational level while no impact was recorded on the scale of completion for the areas at the strategic level of the Council of Ministers. The study was carried out in European Union countries so the situation might not be the same in Nigeria been in South West Africa and also the study did not study the teaching hospital in particular which has public private interwoven. Looking at the title critically one will discover that they only looked into the internal audit as a tool to improve the efficiency of public service so they did not study the effect of internal audit has on public service whether it is significant or insignificant.

Muslimat, and Hamid, (2012), studied the role of internal audit unit in fraud prevention in government owned hospitals in a Nigerian setting. The study made used of survey research design and data were collected through questionnaire. The chi-square and the descriptive statistics were used to analyse the data. The result of the study shows that the Internal Audit Unit of the hospitals are aware of their role to prevent fraud and are making a way forward by tracing and halting fraud but lack the basic knowledge needed to practically prevent fraud. Although the study is about the hospital but not specifically about teaching hospitals and it looked into role of internal audit in preventing the fraud in hospitals the health performance is not considered hence the need to carry out the study based on health performance in teaching hospitals.

Naziru Suleiman (2015) studied the internal audit and the effectiveness and efficiency of operations in hospitals. He used survey research design and collected data through primary source and the study used Cronbach's alpha was used to test the internal validity of the various items in the constructs. Descriptive statistics, chi-square test, Mann Whitney U test and Kruskal Wallis ANOVA were employed for the analysis of data. It was found out that internal audit departments in Federal Hospitals in Kano State are effective and that they contribute positively to the overall attainment of the objectives of internal control system of these hospitals. This study was carried out in Kano State which is the Northern side of the country the result may be different if the study is carried out in south west states. Although the study was carried out in the federal hospitals but due to differences in the settings of teaching hospitals, the researcher decided to study what the outcome will be in teaching hospitals in Oyo State Nigeria.

Ali (2018), investigated the factors influencing the effectiveness of internal Audit on organizational performance. The study made used of primary data and multiple regressions were used to analyse the data. The findings of the study showed that the four factors identified were critical to how internal audit influence the organizational performance. This study only investigated the factors that are influencing the

effectiveness of internal audit on organizational performance but failed to study the how internal audit impacts the organizational performance and also the researcher did not specified the area covered in the research, both sampled number and number of questionnaire were not known.

METHODOLOGY

The researcher employed the survey research design which allows the researcher to gather information directly from the sampled population.

The population and the sample size are the two public teaching hospitals in Oyo State, Unuversity College Hospital, Ibadan Oyo State, owned by federal government of Nigeria and Ladoke Akintola University of Technology Teaching Hospital, Ogbomoso Oyo State, owned by Oyo State government.

The data used in the study are sourced through primary source and gathered through questionnaire. The questionnaire is well structured to suit the mind of the researcher towards the study.

Face, content, and construct validity were used to evaluate the questionnaire's validity. First, the questions were written so that they could be quickly understood by the respondents and precisely communicated their meaning and purpose. Additionally, academic staff members were provided the draft questionnaire to review in light of the research objectives, relevance, appropriateness of the questionnaire items, and question coverage. The high value of 0.838 for the Cronbach's coefficient alpha, which measures the construct validity for internal consistency of variables, was obtained.

The variables are dependent and independent variables. The dependent variable is operational performance in public teaching hospitals and it is measured by medical equipment utilization

The independent variable is internal audit and it is measured by internal audit independence, staff competence, management involvement and the scope of work. The economic model which showed the relationship between internal audit and operational performance in public teaching hospitals was adapted from Asaolu, Adedokun.and Monday (2016) given as:

$$IA = f(INDP, COMP, SWK, MINV) \dots\dots\dots (1)$$

$$PERF = \alpha + \beta_1 INDP + \beta_2 COMP + \beta_3 SWK + \beta_4 MINV + \varepsilon \dots\dots\dots (2)$$

where α , β_1 , β_2 , β_3 , and β_4 are parameters estimate in the model, and ε is the residual value.

These variables were captured on the questionnaire using a 5-point Likert scale namely: strongly agree (SA), agree (A), neutral (N), disagree (D), and strongly disagree (SD). This survey was conducted in November, 2022 through February, 2023

Data collected was analysed using percentage counts, Pearson correlation analysis and multiple linear regression technique.

