International Journal of Management Foresight and Strategy | ISSN 3087-4386
Published by BIRPUB https://birpub.org/ijmfs
Imp. Factor: 7.256

Effect of Cultural Diversity on Firm Performance: Evidence from the Healthcare Sector in Enugu State, Nigeria

Cyrus Apeh Abah [1], Orji Amela Ngozika [2] & Njoku Onyedika Brian[3]

Abstract

This study examined the effect of cultural diversity on firm performance in the healthcare sector in Enugu State, Nigeria. The study specifically evaluates (i) the effect of team collaboration on cost effectiveness, and (ii) the effect of patient-centered care on regulatory compliance among healthcare firms. A descriptive survey design was employed, and data were collected using a structured questionnaire administered to the entire staff population (N = 233) of the National Orthopaedic Hospital, Enugu. Out of these, 226 questionnaires were duly completed and returned. Data were analyzed using descriptive statistics, Likert-scale measures, and Z-test statistics for hypothesis testing. The findings show that team collaboration has a significant positive effect on cost effectiveness ($Z = 9.180$, $p < 0.05$), while patient-centered care has a significant positive effect on regulatory compliance ($Z = 10.776$, $p < 0.05$). The study concludes that cultural diversity expressed through collaborative teamwork and patient-centered practices positively affects the performance of healthcare firms in Enugu State. It recommends that healthcare organizations implement structured team-collaboration frameworks, including multidisciplinary team meetings and shared decision-making protocols, to strengthen coordination, communication, and overall performance outcomes.

Keywords: *Cultural diversity, Firm performance, Team collaboration, Patient-centered care, Regulatory compliance, Healthcare sector*

Cite*:* Cyrus, A. A., Orji, A. N. & Njoku, O. B. (2025). Effect of Cultural Diversity on Firm Performance: Evidence from the Healthcare Sector in Enugu State, Nigeria. *International Journal of Management Foresight and Strategy, 4 (1), 1-20.*

Authors	Affiliation
1	ESUT Business School, Department of Project Management, Enugu State University of Science and Technology (ESUT), Enugu State, Nigeria
2	Department of Business education, Federal College of Education (FCE), Eha-Amufu, Enugu State, Nigeria
3	ESUT Business School, Department of Business, Enugu State University of Science and Technology (ESUT), Enugu state, Nigeria

Introduction

In today's globalized healthcare environment, organizations increasingly operate within multicultural contexts, serving patients and employing professionals who differ in ethnicity, language, values, and socio-cultural orientation. Cultural diversity has therefore shifted from being a demographic attribute to a strategic organizational factor with the potential to influence healthcare performance. When effectively managed, cultural diversity can enhance knowledge sharing, enrich decision-making, improve patient outcomes, and strengthen institutional competitiveness. However, when poorly handled, it may impede communication, increase workplace conflict, and compromise service delivery.

Evidence from contemporary healthcare research reflects this duality. For instance, systematic integrative reviews have shown that unmanaged cultural differences can disrupt team communication, diminish coordination, and undermine both staff performance and patient safety (Minkovitz et al., 2023; Oxelmark et al., 2023). Similar findings have emerged in the Nigerian context. Adeleke et al. (2019) report that ethnic diversity within private healthcare organizations in Kogi State correlated negatively with patient satisfaction in the absence of supporting structures that facilitate inclusion and cohesion.

On the other hand, a growing body of empirical and review studies demonstrates that proactive diversity management through structured communication, cultural competence training, and inclusion frameworks can significantly enhance performance outcomes. Dreachslin et al. (2019), in a comprehensive sector-wide review, found a positive association between cultural diversity and both quality of care and financial performance in healthcare organizations. Likewise, research in the global pharmaceutical sector indicates that culturally diverse teams outperform homogeneous teams in innovation and problem-solving when guided by inclusive practices and high levels of cultural intelligence (Peltokorpi & Clausen, 2020). Leadership cultural intelligence, in particular, has been identified as a critical driver of this positive effect, with studies showing its significant impact on organizational performance and its interaction with supportive organizational structures (Khakbaz & Moeini, 2020).

Beyond workforce dynamics, cultural competence frameworks such as national and institutional standards on culturally appropriate services have been widely implemented to reduce health disparities, strengthen patient engagement, and improve service effectiveness. These frameworks emphasize communication adaptability, respect for cultural preferences, and patient-centered care as core performance enhancers in healthcare delivery.

Taken together, the existing literature underscores that cultural diversity functions as a double-edged sword: a potential source of organizational advantage when supported by inclusive leadership, structured collaboration mechanisms, and cultural competence training, but a possible liability when left unmanaged. This complexity highlights the need for context-specific empirical investigations, particularly in developing economies where healthcare systems often operate under resource constraints and within highly heterogeneous socio-cultural settings.
In the context of Enugu State, Nigeria, where healthcare institutions increasingly rely on multicultural workforces and serve culturally diverse populations, understanding how cultural diversity influences firm performance is both timely and necessary. Examining this effect

provides evidence-based insights that can guide managerial practice, strengthen healthcare delivery, and enhance organizational performance within the sector.

Statement of the Problem

Cultural diversity has become an increasingly prominent feature of healthcare organizations due to globalization, migration, and demographic shifts in both the workforce and patient populations. While this diversity presents opportunities for improved service delivery, innovation, and enriched decision-making, the benefits are not automatically realized. Effective management is essential for healthcare firms to translate cultural diversity into enhanced communication, stronger teamwork, and superior patient engagement.

However, in many healthcare institutions particularly within developing contexts such as Enugu State structured mechanisms for managing cultural diversity remain weak or nonexistent. Inadequate diversity management can result in miscommunication, interpersonal conflict, reduced team cohesion, and inconsistent patient care practices. These challenges directly impact key dimensions of firm performance, including operational efficiency, cost effectiveness, staff collaboration, and compliance with regulatory standards.

Despite the growing relevance of cultural diversity in healthcare, empirical evidence on its concrete effect on firm performance in Nigeria remains limited and fragmented. Existing studies often overlook how culturally influenced team processes, such as collaboration and patient-centered care practices, shape organizational outcomes. This gap contributes to persistent performance issues in healthcare firms, including suboptimal teamwork, rising operational costs, and recurring lapses in regulatory compliance.

If cultural diversity continues to be poorly managed or inadequately assessed, healthcare organizations may experience declining performance, weakened coordination among employees, inefficient resource utilization, and reduced patient satisfaction. These problems underscore the need for a context-specific empirical investigation into how cultural diversity affects firm performance in healthcare institutions in Enugu State, with particular attention to team collaboration, cost effectiveness, patient-centered care, and regulatory compliance.

