

Perscoping Performance of Tertiary Health Care Institutions in South East Nigeria: Human Resource Planning and Development Question Nexus

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Abstract

The study examined the Performance of Tertiary health care institutions in South East Nigeria, the place of human resource planning and development. Data collected were analysed using mean score. The z-normal distribution (z-test) was applied in testing the hypotheses. The findings revealed that Human resource planning does not have a significant effect on medical equipment utilisation in tertiary health care institutions in South East, Nigeria and that human resource planning has a significant effect on human capacity building in tertiary health care institutions in South East, Nigeria. The study concluded that human resource planning helps to ensure the availability of qualified and varied personnel by proactively managing their workforce, optimising staff deployment, and cultivating a culture of continuous learning and professional development. The study recommended among others that for continuous medical equipment utilization, the management of tertiary healthcare institutions should enhance medical equipment utilization by aligning human resource planning with equipment maintenance, operation, and training needs, ensuring the availability of skilled personnel and resources to maximize equipment functionality and improve patient care outcomes.

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1. Introduction

As Nigeria's economy grows and global integration deepens, the importance of human resource planning for organisational effectiveness grows. Human resource planning is one of management's roles and is critical to achieving organisational objectives (Anya, Umoh, and Worlu, 2017). This is because staff are responsible for coordinating and using other resources to achieve organisational objectives. Furthermore, in this age of global competitiveness and the fight for better healthcare services in the healthcare domain, only organisations with the proper individuals can withstand the strong rivalry. Thus, manpower or human resource planning is central to people management. This emphasises the need of planning, recruiting, training, and placing people, whether new or old, in order to guarantee the organization's effectiveness and efficiency (Okafor et al. 2022). Human resource planning assures a steady supply of personnel without interruption. Human resource planning is critical in the face of a significant increase in labour turnover, which is inevitable and even advantageous.

The demand for specialised healthcare personnel often exceeds the available supply, resulting in overloaded staff and poor service performance (Ogbu and Dialoke, 2020). Furthermore, concerns of training and professional growth, succession planning, and responding to changing healthcare requirements present substantial challenges. Furthermore, external variables such as economic restrictions and the global healthcare environment influence tertiary healthcare institutions' capacity to recruit and retain qualified experts. The period of brain drain, in which competent health care personnel leave their jobs in pursuit of brighter pastures, has created a significant deficit for human resource managers (Wabara, 2017). Similarly, huge numbers of workers who retire, die, quit organisations, or become incapable due to physical or mental illness must be replaced by new personnel (Al-Riyami et al. 2019). Factors contributing to worker turnover at tertiary healthcare institutions in South East Nigeria include voluntary resignations, discharges, weddings, promotions, and seasonal changes. When human resource planning is done correctly, it can have a significant impact on the performance of tertiary healthcare institutions in South East Nigeria by improving patient care, operational efficiency, employee morale and retention, ensuring innovation and research, and increasing community engagement and public trust.

In South East Nigeria, inadequate human resource planning has a wide-ranging influence on tertiary healthcare institutions' performance. Improved patient care, a cornerstone of healthcare facilities, is jeopardised when there is a mismatch between patient demands and available qualified workers. Inadequate staffing numbers and skill disparities impede the delivery of timely and high-quality healthcare services, jeopardising patient outcomes (George 2017). Inadequate human resource planning has a negative impact on operational efficiency, which is critical to successful healthcare delivery. Overburdened personnel and skill shortages result in higher workloads and decreasing productivity, limiting institutions' capacity to successfully fulfil expanding patient care needs. Employee morale and retention, which are critical for a sustainable healthcare workforce, suffer when there is a lack of strategic planning. Inadequate training chances, restricted professional development possibilities, and burnout all contribute to a disgruntled workforce, resulting in high turnover rates and a scarcity of experienced employees. Ensure innovation and research in healthcare demands a well-planned and qualified team. Ineffective human resource planning prevents institutions from cultivating a culture of continuous learning and innovation, stifling the creation and implementation of cutting-edge medical practices and research projects.

Furthermore, community participation and public trust are critical for healthcare organisations. Ineffective human resource planning may result in a lack of community outreach programmes and less accessibility, undermining public faith in the healthcare system. Thus, the South East area, which includes states like Enugu, Anambra, Ebonyi, Imo, and Abia, presents unique socioeconomic and healthcare issues, making good human resource planning critical to the long-term success of its tertiary healthcare institutions. Against this context, the research investigated the effect of human resource planning on the performance of tertiary health care institutions in South East Nigeria.

1.2 Problem Statement

In Nigeria's dynamic and competitive climate, effective personnel planning improves adaptation, fills skill shortages, and boosts overall organisational resilience. It is a crucial component for organisations seeking long-term development, operational excellence, and the capacity to overcome problems in Nigeria's broad and changing market. Effective human resource planning helps tertiary health care institutions sustain peak performance in areas such as improved patient care, higher operational efficiency, innovation and research, medical equipment utilisation, and human capacity development.