DATA ANALYSIS AND DISCUSSION

Out of the 95 copies of the questionnaire that were administered, 81 were fully filled and returned, giving a response rate of 85.26%. The analysis and discussion are based on the retrieved copies of the questionnaire.

Table 1: Distribution of Respondents by Socio-Demographic Characteristics

CHARACTERISTICS			FREQUENCY	PERCENTAGE	
GENDER			Male	60	74.1
			Female	21	25.9
			Total	81	100
AGE			26-30 years	4	4.9
			31-35 years	6	7.4
			36-40 years	15	18.5
			41-45 years	20	24.7
			46-50 years	30	37.1
			51-65 years	6	7.4
			Total	81	100
Highest Academic Qualifications			M.Sc./Ph.D.	5	6.2
			B.Sc./HND	66	81.5
			Diploma	10	12.3
			Total	81	100
Professional Qualifications					
			ANAN	50	61.7
			ICAN	27	33.4
			NIM	4	4.9
			Total	81	100

Source: Researcher’s Estimation (2023)

Socio-demographic Characteristics of Respondents

Gender, age, academic background, and professional credentials are only a few of the socio-demographic traits of the respondents that were recorded in this study. Table 1 analysis revealed that 74.1% of responders were men whereas the female counterpart made up 25.9%. Hence, it suggests that more men in Oyo State, Nigeria’s public teaching hospitals are participating in internal audit. Also, the majority (61.8%) of responders were between the ages of 41 and 50. Late-thirties respondents, who made up about 18.5% of the total, are in third place, then the respondents in their early thirties and those in retirement age (51-65 years) who made up 7.4% each of the total and lastly the respondents in their late twenties garnered just only 4.9% which showed that matured mind are involved internal audit of teaching hospital in Oyo State, Nigeria. This demonstrated that the vast majority of responders were capable and skilled enough to provide the necessary details. The analysis also revealed that 81.5% of the respondents had a first degree or Higher National Diploma while 6.2% of the respondents held postgraduate degrees. 12.3% held diplomas. Also, each respondent was a member of a recognized professional organization for accounting and management. The Association of National Accountants of Nigeria (ANAN), the Institute of Chartered Accountants of Nigeria (ICAN), and the Nigerian Institute of Management-Chartered each have about 61.7%, 33.4%, and 4.9% of the respondents, respectively, as members (NIM). This demonstrated the respondents’ familiarity with the study’s subject.

Table 2: Internal Audit in public teaching hospitals in Oyo State Nigeria

Independence of internal audit system	SA	A	N	D	SD
The purpose and authority of internal audit is clearly defined	75	25	0	0	0
Internal audit has full access to records and information they need in conducting audits assignment	20.7	48.3	24.1	0	6.9
Internal auditors feel free to include any audit findings in their audit reports.	8.9	30.1	29	22.3	9.7
The internal audit unit is free to choose any transaction or area of interest for audit	13.8	65.5	6.9	6.9	6.9
Internal audit provides reports directly to the Chief Medical Officer	27.6	44.8	20.7	6.9	0
Scope of Work					
Checking adequacy of the record keeping when appropriate	65.5	24.5	10	0	0
Verifying accuracy of amounts in financial records	55.4	20.8	13.8	10	0
Reviewing information contained in reports of operating departments	41.4	44.8	13.8	0	0
Performing audit of major fraud cases	6.9	44.8	34.5	13.8	0
Assisting the management by identifying risk exposures of the local government	62.1	20.7	17.2	0	0
Professional Competency					
Audit activities are conducted in accordance with recognized standards (e.g. IIA, etc.)	34.5	48.3	0	17.2	0
Internal auditors undertake continuous professional development activities	41.4	51.7	6.9	0	0
Audit department have appropriately qualified staff	34.5	31	20.7	13.8	0
The internal audit staffs possess knowledge and skills in a variety of areas	34.5	44.8	6.9	13.8	0
Internal audit obtains a sufficient budget to successfully carry out its Duties	27.6	20.7	0	37.9	13.8
Management Involvement					
Management follows up recommendations made by the internal audit unit	34.5	58.6	6.9	0	0
Adequate provision of material incentives (bonuses and recompenses) for the internal audit staff	20.7	44.8	27.6	0	6.9
Internal auditors receive full cooperation and support from management	24.1	55.2	6.9	13.8	0
Management regards internal audit as a value-adding service to the organization	27.6	65.5	0	6.9	0

Source: Researcher's Estimation (2023)

