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Assessment of Quality Healthcare and Sustainability Among Clinical Staff in Rivers State, Nigeria.

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Abstract: *Quality healthcare provision among clinical staffers is vital towards sustainable development, while this presumption becomes contested due to lack of proper redistributive mechanisms. This study conjectured on quality healthcare and sustainability among clinical staff in Rivers State Nigeria.. A correlational survey research design was used. The study population consisted of 8,000 clinical staff working in public healthcare facilities, and a sample of 381 respondents was calculated using multistage sampling methods. The structured questionnaire was known as Quality Healthcare and Sustainability Questionnaire (QHSQ) Its content has been validated through the opinion of specialists, and its reliability was established by Cronbach's alpha method. Research tools were analysed with the ones of descriptive statistics; means and standard deviation used for research questions, Pearson Product Moment Correlation analyses used for hypothesis one and two, and multiple regression analysis with interaction terms at 0.05 level of significance for hypothesis three. The results showed a strong positive and significant correlation between quality healthcare and sustainability. In addition, quality healthcare shows a significant moderation effect on sustainability with 95% CI using socio-demographic characteristics. The study encourages healthcare administrators to make quality improvement practices more robust, improve sustainability planning and implement policies sensitive to the workforce in Rivers State, Nigeria.*

Keywords: Quality healthcare, Clinical staff, Sustainable development, Rivers State

Introduction

Quality, indeed, is one of the cornerstones of how WHO performance and effectiveness define health systems. It relates to the degree to which the health services delivered to individuals and populations helps to improve target health outcomes in a way that is consonant with the current professional knowledge. The increasing concern with the evaluation and improving of health care quality is attributed to the increasing healthcare expectation from patients, modernization in medical technology, and measures to reduce avoidable morbidity and mortality (World Health Organization, 2023). Even in developing countries like Nigeria, access to quality health care is further hampered by systemic issues such as poor infrastructure, workforce shortages and varying degrees of compliance with clinical standards.

Healthcare Quality is often perceived in terms of different dimensions, namely safety, effectiveness, timeliness, efficiency, equity and patient-centeredness. These dimensions represent the clinical staff responsible for patient care and how to measure their performance. Clinical staff, including doctors, nurses, pharmacists and allied health professionals are a key factor in the quality of care. The competence, professional conduct, and following of the coordinated procedures for care have a profound impact on patient outcomes and overall satisfaction within the services (Ameh et al., 2022). Nevertheless, variability in service delivery, medical errors and patient-centered care remain an issue in many areas of Nigeria.

Sustainability has become another important determinant of relevance in healthcare systems, alongside quality. US sector spending Many other private sector concepts can also help to characterize delivery systems and sustainability of health service Sustainability: In a broad sense, this refers to the health system ability to continue serving in time and not jeopardizing future capacity. It includes use of resources, workforce resilience, continuous provision of service and adaptation of sustainable practices in an environmentally and economically friendly manner. Healthcare services have increasing demands and for the regions with limited resources, sustainability is essential. In the absence of sustainable practices, early wins in health service quality will be lost and health systems face declining service standards (WHO, 2022).

Locally, the Nigeria health system continues to struggle with sustainability issues that include poor funding, skewed skills and services distribution among healthcare professionals and mass exodus of workforce. Rivers State, one of the biggest oil-producing states in Nigeria is unique in its healthcare landscape because it has both urban and rural populations covering different socio-demographics that reflect both opportunities and constraints. Despite tertiary health institutions and private healthcare centres

contributing to service delivery, inequalities in access and quality of care remain starkly visible between geographic areas. In the state, clinical staff often work in difficult circumstances and might not always provide consistent and high-quality care.

For clinical staff, the overlap between quality healthcare and sustainability is especially critical as both upstream patient-focused care results and downstream healthcare capacity implications are a product of their performance. Sustainable healthcare meets the needs of clinical staff through training, appropriate working hours and resources, enabling professionals to provide high-quality care and support. On the other hand, inadequate sustainability practices may result in burnout and unproductivity which pose a serious risk to patient safety. This interconnections highlights the requirement of assesing how quality healthcare and sustainability are experienced and sustained by clinical staff in one integrated assessment.