One major concern is a possible mismatch between the healthcare staff and the changing needs of the healthcare environment. Rapid advances in medical technology, shifting patient demographics, and the advent of new illnesses all need a highly adaptive and trained healthcare staff. Without effective human resource planning, these institutions may confront a scarcity of specialised workers, jeopardising the quality and efficiency of healthcare service. Furthermore, insufficient workforce planning leads to challenges with personnel allocation and task management. Certain departments within healthcare organisations may face workforce shortages, resulting in overwhelmed healthcare practitioners and possible burnout. This not only lowers the quality of patient treatment, but also has a negative influence on staff morale and retention, increasing the issues that these institutions confront. Furthermore, the implications of human resource planning go beyond the immediate operational issues. In the long run, poor planning may stymie the growth of a strong and forward-thinking healthcare staff. Failure to invest in training, professional development, and succession planning might compromise institutional resilience and response to future healthcare concerns.

Despite the importance of human resource planning, tertiary healthcare institutions in South East Nigeria have specific constraints that prevent effective planning and execution. One significant difficulty is a lack of competent healthcare personnel, such as physicians, nurses, and allied health workers. This scarcity is sometimes compounded by causes such as brain drain, in which trained experts seek employment overseas owing to better working conditions and pay. Inadequate human resource planning has far-reaching consequences, directly affecting the functioning of tertiary healthcare facilities. A dearth of healthcare workers resulted in increased workload and fatigue among current employees, jeopardising patient care quality. The lack of specialised personnel limits the scope of medical services provided, reducing institutions' capacity to address diverse healthcare needs such as improved patient care, increased operational efficiency, innovation and research, medical equipment utilisation, and population capacity building. Inefficiencies in human

resource allocation may also lead to inequities in healthcare delivery, with some geographical regions or medical specialties being disproportionately affected.

1.3 Objectives of the Study

- i. Ascertain the effect of human resource planning on medical equipment utilisation in tertiary health care institutions in South East, Nigeria.
- ii. Examine the effect of human resource planning on human capacity building in tertiary health care institutions in South East, Nigeria.

1.4 Research Questions

The following research questions were raised to guide the study.

- i. How has human resource planning affected medical equipment utilisation in tertiary health care institutions in South East, Nigeria?
- ii. To what extent has human resource planning affect human capacity building in tertiary health care institutions in South East, Nigeria?

1.5 Statement of Hypotheses

The following null hypotheses were formulated to guide the study.

- i. Human resource planning does not have a significant effect on medical equipment utilisation in tertiary health care institutions in South East, Nigeria.
- ii. Human resource planning has no significant effect on human capacity building in tertiary health care institutions in South East, Nigeria.

2. Review of Related Literature

Human Resource Planning

Human Resource Planning (HRP) is a strategic organisational process that involves predicting, analysing, and managing an enterprise's human resources to ensure that the appropriate workforce is in place to fulfil organisational goals. HRP is a dynamic and methodical strategy to aligning human capital needs with business objectives, taking into consideration elements such as labour skills, turnover, and changes in the external environment. Dessler (2017) defines Human Resource Planning as the methodical identification and analysis of an organization's existing and future human resource requirements. The process includes anticipating future labour needs, analysing talent availability both within and outside, and establishing plans to fill any shortages. HRP is critical for optimising human resource utilisation, increasing staff efficiency, and assuring an organization's ability to adapt to changing conditions. Businesses that integrate HRP into their organisational strategy may proactively handle difficulties such as talent shortages, skill mismatches, and other workforce-related concerns, promoting long-term sustainability and competitiveness. According to George (2017), human resource planning includes all of an organization's procedures or strategies for acquiring, recruiting, training, empowering, and developing its people resources. Similarly, human resource planning can be defined as the various procedures and practices implemented by an organisation to ensure the recruitment, retention, and opportunity for the organization's human capital to function efficiently and productively in accordance with the policies and practices established to achieve the strategic goals and objectives for which the organisation was established (Aslam et al., 2013; George, 2017; and Afzal et al., 2013). Human resource planning is at the heart of the human resource management process, and it aims to provide the organisation with the proper people to meet its future and present workforce

demands. Human resource planning serves a variety of functions that cannot be overemphasised. It helps to translate an organization's aims into the number of needed workers by determining the amount of human resource capital required by an organisation to meet its essential goals (Jacobson, 2010; Dash, 2015). People resource planning has evolved throughout time, allowing many organisations to better plan and manage their people resources. Human resource planning, with its comprehensive collection of techniques, is aimed to assure effective employment and administration of an organization's overall personnel (Jonathan & Rice, 201; George, 2017).

The primary goal of human resource planning is to ensure that an organisation at any given time has the right set and number of people with the right talent working in the right positions to ensure optimum performance over time (Dwevedi, 2012; George, 2017). According to Janes (2018), human resource planning includes all actions and practices that involve a continuous scanning of business environments, evaluation of the organization's business and human resource strategies, goals and objectives, policies and guidelines, and ensuring that the right skilled and quantity of human capital are available for use when and where needed.

Determinants of Human Resource Planning.

Validated dimensions of human resource planning include forecasting manpower demand and strategic action (Anya, Umoh, and Worlu, 2017); adequate funding, individual competence, age of prospective applicants, and cultural background of applicants (Eketu and Edeh, 2017); comparing supply against predicted demand and future manpower (Helavalada and Julius, 2017); recruitment, training and development, employee retention, and succession planning (Mbiu and Nzulwa, 2018). Based on the aforementioned factors of human resource planning, this research used Eketu and Edeh's (2017) HRP determinants, which include enough money, individual competency, age, and cultural background. This is because the financing, expertise, age, and cultural background of each candidate or human resource are critical to the existence of any organisation.