Internal Audit in public teaching hospitals in Oyo State Nigeria

In Table 1, an examination of the public teaching hospital in Oyo State, Nigeria, internal auditing’s efficacy was presented. All of the respondents concurred that the role and authority of internal audit in the teaching hospital are clearly defined in terms of internal audit independence. A minimum of 75% of respondents also concurred that internal auditors are free to select any transaction or area of interest for audit, which they have full access to the records and information they need to conduct audits, and that internal audit directly relates to the Chief Medical Director of the Teaching Hospital. Yet, just 39% of those respondents said internal auditors have the right to include audit results in audit reports. Internal audit reports are not posted online for organization use or teaching hospitals’ annual reports are not provided to the public, which promotes transparency and accountability. This is due to internal auditors’ incapacity to include audit findings in their audit reports. As a result, the public teaching hospital’s internal audit system was not entirely independent. The analysis further revealed that 87% of respondents stated that the scope of internal audit work includes ensuring that accounting records are kept adequately when necessary, confirming the accuracy of financial record amounts, reviewing data in operating department reports, and assisting management by identifying risk exposures for the teaching hospital. Also, roughly 51% of respondents concurred that the scope covers major fraud activities. It was clear from this that the internal audit work performed in public teaching hospitals encompassed a wide range of topics, including risk management, fraud detection, and teaching hospital financial management. According to the analysis, more than 80% of respondents stated that internal audit operations are carried out in accordance with accepted standards and that internal auditors engage in ongoing professional development activities when it comes to professional competence. The vast majority of respondents also concurred that staff in internal audit units or departments are suitably qualified and have the necessary capabilities, knowledge, and skills in a variety of fields beyond their field of expertise. Yet, according to around 51% of the respondents, internal audit struggles with having an adequate funding to effectively do its job. With the exception of the difficulty of having inadequate funding to adequately discharge its duties, the teaching hospital’s internal audit unit could therefore be classified as having relatively good professional competence.

Involvement of management has a significant impact on how well an organization’s internal audit unit performs.

The analysis in Table 1 also shows that the top management of public teaching hospitals provided adequate support for internal audit activity by following up on reports and recommendations made by the internal audit unit and by offering sufficient material incentives for internal audit staff in order to motivate them. Furthermore, management fully supports and cooperates with internal auditors since it sees internal audit as a service that adds value to the organization. More than 70% of the respondents attested to these findings. The investigation generally revealed a modest effectiveness of internal audit in Nigerian public teaching hospitals.

Table 3. Correlation matrix of the relationship between internal audit and quality of service delivery in public teaching hospitals

	1	2	3	4	5	6
HP(medical equipment utilization)	1	0.2*	0.304**	0.279**	0.224*	0.275**
INDEP		1	0.218*	0.158	0.145	0.105
SCOPE			1	0.313**	0.109*	0.183
COMP				1	0.356**	0.25*
MINV					1	0.354*

**, * Correlation is significant at the 0.01, 0.05 level (2-tailed) respectively.

Source: Researcher’s Estimation (2023)

Relationship between Internal Audit and quality of service delivery in public teaching hospitals

Pearson correlation analysis was employed to identify the relationship of internal audit variables with each other and with the measure of operational performance. The research in Table 2 demonstrated a significant positive association between the scope of internal audit activity and the independence of the internal audit system, which was significantly related to the professional competence of the internal audit unit. Also, there was a strong correlation between management engagement and professional competency. It is impossible to provide enough money to increase professional competence without management support. The findings show that internal audit's elements are interconnected. Also, the correlation matrix demonstrated the link between internal audit and service delivery quality, a metric for gauging the effectiveness of public teaching hospitals' operational performance. The results of the analysis demonstrated a substantial positive link between the quality of services offered by the public teaching hospitals in Oyo State, Nigeria, and each of the internal audit factors. At the 0.01 level (2 tailed), scope of work and management support had a significantly favorable association with quality of service delivery, while professional competence and the independence of the internal audit system were significant at the 0.05 level (2 tailed). This research suggests that higher service delivery quality is correlated with stronger internal audit effectiveness.

