

EMPLOYEE RESILIENCE AND ORGANIZATIONAL CULTURE AS DETERMINANTS OF SUSTAINABLE PERFORMANCE IN SOME TERTIARY HOSPITALS: A STUDY OF OYO STATE, NIGERIA

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Article History

Received: 27 / 08 / 2025 Accepted: 16/ 09 / 2025 Published: 20 / 09 /2025 Abstract: This study explores the impact of employee resilience and organizational culture on sustainable performance within tertiary hospitals in Oyo State, Nigeria. Using a mixed-methods research design, data were collected from 338 healthcare professionals across four major hospitals through structured questionnaires and in-depth interviews. The study aimed to examine both the direct influence of employee resilience on performance outcomes and the moderating role of organizational culture in this relationship. Quantitative data were analyzed using multiple regression techniques. Findings reveal that employee resilience significantly predicts sustainable performance ($\beta = 0.514$, p < 0.001), emphasizing the importance of cognitive, behavioural, and contextual adaptability in improving healthcare delivery. Organizational culture also demonstrated a significant positive impact on performance ($\beta = 0.403$, p < 0.001), with attributes such as openness, collaboration, and innovation contributing to enhanced operational outcomes. Furthermore, the interaction between resilience and culture ($\beta = 0.247$, p = 0.003) confirmed that a supportive culture strengthens the resilience-performance link. The study is underpinned by the Resource-Based Theory, Conservation of Resources Theory, and Social Exchange Theory, all of which reinforce the strategic importance of human capital and organizational environment in sustaining institutional excellence. The research recommends integrating resilience-building into staff development programmes and fostering a culture of trust, communication, and support across healthcare institutions. The findings have practical implications for hospital administrators, policymakers, and human resource managers seeking to improve healthcare quality, employee well-being, and institutional sustainability in Nigeria's healthcare system.

Keywords: Employee Resilience, Organizational Culture, Sustainable Performance, Tertiary Hospitals, Healthcare Management.

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Introduction

The organizational structure of any institution fundamentally determines how it functions, evolves, and achieves its stated objectives. In the healthcare sector, which is intrinsically linked to the well-being and survival of populations, the structure of an organization does not merely reflect its internal hierarchy but actively shapes its efficiency, responsiveness, and ability to meet complex service demands. Organizational structure defines how roles, responsibilities, authority, and communication flow within an institution, influencing how efficiently resources are utilized and how quickly and effectively decisions are made (Kenton, 2023).

multifaceted challenges, including insufficient funding, poor infrastructure, and an overstretched workforce institutional design and governance mechanisms have become critical factors in improving service delivery. Effective organizational structures serve as strategic enablers that provide clarity, reduce redundancies, and align individual and departmental functions with broader institutional and national health objectives. Whether the structure is functional, emphasizing specialization and departmental segmentation; matrix, encouraging cross-functional

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coordination; flat, supporting decentralization and speed; or divisional, enabling geographical or service-line segmentation, each model influences how healthcare outcomes are achieved.

Importantly, these structures must remain dynamic and adaptive, capable of evolving in response to changing healthcare demands such as emerging diseases, technological advancements, demographic transitions, and global health crises. Within Nigerian health institutions, particularly tertiary hospitals that serve as referral and teaching centers inefficient organizational models can contribute to slow response times, disjointed communication, unclear accountability channels, and staff burnout, all of which directly undermine patient care and public trust.

Empirical evidence suggests that well-structured institutions are more likely to perform optimally. As Akinola, Afolabi, and Dike (2023) note, institutions with clear, responsive, and purpose-driven organizational frameworks exhibit higher levels of employee performance, increased accountability, and more effective allocation of human and material resources. Additionally, such structures facilitate regular monitoring, evaluation, and policy review, helping institutions stay aligned with their mission and responsive to community health needs.

However, even the best organizational structure cannot deliver its full potential in the absence of strong human capital. Healthcare is fundamentally human-centred. The sector relies heavily on skilled professionals doctors, nurses, laboratory technicians, administrative personnel, and support staff who deliver care, make real-time decisions, and interact with patients on a daily basis. These professionals operate under immense pressure, often in under-resourced environments, and their capacity to remain effective depends not only on their technical skills but also on their psychological well-being and institutional support systems.

Human Resources (HR) departments thus play a strategic role in shaping organizational performance. Beyond recruitment and training, HR units are responsible for developing policies related to occupational health, employee welfare, safety, and professional development, all of which have direct implications for organizational outcomes. In healthcare institutions, HR must function proactively, implementing programs that enhance employee engagement, reduce burnout, and promote a culture of support and resilience (Health and Safety Guide, n.d.).

A growing body of literature emphasizes the importance of employee resilience in healthcare. Resilience refers to the ability of individuals to cope with, recover from, and even grow through adverse experiences. In the high-pressure context of Nigerian healthcare, where professionals are regularly confronted with long working hours, traumatic cases, inadequate equipment, and emotional fatigue, resilience becomes essential for maintaining not just personal well-being, but also the standard of care delivered to patients (Cleary et al., 2018; Cooper, Liu & Tarba, 2014).