Adequate money: When it comes to human resource planning, finance is a critical component that cannot be overlooked. Finance is an organisational lubricant; it defines the quantity of human resources that an organisation can accommodate in terms of wage and compensation for a short or long length of time. Non-availability of money may prevent enterprises from recruiting the necessary trained human resources, giving them a competitive edge over their competitors. On the other side, its availability might provide businesses a competitive edge.

Competence is defined in this research as an individual's job-related talents, skills, and knowledge. It also refers to the potential employee's capacity to do a certain task competently and efficiently. For example, some people may be qualified to do a certain job yet not competent to manage the job's tasks. In addition, some people may be skilled but not competent enough. Therefore, competency includes academic qualification, technical abilities, conceptual skills, human skills, social intelligence, and emotional intelligence. Age is associated with several biological and psychological qualities of the human being. For example, certain tasks may need physical muscle activity to do, such as weight lifting, bending, walking, travelling, concentration, and so on. Some organisations, both military and paramilitary, impose age requirements for anybody who wishes to join them. Another example may be seen at several Nigerian fast-food restaurants, where service staff are deemed to be under the age of 20-25 (Edeh, Ugwu, Ikpor, Nwali, and Udeze, 2019).

Cultural background: In this research, cultural background refers to the beliefs, norms, and values that a job candidate had before entering a company. These preconceptions may either help or

hamper the success of such persons, particularly if recruiters fail to recognise them at the hiring stage. Thus, during human resource planning, the cultural background of those who will be required must be considered. For example, some individuals will not want to work in hotels' bars, where all types of alcoholic beverages are served, because of their religious beliefs. As a result, if such individuals are incorrectly positioned in such a sector of the hotel, they will undoubtedly be ineffectual. Based on this assumption, human resource professionals should pay close attention to the cultures of people seeking to join any organisation in order to reduce wasteful turnover and underperformance.

Organisational Performance.

Organisational performance is a multifaceted concept that incorporates various aspects that impact an entity's efficacy in achieving its goals. It comprises getting the most out of existing resources and adjusting to changing conditions. Kaplan and Norton's Balanced Scorecard (1992) is an important framework that highlights the whole aspect of organisational performance, with a focus on financial, customer, internal processes, and learning and development perspectives.

Effective leadership is essential for organisational performance because it promotes employee engagement, innovation, and strategy alignment. According to Avolio and Gardner (2005), transformational leadership boosts organisational performance by creating a shared vision and supporting a culture of continual improvement.

Furthermore, corporate culture and employee engagement have a significant impact on performance. Denison (1990) underlined the need of cultural consistency and flexibility in achieving high organisational performance.

To recap, organisational success depends on a complex interplay of leadership effectiveness, cultural dynamics, and strategy alignment. Scholars and practitioners may get valuable insights into enhancing and sustaining organisational performance by using frameworks such as the Balanced Scorecard, comprehending the impact of leadership styles, and acknowledging the influence of corporate culture.

Human Resource Management and Medical Equipment Utilisation

Medical equipment utilisation is the efficient and effective use and administration of healthcare devices and technology to improve patient care, diagnosis, and treatment. It entails optimising the use of medical equipment to attain the greatest level of care, enhance patient outcomes, and assure cost-effective healthcare delivery. To maximise the advantages of existing technology, healthcare workers must prepare ahead of time, maintain their equipment properly, and get continual training. Sittig and Singh (2016) emphasise the importance of using medical equipment effectively in boosting patient safety, minimising mistakes, and improving overall healthcare delivery. Considerations for medical equipment utilisation include matching equipment capabilities to patient demands, ensuring correct sterilisation and maintenance standards, and smoothly integrating technology into healthcare processes (Kapoor & Leonard, 2015).

Human resource planning (HRP) and medical equipment utilisation are critical components of good healthcare administration in tertiary health facilities in South East Nigeria. The strategic alignment of competent healthcare personnel via human resource planning is critical to optimising medical equipment use. According to Noe et al. (2019), HRP guarantees that institutions have the

proper staff with the essential skills, cultivating a workforce capable of effectively managing and using medical technology. In a resource-constrained area like South East Nigeria, where healthcare institutions may confront difficulties in purchasing and maintaining sophisticated medical equipment, effective HRP is critical. HRP improves healthcare personnel' ability to successfully use existing medical technology by predicting staffing requirements, offering suitable training, and assuring continual professional growth.

According to Kapoor and Leonard (2015), effective medical equipment utilisation requires good maintenance, aligning equipment capabilities with patient demands, and smoothly integrating technology into healthcare operations. A harmonic combination of HRP and medical equipment utilisation in South East Nigeria tackles regional healthcare concerns while also contributing to enhanced patient care outcomes and the overall efficacy of tertiary health institutions.