Objectives of the study

The main objective of the study was to examine the effect of cultural diversity on firm performance in the healthcare sector in Enugu State, Nigeria. The specific objectives are to:

i. Ascertain the effect of team collaboration on the cost effectiveness of healthcare firms in Enugu State.
ii. Evaluate the effect of patient-centered care on the regulatory compliance of healthcare firms in Enugu State.

Research Questions

The following research questions guided the study;

i. What is the effect of team collaboration on cost effectiveness of healthcare firms in Enugu State?
ii. What is the effect of patient-centered care on regulations compliance of healthcare firms in Enugu State?

Statement of Hypotheses

The following hypotheses guided the study;

i. Team collaboration has no statistically significant effect on cost effectiveness of healthcare firms in Enugu State
ii. Patient-centered care has no statistically significant effect on regulations compliance of healthcare firms in Enugu State

Significance of the Study

This study offers important contributions to both practice and policy within the healthcare sector. Practically, the findings will assist healthcare administrators in understanding how cultural diversity influences team collaboration, cost effectiveness, and regulatory compliance. Such insights can guide the development of diversity-sensitive management strategies, including structured team-collaboration frameworks and patient-centered care protocols that enhance organizational performance. For project managers, the results provide a clearer understanding of how culturally diverse teams interact, communicate, and coordinate tasks. This knowledge can improve the planning, execution, and monitoring of healthcare projects, particularly in environments where cultural differences shape staff behavior and decision-making. Government agencies and healthcare regulators will also benefit from the study, as it highlights areas where policy interventions, cultural competence standards, and regulatory frameworks can strengthen institutional performance and service delivery. The evidence can support the design of inclusive policies that promote effective workforce management and increase compliance with healthcare regulations. Indirectly, patients stand to gain from more efficient, culturally responsive, and patient-centered healthcare systems. Improved communication, better collaboration among staff, and higher organizational efficiency ultimately contribute to enhanced patient experiences and outcomes. Hence, this study advances understanding of how cultural diversity affects firm performance in Nigerian healthcare institutions and supports the development of more inclusive, efficient and responsive healthcare systems.

Review of Related Literature

Conceptual Review

Cultural Diversity

Cultural diversity refers to the presence and interaction of individuals from different cultural backgrounds, encompassing ethnicity, race, language, religion, socioeconomic status, gender identity, and other social factors within a given environment. In healthcare, cultural diversity is especially significant because it shapes how patients perceive illness, communicate symptoms, make decisions, and respond to treatment. Recognizing and effectively managing this diversity is key to delivering equitable, high-quality care. A comprehensive integrative review highlighted that culturally diverse healthcare teams bring rich perspectives and enhanced problem-solving capacity. However, without engaged leadership and cultural-awareness training, diversity can also lead to communication breakdowns, increased conflict, and reduced team effectiveness (Wolters Kluwer Health, 2023). In Plastic and Reconstructive Surgery Global Open, the authors define cultural competence as the ability to collaborate effectively across cultural lines. They stress that healthcare systems with cultural and ethnic diversity are better positioned to address health disparities, improve patient experiences, and foster trust in underserved populations (Adeleke et al., 2019).

Team Collaboration

Team collaboration refers to the dynamic and coordinated efforts of individuals working interdependently to achieve a common goal, typically characterized by shared responsibility, mutual respect, and complementary skills. It is a strategic mechanism through which organizations harness collective competence to address complex tasks and deliver successful projects. In healthcare firms. especially those operating in culturally diverse settings collaboration becomes both a necessity and a challenge.

Multiple definitions highlight this concept from different dimensions: it can be viewed as a social process requiring active engagement among individuals to solve problems together (Kozlowski & Ilgen, 2015); as a communication-dependent activity involving the integration of knowledge from various disciplines (Tuckman & Jensen, as extended by Salas et al., 2018); and as a system of mutual interdependence designed to enhance productivity and innovation in task execution (Schmutz et al., 2019).

In the context of healthcare project delivery, where timelines are strict, resources limited, and quality expectations high, the synergy created through effective team collaboration becomes crucial (Ainsworth & Oldham, 2020; Imran et al., 2021). Culturally diverse teams, in particular, must overcome barriers such as language differences, communication styles, and contrasting work ethics to align efforts and achieve common outcomes (Reiche, Lee & Quintanilla, 2019; Stahl et al., 2017; Ang et al., 2020).

Patient-Centered Care

Patient-centered care is a transformative and indispensable framework that aligns healthcare delivery with the unique values, cultural contexts, and expectations of individual patients. In multicultural environments, this model ensures that healthcare firms deliver care that is not only clinically effective but also culturally competent and inclusive.

By integrating patient-centered principles into project delivery, digital innovations, and clinical routines, healthcare providers can foster greater trust, reduce disparities, and enhance overall service quality. As healthcare systems continue to confront complex challenges, embedding patient perspectives into every layer of decision-making remains central to achieving sustainable and equitable health outcomes (Anhang Price et al., 2015; Epstein & Street, 2016; Barry & Edgman-Levitan, 2018; Nkrumah & Abekah-Nkrumah, 2023; WHO, 2023).

Performance

Performance in healthcare firms is a multidimensional concept that extends beyond financial metrics. It encompasses the ability of organizations to deliver high-quality patient care, operate efficiently, manage resources effectively, and contribute positively to public health. Unlike organizations in traditional industries, healthcare firms must balance economic viability with social responsibility and clinical outcomes.

Financial performance remains a central aspect, reflecting how effectively a firm generates revenue, controls costs, and creates stakeholder value. Traditional indicators such as return on assets (ROA), return on equity (ROE), and revenue growth are commonly used. Park and Guahk (2017) argue that healthcare firms tend to record higher ROE and ROA compared to firms in other sectors due to intensive investments in research and development (R&D), which drive innovation and long-term value creation.

Cost Effectiveness

Cost effectiveness refers to the ability to achieve desired outcomes using the least amount of financial and material resources. In the healthcare sector, it implies delivering high-quality care and achieving favorable patient outcomes without incurring unnecessary costs. This concept is especially critical in project delivery, where resource allocation must be strategically planned to ensure value for money.