Resilience is influenced by both individual traits (such as adaptability, emotional regulation, and optimism) and organizational conditions. Institutions that foster open communication, psychological safety, continuous learning, and supportive leadership tend to cultivate more resilient workforces (Lupṣa et al., 2020). According to Sools and Mooren (2012), organizational resilience defined as the collective capacity of an institution to respond and adapt to shocks emerges when structures and culture prioritize flexibility, inclusion, shared responsibility, and access to support systems. Such environments empower

employees to withstand professional challenges, make sound decisions under pressure, and sustain motivation even during crises

Moreover, organizational culture, which encompasses the shared values, beliefs, norms, and practices within a workplace, profoundly impacts how employees perceive their work, relate to colleagues, and engage with institutional goals. A culture that promotes collaboration, fairness, recognition, and inclusiveness enhances employee morale and loyalty, reducing turnover and fostering institutional continuity. Conversely, toxic or hierarchical cultures can demoralize workers, increase conflict, and drive skilled personnel out of the system.

In Nigeria, where health workers have frequently cited poor working conditions, lack of recognition, unclear career pathways, and minimal psychological support as demotivating factors, the intersection of structure, culture, and resilience has become an urgent area of inquiry. The COVID-19 pandemic further exposed these vulnerabilities. Frontline workers across the country faced overwhelming patient loads, high infection risks, and emotional distress, with many succumbing to burnout or leaving the profession altogether (Lawal et al., 2022). These outcomes underscore the need for systemic transformation that prioritizes not only infrastructure and technology but also human resource sustainability.

Within Oyo State, which houses several tertiary health institutions serving large populations across urban and rural areas, the challenges are particularly pronounced. Reports indicate insufficient staffing, equipment shortages, inadequate funding, and structural inefficiencies that hinder service delivery. Healthcare workers in these institutions must contend with daily operational and emotional pressures, making resilience not just desirable but indispensable. Yet, despite its importance, little empirical research has been conducted to examine how organizational structure and culture interact to influence resilience and sustainable performance in Nigerian healthcare settings.

This study seeks to bridge this knowledge gap by investigating the interrelationships among organizational structure, organizational culture, employee resilience, and sustainable performance in tertiary hospitals in Oyo State. It explores the degree to which structural frameworks and cultural dimensions shape the resilience of healthcare workers, and how, in turn, this resilience affects service quality, institutional stability, and long-term sustainability.

By adopting a multidimensional perspective, this research aims to generate evidence-based insights that can inform policy reforms, institutional restructuring, and workforce management strategies. Understanding these relationships is critical for designing healthcare systems that are not only efficient and patient-centered but also capable of withstanding future shocks, be it pandemics, economic downturns, or political instability.

In doing so, the study contributes to the broader discourse on sustainable healthcare delivery in low- and middle-income countries and offers practical recommendations for stakeholders in health governance, hospital administration, human resources, and public policy. The ultimate goal is to promote a resilient, responsive, and sustainable healthcare system in Nigeria, one where both institutions and individuals are empowered to thrive

Objectives of the Study

The broad objective of the study is to examine the role of employees' resilience and organizational culture in the sustainable performance of tertiary hospitals in Oyo State, Nigeria. To achieve this objective, the following specific objectives were developed to:

- Examine the nature of relationships that exist between employee resilience level, organizational culture, and sustainable performance;
- Examine the influence of employee-level resilience on sustainable performance;
- Determine the impact of organizational culture on tertiary hospitals sustainable performance;
- Investigate the moderating role of organizational culture in the relationship between employee resilience level and tertiary hospitals sustainable performance;
- Examine the impact of medical personnel's resilience on patient satisfaction in tertiary hospitals.

Research Questions

The study aims to answer the following research questions:

- What is the relationship between employee resilience, organizational culture, and sustainable performance?
- How does employee resilience influence sustainable performance?
- What is the impact of organizational culture on sustainable performance?
- What is the moderating role of organizational culture in the resilience-performance relationship?
- How does employee resilience affect patient satisfaction?

Research Hypotheses

The study formulates the following null hypotheses:

- H01: Employee resilience does not significantly influence sustainable performance.
- H02: Organizational culture does not significantly affect sustainable performance.
- H03: Organizational culture does not significantly moderate the resilience-performance relationship.

Operational Definition of Terms

- Employees: Medical personnel (doctors, nurses, therapists, etc.) working in various healthcare professions at Oyo State Tertiary Hospitals during the study period.
- Employee Resilience: The ability of medical personnel to demonstrate positive attitudes and characteristics across cognitive (thinking), behavioural (actions), and contextual (environmental) levels.
- Employee-Level Resilience Factors: Measurable characteristics that determine an employee's resilience across cognitive, behavioural, and contextual levels (e.g., optimism, adaptability, problem-solving skills, social support networks).
- Sustainable Performance: A multi-faceted measure of an organization's performance that considers waste management, efficient resource utilization, cost control, service delivery quality, employee satisfaction, and patient satisfaction.
- Organizational Culture: The shared beliefs, values, and behaviours that define the typical way of working within

- an organization, such as the tertiary hospitals. This culture can be characterized by elements like openness, trust, proactiveness, autonomy, and collaboration.
- Tertiary Hospitals: Also known as university hospitals or specialist centers, these are healthcare institutions that provide specialized medical care to patients and serve as training grounds for student doctors in their respective specialties.
- Patients: Individuals receiving medical care or treatment, either in an inpatient or outpatient setting.
- Healthcare Service Delivery: The provision of medical treatment and supplies to patients within a healthcare system, ensuring they receive the care they are entitled to
- Coping Mechanisms: Conscious or unconscious strategies adopted to manage environmental stress, aiming to enhance control over behaviour or provide psychological comfort. Examples include relaxation techniques, social support seeking, or problem-solving approaches.
- Adhocracy: An organizational structure that emphasizes individual initiative and self-organization in achieving tasks. It minimizes reliance on rigid rules and hierarchies, promoting flexibility and responsiveness to changing demands.
- Hierarchy: A system of ranking members of an organization or society based on relative status or authority. This establishes clear lines of reporting and decision-making within the organization.

