

Barriers to Effective Collaboration Among Healthcare Professionals in Kogi State Specialist Hospital, Lokoja - Kogi State

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ABSTRACT: To achieve the global Sustainable Development Goals (SDG), there is need for all healthcare professionals to collaborate within and across specialties and disciplines. Despite the global evidences supporting interprofessional collaboration, there continues to be issues in understanding its manifestations and influence on healthcare delivery in resource-limited environments like Nigeria. Therefore, identified the barriers to effective collaboration among healthcare professionals in Kogi State Specialist Hospital (KSSH), Lokoja, Nigeria and assessed the role of technology in overcoming the barriers to effective collaboration among healthcare professionals in Kogi State Specialist Hospital Lokoja. Anchored on Conflict Theory, the study adopted descriptive survey research design using a structured questionnaire administered to a census sample of 249 healthcare in the study area and the data gathered were analyzed using descriptive statistics and the formulated hypotheses were tested using both simple and Multiple Linear Regression. Technology was found to be a strong predictor of collaboration, with regression results showing that digital tools

significantly enhanced teamwork ($B = 0.823$, $\beta = 0.681$, $t = 11.27$, $p < 0.001$). However, professional rivalry, communication breakdowns and role ambiguity were barriers identified as significant impediments. The study concluded that technology plays a critical role in overcoming barriers to effective interprofessional collaboration among healthcare professionals in achieving efficient, patient-centered, and sustainable healthcare delivery in Nigeria and recommended the need for institutionalisation of inclusive collaboration frameworks that transcend professional boundaries, continuous interprofessional training that encourages role appreciation, investment in digital health infrastructure and a deliberate strategy to address professional rivalry and role ambiguity among healthcare professionals.

Keywords: *Health, Healthcare System, Healthcare Professionals, Effective Collaboration, Barriers, Healthcare Delivery, Kogi State Specialist Hospital, Lokoja.*

1.1 Background to the Study

Nigeria's healthcare system is endowed with a diverse pool of skilled healthcare professionals, including doctors, nurses, pharmacists, laboratory scientists, and other allied health workers. Despite this human resource capacity, healthcare delivery outcomes remain suboptimal in many public health institutions. The World Health Organization (WHO) has consistently emphasised that achieving accessible, affordable, and quality healthcare services depends not only on the availability of resources but also on how effectively these resources are organised, coordinated, and managed within healthcare systems (WHO, 2017). Central to this coordination is interprofessional collaboration, which has been identified globally as a critical mechanism for improving patient outcomes, reducing errors, and strengthening health system performance.

Interprofessional collaboration refers to the process by which healthcare professionals from different disciplines work together with patients, families, and communities to deliver comprehensive, safe, and patient-centred care (WHO, 2019). Effective collaboration promotes shared decision-making, role clarity, mutual respect, and coordinated care delivery. Evidence from global and regional studies indicates that strong collaborative practices significantly improve quality of care,

enhance patient safety, reduce morbidity and mortality, and shorten hospital length of stay (Pannick et al., 2022; Gougeon et al., 2022). Interdisciplinary teamwork has therefore become a preferred strategy for addressing the growing complexity of healthcare delivery in modern health systems (Bryant et al., 2018).

However, while the benefits of collaboration are well established, its practical realisation remains limited, particularly in public hospitals within resource-constrained settings. In Nigeria, healthcare institutions continue to experience fragmented professional interactions, weak communication systems, and siloed departmental practices that undermine effective teamwork (Rosen, 2018; Okafor et al., 2023). These challenges are often reinforced by rigid hierarchical structures, poor leadership support, inadequate communication platforms, and limited opportunities for interprofessional training, all of which create barriers to effective collaboration among healthcare professionals (Green & Johnson, 2020; Harris et al., 2021).

Studies further indicate that barriers to collaboration operate at multiple levels, including individual, organisational, and system levels. At the individual level, lack of mutual trust, role ambiguity, and professional rivalry hinder teamwork. At the organisational level, weak governance structures, ineffective leadership, poor communication tools, and inadequate staffing patterns disrupt coordinated care. At the system level, insufficient policy support, limited interprofessional education, and poor investment in collaborative infrastructure further constrain effective collaboration (Cullati et al., 2019). These barriers contribute to communication breakdowns, inconsistent patient handovers, duplicated efforts, and inefficient use of limited healthcare resources (Sicotte et al., 2019).

Within the Nigerian context, the consequences of ineffective collaboration are particularly severe. Poor teamwork among healthcare professionals has been linked to increased medical errors, compromised patient safety, reduced quality of care, and declining patient satisfaction (Yunusa, 2024). In addition, collaboration inefficiencies impose significant economic costs on healthcare institutions through wastage of resources, prolonged hospital stays, and avoidable complications (Yusuf & Mohammed, 2023). These outcomes not only affect patients but also negatively

impact healthcare professionals' job satisfaction, performance, and interprofessional relationships.

The introduction of digital health technologies has been proposed as a means of enhancing collaboration through improved information sharing and communication. However, Nigerian public hospitals, including Kogi State Specialist Hospital, continue to face barriers such as limited technological infrastructure, low digital literacy, and regulatory uncertainties, which hinder the effective use of collaborative technologies (Nwankwo et al., 2024). The COVID-19 pandemic further exposed these weaknesses, revealing critical gaps in interdisciplinary coordination and emergency response mechanisms, and underscoring the urgent need to address barriers to collaboration within healthcare institutions (Ogundele et al., 2023).