Healthcare projects such as facility development, electronic health record implementation, or public health campaigns are often evaluated by comparing the costs incurred with the health benefits gained, using tools like cost-effectiveness analysis (CEA) or cost-utility analysis (CUA) (Drummond et al., 2015; Raftery et al., 2017; Neumann et al., 2018; Akazili et al., 2020; Onwujekwe et al., 2021).

In culturally diverse healthcare settings, cost effectiveness becomes more complex, as project designs must accommodate diverse patient needs without compromising financial sustainability. For example, providing multilingual services, cultural competency training, and culturally tailored interventions may increase initial costs but can lead to improved compliance and outcomes, making them cost-effective in the long term (Wong et al., 2016; Ojo & Okafor, 2019; Ekezie et al., 2020; Uzochukwu et al., 2022; Karam et al., 2023).

In low-resource environments such as many regions in Nigeria, cost effectiveness is a crucial metric for prioritizing interventions, especially given limited funding for healthcare infrastructure and services. Projects designed to reduce maternal mortality or improve access to primary care are assessed not only for their impact but also for their economic efficiency (WHO, 2020; Eze et al., 2019; Oleribe et al., 2021). Therefore, cost effectiveness in healthcare project delivery is not solely about minimizing expenses but about maximizing impact per unit of investment while addressing diverse cultural and demographic realities.

Regulatory Compliance

Regulatory compliance in healthcare refers to adherence to laws, regulations, guidelines, and standards governing medical practices, patient safety, data protection, and operational procedures. It ensures that healthcare organizations operate within legal boundaries while maintaining high standards of service delivery, quality assurance, and ethical conduct.

These regulations are enforced by government bodies such as ministries of health, professional councils, and international organizations like the World Health Organization (WHO). In Nigeria, agencies such as the National Agency for Food and Drug Administration and Control (NAFDAC) and the Medical and Dental Council of Nigeria (MDCN) play key roles in enforcing regulatory standards.

Compliance is essential not only to avoid penalties but also to build public trust, guarantee patient safety, and promote accountability in service provision (Adebayo et al., 2017; Olalekan & Adenike, 2019; WHO, 2021; Fagbohun et al., 2022; Okechukwu & Onuoha, 2023).

Conceptual framework

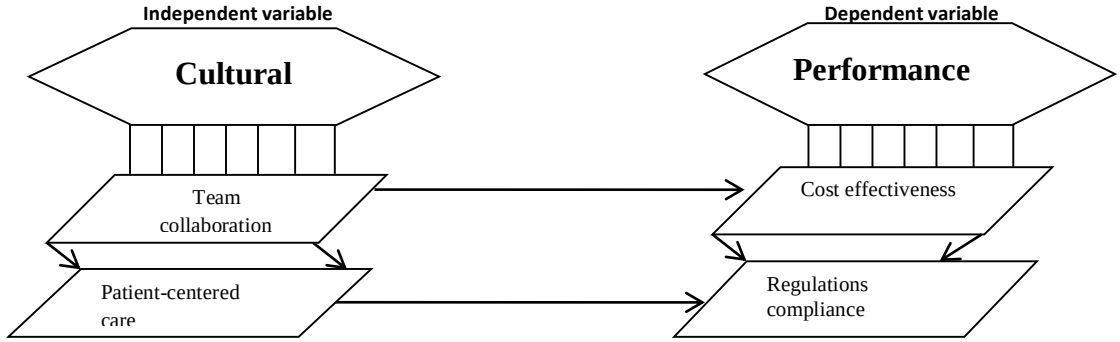

Fig 2.1 conceptual framework of the study

In Figure 2.1 above, it shows that cultural diversity in healthcare firms affects performance, through two key mediating variables: Team collaboration and Patient-centred care (PCC). Specifically, when healthcare firms embrace team collaboration, it leads to improved efficiency by reducing misunderstandings and enhancing employee adaptability. In turn, greater Patient-centred care (PCC) among culturally diverse staff fosters better performance, as clear and respectful interactions improve patient experiences and coordination of care. A

Theoretical Review

This study is anchored on **Hofstede's Cultural Dimensions Theory (1980)**, as it best explains how cultural awareness, communication patterns, and team collaboration influence project delivery outcomes in culturally diverse healthcare firms. The theory provides a framework for understanding how cultural differences shape workplace relationships, communication behaviors, and organizational performance, especially in multicultural environments such as healthcare institutions in Enugu State.

Hofstede's Cultural Dimensions Theory (1980)

Hofstede's Cultural Dimensions Theory explains how national culture influences behavior within organizations. The theory identifies key cultural dimensions—such as power distance, individualism versus collectivism, uncertainty avoidance, masculinity versus femininity, long-term orientation, and indulgence versus restraint—that shape how individuals interact, make decisions, handle conflict, and collaborate within diverse teams. These dimensions are particularly relevant in healthcare settings where employees and patients come from varied cultural backgrounds.

Differences in cultural values can influence expectations about hierarchy, communication styles, teamwork, and problem-solving. For example, high power-distance environments may discourage open communication, which can impede team collaboration, while collectivist cultures may support teamwork but challenge independent decision-making. Understanding these dynamics helps healthcare managers design effective communication strategies, foster inclusiveness, and improve team performance.

Hofstede's theory is highly relevant to the study objectives. First, it clarifies why cultural awareness is essential for enhancing efficiency, as employees who understand cultural variations communicate more effectively and collaborate more willingly. Second, the theory provides insight into how cultural dimensions influence patient-centered care, shaping how patients express concerns, make decisions, and respond to treatment. Third, by applying cultural competence principles derived from Hofstede's framework, healthcare organizations can strengthen team collaboration, reduce costly misunderstandings, and improve cost-effectiveness in project execution. Lastly, culturally sensitive communication aligned with Hofstede's dimensions can promote regulatory compliance by ensuring that both staff and patients are well informed, respected, and engaged in care processes.

Hence, Hofstede's Cultural Dimensions Theory offers a comprehensive foundation for understanding cultural diversity within healthcare settings and its influence on organizational performance, project delivery, and service quality in Enugu State.

Empirical Review

Team Collaboration and Cost Effectiveness

Kan (2024) investigated the critical relationship between team dynamics, communication, and productivity within firms. With an increasingly interconnected and dynamic business landscape, understanding how these factors influence organizational performance is paramount. The research aims to provide insights into how effective team dynamics and communication strategies contribute to enhanced productivity levels in firms. The methodology employed involves quantitative analysis of survey data collected from employees across different departments within firm. Statistical techniques such as T-Test, chi-square, ANOVA are utilized to discern patterns and relationships between team dynamics, communication practices, and productivity metrics. The findings of this research are expected to contribute to the existing body of knowledge by offering practical recommendations for firms to optimize their team dynamics and communication strategies to bolster productivity. By identifying key drivers and barriers to effective collaboration, organizations can implement targeted interventions and initiatives to foster a conducive work environment that nurtures high-performing teams and maximizes overall productivity.