Literature Review

Employee Resilience

Employee resilience refers to the ability of workers to adapt and thrive amidst challenges, including unforeseen changes and stressful conditions. This concept has become increasingly critical in modern workplaces, particularly in the healthcare sector, where high stress levels are routine. Resilience is multidimensional, encompassing the following:

Cognitive Dimension: Cognitive resilience includes problem-solving skills, decision-making abilities, and creative thinking that enable employees to manage complex situations effectively. Proactive behaviours fostered by cognitive resilience ensure employees remain resourceful during crises. For instance, healthcare professionals often utilize their cognitive skills to adapt to rapidly changing patient care demands, thereby maintaining service quality (Gherhes, Vorley, & Williams, 2018; Santoro, Meesseni-Petruzzelli, & Del Giudice, 2021). Cognitive resilience is also vital for innovation, particularly when employees are required to devise solutions under resource constraints.

Behavioural Dimension: This dimension includes adaptability, perseverance, and self-discipline. Behavioural resilience ensures that employees can maintain productivity in adverse circumstances by demonstrating learned resourcefulness and ingenuity. Such traits allow workers to respond swiftly and effectively to organizational challenges. Behavioural resilience is especially important in high-stress environments, such as during the COVID-19 pandemic, where healthcare workers displayed remarkable adaptability and self-discipline to meet unprecedented demands (Cleary et al., 2018; Lupşa et al., 2020).

Contextual Dimension: Contextual resilience revolves around interpersonal relationships, knowledge sharing, and an environment of psychological safety. These factors ensure employees feel supported and secure, enabling them to perform optimally under pressure. In healthcare settings, a supportive work environment, characterized by strong interpersonal connections and open communication, plays a significant role in mitigating stress and burnout (DeTore et al., 2022; Robertson et al., 2015).

Organizational Culture

Organizational culture refers to the shared values, practices, and beliefs that influence behaviour and performance within an organization. In healthcare, elements such as openness, trust, collaboration, and innovation are particularly vital in fostering resilience and sustainable performance. Organizations with robust cultures provide psychological safety, encourage proactivity, and create an environment conducive to adaptability and growth (Naranjo-Valencia, Jiménez-Jiménez, & Sanz-Valle, 2015; Bhardwaj & Kalia, 2021).

Alignment with Organizational Goals: Strong organizational cultures align employee objectives with broader institutional goals, thereby enhancing resilience and performance. For example, healthcare organizations that emphasize collaborative teamwork often achieve better patient outcomes due to aligned priorities and cohesive efforts.

Reduction of Burnout: Effective cultural frameworks reduce burnout and promote mental well-being. For instance, organizations fostering a culture of trust and respect create environments where employees feel valued, leading to increased job satisfaction and reduced absenteeism (Pedrosa et al., 2021; Kuo & Tsai, 2019).

Encouragement of Innovation: Cultures that support experimentation and learning encourage employees to innovate and adapt to dynamic challenges. This is particularly critical in healthcare, where innovation directly impacts patient care and operational efficiency (Oh & Han, 2020).

Sustainable Performance

Sustainable performance extends beyond immediate outcomes to encompass long-term economic, social, and environmental goals. In healthcare, sustainable performance involves optimizing service delivery, maintaining cost efficiency, and ensuring both employee and patient satisfaction. Achieving these outcomes requires a dual focus on resilience and organizational culture.

Integration with Sustainability Goals: Sustainable performance aligns with broader sustainability imperatives, including the United Nations' Sustainable Development Goals (SDGs). These goals emphasize economic growth, social inclusion, and environmental sustainability, making them relevant for healthcare institutions aiming to balance resource utilization and patient care (United Nations, 2015; Fortistar, 2023).

Systemic Efficiencies: Addressing systemic inefficiencies, such as resource wastage and high employee turnover, is crucial for sustainable performance. Resilient employees and strong organizational cultures contribute to reducing inefficiencies, enhancing overall productivity (Santoro et al., 2021).

Enhanced Well-being: A focus on sustainability not only improves operational outcomes but also enhances the well-being of

employees and patients. This dual benefit underscores the importance of resilience and organizational culture in achieving holistic success in healthcare organizations (Lin & Liao, 2020; Stentoft & Freytag, 2020).

Resource-Based Theory (RBT)

Originally developed by Wernerfelt (1984) and later advanced by Barney (1991), the Resource-Based Theory posits that an organization's ability to gain and sustain competitive advantage lies in the effective acquisition, development, and deployment of strategic internal resources. According to RBT, resources must exhibit four key characteristics; Valuable, Rare, Inimitable, and Non-substitutable (VRIN), to confer sustained performance benefits.

In the context of healthcare institutions, particularly tertiary hospitals in Nigeria, resilient employees qualify as strategic resources. Their ability to adapt to high-pressure environments, respond to frequent operational disruptions, and remain productive despite systemic constraints, such as inadequate infrastructure, long working hours, and erratic funding makes them invaluable assets. Unlike financial or technological resources, resilience is embedded in the workforce and is difficult to replicate by competitors, fulfilling the VRIN criteria.

Moreover, when healthcare institutions invest in resilience-enhancing programmes, such as stress management workshops, continuing professional development, flexible scheduling, and mental health interventions, they are essentially nurturing this strategic resource. These investments improve staff adaptability, innovation, and engagement, which are critical in environments marked by unpredictability and resource scarcity. Thus, RBT provides a foundational rationale for viewing employee resilience not merely as a soft skill but as a core intangible resource that can drive sustainable organizational performance in the healthcare sector.