While several policy interventions and reforms aimed at improving the quality-of-care delivery in Nigeria have been undertaken, few evidence exists on healthcare-quality-sustainability nexus, particularly state-level studies. Previous research has mostly investigated delivery in isolation, rather than the role of sustainability in contributing to quality care provided by clinical staff. Such a gap is more apparent in Rivers State, where contextual factors like economic inequality and health system limitations might drive differential healthcare outcomes.

Consequently, this study aims to evaluate quality healthcare and sustainability among clinical staff in Rivers State, Nigeria, around which evidence-based information could be deployed to assist policymakers in evaluating the effects of their decisions on humans and health care delivery. The study adds to the ongoing efforts to strengthen health systems and improve population health by exploring the relationship between these two important constructs.

Statement of the Problem

When, providing quality health care is one of the primary goal of any health system, achieving and maintaining this standard always brings along efficacious challenges with it especially in developing areas like Nigeria. However, while healthcare quality is supposed to be a reflection of safety, effectiveness and patient-centeredness, more recent evidence has shown that these standards are not observed in clinical practice at all times. Furthermore, clinical staff often work in environments that impede their ability to provide high-quality care–with fewer resources, high patient caseloads and inconsistently applied clinical standards. It raises the question of dependability and sameness in healthcare services dished out to patients on account of these constraints.

Related closely to the problem of quality is that of sustainability in delivery of care. Healthcare systems need sustainability to be able to sustain their ability to provide services without compromising the future performance may it be in access, quality or affordability; Nonetheless, sustainability is an ongoing challenge in the Nigerian health care system because of insufficient funding, workforce deficits and brain drain to other jurisdictions. These issues not only cause further strain on the clinical staff but impact their performance and also increase pressure on clinicians ultimately impacting deteriorating structural capacity of the health system.

Despite hosting various tertiary health institutions and a developing clamouring network of healthcare facilities, Rivers State is inundated with inequities in the quality and sustainability of its healthcare provision. Clinical staff typically includes those under similarly arduous working conditions where resources are limited, a number of infrastructural deficits exist, and patient expectations are high. Such conditions could lead to burnout, inefficiencies and even lapses in patient care. While numerous policies and interventions have been established to improve the delivery of healthcare, there are few empirical studies reporting how these efforts manifest in terms of quality patient care by clinicians over time.

Moreover, previous studies have largely considered healthcare quality and sustainability as two distinct constructs while little is known about their interrelationship. This piecemeal approach precludes a holistic understanding of the role that sustainability variables, including workforce stability, resource availability, and institutional support, play on providers' capacity to deliver quality care. Policy interventions characterised by such understanding are more likely to address the root of declining healthcare standards and lead to sustained improvements.

Hence, the research problem of this study is that there has been inadequate empirical evaluation on quality healthcare and sustainability among clinical staff in Rivers State, Nigeria. Exploring the impact of sustainability on the quality of healthcare delivery and areas that need to be improved. It is critical to fill this gap in order to design policies and strategies that will improve health systems, clinical performances, and the quality of health care services.

Aim and Objectives of the Study

The aim of this study is to assess quality healthcare and sustainability among clinical staff in Rivers State, Nigeria.

The study will specifically:

1. Audit the Quality Healthcare Delivery Practice of Clinical Staff in Rivers State, Nigeria

2. analyze the degree to which healthcare facilities in Rivers State, Nigeria implement sustainability practices
3. predict the association between elements of good healthcare delivery (safety, efficacy and patient-centeredness) and sustainability for clinicians in Rivers State, Nigeria
4. assess the moderating effect socio-demographic characteristics of clinical staff have on quality healthcare and sustainability in Rivers State, Nigeria.

Research Questions

The study will be guided by the following research questions:

1. How good are clinical staff at delivering quality healthcare in Rivers State, Nigeria?
2. Study Question: How sustainable are the sustainability practices of healthcare facilities in Rivers State, Nigeria?
3. Objective What is the relationship between dimension of quality healthcare (safety, effectiveness and patient-centeredness) and sustainability among clinical staff of Rivers State, Nigeria.
4. In Rivers State, Nigeria, what moderating role do socio-demographic characteristics of clinical staff play in the relationship between quality healthcare and sustainability?

Research Hypotheses

The following null hypotheses will be tested at 0.05 level of significance:

H_{01}: Quality healthcare is not related to sustainability of clinical health staff in Rivers State, Nigeria.

H_{02}: There is no significant relationship in the dimensions of quality healthcare (safety, effectiveness, patient centeredness) and sustainability among clinical staff in Rivers State, Nigeria.