Khadija (2024) explored the impact of workplace diversity on organizational performance, analyzing both the positive and negative effects of diverse workforce composition. The research investigates how diversity in race, gender, and cultural backgrounds influences creativity, innovation, and decision-making, thereby affecting organizational growth and profitability. Theoretical frameworks and empirical studies are reviewed to understand the complexities and contradictions in the relationship between diversity and performance. The findings indicate that while diversity can enhance productivity and innovation, it may also lead to challenges such as

miscommunication and conflict. The study provides practical implications for organizations seeking to leverage diversity to improve performance.

Nduhura et al. (2024) examined the effect of teamwork on employee performance among Small and Medium Enterprises in Kampala. A case study at Exquisite Solution Limited. The study employed descriptive research design since the analysis unit was based on only one firm. A case study design was used to select a sample size of 50 respondents and Purposive and Simple random sampling procedures were used. Secondary data was collected and it's what was used to explain the research phenomenon. The study concluded that the worker productivity increases when there is effective communication among the teams and within the organization. The study concluded that the worker productivity increases when there is effective communication among the teams and within the organization. The study examined and evaluated the effect of teamwork on Employee Performance among Small and Medium Enterprises in Kampala, a case study of Exquisite Solution Limited. Based on the findings, there is a positive and significant relationship between effective communication and employee performance. Therefore, effective communication in the entertainment industry is an essential tactic that has been performed which can extract the ultimate of the employee to help both organization and the employees to achieve their goal. Level of trust has a positive and significant relationship with employee performance as referring to the findings.

Eyiah et al. (2025) investigated the management of cultural diversity and its implications for the success of infrastructure projects. It was conducted qualitatively at a multinational organisation, involving twelve semi-structured interviews with participants from Europe, Asia, America, and Africa. Content analysis identifies relevant units and categories based on theory and empirical data. A positive work environment promotes flexibility in decision-making through effective communication, problem-solving, and distinctive familial characteristics. Key success factors include effective communication, team building, strong relationships, language barriers, diverse perspectives, mutual respect, hygiene, safety, welfare facilities, and technical challenges. Successful construction firms integrate changes in cross-cultural team selection, joint decision-making, communication, teamwork, effective people selection, and project selection, enabling consistent high-performance levels across various organisational levels in project teams. Project managers can enhance team dynamics, productivity, and project success by promoting cultural diversity through training in interpersonal skills, language proficiency, and cultural intelligence, encouraging collaboration, clear goals, and inclusive decision-making processes.

Khassawneh & Mohammad (2025) investigated the impact of workforce diversity on organizational performance (OP) from the perspective of resource-based view (RBV) theory in the context of the hospitality sector in the United Arab Emirates (UAE). We suggest training and performance appraisal as moderators. Sequential regression analysis was applied, including information from directors, unit managers, supervisors, low-level workers, and customers, as well as financial outcomes from 167 organizations in the UAE (683 full-time employees) in the hospitality sector, including hotels, restaurants, theme parks, travel agents, recreational centers, and museums. This analysis assisted in supporting the hypotheses. The findings confirm that there is a positive relationship between diversity and OP. Additionally, the emphasis on training and performance appraisal will strengthen this relationship and lead to higher organizational performance. This improvement is expected to increase customer satisfaction and sales growth. Researchers have emphasized the necessity of conducting a comprehensive investigation to fully understand the impact of diversity on OP.

Patient-centered Care and Regulatory Compliance

Yu et al. (2023) explored the association between patient-centered care (PCC) and inpatient healthcare outcomes, including self-reported physical and mental health status, subjective necessity of hospitalization, and physician-induced demand behaviors. A cross-sectional survey was conducted to assess patient-centered care among inpatients in comprehensive hospitals through QR codes after discharge from September 2021 to December 2021 and had 5,222 respondents in Jiayuguan, Gansu. The questionnaire included a translated 6-item version of the PCC questionnaire, physician-induced behaviors, and patients' socio demographic characteristics including gender, household registration, age, and income. Logistic regression analyses were conducted to assess whether PCC promoted self-reported health, the subjective necessity of hospitalization, and decreased physician-induced demand. The interactions between PCC and household registration were implemented to assess the effect of the difference between adequate and inadequate healthcare resources.PCC promoted the patient's self-reported physical (OR = 4.154, $p< 0.001$) and mental health (OR = 5.642, $p< 0.001$) and subjective necessity of hospitalization (OR = 6.160, $p< 0.001$). Meanwhile, PCC reduced physician-induced demand in advising to buy medicines outside (OR = 0.415, $p< 0.001$), paying at the outpatient clinic (OR =0.349, $p< 0.001$), issuing unnecessary or repeated prescriptions and medical tests (OR = 0.320, $p< 0.001$), and requiring discharge and readmitting (OR = 0.389, $p< 0.001$).By improving health outcomes for inpatients and reducing the risk of physician-induced demand, PCC can benefit both patients and health insurance systems. Therefore, PCC should be implemented in healthcare settings.

Dunbar et al. (2023) identified determinants of compliance with such regulation in health and social care services. Searches were carried out on five electronic databases and grey literature sources. Quantitative, qualitative and mixed methods studies were eligible for inclusion. Titles and abstracts were screened by two reviewers independently. Determinants were identified from the included studies, extracted and allocated to constructs in the Consolidated Framework for Implementation Research (CFIR). The quality of included studies was appraised by two reviewers independently. The results were synthesised in a narrative review using the constructs of the CFIR as grouping themes. The search yielded 7,500 articles for screening, of which 157 were included. Most studies were quantitative designs in nursing home settings and were conducted in the United States. Determinants were largely structural in nature and allocated most frequently to the inner and outer setting domains of the CFIR. The following structural characteristics and compliance were found to be positively associated: smaller facilities (measured by bed capacity); higher nurse-staffing levels; and lower staff turnover. A facility's geographic location and compliance was also associated. It was difficult to make findings in respect of process determinants as qualitative studies were sparse, limiting investigation of the processes underlying regulatory compliance.