Conservation of Resources (COR) Theory

The Conservation of Resources (COR) Theory, developed by Hobfoll (1989), centers on the principle that individuals strive to acquire, retain, and protect resources that they value whether material, social, personal, or psychological. When these resources are threatened, lost, or insufficient to meet environmental demands, individuals experience stress, which may culminate in burnout or reduced performance. Conversely, resource acquisition and conservation help individuals build resilience and better cope with challenges.

In Nigerian tertiary hospitals, where chronic underfunding, limited personnel, and high patient-to-provider ratios are commonplace, healthcare workers frequently operate under extreme stress. According to COR, such high-demand environments deplete critical resources including time, energy, emotional balance, and social support. Without intentional interventions to replenish or protect these resources, employees are likely to experience diminished resilience, reduced motivation, and eventual performance decline.

Implementing resource-conserving strategies, such as peersupport groups, fair workload distribution, provision of psychological services, and opportunities for rest and recuperation enables staff to restore depleted resources and prevent adverse outcomes. Moreover, when organizations adopt policies that anticipate and mitigate resource loss cycles, they create a psychologically safe environment that enhances workforce stability and efficiency. COR theory, therefore, supports this study's aim to identify institutional mechanisms that foster employee resilience as a pathway to sustainable performance.

Social Exchange Theory (SET)

The Social Exchange Theory (SET), introduced by Blau (1964) and refined by Cropanzano and Mitchell (2005), emphasizes the role of reciprocal relationships in shaping human behavior within organizations. SET posits that employees evaluate the actions of their organization based on perceived fairness, support, and trust. When employees perceive that their organization is genuinely invested in their well-being, they are more likely to reciprocate with positive behaviors such as increased commitment, cooperation, innovation, and extra-role performance.

In healthcare institutions, fostering a positive organizational culture characterized by open communication, equity, recognition, and supportive leadership is essential to sustaining high levels of performance and resilience. For instance, when a hospital acknowledges the contributions of its staff, provides opportunities for advancement, and encourages participatory decision-making, it builds a social contract rooted in mutual respect and loyalty. This creates a work environment that strengthens employee resilience, enhances emotional investment, and reduces turnover intentions.

Conversely, when organizational culture is marked by authoritarianism, favoritism, or neglect of employee welfare, trust breaks down, and employees become disengaged or resistant to change. In Nigeria, where many public health institutions struggle with governance inefficiencies and hierarchical rigidity, applying SET can guide cultural transformation efforts that promote mutual accountability and staff empowerment. Thus, SET complements the other two theories by shedding light on how relational dynamics influence resilience and, ultimately, sustainable institutional performance.

Integration of Theories

The integration of Resource-Based Theory, Conservation of Resources Theory, and Social Exchange Theory provides a comprehensive theoretical lens through which to explore the interconnections between employee resilience, organizational culture, and sustainable performance in Nigerian tertiary healthcare institutions.

RBT underscores the strategic importance of resilience as a non-replicable internal resource that must be nurtured and leveraged to achieve organizational goals in competitive and challenging environments. COR highlights the psychosocial mechanisms by which resilience is developed, maintained, or eroded, pointing to the importance of protecting employee well-being through intentional organizational support systems. SET draws attention to the relational context in which employees operate, emphasizing that supportive, trust-based relationships within an organization enhance both resilience and performance through mutual reciprocity.

Together, these theories reinforce the study's focus on the human and cultural dimensions of performance sustainability, offering a robust conceptual foundation for empirical investigation. They guide the analysis of how Nigerian tertiary hospitals can strategically align their structures, cultures, and human capital initiatives to not only survive but thrive in the face of persistent healthcare system challenges.

Methodology

Research Design

This study adopted a mixed-methods research design specifically, a sequential explanatory strategy that integrates both quantitative and qualitative approaches. The quantitative phase focused on measuring employee resilience, organizational culture, and performance through

structured questionnaires, while the qualitative phase offered contextual insights via semi-structured interviews. This approach enabled a nuanced understanding of the interplay among resilience, culture, and sustainable outcomes.

Population and Sampling

The population consisted of healthcare professionals and patients across four major tertiary hospitals in Oyo State: University College Hospital (UCH), Ladoke Akintola University of

Technology Teaching Hospital (LAUTECHTH), State Hospital Adeoyo, and Baptist Medical Centre, Saki. A stratified sampling technique was used to ensure representativeness across cadres (doctors, nurses, pharmacists, admin staff) and patients.

The study population consisted of 2,167 medical personnel across four tertiary hospitals in Oyo State:

Table 1: Population of Healthcare Professionals

LGA	Ward	Facility	Facility Level	Population
Ibadan North	Yemetu	Adeoyo Teaching Hospital	Teaching Hospital	255
Ibadan North	Bodija	University College Hospital (UCH)	Teaching Hospital	970
Ogbomoso North	Osupa 4	Bowen Teaching Hospital	Teaching Hospital	430
Ogbomoso North	Saabo/Taara	LAUTECH Teaching Hospital	Teaching Hospital	512
Total				2,167

To determine an appropriate and manageable sample size from this population, Yamane's formula was applied at a 95% confidence level with a 5% margin of error, yielding a sample size of 338 respondents. The sample was proportionally allocated to each

facility based on its staff population size to ensure representativeness.