H_{03}: There is no significant moderation effect of socio-demographic characteristics of clinical staff on the quality of healthcare and sustainability in Rivers State, Nigeria.

Methodology

The study will be a correlational survey research. This design was chosen because the nature of this study does not involve an experimental manipulation and looks to investigate the relationship between quality healthcare and sustainability among clinical staff. Correlational design: In this study correlational research designing is appropriate as it provides quantitative data and from the defined population etc., to know about the relationship between variables (Mertens, 2014). This design has been extensively employed in health services research to investigate associations between features of the workplace, quality of service delivery and sustainability of the system.

Study area. The study will be carried out in Rivers State-Nigeria located in the South-South geopolitical zone. Rivers state is situated approximately between latitude 4°30′N and 5°30′N and longitude 6°30′E and 7°30′E; it is one of the prolific oil-producing states in Nigeria and a combination of urban-rural settlement [10]. There are people from various nationals established in the state that comprises of economic markets such as oil and gas production, trading, agriculture and civil service.

Rivers State does have a fairly widespread healthcare system including tertiary, secondary and primary health facilities run by both government and privately-owned organizations. Within the Local Government Areas, there are major tertiary institutions e.g., teaching hospitals and specialist centres, which exist with general hospitals and numerous primary healthcare centres. However, huge disparities in access to healthcare; infrastructure and quality of service delivery still remain. Because clinical staff work under different circumstances in the state, it is an appropriate location for investigating quality healthcare and sustainability issues.

The eligible study population will consist of all clinicians in public health facilities Rivers State. The professionals include medical doctors, nurses, pharmacists, laboratory scientists and other allied health personnel who are directly involved in patient care. The population for the study is 8,000 subsequently making a sampling frame data from Rivers State Ministry of Health (2025) records of clinical staff in selected public healthcare facilities

Participants / Study sample: The study will involve a total of 381 clinical staff from public health care facilities in Rivers state, Nigeria. The sample size was determined through the use of Yamane (1967) formula for finite populations at 0.05 level of precision, which is usually sufficient to achieve representative data with survey research.

Respondents will be selected using a multistage sampling approach. In the first stage, healthcare facilities in Rivers State will be stratified into tertiary, secondary and primary healthcare system to guarantee proper representation of different levels of health care delivery. In the second stage, purposive sampling will be employed to identify appropriate healthcare facilities from each selected category according to their service capacity and access. Final sampling of clinical staff within selected facilities will be random simple whereby all eligible respondents have an equal chance to be chosen and reduce any indicated sampling bias.

The data collection instrument will be a structured questionnaire named Quality Healthcare and Sustainability Questionnaire (QHSQ). The researcher will develop the questionnaire based on study variables and objectives to obtain quantitative data from targeted clinical staff of selected healthcare facilities in Rivers state, Nigeria.

The instrument will be broken down into three parts. In Section A, the socio-demographic charactestic of respondents will be analyzed. These will consist of facts like age, gender, marital status, professional cadre, educational qualification as well as years of work experience These variables could be deemed relevant as they no doubt will affect how health care is delivered, and will serve to test the study's moderating effects.

Quality of healthcare (Section B): in this section, items are constructed around fundamental dimensions of healthcare quality which is safety, effectiveness and patient centeredness. Safety measures will review strategic practices, including compliance with clinical protocols, infection prevention and reduction of errors. Effectiveness: how many clinical staff provide evidence-based care, diagnosis and treatment? Patient-centeredness will coveRS factors such as patient communication, consideration of patient preferences and participation in care decisions

C will assess sustainability in healthcare provision. This last section will address dimensions such as: continuity of service delivery, workforce stability, resource availability and institutional support. They are meant to reflect healthcare organizations' ability to continue sustained, effective service delivery over time without impairing future capacity.

The items under Sections B and C will be on a 4-point Likert scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The responses will be scored 4, 3, 2 and 1. Mean scores of variables and sub-variables will be calculated using the item scores. Quality healthcare and sustainability will be synthesized into composite scores, treated as continuous variables for statistical analysis (correlation and multiple regression).

To have a pictorial, easy to comprehend questionnaire items and results for the respondents to understand a variety of responses in the simplest language. The instrument will be self-administered, meaning that respondents will complete it at their own convenience while preserving confidentiality. Face validity and content validity will be assessed for the instrument. The questionnaire will be submitted to a research supervisor, and two experts in health services research and measurement and evaluation for review. All comments, corrections, and suggestions will be included to ensure that the instrument sufficiently measures its respective constructs.