Tewu et al. (2024) examined the effect of ERM on a firm's operational and financial performances by using two mediating variables of compliance practices and IT strategy. By using a quantitative approach, data was collected through purposive random sampling from 250 bank managers in Jabodetabek, Indonesia. The study found that ERM was found to influence financial and operational performance positively and significantly. Moreover, compliance practices positively and significantly affect both financial and operational performance. IT strategy also has a positive and significant impact on firm performance. In testing the mediating effect, IT strategy partially mediates the relationship between ERM and performance, as do compliance practices. These

findings highlight the importance of ERM, IT strategy, and compliance practices in enhancing the performance of banking companies in Indonesia. The findings validate the increasing importance of risk management in the financial landscape in Indonesia. The recognition of the banking sector's complexity and vulnerability to diverse risk types, including credit, market, operational, and regulatory risks, underscores the critical role of risk management practices.

Jawanjal (2024) examined the significant impact of healthcare policies on the operations and management of hospitals. Through a comprehensive review of existing literature and policy documents, combined with a series of expert interviews, this study delineates how different healthcare regulations shape hospital efficiencies, quality of care, patient outcomes, and financial stability. The analysis focuses on several key policy areas including Medicare and Medicaid reforms, insurance coverage mandates, and quality assurance standards. The findings suggest that well-designed policies can lead to improved hospital performance, whereas poorly crafted regulations may hinder hospital operations. The paper concludes with strategic recommendations for policymakers to support hospital management and improve overall healthcare delivery.

Lagat et al. (2025) explored the determinants of regulatory compliance in construction projects within Nairobi City County, Kenya. It identified nine factors influencing compliance: Suitability of the Project Legal Framework (SLF), Proactiveness of Regulatory Agencies (PRA), Efficiency in Regulatory Processes (ERP), Conduciveness of the Construction Task Environment (CTE), Characteristics of the Project Client (CPC), Competency of Project Leaders (CPL), Goodness of Construction Labour (GCL), Stability of the Prevailing Economic Environment (SEE), and Adherence to Ethical Factors (AEF). A cross-sectional research design sampled 261 projects, with data collected through semi-structured questionnaires administered to construction site supervisors. Multiple Regression Analysis (MRA) was used to analyze the data. The results show that approximately 67% of the variability in regulatory compliance is explained by the nine factors with six significant predictors emerging: CPC, SLF, CTE, CPL, GCL, and PRA. The study found that a more suitable legal framework, more proactive regulatory agencies, a conducive construction environment, competent project leaders, better construction labor, and positive client characteristics all contribute to higher levels of regulatory compliance.

Summary and Gap in Knowledge

Cultural diversity plays a crucial role in shaping organizational performance, yet its specific impact on healthcare project delivery in Nigeria remains underexplored. The intersection of team collaboration, cost-effectiveness, and patient-centered care in regulatory compliance remains an underexplored area. While research on multicultural teams (Misoc, 2017; Yousef, 2024) highlights their innovative potential, few studies examine how these dynamics affect project costs and resource allocation in healthcare. Moreover, although patient-centered care (PCC) is linked to better health outcomes (Engle et al., 2021; Yu et al., 2023), its influence on regulatory compliance in Nigerian healthcare firms has not been studied. Given the stringent requirements of Nigeria’s National Health Insurance Scheme (NHIS) and other regulations, understanding how PCC fosters adherence to these standards is crucial. By investigating these gaps, this study will provide valuable insights for policymakers and healthcare managers seeking to optimize project delivery in culturally diverse settings.

Methodology

The area of the study was Enugu Metropolis, focusing on the evaluation of cultural diversity and its effect on the performance of healthcare firms in the Orthopaedic Hospital, Enugu, Enugu State. Two hundred and thirty-three (233) employees were selected for the study. The study adopted a descriptive survey design. The primary source of data was a questionnaire. Two hundred and twenty-six (226) employees returned their questionnaires, all of which were properly completed, giving a 97 percent response rate. The validity of the instrument was tested using content analysis, and the result was satisfactory. Reliability was tested using the Pearson correlation coefficient (r), which yielded a reliability coefficient of 0.82, also indicating good reliability. Data were presented and analyzed using mean scores and standard deviations. The hypotheses were tested using the Z-test statistical tool.

Data Presentation and Analyses

Data Presentation

The effect of team collaboration and cost effectiveness of healthcare firms in Enugu state

Table 1: Responses to effect of team collaboration and cost effectiveness of healthcare firms in Enugu state

		5 SA	4 A	3 N	2 DA	1 SD	∑FX	- X	SD	Decision
1	Improved inter professional collaboration significantly reduces medical errors and leads to faster decision-making processes	660 132 58.4	204 51 22.6	60 20 8.8	24 12 5.3	11 11 4.9	959 226 100%	4.24	1.127	Agree
2	Promoting collaborative practices not only enhances patient outcomes but also contributes to the efficient use of resources.	655 131 58.0	188 47 20.8	75 25 11.1	20 12 5.3	11 11 4.9	949 226 100%	4.22	1.140	Agree
3	Well-coordinated teams streamline workflows and reduce patient length of stay, and lower readmission rates	655 131 58.0	204 51 22.6	63 21 9.3	24 12 5.3	11 11 4.9	957 226 100%	4.23	1.129	Agree
4	Team collaboration reduces redundancies, avoiding unnecessary tests or minimizing delays in care, and optimizing the use of human and technological resources	665 133 58.8	184 46 20.4	72 24 10.6	24 12 5.3	11 11 4.9	956 229 100%	4.23	1.139	Agree
5	Collaborative teams are better positioned to respond to complex clinical cases by drawing upon diverse expertise and continuity of care	690 138 61.1	204 51 22.6	42 14 6.2	24 12 5.3	11 11 4.9	971 226 100%	4.30	1.114	Agree
	Total grand mean and standard deviation							**3.348**	**1.6244**	

Source: Field Survey, 2025

From table 1 above, 137 respondents out of 226 representing 81.0 percent agreed that Improved inter professional collaboration significantly reduces medical errors and leads to faster decision-making processes with mean score of 4.24 and standard deviation of 1.127.