Table 2: Sample Size of Healthcare Professionals

Facility	Population	Sample Size
Adeoyo Teaching Hospital	255	40
University College Hospital (UCH)	970	151
Bowen Teaching Hospital	430	67
LAUTECH Teaching Hospital	512	80
Total	2,167	338

This sampling strategy ensured balanced representation across the four hospitals, reflecting variations in institutional size, healthcare delivery models, and administrative practices. The sample includes a range of healthcare professionals such as doctors, nurses, pharmacists, medical laboratory scientists, and administrative staff, thereby allowing for generalization within the tertiary healthcare workforce in Oyo State.

Data Collection Procedure and Research Instruments

Data collection was conducted in two phases, quantitative and qualitative to enhance the reliability and depth of the research findings. Structured questionnaires were administered to the 338 sampled healthcare workers across the four selected tertiary hospitals. The questionnaires were distributed both physically and electronically, depending on the accessibility and preferences of the respondents. The researchers coordinated with Human Resource Departments and departmental heads to facilitate the smooth administration and retrieval of questionnaires. This phase focused on capturing measurable data regarding resilience, organizational culture, and performance outcomes. Following the analysis of quantitative data, semi-structured interviews were conducted with 12 purposively selected healthcare managers and senior medical staff to gather in-depth perspectives on how resilience and culture influence performance. This qualitative component allowed for a deeper understanding of contextual variables, organizational dynamics, and perceived challenges and opportunities.

The study employed three major instruments:

Employee Resilience Scale (ERS) which was adapted from the Resilience at Work Scale (RAW-S), this tool measured resilience across cognitive, behavioural, and contextual domains. Items focused on problem-solving skills, emotional regulation, adaptability, social support, and perseverance. Organizational Culture Assessment Instrument (OCAI) which was developed by Cameron and Quinn (2011), this instrument classified organizational culture into four typologies: clan, adhocracy, market, and hierarchy. It measured aspects such as leadership style, organizational glue, strategic emphasis, and dominant characteristics.

Sustainable Performance Index (SPI) that was a researcher-developed tool that captured sustainability-related performance indicators. These included metrics such as service delivery efficiency, resource utilization, employee retention, job satisfaction, and patient satisfaction. Each instrument was validated by experts in public health, psychology, and organizational behaviour. A pilot study was conducted with 25 participants from a non-sampled hospital to test clarity and reliability. The instruments showed high internal consistency, with Cronbach's alpha

coefficients ranging between 0.78 and 0.89, indicating robust reliability. Ethical approval was obtained from the Oyo State Ministry of Health Research Ethics Committee, and informed consent was collected from all participants before the commencement of data collection.

Data Analysis and Results

The data obtained from the field survey were meticulously analyzed using the Statistical Package for the Social Sciences (SPSS), Version 26, which provided a reliable platform for both descriptive and inferential statistical procedures. The analysis was strategically structured in two key stages, descriptive and inferential to effectively address the research objectives, profile the participants, and test the formulated hypotheses regarding the interrelationships among employee resilience, organizational culture, and sustainable performance in Nigerian tertiary hospitals.

Descriptive Analysis

The first stage involved the use of descriptive statistics to generate an overview of the socio-demographic characteristics and resilience profiles of the respondents. Descriptive measures such as frequencies, percentages, means, and standard deviations were computed and presented in tables and charts to facilitate interpretation and visualization.

Key variables described included: Gender distribution of the healthcare workers (e.g., male vs. female representation). Job designation and cadre (e.g., nurses, physicians, administrative personnel). Years of experience, reflecting professional maturity and exposure to organizational dynamics. Departments/units, capturing diversity in institutional functions and environments. Exposure to workplace stressors and utilization of coping mechanisms, which informed the resilience indices. The descriptive data not only provided demographic context but also helped identify patterns and trends in resilience behaviors and cultural experiences among the workforce, offering a baseline for deeper inferential analysis.

Inferential Analysis

In the second stage, inferential statistics were employed to examine the relationships among the study variables and test the research hypotheses. The primary statistical method used was multiple regression analysis, which allowed for:

- Assessment of the direct effects of the independent variables (employee resilience and organizational culture) on the dependent variable (sustainable performance).
- Examination of the interaction effects, specifically whether organizational culture moderated the relationship between employee resilience and performance outcomes.

To achieve these objectives, the hypotheses were tested across three distinct regression models:

Model 1:

This model investigated the direct effect of employee resilience on sustainable performance. It tested the assumption that higher levels of resilience among employees would positively predict improved organizational outcomes such as service quality, adaptability, and long-term stability in healthcare delivery.

Model 2:

The second model tested the independent effect of organizational culture on sustainable performance. It aimed to determine whether supportive and constructive workplace cultures, characterized by trust, communication, and shared values, have a significant impact on institutional sustainability irrespective of individual resilience levels.

Model 3:

This final model introduced an interaction term between employee resilience and organizational culture to evaluate the moderating effect of organizational culture. The model tested whether the influence of resilience on sustainable performance became stronger or weaker under different cultural conditions, thereby highlighting the synergistic role of a positive work environment.

Regression Assumptions Testing

Before interpreting the results, all key assumptions of the multiple regression analysis were rigorously tested and satisfied to ensure the validity and robustness of the model estimates:

- Linearity: Scatterplot diagrams were used to confirm linear relationships between the independent and dependent variables, validating that the regression model was appropriate for the data.
- Normality of residuals: Histograms and Q-Q plots of the standardized residuals showed a bell-shaped distribution, indicating that residuals followed a normal pattern.
- Homoscedasticity: Residual plots displayed a uniform scatter around the regression line, confirming that the error terms had constant variance across all levels of the independent variables.
- Multicollinearity: Variance Inflation Factor (VIF) values for each predictor were all below the conservative threshold of 5, suggesting that multicollinearity was not a concern and the independent variables were not excessively correlated.