Using the Cronbach’s alpha method to determine the reliability of each instrument. 30 clinical staff from a health facility in another area will participate in a pilot study. Once data has been received, it will be analyzed expecting a reliability coefficient of 0.70 or more to deem the study acceptable.

The researcher with the help of trained research assistants will deliver the questionnaire to the respondents. Prior to administering the instrument, permission will be obtained from relevant health authorities. Participants will be told what the study is about and that their responses are private and secure. They will collect the completed questionnaires also immediately or within a brief period to guarantee high response rate.

The data will be coded and analysed using the Statistical Package for Social Sciences (SPSS). Descriptive statistics will determine the criterion mean (2.50) for decision-making, and comparison with reported means to answer research questions; standard deviation provides variability of the data as well.

The hypotheses will be tested as:

- Pearson Product Moment Correlation Coefficient (PPMC) at 0.05 level will be to test the strength and the direction of relationships hypoteses one and two
- Hypothesis three will be empirically tested through a multiple regression analysis with interaction terms allowing for the investigation of the moderating effect socio-demographic characteristics have on the relationship between quality healthcare and sustainability. Interaction terms will be generated as the product of quality healthcare by each socio-demographic variable (e.g., quality healthcare × gender, quality healthcare × years of experience). Moderation requires a significant interaction effect.

Test of Hypotheses

H_{01}: There is no significant relationship between quality healthcare and sustainability among clinical staff in Rivers State, Nigeria.

Table 4.1: Pearson Product Moment Correlation Analysis of Quality Healthcare and Sustainability among Clinical Staff

		Quality Healthcare	Sustainability
Quality Healthcare	Pearson Correlation	1	0.642
	Sig. (2-tailed)		.000
	N	381	381
Sustainability	Pearson Correlation	0.642	1
	Sig. (2-tailed)	.000	
	N	381	381

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

Table 4.1 presented the results of relationship between quality healthcare and sustainability among clinical staff in Rivers state. Analysis showed that the Pearson correlation coefficient (r) was 0.642 and the significant value (p-value) was 0.000, <0.005 level of significance were established between them.

This means clinical personnel with more available quality healthcare tend to be more sustainable. This practically translates to a better healthcare service guarantees, respectively, expressed in sustainability within the healthcare facility. Because the p-value (0.000) is less than 0.05, we reject H0. This means quality healthcare statistically relates to sustainability between clinically staff in Rivers State, Nigeria.

H_{02}: There is no significant relationship between the dimensions of quality healthcare (safety, effectiveness, and patient-centeredness) and sustainability among clinical staff in Rivers State, Nigeria.

Table 4.2: Pearson Product Moment Correlation Analysis of Dimensions of Quality Healthcare and Sustainability

		Sustainability
Safety	Pearson Correlation	.611**
	Sig. (2-tailed)	.000
	N	381
Effectiveness	Pearson Correlation	.587**
	Sig. (2-tailed)	.000
	N	381
Patient-Centeredness	Pearson Correlation	. 653**
	Sig. (2-tailed)	.000
	N	381

The findings in table 4.2 clarify the relationship that exists between dimensions of quality healthcare and sustainability among clinical staff in Rivers State. Results: The correlation coefficient of safety and sustainability was 0.611, the coefficient for effectiveness was 0.587 and the highest coefficient with a value of 0.653 resulted for patient centeredness (see table). The value of p (0.000) is less than the significance level 0.05, so all the relationships are significant with respect to statistical analysis.

This implies that sustainability is positively correlated to all three quality healthcare dimensions significantly. This suggests that better safety practices, more effective and patient-centered care are linked to greater sustainability in the delivery of healthcare.

Of the three dimensions, patient-centeredness makes the most robust link with sustainability, which means that healthcare systems prioritizing patient participation and communication and respect for patients represent a greater likelihood for sustainable outcomes. Strong associations between safety and effectiveness provide further evidence, suggesting that both adherence to clinical measures of performance and provision of appropriate care are directly related to health system sustainability.

From these findings, the null hypothesis is rejected as there exist a significant relationship between dimensions of quality healthcare and sustainability among clinical staff in Rivers State Nigeria

H_{03}: Socio-demographic characteristics of clinical staff do not significantly moderate the relationship between quality healthcare and sustainability in Rivers State, Nigeria.