Promoting collaborative practices not only enhances patient outcomes but also contributes to the efficient use of resources 178 respondents representing 78.8 percent agreed with mean score of 4.22 and standard deviation of 1.140. Well-coordinated teams streamline workflows and reduce patient length of stay, and lower readmission rates 182 respondents representing 80.6 percent agreed with mean score of 4.23 and standard deviation of 1.129. Team collaboration reduces redundancies, avoiding unnecessary tests or minimizing delays in care, and optimizing the use of human and technological resources 179 respondents representing 79.2 percent agreed with mean score of 4.23 and standard deviation of 1.139. Collaborative teams are better positioned to respond to complex clinical cases by drawing upon diverse expertise and continuity of care 189 respondents representing 83.7 percent agreed with a mean score of 4.30 and standard deviation of 1.114

The effect of patient-centered care on regulations compliance of healthcare firms in Enugu state

Table 2: Responses to effect of patient-centered care on regulations compliance of healthcare firms in Enugu state

		5 SA	4 A	3 N	2 DA	1 SD	∑FX	- X	SD	Decision
1	Patient-Centered Care (PCC) fosters a culture of transparency, accountability, and continuous improvement principles that align with the requirements of quality-improvement mandates.	730 146 64.6	204 51 22.6	18 6 2.7	24 12 5.3	11 11 4.9	987 226 100%	4.37	1.092	Agree
2	Institutions that encourage open dialogue with patients, address gaps in care delivery, and prevent adverse events that could trigger regulatory scrutiny or penalties	810 162 71.7	136 34 15.0	21 7 3.1	24 12 5.3	11 11 4.9	1002 226 100%	4.43	1.103	Agree
3	As regulations continue to evolve, the integration of PCC helps to maintaining accreditation and avoiding penalties,	780 156 69.0	136 34 15.0	39 13 5.8	24 12 5.3	11 11 4.9	990 226 100%	4.38	1.122	Agree
4	Value-based purchasing programs increasingly link reimbursement to both patient satisfaction and regulatory adherence.	780 156 69.0	136 34 15.0	39 13 5.8	24 12 5.3	11 11 4.9	990 226 100%	4.38	1.122	Agree
5	Organizations that embed PCC into their operations are better positioned to meet compliance standards	450 90 39.8	324 81 35.8	96 32 14.2	24 12 5.3	11 11 4.9	905 226 100%	4.00	1.093	Agree
	Total grand mean and standard deviation							**4.312**	**1.1064**	

Source: Field Survey, 2025

From table 2, 197 respondents out of 226 representing 87.2 percent agreed that Patient-Centered Care (PCC) fosters a culture of transparency, accountability, and continuous improvement principles that align with the requirements of quality-improvement mandates with mean score of 4.37 and standard deviation of 1.092. Institutions that encourage open dialogue with patients, address gaps in care delivery, and prevent adverse events that could

trigger regulatory scrutiny or penalties 196 respondents representing 86.7 percent agreed with mean score of 4.43 and standard deviation of 1.103 As regulations continue to evolve, the integration of PCC helps to maintaining accreditation and avoiding penalties 190 respondents representing 84.0 percent agreed with mean score of 4.38 and standard deviation of 1.122. Value-based purchasing programs increasingly link reimbursement to both patient satisfaction and regulatory adherence 190 respondents representing 84.0 percent agreed with mean score of 4.38and standard deviation of 1.122. Organizations that embed PCC into their operations are better positioned to meet compliance standards 171 respondents representing 75.6 percent agreed with a mean score of 4.00 and standard deviation of 1.093

Test of Hypotheses

Hypotheses One: Team collaboration has no statistically significant effect on cost effectiveness of healthcare firms in Enugu State

One-Sample Kolmogorov-Smirnov Test

		Improved inter professional collaboration significantly reduces medical errors and leads to faster decision-making processes	Promoting collaborative practices not only enhances patient outcomes but also contributes to the efficient use of resources.	Well-coordinated teams streamline workflows and reduce patient length of stay, and lower readmission rates	Team collaboration reduces redundancies, avoiding unnecessary tests or minimizing delays in care, and optimizing the use of human and technological resources	Collaborative teams are better positioned to respond to complex clinical cases by drawing upon diverse expertise and continuity of care
N		226	226	226	226	226
Uniform Parameters[a,b]	Minimum	1	1	1	1	1
	Maximum	5	5	5	5	5
Most Extreme Differences	Absolute	.584	.580	.580	.588	.611
	Positive	.049	.049	.049	.049	.049
	Negative	-.584	-.580	-.580	-.588	-.611
Kolmogorov-Smirnov Z		8.781	8.714	8.714	8.847	9.180
Asymp. Sig. (2-tailed)		.000	.000	.000	.000	.000

a. Test distribution is Uniform.
b. Calculated from data.

Decision Rule

If the calculated Z-value is greater than the critical Z-value (i.e $Z_{cal} > Z_{critical}$), reject the null hypothesis and accept the alternative hypothesis accordingly.

Result

With Kolmogorov-Smirnon Z – values ranging from 8.714< 9.180and on Asymp. Significance of 0.000, the responses from the respondents as display in the table is normally distributed. This affirms that the assertion of the most of the respondents that **Team collaboration had significant positive effect on cost effectiveness of healthcare firms in Enugu State**

Decision

Furthermore, comparing the calculated Z- values ranging from 8.714< 9.180 against the critical Z- value of .000 (2-tailed test at 97% level of confidence) the null hypothesis were rejected. Thus the alternative hypothesis was accepted which states that between Team collaboration had significant positive effect on cost effectiveness of healthcare firms in Enugu State

Hypotheses Two: Patient-centered care has no statistically significant effect on regulations compliance of healthcare firms in Enugu State

One-Sample Kolmogorov-Smirnov Test

		Patient-Centered Care (PCC) fosters a culture of transparency, accountability, and continuous improvement principles that align with the requirements of quality-improvement mandates.	Institutions that encourage open dialogue with patients, address gaps in care delivery, and prevent adverse events that could trigger regulatory scrutiny or penalties	As regulations continue to evolve, the integration of PCC helps to maintaining accreditation and avoiding penalties,	Value-based purchasing programs increasingly link reimbursement to both patient satisfaction and regulatory adherence.	Organizations that embed PCC into their operations are better positioned to meet compliance standards
N		226	226	226	226	226
Uniform Parameters[a,b]	Minimum	1	1	1	1	1
	Maximum	5	5	5	5	5
Most Extreme Differences	Absolute	.646	.717	.690	.690	.507
	Positive	.049	.049	.049	.049	.049
	Negative	-.646	-.717	-.690	-.690	-.507
Kolmogorov-Smirnov Z		9.712	10.776	10.377	10.377	7.616
Asymp. Sig. (2-tailed)		.000	.000	.000	.000	.000

a. Test distribution is Uniform.
b. Calculated from data.