Human Resource Planning and Capacity Building

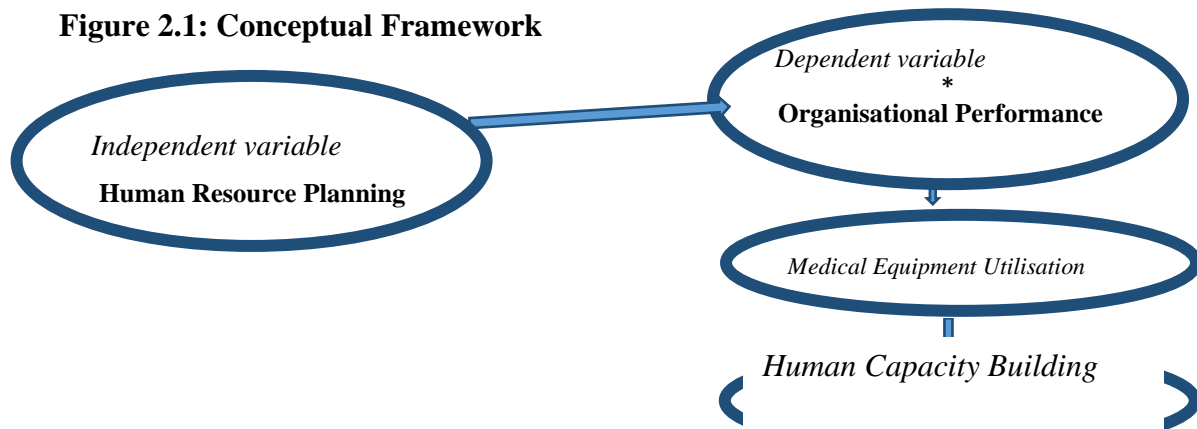
Human capacity development is a dynamic and ongoing process that aims to enhance people' knowledge, skills, and talents in order for them to perform better and contribute more effectively to the objectives of an organisation or society. It entails purposeful attempts to empower people via education, training, and development programmes, allowing them to adapt to changing circumstances, innovate, and make significant contributions to their professional duties and responsibilities.

The notion of human capacity building is consistent with lifelong learning concepts, emphasising the significance of continuing education and skill development (UNESCO, 2015). It goes beyond typical training programmes by promoting a holistic approach that takes into account personal and professional development, empowerment, and the creation of a learning culture inside organisations (UNDP, 2009). Human capacity development is critical for tackling the complexity of a fast changing global context. Senge (2006) argues that strengthening individual and group capacity is critical for organisational learning and flexibility, which contributes to long-term success and resilience.

Strategically combining HRP and Human Capacity Building is critical for developing a competent and adaptive healthcare workforce capable of navigating the complex and dynamic healthcare environment in South East Nigeria. This dual strategy helps to enhance not just patient care results, but also the general resilience and efficacy of the region's tertiary health institutions.

Figure 2.1: Conceptual Framework

Figure 2.1: Conceptual Framework



Source: Author's Conceptualization 2024.

Theoretical framework

Human Capital Theory

The Human Capital Theory, suggested by Schultz in 1961 and expanded by Becker in 1994, posits that human resource practices may have a direct impact on corporate performance. It assumes that workers have a set of skills acquired via education and training, which creates a stock of productive capital. Investing in human capital helps both employees and companies. The amount of salary should provide both parties with a decent return on investment. Human capital plays an important role in determining a company's market value. People provide value to organisations, and there is a justification for quantifying this value as a foundation for HR planning and monitoring the success and impact of HR policies and procedures.

Human capital refers to the human aspect in an organisation; the combined intellect, skills, and knowledge that gives the organisation its unique character. The human parts of the organisation are those who are capable of learning, adapting, inventing, and giving a creative drive, which, when properly motivated, may assure the organization's long-term existence. These are the intangible resources connected with people that, together with tangible resources (money and physical assets), contribute to a company's market or overall worth. Bontis (1998) defines intangible resources as things other than financial and physical assets that contribute to a company's value-creation activities and are within its control.

The present analysis is based mostly on the human capital hypothesis. It is significant to our research since it connects human capital and corporate performance. The research focuses on human capital enhancement tactics such as HR planning, recruiting, induction, and retention, and how these might help organisations perform better. The theoretician contends that human capital improves company performance. As a result, it is expected that people-resourcing techniques would improve business performance.

Using Human Capital Theory to investigate the effect of Human Resource Planning (HRP) on the performance of tertiary healthcare institutions in South East Nigeria provides a comprehensive

framework for understanding the relationship between human resource investments and organisational outcomes. Human Capital Theory holds that an individual's knowledge, skills, and talents contribute to their productivity and, as a result, the overall success of an organisation.

In the context of healthcare, the idea emphasises the importance of healthcare practitioners' knowledge and skills. The efficacy of HRP may be measured by how effectively it handles the development, use, and retention of human capital in these organisations. This involves examining the compatibility of worker skills with the healthcare sector's shifting demands, providing continuing training and development opportunities, and developing talent retention measures. A Human Capital Theory perspective would be used in this study to investigate how investments in healthcare professionals, through strategic HRP, improve the quality of patient care, contribute to medical innovation, and, ultimately, improve the overall performance of tertiary health institutions in a dynamic and challenging region like South East Nigeria.

3. Methodology

Research Design

The researcher used a survey research approach. The survey approach is the most often used research method in the behavioural sciences, and it entails creating a series of questions on numerous topics or elements of a subject that a subset of a population is asked to respond. As a result, the rationale for employing the survey research technique is that it offers the most effective way of gathering respondents' perspectives on the influence of human resource planning on organisational performance of tertiary health care institutions in South East Nigeria.

Sources of Data

The researcher made use of both primary and secondary data for the study.

Primary Data: The primary data are information collected from direct survey using questionnaire, interviews and observations.

Secondary Sources of Data: The researcher gathered secondary data from textbooks, journals, periodicals, and the internet. Furthermore, data were gathered from journal papers, essays, and other studies that are directly relevant to the subject.