Table 4. Multiple linear regression analysis of effect of internal audit on management of public teaching hospitals' resources

Model	Coefficient	Sig	TOL.	VIF
CONSTANT	.359	.028	–	–
INDEP	.221	.006	.402	1.992
SCOPE	.255	.015	.612	1.489
COMP	.315	.105	.751	1.321
MSP	.123	.032	.832	1.235
R ²	.623	Durbin Watson Stat.		1.961
F(Sig.)	47.322(0.19)	Sig. KS		0.651

Dependent variable: HP (medical equipment utilization)

Source: Researcher's Estimation (2023)

Effect of Internal Audit on Management Activities in Public Teaching Hospitals

An investigation using multiple linear regression looked at how internal auditing affected the way resources were managed in public teaching hospitals. The analysis in Table 3 demonstrated that the management and accountability of resources in public teaching hospitals are significantly impacted by the independence of the internal audit system, professional competency, scope of work, and management support ($F = 47.322$, $p < 0.05$). This suggests that internal audit aids in asset protection for public teaching hospitals. The strong R^2 value showed that the internal audit factors might account for up to 62% of the diversity in how public

teaching hospitals managed their resources. These findings show that internal audit has a major impact on operational performance in public teaching hospitals in Oyo State, Nigeria, in terms of resource management and accountability. The finding is consistent with Asaolu, Adedokun and Monday (2016) who found that the independence of internal audit system, professional capabilities, scope of internal audit work, examination process and support of management were crucial to the operation and success of good governance in public sector. The study additionally checked for normalcy, autocorrelation, and multicollinearity in order to make the work robust.

Normality Test, Autocorrelation, and Multicollinearity

The goal of the normality test was to establish the normality of all the independent and dependent variable data. While the Kolmogorov-Smirnov (KS) test was not significant at 0.05, accepting the null hypothesis that the distribution of the series under test was normal, the analysis in Table 3 complies with the assumptions of normality.

The Durbin Watson test result, which was roughly 2.00, indicated that there was no autocorrelation between the regression model's residuals.

The Tolerance (TOL) and Variance Inflation Factor (VIF), which both indicated acceptable values, were used to confirm the multicollinearity of the model's variables.

Test of Hypothesis

Hypothesis one restated: there is no any significant relationship between internal audit and quality of service delivery in public teaching hospitals in Oyo State, Nigeria.

Pearson correlation analysis demonstrated a significant positive association between the scope of internal audit activity and the independence of the internal audit system, which was significantly related to the professional competence of the internal audit unit. At the 0.01 level (2 tailed), scope of work and management support had a significantly favorable association with quality of service delivery, while professional competence and the independence of the internal audit system were significant at the 0.05 level (2 tailed). This research suggests that higher service delivery quality is correlated with stronger internal audit effectiveness. The result of the study showed that, there is significant relationship between internal audit and quality of service delivery in public teaching hospitals in Oyo State, Nigeria, therefore accept the alternative hypothesis and reject the null hypothesis.

Hypothesis two restated: Internal audit does not have any significant influence on management activities in public teaching hospitals in Oyo State, Nigeria.

Multiple linear regressions demonstrated that the management and accountability of resources in public teaching hospitals are significantly impacted by the independence of the internal audit system, professional competency, scope of work, and management support. ($F = 47.322$, $p 0.05$) and the strong R^2 value showed that the internal audit factors might account for up to 62% of the diversity in how public teaching hospitals managed their resources. The findings of the study showed that internal audit has significant influence on management activities in public teaching hospitals in Oyo State, Nigeria. Therefore accept the alternative hypothesis and reject the null hypothesis.

CONCLUSION AND RECOMMENDATIONS

This study revealed how operational performance in public teaching hospitals can be promoted through internal audit.

The evidence from the study demonstrated that the internal audit systems in public teaching hospitals were not completely independent, and their professional competence was constrained as a result of the challenge of not having enough money to effectively perform their duties. On the other hand, the management provides adequate support for the internal audit process, and the internal audit work was given a broad scope. Thus, internal audit's efficacy in public teaching hospitals Oyo State Nigeria is average.

Also, a strong favorable correlation between internal audit and the quality of services delivery by public teaching hospitals was discovered. This is attributable to the presence of skilled internal auditors, wide-ranging task specifications, and active management engagement.

The study made the recommendation that public teaching hospitals should be required by law to allow government information to be publicly published. By doing this, they could help increase operational performance in public teaching hospitals in Oyo State Nigeria and lower the danger of corruption. In addition, management of teaching hospitals in Nigeria should make fund available to support internal audit department in carrying out their duties to the best extent possible.

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