Decision Rule
If the calculated Z-value is greater than the critical Z-value (i.e $Z_{cal} > Z_{critical}$), reject the null hypothesis and accept the alternative hypothesis accordingly.

Result
With Kolmogorov-Smirnon Z – values ranging from 7.616<10.776and on Asymp. Significance of 0.000, the responses from the respondents as display in the table is normally distributed. This affirms that the assertion of the most of the respondents that **Patient-centered care had significant positive effect on regulations compliance of healthcare firms in Enugu State**

Decision
Furthermore, comparing the calculated Z- values ranging from 7.616<10.776 against the critical Z- value of .000 (2-tailed test at 97% level of confidence) the null hypothesis were rejected. Thus the alternative hypothesis was accepted which states that **Patient-centered care had significant positive effect on regulations compliance of healthcare firms in Enugu State**

Discussion of Findings
From the result of hypothesis one, the calculated Z- values ranging from 8.714< 9.180 against the critical Z- value of .000 which implies that between Team collaboration had significant positive effect on cost effectiveness of healthcare firms in Enugu State. In the support of the result in the literature review, Nduhura, et al., (2024) examined the effect of teamwork on

employee performance among Small and Medium Enterprises in Kampala. The study concluded that the worker productivity increases when there is effective communication among the teams and within the organization. Eyiah, et al., (2025) investigated the management of cultural diversity and its implications for the success of infrastructure projects. Findings::A positive work environment promotes flexibility in decision-making through effective communication, problem-solving, and distinctive familial characteristics.

From the result of hypothesis two, the calculated Z- values ranging from 7.616<10.776 against the critical Z- value of .000 which implies that Patient-centered care had significant positive effect on regulations compliance of healthcare firms in Enugu State**.** In the support of the result in the literature review, Yu et al. (2023) explored the association between patient-centered care (PCC) and inpatient healthcare outcomes, including self-reported physical and mental health status, subjective necessity of hospitalization, and physician-induced demand behaviors. The interactions between PCC and household registration were implemented to assess the effect of the difference between adequate and inadequate healthcare resources. Findings: PCC promoted the patient's self-reported physical and mental health and subjective necessity of hospitalization.

Summary of Findings

i. Team collaboration had significant positive effect on cost effectiveness of healthcare firms in Enugu State, Z(9.180, P < .05)
ii. Patient-centered care had significant positive effect on regulations compliance of healthcare firms in Enugu State, Z(10.776, P < .05)

Conclusion

The study concluded that team collaboration and Patient-centered care had significant positive effect on cost effectiveness and regulations compliance of healthcare firms in Enugu State. Cultural diversity in healthcare firms means the presence of employees from different ethnic, religious, linguistic, and social backgrounds. In Enugu State, the increasing cultural mix within the workforce of healthcare institutions has both positive and negative effects on organizational performance. On the positive side, diversity can improve creativity, decision-making, and service delivery, especially in a multicultural patient environment. Diverse teams often bring varied perspectives that enhance problem-solving and innovation in healthcare practices.

Recommendations

Based on the findings, the following recommendations were proffered:

i. Healthcare firms should implement structured team collaboration frameworks such as multidisciplinary team meetings and shared decision-making protocols to enhance communication and coordination among staff. This promotes efficient resource utilization, reduces service duplication, and ultimately improves cost-effectiveness in healthcare delivery.
ii. Healthcare firms in Enugu State should adopt a patient-centered care model that aligns with regulatory standards by actively involving patients in their treatment decisions, maintaining transparent communication, and regularly updating patient consent and privacy protocols.

References

Adebayo, O., Olalekan, A., & Adenike, F. (2017). Regulatory compliance and organizational performance in Nigerian healthcare. *Journal of Health Management, 19*(3), 245–258.

Akazili, J., Nkrumah, R., & Adomako, P. (2020). Cost-effectiveness analysis in low-resource healthcare settings. *Health Economics Review, 10*(15), 1–12.

Adeleke, B. A., et al. (2019). Impact of workforce diversity on healthcare performance in Nigeria. *Journal of Social and Economic Research, 2*(12), 6–13. https://ideas.repec.org/a/pkp/josere/v6y2019i2p126-138id1343.html

Ainsworth, S., & Oldham, G. (2020). Team collaboration in healthcare: Enhancing performance through coordinated efforts. *Journal of Organizational Behavior, 41*(6), 523–538.

Anhang Price, R., Elliott, M., Zaslavsky, A., et al. (2015). Examining patient-centered care: A systematic review. *Health Services Research, 50*(3), 923–945.

Ang, S., Van Dyne, L., Koh, C., & Ng, K. (2020). Cultural diversity and team performance. *International Journal of Cross-Cultural Management, 20*(2), 115–137.

Barry, M. J., & Edgman-Levitan, S. (2018). Shared decision making in patient-centered care. *New England Journal of Medicine, 378*(7), 780–781.

Dreachslin, J., et al. (2019). Diversity and organizational performance in healthcare. *Journal of Healthcare Management*. https://pubmed.ncbi.nlm.nih.gov/30765101

Drummond, M. F., Sculpher, M. J., Claxton, K., et al. (2015). *Methods for the Economic Evaluation of Health Care Programmes* (4th ed.). Oxford University Press.

Dunbar, P., Keyes, M. L., & Browne, J. P. (2023). Determinants of regulatory compliance in health and social care services: A systematic review using the Consolidated Framework for Implementation Research. *PLOS ONE, 18*(1), e0278007. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0278007

Ekezie, W., Uzochukwu, B., & Okafor, H. (2020). Cost-effectiveness of culturally tailored interventions in Nigerian healthcare. *African Health Sciences, 20*(4), 1892–1901.

Engle, R., Smith, J., & Taylor, K. (2021). Patient-centered care and health outcomes: Evidence from hospital settings. *Journal of Health Services Research & Policy, 26*(2), 112–121.

Epstein, R. M., & Street, R. L. (2016). The values and value of patient-centered care. *Annals of Family Medicine, 9*(2), 100–103.

Eyiah, A., Bondinuba, F. K., Adu-Gyamfi, L., & Liphadzi, M. (2025). Promoting effective management of cultural diversity in multinational construction project teams. *Building, 15*(5), 1–15.

Eze, B., Onwujekwe, O., Uzochukwu, B., & Okoli, C. (2019). Cost-effectiveness of maternal health interventions in Nigeria. *International Journal of Health Policy and Management, 8*(10), 597–605. https://doi.org/10.15171/ijhpm.2019.43

Fagbohun, A., Okeke, I., & Oluwaseun, A. (2022). Compliance and regulatory practices in Nigerian healthcare. *Journal of Health Administration, 24*(1), 45–62.