Area of the Study

The research focused on tertiary health institutions in Nigeria's south-east states. The research focused on five tertiary health institutions in Nigeria's South Eastern geopolitical zones. The states are: Enugu, Anambra, Abia, Ebonyi, and Imo. The hospitals are Federal Medical Centre, Aba Road, Umu Obasi, Umuahia for Abia State, Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi for Anambra State, Federal Teaching Hospital, Abakaliki for Ebonyi State, National Orthopaedics Hospital, Abakpa Junction Abakiliki Road, Enugu for Enugu State, and Federal Medical Centre, Orlu Road, Owerri for Imo State.

Population of the Study

The study's population consisted of workers from the five Tertiary Health Institutions in the South-East States under inquiry. The study's population is consequently three thousand, eight

hundred and ninety-one (3,891) employees. Table 3.1 presents the population based on the departments in the hospitals under consideration.

Sample Size Determination

The population of three thousand eight hundred and ninety-one (3,891) was considered too large, the researcher applied Yamane, (1964) statistical formula to reduce the population to a manageable size. The formula is stated under.

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

Where
 n = Sample size
 N = Population size
 e = Error margin allowed
 1 = Constant

The researcher was choosing two percent (0.04) as error margin allowed. The translation of the formula is show below. The researcher chose two percent (0.04) as error margin allowed. The translation of the formula is show below.

$$n = \frac{3,891}{1+3891(0.04)^2}$$

$$n = \frac{3,891}{1+3,891 (0.0016)}$$

$$n = \frac{3586}{1+5.7376}$$

$$n = \frac{6.7376}{3586}$$

n = 532.23 = 532 by approximation.

Method of Data Collection

Data for the research were gathered via the use of questionnaires, interviews, and observations. The data gathering devices employed were closed-ended questionnaires.

Method of Data Analyses

The researcher's analysis of the acquired data was directed by the study's goals and research questions. All questionnaire questions were spaced out to capture the qualitative and quantitative answers anticipated from respondents. Data analysis was conducted to verify that the study's facts and results were brief and complete. The descriptive content analysis helped us to evaluate the variables in our research questions. The hypotheses were evaluated using the z-normal distribution (z-test).

Data Presentation

The data analysis technique was critical to ensuring the findings' validity. Once the data was obtained, it was organised such that each participant's information was maintained together and in order.

Table 4.1 Response Rate of the Questionnaire

	Response
No. of distributed questionnaire	532
Returned questionnaire	503
Returned and usable questionnaire	489
Returned and excluded questionnaire	14
Questionnaires not returned	29
Response rate	95%
Usable response rate	92%

Sources: Research Data, 2024

Table 4.1 shows that 503 of the 532 questionnaires given during data collection were returned. This accounts for 95% of the whole questionnaire given. A thorough examination of the questionnaires returned indicates that 14 of them were not correctly completed. This was validated throughout the data cleansing and screening procedure. At the conclusion of data screening and processing, 489 copies of the questionnaire were accessible for further analysis, representing 92%.

Analysis of Data

Research Question One How has human resource planning affected medical equipment utilisation in tertiary healthcare institutions in South East, Nigeria?

Table 1: Effect of how human resource planning on utilization of medical equipment in tertiary healthcare institutions in South East, Nigeria

s/n	Item	SA	A	U	DA	SD	Total	Mean	Decision
1	Human resource planning ensures that healthcare professionals are adequately trained to operate and maintain medical equipment.	186	167	21	70	45	489	3.8	Accepted
2	Adequate planning helps in determining the optimal staffing levels, ensuring that there is sufficient number of qualified personnel available to operate and manage medical equipment efficiently and effectively	200	156	18	67	48	489	3.8	Accepted
3	Human resource planning allows for the establishment of preventive maintenance schedules and the assignment of responsibilities to personnel which contributes to the longevity and consistent performance of medical equipment.	166	190	13	71	49	489	3.7	Accepted
4	Proper planning facilitates the alignment of staffing schedules with patient demand, reducing idle time for both personnel and equipment thereby optimising overall workflow efficiency.	196	150	19	84	40	489	3.8	Accepted
5	Skilled and adequately staffed teams, resulting from effective human resource planning, contribute to swift responses to equipment malfunctions or breakdowns, minimizing downtime and ensuring uninterrupted healthcare services	199	176	10	83	40	489	4.0	Accepted

Source: Field Survey, 2024

Table 4.5 presents descriptive information on how human resource planning influenced medical equipment use in tertiary health care facilities in South East Nigeria. It shows that all of the listed items were approved (based on a theoretical acceptance mean rating of 3.0).

According to item number one, the respondents agreed that human resource planning ensures that healthcare staff are properly educated to handle and maintain medical equipment. This helps to the development of a strong research workforce. The mean score of 3.8 indicates that respondents felt good about the issue under discussion. In item number two, the mean score of 3.7 indicates that

respondents agreed that adequate planning aids in determining the optimal staffing levels, ensuring that there are a sufficient number of qualified personnel available to operate and manage medical equipment effectively. Item three, with a mean score of 3.8, indicates that respondents agreed that human resource planning enables the formulation of preventative maintenance programmes and the distribution of duties to staff. This proactive strategy promotes the lifetime and constant operation of medical equipment. Item number four had a mean score of 4.0, indicating that respondents agreed that proper planning helps the alignment of staffing schedules with patient demand, decreasing idle time for workers and equipment. This optimisation improves the overall process efficiency. According to the results of item number five, the respondents affirmed that skilled and adequately staffed teams, resulting from effective human resource planning, contribute to swift responses to equipment malfunctions or breakdowns, minimising downtime and ensuring uninterrupted healthcare services. The mean score was 4.28.