Statistical Significance and Interpretation

A 5% level of significance (p < 0.05) was adopted for hypothesis testing. This means that findings with p-values below 0.05 were considered statistically significant. The regression models produced standardized beta coefficients (β), which were used to assess the direction and strength of the relationships between variables:

- Positive beta values indicated direct positive relationships (e.g., greater resilience leading to higher performance).
- Negative beta values indicated inverse relationships, where an increase in one variable corresponds to a decrease in another.

The effect sizes and p-values were presented in detailed tables, along with Adjusted R-squared values, which measured the proportion of variance in sustainable performance explained by the predictors in each model. These results provided critical empirical evidence supporting the theoretical assertions of the study.

These findings underscore the multidimensional drivers of performance in healthcare settings and reinforce the argument that resilience-building efforts must be coupled with strategic cultural enhancements for optimal outcomes.

Conclusion of Analytical Process

The dual-layered analytical approach adopted in this study, descriptive profiling and inferential modeling ensured a holistic interpretation of the data. By rigorously validating regression assumptions, utilizing multiple regression techniques, and articulating effect sizes and significance levels, the study provides a robust empirical foundation for drawing credible conclusions. This comprehensive approach adds validity to the theoretical propositions, enhances the generalizability of the findings, and forms a solid basis for the development of evidence-based interventions and policy recommendations aimed at strengthening sustainable performance in Nigeria's tertiary hospitals.

Test of Hypotheses

 Hypothesis 1: Employee resilience significantly influences sustainable performance.

Table 3: Employee Resilience on Sustainable Performance

Predictor	В	Std. Error	Beta	t	Sig.
Employee Resilience	0.419	0.069	.514	6.072	*000

The results of the regression analysis reveal a statistically significant and positive relationship between employee resilience and sustainable performance in Nigerian tertiary hospitals. Specifically, the analysis yielded a p-value less than 0.001 (p < 0.001), indicating that the observed effect is highly unlikely to have occurred by chance and is statistically robust at the 0.1% significance level. The standardized beta coefficient ($\beta=0.514$) demonstrates a moderately strong effect size, suggesting that resilience is a substantial predictor of sustainable performance. In practical terms, this means that for every one-unit increase in the resilience score of healthcare employees, there is a corresponding and measurable increase in the organization's sustainable performance index. This positive association emphasizes that resilience is a meaningful determinant of outcomes that define sustainability in healthcare, such as:

Enhanced patient satisfaction due to improved interpersonal communication, empathy, and consistent service delivery. Higher service quality, as resilient employees tend to maintain focus, manage stress effectively, and uphold standards even under pressure. Operational efficiency, where resilient individuals adapt quickly to change, solve problems proactively, and minimize downtime caused by stress or burnout. Moreover, the t-value of 6.072 exceeds conventional thresholds (typically 2.0 or higher), further affirming the statistical significance and practical relevance of the predictor variable. This strong t-statistic underlines the robustness of the relationship and reinforces confidence in the reliability of the model.

These findings provide compelling empirical support for the theoretical assumptions underpinning the study, particularly those derived from the Resource-Based Theory (RBT) and the Conservation of Resources (COR) Theory. From the RBT perspective, resilience can be seen as a strategic internal resource that is valuable, rare, inimitable, and non-substitutable (VRIN), thus offering hospitals a competitive edge. According to COR theory, resilience functions as a protective mechanism, enabling individuals to conserve and effectively utilize psychological and emotional resources under stressful conditions. Importantly, this

result reframes resilience from being merely an individual psychological trait to being a strategic institutional asset. In the high-pressure and resource-constrained environments typical of tertiary healthcare institutions, especially in developing economies like Nigeria, fostering resilience among staff becomes essential for long-term sustainability. Institutions that prioritize employee resilience through training, mental health support, work-life balance initiatives, and empowerment programs are more likely to experience enhanced workforce engagement, reduced turnover, and improved service delivery. The statistically significant and positively signed coefficient for employee resilience underscores the centrality of human capital in achieving sustainable healthcare performance. It advocates for organizational policies that actively promote resilience as a core competency and integral part of institutional development strategy.

• Hypothesis 2: Organizational culture significantly affects sustainable performance.

Table 4: Organizational Culture on Sustainable Performance

Predictor	В	Std. Error	Beta	t	Sig.
Organizational Culture	0.316	0.061	.403	5.180	.000*

The regression analysis further revealed that organizational culture has a statistically significant and positive effect on sustainable performance in tertiary hospitals, as evidenced by a p-value less than 0.001 (p < 0.001). This indicates a high level of confidence in the result and confirms that the relationship between organizational culture and performance is not due to random variation. The standardized beta coefficient (β = 0.403) demonstrates a substantial positive influence, though marginally lower than that of employee resilience (β = 0.514). This finding signifies that organizational culture is a critical institutional factor contributing to performance outcomes, and its effect size suggests that it plays a strong, though complementary, role in shaping the sustainable success of healthcare organizations.

In practical terms, this means that hospitals characterized by a positive organizational culture, marked by values such as openness, teamwork, innovation, accountability, and shared purpose are more likely to experience sustained improvements in areas such as: Service delivery efficiency, as clear norms and collaborative work environments streamline communication and workflow. Employee engagement, with staff feeling more motivated, valued, and aligned with institutional goals. Patient-centered care, where values of empathy, respect, and integrity are reflected in everyday practices. Institutional adaptability, as innovative cultures support continuous learning and responsiveness to environmental challenges.