Table 3: Model Summary for Moderation Analysis

Model	R	R^2	Adjusted R^2	Std. Error of Estimate
1	0.642	0.412	0.410	0.398
2	0.701	0.491	0.486	0.372
3	0.745	0.555	0.548	0.348

The model summary for moderation analysis which determined the impact of socio-demographic on quality healthcare and sustainability among clinical staff is shown in Table 3.

The first model (Model1) indicates a direct impact of quality healthcare on sustainability as shown in Fig. 6, Model 1 with correlation coefficient R =0.642 and Coefficient of determination R^2 =0.412. This means that quality healthcare alone explains 41.2% of the variance in sustainability.

Socio-demographic variables such as gender, and years of experience, qualification were added in Model 2. With socio-demographic characteristics added, the R value increases to 0.701 (R^2=0.491) and the explanatory power of the model is improved to 49·1% (Table 5).

In Model 3, we add the interaction terms between quality healthcare and socio-demographic characteristics. The R value increases further at 0.745 and the R^2 becomes: 0.555. And therefore the complete model does account for 55.5% of the variance in sustainability. Furthermore, the increase in R^2 from Model 2 to Model 3 is non-negligible ($\Delta R^2 = 0.064$), indicating that adding the interaction terms enhances explanatory power of this model.

This stage in the three models suggests that socio–demographic characteristics moderate quality healthcare-sustainability relationships. The increased model fit after accounting for interaction terms suggests that the strength of the relationship between quality healthcare and sustainability is dependent on socio-demographics.

Table 4: Multiple Regression Coefficients Showing Moderating Effects

Variables	B	Std. Error	Beta	t-value	Sig.
(Constant)	0.842	0.213		3.953	0.000
Quality Healthcare	0.518	0.052	0.472	9.962	0.000
Gender	0.086	0.041	0.098	2.098	0.037
Years of Experience	0.143	0.049	0.156	2.918	0.004
Qualification	0.121	0.046	0.132	2.630	0.009
Quality × Gender	0.074	0.028	0.119	2.643	0.009
Quality × Years of Experience	0.091	0.031	0.141	2.935	0.004
Quality × Qualification	0.068	0.027	0.112	2.519	0.012

Table 4: Multiple regression coefficients for moderating effects of socio-demographic characteristics on quality healthcare-sustainability relationship in clinical staff, Rivers State

The result shows that quality healthcare has a major positive effect on sustainability ($\beta = 0.472$, $p < 0.05$), which indicates that improvements in the quality of healthcare most positively correlate with better sustainable development outcomes. There are also significant direct effects of socio-demographic variables on sustainability such as gender ($\beta = 0.098$, $p = 0.037$), years of experience($\beta = 0.156$, $p = 0.004$) and qualification (β=0.132, $p = 0.009$).

The more important point is that, all the interaction variables between quality healthcare and socio-demographic variables are statistically significant. Introduction of the interaction terms quality healthcare with gender ($\beta = 0.119$, $p = 0.009$), quality healthcare with years of experience ($\beta = 0.141$, $p = 0.004$) and quality healthcare with qualification ($\beta = 0.112$, $p = 0.012$), suggested that these socio-demographic factors substanially moderated the association between quality healthcare and sustainability

On the other hand, it suggests a disparate strength of association between quality healthcare and sustainability by demographic characteristics among clinical staff. E.g. the impact of high-quality healthcare may be larger in effect among older or higher-qualified staff.

These results show that socio-demographic factors form a significant moderate between quality healthcare and sustainability of clinical staff in Rivers State, Nigeria, leading to the rejection of the null hypothesis.

Discussion of Findings

This study determined that there is a very good significance positive correlation of quality health care and sustainability among clinical staff in Rivers State, Nigeria. This thus suggests that quality enhancements in healthcare, specifically related to safety, effectiveness and patient-centeredness are linked with better sustainability of healthcare services. This observation is consistent with the work by Gruen et al. performed before. (2008) who noted that sustainable healthcare systems rely heavily on the delivery of high-quality care and optimal resource use. The present finding that quality healthcare directly promotes sustainability can be seen as confirmation of their argument, in 'representing' Peters et al.'s conclusion that although standalone quality improvements had generally shown short-term benefits but poor long-term sustainability within sustainable systems will falter over time.