Research Question Two: To what extent has human resource planning affect human capacity building in tertiary healthcare institutions in South East, Nigeria?

Table 4.2: Effect of human resource planning on human capacity building in tertiary healthcare institutions in South East, Nigeria

s/n	Item	SA	A	U	DA	SD	Total	Mean	Decision
1	Human resource planning identifies the skills and competencies required within the healthcare workforce.	186	167	21	70	45	489	3.8	Accepted
2	Effective Human resource planning creates opportunities for professional development, such as workshops, seminars, and certifications, thereby fostering a culture of continuous learning and improvement among healthcare staff	200	156	18	67	48	489	3.8	Accepted
3	Human resource planning have identified potential leaders and key personnel for succession, that help to ensure seamless transfer of knowledge and skills, thereby preventing disruptions in service delivery and maintaining a skilled workforce over time	166	190	13	71	49	489	3.7	Accepted
4	Human resource planning allows for the implementation of specialized training programs tailored to the unique needs of the healthcare institution.	196	150	19	84	40	489	3.8	Accepted
5	Adequate Human resource planning has contributed to staff satisfaction and retention, by demonstrating the institutions' commitment to its staff, reducing turnover and retaining skilled professionals	199	176	10	83	40	489	4.0	Accepted

Source: Field Survey, 2024

Table 4.2 presents descriptive information on how human resource planning influences human capacity development in tertiary health care facilities in South East Nigeria. It shows that all of the listed items were approved (based on a theoretical acceptance mean rating of 3.0). According to answer number one, respondents agreed that human resource planning defines the skills and competences needed in the healthcare workforce. The mean score of 3.8 indicates that respondents felt good about the issue under discussion. In item number two, the mean score of 3.7 indicates that respondents agreed that effective human resource planning provides possibilities for continued professional growth. This includes conferences, seminars, and certifications, which encourage a

culture of continual learning and growth among healthcare workers. Item three, with a mean score of 3.8, indicates that respondents believed that human resource planning included identifying future leaders and essential workers for succession. This provides a smooth transfer of knowledge and skills, reducing delays in service delivery and retaining a trained staff over time.

Item four had a mean score of 4.0, indicating that respondents agreed that human resource planning enables the execution of specialised training programmes customised to the particular requirements of the healthcare institution. The findings of question number five, with a mean score of 4.28, reveal that respondents agreed that adequate human resource planning takes into account aspects that contribute to employee satisfaction and retention. Investing in capacity-building programmes displays an institution's dedication to its employees, lowering turnover and retaining talented workers.

Test of Hypotheses

The z-test was used in the research to allow for inferential examination of the association between basic human resource planning parameters and organisational performance of tertiary health care institutions in South East Nigeria. The mean of the average replies to the questions as indicated in the tables was computed, and standard deviation was determined. the Z-score was found as

$$z = \frac{\bar{x} - \mu}{s/\sqrt{n}}$$

where:

z	=	standard normal deviate
\bar{x}	=	mean of the mean responses
μ	=	Population mean
S	=	standard deviation
e	=	2% (Zcritical = ± 2.33)

Decision Rule

The rule in the use of the z-test criterion was to accept the alternate hypothesis if the calculated z-score was higher than the tabulated z-score. The hypothesis was not to be rejected if the tabulated value was less than the calculated z-value.

Test of Hypothesis One

Step 1: Restatement of the hypothesis in the null and alternate forms

Restatement of Hypothesis One

Ho: Human resource planning does not have a significant effect on medical equipment utilisation in tertiary healthcare institutions in South East, Nigeria.

Source of Data from Table 4.1

Table 4.3: Normalizes z-score for mean responses

S/N		N	Mean	Std. Deviation	z-score	Z _{0.05}	Decision rule for hypothesis
1	Human resource planning does not have a significant effect on medical equipment utilisation in tertiary health care institutions in South East, Nigeria.	489	4.3749	1.03807	45.97	2.33	

Source: Author’s compilation SPSS 22.0 Output

From table 4.3, the z-score for the responses to the questionnaire items are computed and juxtaposed with the z-table value of ± 2.33 at 2% significance level. The analysis indicates that the proposition that “Human resource planning does have a significant effect on medical equipment utilisation in tertiary healthcare institutions in South East, Nigeria is accepted at 2% significance level as the computed, z value of 45.97 exceeds the table value of ± 2.33 .

Decision:

As seen from Table 4.3 and the subsequent analysis of result the computed Z-scores (45.97) for the statements exceed the table z value of ± 2.33 . at 2% significance level. Therefore, we reject the null hypothesis and accept the research hypothesis that Human resource planning does not have a significant effect on medical equipment utilisation in tertiary health care institutions in South East, Nigeria.

Test of Hypothesis One

Step 1: Restatement of the hypothesis in the null and alternate forms

Restatement of Hypothesis One

Ho: Human resource planning has no significant effect on human capacity building in tertiary healthcare institutions in South East, Nigeria.