Haslam, S. A. (2014). *Psychology in Organizations: The Social Identity Approach* (2nd ed.). Sage Publications.

Imran, M., Saleem, Q., & Akhtar, N. (2021). Communication strategies and team collaboration in healthcare projects. *Journal of Healthcare Management, 66*(5), 351–362.

Iroanya, O., & Obasi, R. (2023). Promoting inclusive patient-centered care in Nigerian hospitals: Regulatory and social perspectives. *International Journal of Health Policy and Management, 12*(5), 345–356. https://doi.org/10.34172/ijhpm.2023.45

Jawanjal, R. (2024). The influence of healthcare policies on hospital operations and management. *International Journal of Research in Management, 6*(1), 273–275.

Kan, L. (2024). Team dynamics, communication, and productivity: Empirical insights. *Journal of Organizational Behavior Research, 19*(2), 45–61.

Karam, G., Onwujekwe, O., & Uzochukwu, B. (2023). Cost-effectiveness analysis in culturally diverse healthcare settings. *Health Policy and Planning, 38*(7), 872–883.

Khadija, S. M. (2024). The impact of workplace diversity on organizational performance. *Research Output Journal of Education, 3*(3), 61–65.

Khakbaz, M., & Moeini, H. (2020). Cultural intelligence and performance in knowledge-based firms. *arXiv Preprint.* https://arxiv.org/abs/2010.02678

Khassawneh, O., & Mohammad, T. (2025). The influence of workforce diversity on organizational performance in the UAE hospitality sector: The moderating role of HR practices. *SAGE Open, 2*(1), 1–12.

Kozlowski, S. W. J., & Ilgen, D. R. (2015). Enhancing the effectiveness of work groups and teams. *Psychological Science in the Public Interest, 16*(2), 3–48.

Lagat, E., Njuguma, J., Kivaa, J., & Mutungi, P. (2025). Determinants of regulatory compliance in construction projects: Evidence from Nairobi City County, Kenya. *International Journal of Construction Management, 25*(3), 234–251. https://doi.org/10.1080/15623599.2025.1712345

Minkovitz, C. S., et al. (2023). Cultural diversity and patient safety. *Wolters Kluwer Health*. https://pubmed.ncbi.nlm.nih.gov/37615941

Nduhura, T., Natamba, S., Kasirye, G., Ainebyona, L., & Nduhuura, C. (2024). The effect of teamwork on employee performance among small and medium enterprises in Kampala: A case study of Exquisite Solution Limited. *International Journal of Academic Multidisciplinary Research, 8*(10), 335–345.

Nkrumah, R., & Abekah-Nkrumah, G. (2023). Patient-centered care in low-resource healthcare contexts. *International Journal of Healthcare, 7*(2), 110–124.

Obiezekwem, C. J. (2020). Cultural differences and organizational productivity in multinational companies in South East Nigeria. *International Journal of Innovative Development in Policy Studies, 8*(1), 100–109.

Okechukwu, A., & Onuoha, C. (2023). Regulatory compliance and patient-centered care in Nigerian hospitals. *African Journal of Health Policy, 12*(1), 59–72.

Oleribe, O., et al. (2021). Healthcare performance and access in Nigeria: A review. *Nigerian Medical Journal, 62*(1), 12–22.

Oxelmark, L., et al. (2023). Inclusive climate and diverse healthcare teams in Sweden. *SAGE Open Nursing*. https://journals.sagepub.com/doi/full/10.1177/20571585211070381

Onwujekwe, O., Uzochukwu, B., & Ekezie, W. (2021). Economic evaluation of healthcare interventions in Nigeria. *Health Economics Review, 11*(25), 1–10.

Park, J., & Guahk, J. (2017). Financial performance in healthcare organizations: ROA and ROE analysis. *Journal of Health Economics, 56*, 142–152.

Peltokorpi, V., & Clausen, T. (2020). Cultural diversity, team innovation, and inclusivity. *International Journal of Innovation Science*. https://www.emerald.com/insight/content/doi

Raftery, J., et al. (2017). Economic evaluation in healthcare project delivery. *Health Policy, 121*(8), 853–860.

Reiche, B. S., Lee, Y. T., & Quintanilla, C. (2019). Cultural diversity and team effectiveness. *Journal of International Business Studies, 50*(5), 765–784.

Salas, E., Tuckman, B., & Jensen, M. (2018). Team development and collaboration: Extending Tuckman's model. *Journal of Organizational Behavior, 39*(7), 1023–1036. https://doi.org/10.1002/job.2285

Schmutz, J., Meier, L. L., & Manser, T. (2019). Teamwork in healthcare: A review. *BMJ Quality & Safety, 28*(2), 159–171.

Stahl, G. K., Mäkelä, K., Zander, L., & Maznevski, M. L. (2017). Cultural diversity and team collaboration. *Journal of International Business Studies, 48*(2), 186–210.

Tewu, D., Bernarto, I., Suwarno, & Lisdiono, P. (2024). The effect of enterprise risk management and compliance practices on the firm performance of Indonesian banking companies. *Indonesian Journal of Business and Entrepreneurship, 10*(1), 21–40.

Umeokonkwo, C., et al. (2020). Cultural awareness and teamwork effectiveness in healthcare projects. *African Journal of Organizational Studies, 6*(3), 45–60.

WHO. (2020). *Cost-effectiveness in healthcare decision-making*. World Health Organization.

WHO. (2021). *Regulatory compliance in healthcare: Global perspectives*. World Health Organization.

WHO. (2023). *Patient-centered care guidelines*. World Health Organization.

Wolters Kluwer Health. (2023). Cultural diversity and patient safety in healthcare teams: A systematic integrative review. https://pubmed.ncbi.nlm.nih.gov/37615941

Wong, S. L., Ojo, A., & Okafor, H. (2016). Cultural competence and cost-effectiveness in healthcare delivery. *Journal of Health Management, 18*(4), 310–325.

Yu, C., Xian, Y., Jing, T., Bai, M., Li, X., Li, J., Liang, H., Yu, G., & Zhang, Z. (2023). More patient-centered care, better healthcare: The association between patient-centered care and healthcare outcomes in inpatients. *Frontiers in Public Health, 11*, Article 112345.

Yousef, R. (2024). Dynamics of multicultural teams and organizational performance: A review. *Global Journal of Organizational Behavior, 15*(2), 101–118.