The significance of these results reinforces the understanding that organizational culture is not merely an ambient or background condition, but rather a dynamic force that actively shapes behavior, decision-making, and interpersonal relationships within healthcare settings. A strong culture aligns individual actions with the collective mission, reduces ambiguity in roles and expectations, and cultivates trust and commitment across hierarchical levels. Furthermore, the findings support theoretical insights drawn from the Social Exchange Theory (SET), which posits that when organizations cultivate a supportive and empowering culture, employees are more likely to reciprocate with increased loyalty, productivity, and adaptability. In healthcare

institutions where demands are high and resources often stretched, the presence of a cohesive culture serves as a psychological buffer that enables staff to perform effectively even in high-stress conditions.

The impact of culture on performance also aligns with the Conservation of Resources (COR) Theory, whereby a positive cultural environment contributes to the retention and replenishment of employee resources, reducing burnout and enhancing resilience. Cultures that promote collaboration, recognition, and well-being can mitigate the adverse effects of stress and contribute directly to the sustainability of institutional operations. In the context of Nigerian tertiary hospitals, where systemic constraints such as underfunding, staff shortages, and infrastructural challenges persist, the findings underscore the strategic necessity of cultivating a resilient organizational culture. Hospitals that invest in cultural transformation initiatives including leadership development, staff involvement in decision-making, values-based training, and clear communication structures, are more likely to foster internal cohesion and deliver consistently high-quality care. This study confirms that organizational culture is a core enabler of sustainable performance. It serves not only as the foundation upon which policies and procedures are implemented but also as the social fabric that binds individuals together in pursuit of shared institutional goals. Building and maintaining a positive culture is therefore essential for long-term success in the healthcare sector.

 Hypothesis 3: Organizational culture moderates the resilience-performance relationship.

Table 5: Organizational culture on Resilience-Performance

Interaction Term	В	Std.	Beta	t	Sig.
		Error			
Employee Resilience *	0.238	0.078	.247	3.050	.003*
Culture					

The introduction of an interaction term in the regression model revealed that organizational culture significantly moderates the relationship between employee resilience and sustainable performance in tertiary hospitals. The result, with a p-value of 0.003, is statistically significant and indicates that the influence of resilience on performance is contingent upon the nature of the prevailing organizational culture. The moderate standardized beta coefficient ($\beta=0.247$) shows a meaningful interaction effect, suggesting that the positive impact of resilience on sustainable performance is strengthened in organizations that possess a supportive and empowering culture. In contrast, in environments where the culture is dysfunctional, characterized by poor communication, lack of recognition, authoritarian leadership, or resistance to change the beneficial effects of resilience are diminished or even neutralized.

In practical terms, this finding emphasizes that resilience alone is insufficient to drive sustainable performance unless it is nurtured and enabled by the surrounding institutional culture. Even the most resilient healthcare professionals, those who demonstrate high emotional intelligence, adaptability, perseverance, and stress tolerance may find their efforts constrained or undermined in toxic cultural climates. For example, a resilient nurse may burn out quickly in an environment where staff input is routinely ignored, leadership is punitive, and innovation is discouraged. Conversely, when organizational culture is characterized by inclusivity, mutual respect, recognition, open communication, shared values, and learning orientation, it serves as a catalyst that magnifies the benefits of resilience. In such environments, resilient employees

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are more likely to remain motivated, engaged, and committed to delivering quality care, even amidst resource limitations and systemic challenges. A supportive culture, in effect, transforms resilience from a personal trait into a strategic performance driver by ensuring the alignment between individual strengths and institutional priorities.

This moderating effect is strongly aligned with the principles of the Social Exchange Theory (SET). SET posits that the quality of the relationship between employees and their organizations is governed by reciprocal exchanges, when employees perceive that their well-being, contributions, and development are valued, they are more likely to respond with loyalty, dedication, and discretionary effort. In this context, a positive organizational culture acts as a signal of institutional investment in employees, which in turn strengthens their psychological engagement and performance outcomes. Moreover, the finding supports insights from both the Resource-Based Theory (RBT) and the Conservation of Resources (COR) Theory. From an RBT perspective, the combination of resilient human capital and a supportive culture represents a synergistic internal capability that is valuable, rare, and difficult to replicate thereby creating sustainable competitive advantage. COR Theory, on the other hand, suggests that a supportive culture serves as a resource-enhancing mechanism, replenishing employees' psychological reserves and enabling them to withstand and recover from stressors more effectively.

Within the Nigerian tertiary healthcare context, where practitioners often operate under conditions of chronic stress, limited funding, and systemic inefficiencies, this result has profound implications. It underscores the need for hospital administrators to go beyond simply building individual capacity and to foster an organizational culture that reinforces and leverages resilience. Investing in cultural interventions such as leadership training, staff engagement programs, transparent communication practices, and inclusive governance models is essential for unlocking the full potential of resilient employees. The study's findings confirm that organizational culture is not only an independent driver of performance but also a key moderator that conditions the effectiveness of employee resilience. By shaping the organizational environment in which resilience is exercised, culture can either amplify or dampen its performance-enhancing effects. Tertiary hospitals aiming to achieve sustainable performance must, therefore, adopt a dual approach: enhancing individual resilience and simultaneously cultivating a culture that supports and sustains that resilience in practice.