Source of Data from Table 4.2

Table 4.4: Normalizes z-score for mean responses

S/N		N	Mean	Std. Deviation	z-score	Z _{0.05}	Decision rule for hypothesis
s1	Human resource planning has no significant effect on human capacity building in tertiary health care institutions in South East, Nigeria.	489	4.3749	1.1048	42.75	2.33	Accepted

Source: Author’s compilation SPSS 22.0 Output

From Table 4.4, the z-score for the responses to the questionnaire items are computed and juxtaposed with the z-table value of ± 2.33 at 2% significance level. The analysis indicates that the proposition that “Human resource planning has no significant effect on human capacity building in tertiary health care institutions in South East, Nigeria is accepted at 2% significance level as the computed, z value of 42.75 exceeds the table value of ± 2.33 .

Decision:

As seen from Table 4.2 and the subsequent analysis of result the computed Z-scores (42.75) for the statements exceed the table z value of ± 2.33 . at 2% significance level. Therefore, we reject the

null hypothesis and accept the research hypothesis that Human resource planning has a significant effect on human capacity building in tertiary health care institutions in South East, Nigeria.

Discussion of Findings

Human Resource Planning and Medical Equipment Utilisation.

The findings revealed that human resource planning has a substantial impact on medical equipment use in tertiary healthcare facilities in South East Nigeria. The study's z-score ($z=45.97$, $z_{cal} = \pm 2.33$) provides strong justification. Table 4.5 demonstrates that respondents think that human resource planning has a substantial influence on medical equipment utilisation in tertiary healthcare facilities in South East Nigeria. Effective human resource planning ensures that healthcare facilities have enough competent workers to operate and maintain medical equipment effectively, maximising its utilisation and advantages. First and foremost, human resource planning assures the availability of biomedical engineers, technicians, and other specialised personnel required for effective medical equipment installation, calibration, and maintenance. Healthcare facilities may guarantee that medical equipment is in good working order and ready for use when required by hiring and training skilled workers.

Second, human resource planning allows for workforce deployment techniques that guarantee an equal allocation of staff across departments and units. This guarantees that medical equipment is properly manned and used across the healthcare institution, avoiding bottlenecks and delays in patient treatment. Furthermore, human resource planning encourages continuous training and development opportunities for employees to improve their technical abilities and competences while operating medical equipment. Healthcare facilities may enhance staff competency and confidence in utilising medical equipment by investing in staff training programmes, which will result in higher utilisation rates and better patient outcomes. To summarise, human resource planning is critical in optimising medical equipment utilisation at tertiary healthcare institutions in South East Nigeria by ensuring the availability of trained workers, equitable workforce deployment, and continuing staff training and development programmes.

Human Resource Planning and Capacity Building.

Finally, the study found that human resource planning has a considerable impact on human capacity development in tertiary health care institutions in South East Nigeria. The study's z-score ($z=45.97$, $z_{cal} = 2.33$) provides strong justification. Table 4.5 demonstrates that respondents felt that human resource planning had a substantial influence on human capacity development in tertiary healthcare institutions in South East Nigeria. Through strategic workforce planning and management, these institutions may systematically grow and improve their staff's skills, knowledge, and competencies, so increasing human capacity and boosting the entire healthcare system.

Human resource planning helps improve human capacity by assessing current and future workforce demands and connecting them with organisational goals and objectives. Healthcare facilities may create tailored training and development programmes to address skill shortages and increase worker capacity by analysing staffing needs based on patient demographics, illness incidence, and service demands.

Furthermore, human resource planning allows healthcare organisations to attract, educate, and retain talented healthcare personnel, encouraging a culture of lifelong learning and professional

growth. By investing in staff training programmes, continuing education efforts, and career promotion opportunities, these organisations enable their employees to learn new skills, keep current with evolving trends, and provide high-quality patient care. Furthermore, human resource planning allows for the deployment of individuals to areas of highest need, guaranteeing a fair allocation of human resources across departments and specialisations. Healthcare organisations may improve total human capacity by optimising personnel deployment and workload management. Finally, human resource planning plays an important role in human capacity building in tertiary healthcare institutions in South East Nigeria by identifying workforce needs, encouraging continuous learning and professional development, and optimising staff deployment to improve overall workforce capacity and effectiveness.

5. Summary of Findings

The following were the findings:

- i. Human resource planning does not have a significant effect on medical equipment utilisation in tertiary health care institutions in South East, Nigeria. This suggests that adequate planning helps in determining the optimal staffing levels, ensuring that there is a sufficient number of qualified personnel available to operate and manage medical equipment efficiently.
- ii. Finally, human resource planning has a significant effect on human capacity building in tertiary health care institutions in South East, Nigeria. This implies that Effective Human resource planning creates opportunities for ongoing professional development. This includes workshops, seminars, and certifications, fostering a culture of continuous learning and improvement among healthcare staff.

Conclusion

Human resource planning is crucial for aligning worker skills with organisational goals and objectives, which improves operational efficiency, patient care quality, innovation, and human capacity development. Healthcare organisations may assure the availability of qualified and varied personnel by proactively managing their workforce, optimising staff deployment, and cultivating a culture of continuous learning and professional development. These activities help to improve patient outcomes, promote staff productivity, and strengthen organisational resilience in the face of adversity. Furthermore, human resource planning helps healthcare organisations to efficiently handle personnel shortages, skill gaps, and resource limits, reducing risks and increasing potential for success. Healthcare institutions may develop a competent and motivated staff capable of providing high-quality treatment to patients while also boosting organisational success via focused recruiting, training, and retention initiatives.