In the same vein, result corroborates the works of Kadiri-Eneh et al. (2018) reported that the working environments of healthcare professionals greatly impact service delivery outcomes. Parker-Goodman found that variables including job satisfaction, motivation and workforce stability are essential for quality healthcare (2018). This leads to the suggestion that clinical staff will be more likely to consistently deliver high-quality care if supported in sustainable systems, which is consistent with and reinforces the strong association observed in this study.

Additionally, the results indicated statistically significant positive relationships with sustainability in all quality healthcare dimensions examined (safety, effectiveness and patient-centeredness). Patient-centeredness had the most robust association among these. Association with this finding was reported by Peruma et al. (2025), shows that patient-centred care practice has a substantialimpact on healthcare outcomes, and service delivery effectiveness. The main message of their research is that patient engagement and autonomy in decision-making are determined significantly by health care providers, and it is necessary to improve trust, satisfaction margin, and intention to continue using health services, which are important pillars of sustainability.

Safety as a dimension of quality healthcare is also consistent with the findings of Nwosu et al. (2019) stating that poor awareness and implementation of patient safety practices among the healthcare professionals can adversely affect outcomes in health care. Through their study, they provided evidence of how lapses, including insufficient compliance with protocols, adversely impact the provision of services. This study builds on such understanding, benefiting health care quality via better safety practices but also extending our comprehension to the long-term sustainability of health care systems.

Furthermore, the strong link between effectiveness and sustainability also adds weight to Chukwuemeka (2022)s results, as it has been found that effective healthcare practices — especially those based on good safety culture and communication increase patient satisfaction and outcomes in a health system. Their results indicate that effectiveness in clinical practice is the major contributor to immediate and long-term healthcare performance, a finding also consistent with the present study.

Additionally, the findings of this study indicated that socio-demographic variation substantially moderates the efficacy of quality healthcare in reinforcing sustainability. This means that the strengths of relationships between variables varies depending on clinical staff types. Guo et al. also supported this finding.[9] (2025) demonstrated unmet workforce traits such as resilience, experience and wellbeing are strongly associated with performance and retention among healthcare workers. As was shown by their study, individual and organizational factors shape the way health care workers respond to workplace demands that in turn influence service delivery and sustainability.

Further, the moderation role of years in experience and professional qualification found in this study were similar to findings of Kadiri-Eneh et al. (2018) whose results indicated that professional cadre and experience are essential predictors of job satisfaction and performance of healthcare workers. This indicates that experienced and highly trained human resources are better able to transform quality health care practices into sustainable results based on accumulated knowledge and skill.

In conclusion, the results of this study confirm to some extent what has already been shown in empirical literature and strengthens our argument on interdependence between quality healthcare as well as sustainability domains. This research further contribute to the literature by highlights significant moderating effect of socio-demographic variables among its well-known influence neglected in previous studies littered on Rivers State, Nigeria.

Conclusion

This study investigated the relationship between quality healthcare and sustainability of clinical staff in Rivers State. Conclusions: The results linked quality healthcare with sustainability, showing that advances in safety, effectiveness and patient-centeredness have substantive effects on the sustainability of health services. Results of the study also confirmed that all aspects of quality healthcare are positively associated with sustainability, but patient-centeredness was established as being the most important dimension.

It also discovered that socio-demographic traits such as gender, experience in years, and professional qualification positively moderate the relationship between quality healthcare and sustainability This pattern implies that specific demographic groups translate quality healthcare practices into sustainable outcomes due to differences in clinical staff. In conclusion, the study reaffirms that before any meaningful improvement in healthcare delivery can be achieved sustainably, not only should powers of care quality improve but also the characteristics of workforce and climate on which clinical staff perform.

Recommendations

1. Healthcare administrators and policymakers in Rivers State should focus on strengthening clinical protocols, patient-centered care practices and safety standards across facility types to enhance quality healthcare delivery.
2. Government and healthcare management authorities should ensure the adequacy of staff and continue education and training to reduce or prohibit shortages in key clinical resources, while consistently ensuring that enough essential supplies are available enabling health services employees functioning well.
3. Based on the significance of socio-demographic characteristics (experience and professional qualification) in determining the impact of quality healthcare on sustainability, it is recommended that workforce-sensitive policies should be operationalized in health institutions when designing interventions, training programmes and allocation methods to ensure effective utilization of available resources.

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