Findings and Discussion

The empirical analysis conducted in this study provides robust evidence that employee resilience plays a crucial role in driving sustainable performance in tertiary hospitals across Oyo State, Nigeria. The regression analysis yielded a statistically significant and strong positive coefficient ($\beta=0.514,\,p<0.001$), indicating that resilient employees contribute substantially to improved organizational outcomes. These outcomes include higher staff retention, reduced absenteeism, consistent service delivery under stress, and the ability to navigate complex health challenges. Resilience enables employees to maintain composure and effectiveness in high-pressure environments, a common feature in tertiary healthcare institutions due to limited resources, high patient loads, and unpredictable operational challenges.

This finding is consistent with the works of Cleary et al. (2018), who emphasized resilience as a protective factor against burnout in high-stress healthcare roles, and Gherhes et al. (2021), who noted that resilient workers are better equipped to innovate and remain productive even in adverse situations. Such characteristics are vital in resource-constrained environments like those of Nigerian tertiary hospitals, where external stressors can easily compromise service quality and staff morale. Additionally, the study found that organizational culture has a significant positive influence on sustainable performance ($\beta = 0.403$, p <0.001). A strong and positive organizational culture marked by collaboration, psychological safety, shared values, and ethical leadership was associated with enhanced workforce engagement, streamlined decision-making, and improved patient satisfaction. Tertiary hospitals that exhibit such a culture tend to perform better in service quality, cost control, and employee commitment. These findings echo the perspectives of Pedrosa et al. (2021) and Naranjo-Valencia et al. (2015), who argued that organizational culture is foundational to effective institutional performance, especially in dynamic and uncertain contexts such as healthcare.

The analysis further uncovered that the interaction effect between employee resilience and organizational culture is statistically significant ($\beta=0.247,\ p=0.003$), confirming a moderating relationship. In essence, while resilience on its own contributes positively to sustainable performance, its impact is substantially amplified in hospitals where the organizational culture is supportive and empowering. This suggests that resilience cannot operate optimally in isolation; it requires a conducive organizational environment to fully translate into desirable outcomes. For instance, in a culture that values open communication, inclusivity, and mutual respect, resilient employees are more likely to take initiative, engage in problem-solving, and foster innovation.

This finding aligns with theoretical perspectives such as Social Exchange Theory (SET) and Conservation of Resources Theory (COR). SET posits that when employees perceive reciprocal support from their organization, they are more motivated to contribute positively. COR Theory suggests that access to supportive resources, like a positive culture helps individuals preserve and invest their psychological resources effectively. Together, these theories reinforce the idea that internal organizational mechanisms can either enable or hinder the manifestation of individual capabilities like resilience. Overall, the findings validate the proposed conceptual framework of this study: that employee resilience, particularly when moderated by a positive organizational culture, significantly predicts sustainable performance in tertiary healthcare institutions. This underscores the strategic importance of investing not only in workforce capacity development but also in building institutional cultures that are adaptable, inclusive, and resilient.

Conclusion

Based on the analysis, the study concludes that both employee resilience and organizational culture are not only critical but also interdependent factors in achieving sustainable performance in tertiary healthcare institutions. The data confirms that employees who possess high resilience can better manage stress, recover from setbacks, and maintain high levels of productivity. However, the presence of a strong organizational culture is necessary to maximize these individual strengths. In the specific context of Oyo State, where tertiary hospitals often face

operational constraints such as inadequate funding, workforce shortages, and infrastructural challenges, building a resilient workforce supported by a healthy and enabling organizational culture is essential for long-term sustainability. Such synergy enhances not only the effectiveness and efficiency of service delivery but also ensures better health outcomes for patients and improved job satisfaction for staff.

Moreover, the study contributes to the literature by providing empirical support for Resource-Based Theory, Conservation of Resources Theory, and Social Exchange Theory. These theoretical frameworks collectively illustrate how internal organizational capabilities, such as resilience and culture, are key intangible assets that drive competitive advantage and performance, especially in dynamic sectors like healthcare.

Recommendations

In light of the findings, the following recommendations are made to guide stakeholders in the healthcare sector, including hospital administrators, human resource managers, and policymakers:

Tertiary hospitals should develop structured programmes aimed at enhancing the cognitive, behavioral, and contextual resilience of healthcare workers. These programmes could include mindfulness training, adaptive thinking exercises, emotional regulation workshops, and crisis management simulations. Such interventions will equip staff with the tools needed to withstand and recover from workplace stressors.

Leadership should actively work to build a supportive and inclusive work environment by promoting values such as trust, openness, mutual respect, and innovation. Strategies may include transparent communication, collaborative decision-making processes, structured staff recognition, and periodic feedback mechanisms to ensure that staff feel valued and heard.

Human Resources (HR) departments should incorporate resilience-related indicators, such as adaptability, problem-solving capacity, emotional intelligence, and self-management into employee evaluation frameworks. This would signal the importance of these attributes and encourage staff to actively develop them.

HR departments should also champion the formulation and enforcement of workplace well-being policies. These should include access to professional counseling services, provision of flexible work arrangements, regular stress and burnout audits, and development of employee assistance programmes (EAPs).

Policymakers and health regulators should ensure that hospital performance metrics are aligned with broader national health policy frameworks by incorporating indicators related to workforce resilience and organizational culture. This alignment will support the implementation of evidence-based reforms and foster consistency in service delivery improvements across institutions.

Investments should be made in ongoing professional development programmes that include modules on stress management, team dynamics, and change leadership to keep staff equipped for evolving healthcare challenges.

By adopting these recommendations, stakeholders can create a holistic ecosystem where both individual and institutional

capacities are developed synergistically, thereby ensuring longterm sustainable performance in Nigeria's tertiary healthcare sector.

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