Recommendations

The following recommendations are made for the study:

1. For continuous medical equipment utilization, the management of tertiary healthcare institutions should enhance medical equipment utilization by aligning human resource planning with equipment maintenance, operation, and training needs, ensuring the

availability of skilled personnel and resources to maximize equipment functionality and improve patient care outcomes.

2. Given the significance nature of human capacity building in organization, the management of tertiary healthcare institutions should prioritize human capacity building through targeted recruitment, training, and career development programs that empower healthcare professionals with the necessary skills and knowledge to meet evolving healthcare challenges, fostering a resilient and competent workforce capable of delivering high-quality care in tertiary healthcare institutions in South East, Nigeria.

References

- Adagbabiri, M.M. and Okolie, U.C. (2020). Human resource management practices and organizational performance. An empirical study of oil and gas industries in Nigeria. *RUDN Journal of Public Administration*, 7 (1), 53–69.
- Alasan, A. I. & Eyanuku, J. P. (2020). Human resource management practices and Nigerian Banks' performance. *LASU Journal of Employment Relations & Human Resource Management*, 2(1), 124-140.
- AL-Riyami, F. A. & Banu, R. (2019). The influence of human resource planning on organisational performance: A Study in Sultanate of Oman. *International Journal for Research in Engineering Application & Management (IJREAM)*, special issue, 43-46.
- Anya C. J. P., G.I. Umoh and Worlu, G. (2017). Human resource planning and organizational performance in oil and gas firms in Port Harcourt. *International Journal of Advanced Academic Research / Social & Management Sciences*. 3(9), 110-129
- Chioke, S. C. & Mbamalu, K. U. (2020). Human resource planning and organizational Performance: A Philosophical Approach. *International Journal of Management, Social Sciences, Peace and Conflict Studies (IJMSSPCS)*, 3(3), 387 - 398;
- Dialoke, I., & Duru, M.I. (2017). Effects of workforce planning on organizational performance: a study of selected media houses in Imo State, Nigeria. *International Journal of SocialSciences and Management Research*, 3(2), 1-7.
- Dieleman, M. & Harnmeijer, J. W. (2016). *Improving Health Worker Performance: In Search of Promising Practices*. Geneva: World Health Organization. Available at http://www.kit.nl/net/KIT_Publicaties_output/ShowFile2.aspx?e=1174
- Edeh, F. O., & Dialoke, I. (2020). Effect of Human Resource Planning on Organizational Performance of the Hospitality Sector in Nigeria. *Business Perspective Review*, 2(1), 1-12.
- George, N.R. (2017). Examples of organizational performance management. . Available online at:< <http://smallbusiness.chron.com/examples-organizational-performance-management-11508.html>.> (accessed 4th March 2021).
- George, V. (2017). The role of human resource planning in the human resource network. *International Journal of Creative Research Thoughts*, 5(11). 1-10.

- Jacob, B.J., Ishaya, Y., & Bajama, S.Y. (2022). Impact of human resource management on organizational performance in Nigeria: Nigeria breweries Kaduna plc as a case study. *SocioEconomic Challenges*, 6(3), 123-131.
- Maina, D. K., & Kwasira J. (2015). Role of human resource planning practices on employee performance in county governments in Kenya: A case of Nakuru County. *International Journal of Economics, Commerce and Management*, 3(5), 1569-1580.
- Mansaray, H.E. (2019). The consequence of human resource planning on organizational performance: An ephemeral review. *Britain International of Humanities and Social Sciences (BloHS) Journal*, 1(2), 50-61
- Mwangi, M.W., & Wanyama, J. (2021). Effect of human resource planning on organizational performance of Deloitte Kenya. *Journal of Human Resource and Leadership*, 1(1), 32-38.
- Nondoh, R. A., Tsuma, E., Alala, B. O., Onyango, R. (2020). Effect of human resource planning practices on organizational performance in public Universities in Western Kenya. *The Strategic Journal of Business & Change Management*, 7(2), 20 – 39.
- Okonkwo, E., Okafor, N., & Essell, O. (2022). The Effect of Human Resource Planning On Organizational Performance: A Study of Selected Breweries In The South-East, Nigeria. *International Journal of Management & Entrepreneurship Research* 4(1), 13-25.
- Onikoyi, I. A., Omoyele, O.S., Odumeru, J.A. & Odeh, C.D. (2023). Impact of human resource management practices on employees' behavioural outcomes in the manufacturing sub-sector of South-West Nigeria. *ACTA Universitatis Danubius*, 19(3),27-46.
- Oragudosi S. O. (2022). The impact of human resources management (HRM) practices on organisational performance in Globacom Nigeria. *Research Journal of Management Practice*, 2(5), 43-62
- Rehman, T. U., & Khatoon, R. (2022). Human Resource Management Practices and Organizational Performance in the New Normal: A Relationship Analysis. In *Navigating the New Normal of Business with Enhanced Human Resource Management Strategies* (pp.212-233). IGI Global.
- Ubah, C. A. & Umar, A. I. (2021). Effect of human resource planning on the performance of public sector organizations: Evidence from Nigeria. *International Journal of Research in Business and Social Science* 10(5), 72-82
- Wachiuri (2018). The role of performance appraisals in assessing an organization's performance.