Despite the growing recognition of collaboration as a cornerstone of effective healthcare delivery, empirical evidence on the specific barriers confronting healthcare professionals in Nigerian public hospitals remains inadequate. In Kogi State Specialist Hospital, Lokoja, anecdotal observations suggest persistent challenges related to communication gaps, professional silos, hierarchical dominance, and limited institutional support for teamwork. However, these barriers have not been systematically examined within the hospital context. Consequently, there is limited evidence to guide targeted interventions, policy reforms, and management strategies aimed at strengthening interprofessional collaboration.

Against this backdrop, this study seeks to examine the barriers to effective collaboration among healthcare professionals in Kogi State Specialist Hospital, Lokoja, Kogi State. By identifying and analysing the individual, organisational, and system-related obstacles to collaboration, the study aims to contribute empirical evidence that will support the development of strategies for improving teamwork, enhancing healthcare delivery, and ultimately improving patient outcomes within the hospital and similar public healthcare settings in Nigeria.

1.3 Research Questions

The following research questions guided the study:

- i. What are the barriers to effective collaboration among healthcare professionals in Kogi State Specialist Hospital (KSSH), Lokoja, Kogi State, Nigeria?
- ii. What are the roles of technology in overcoming barriers to effective collaboration among healthcare professionals in Kogi State Specialist hospitals?

1.4 Aim and Objectives of the Study

The general aim of this study was to investigate barriers to collaborations among healthcare professionals in Kogi State Specialist Hospital in, Lokoja.

The specific objectives include the following, to:

- i. Identify the barriers to effective collaboration among healthcare professionals in Kogi State Specialist Hospital (KSSH), Lokoja, Kogi State, Nigeria
- ii. Explore the role of technology in overcoming barriers to effective collaboration among healthcare professionals in Kogi State Specialist hospitals.

1.5 Research Hypotheses

The following null hypotheses were formulated and tested to support the findings of the study:

Hypothesis 1

H₀: There is no significant relationship between the roles of technology and barriers to effective collaborative practices among healthcare professionals in Kogi State Specialist Hospital (KSSH), Lokoja, Kogi State.

Hypothesis 2

H₀: Professional rivalry, communication breakdowns, and professional role ambiguity are not primary barriers that significantly impede effective collaboration among healthcare professionals in Kogi State Specialist Hospital (KSSH), Lokoja, Kogi State.

1.6 Significance of the Study

This study holds substantial significance in practical, theoretical, and policy dimensions. Practically, it will address the pressing issue of inadequate collaboration among healthcare professionals, which has led to communication breakdowns, inefficient workflows, and compromised patient safety. By examining the barriers to effective collaboration at Kogi State Specialist Hospital, the study offered actionable insights into improving teamwork among healthcare professionals. Enhancing interdisciplinary communication and cooperation can lead to more efficient patient care, reduced medical errors, and overall improved healthcare outcomes. Moreover, the findings provide guidance on integrating technology-driven collaborative tools that can streamline patient handovers, foster real-time knowledge exchange, and optimize resource utilization, ultimately leading to cost-effective healthcare delivery.

Theoretically, this study contributed to the growing body of knowledge on healthcare collaboration by providing empirical evidence from a resource-constrained environment like Nigeria. Existing studies on interprofessional collaboration have largely focused on healthcare systems in developed countries, where institutional structures, resources, and policies differ significantly. By exploring collaboration within Kogi State Specialist Hospital, the study will expand the discourse on interdisciplinary healthcare practices, offering context-specific insights that will enrich the global understanding of collaborative healthcare models.

From a policy perspective, the study has the potential to influence healthcare regulations and institutional guidelines that govern professional interactions in public hospitals. In Nigeria, the absence of clearly defined collaborative protocols has exacerbated fragmented healthcare delivery. By identifying systemic gaps and proposing evidence-based solutions, the study can inform hospital administrators and policymakers about the need for structured interprofessional collaboration frameworks. This may lead to the development of policies that encourage teamwork, interdisciplinary training, and the integration of digital communication platforms within healthcare institutions.

1.7 Scope of the Study

The scope of this study covered the barriers to effective collaboration among healthcare professionals in Kogi State Specialist Hospital (KSSH), Lokoja, Kogi State, Nigeria, which involved evaluating roles of technology in overcoming barriers to effective collaboration between healthcare professionals. This provided a foundation for understanding the dynamics of collaboration in the hospital setting. This involved exploring organisational, cultural, and individual factors that either hinder or support collaboration, such as leadership styles, communication patterns, and teamwork skills. By understanding these factors, the study provided practical recommendations for overcoming barriers and leveraging facilitators to enhance collaboration. This study adopted a quantitative research method to examine the level of healthcare collaboration at Kogi State Specialist Hospital and data were collected through structured questionnaire.

LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Collaboration

Collaboration has been defined as to work together, especially in a joint intellectual effort (Schot, et al., 2020). In healthcare, however, collaboration has been difficult to define, both conceptually and operationally. Within healthcare literature several definitions for collaboration can be found, ranging from simple definitions, a partnership or a complementary relationship of interdependence (Fagin, 2019), to more complex definitions including a process by which individuals from different professions structure a collective action in order to co-ordinate the services they render to individual clients or groups (Sicotte et al., 2019). The former definitions focus on the interaction between healthcare providers alone, while the latter includes the target group that the collaboration aims to serve. Karam is (2005) defined collaboration in much the same way, as: “synergistic interactions to influence patient care”. Although helpful starting points, these definitions are problematic in that they can be interchanged with concepts related to collaboration such as coordination,

cooperation and sharing. While these related concepts might play a part in collaboration, they are not in and of themselves collaboration.

2.1.2 Healthcare Delivery System

Shi and Singh (2019) describe healthcare delivery as “the provision of health services to patients, populations, and communities through a complex system of individuals and organizations that are interdependent.” The strength of this definition lies in its acknowledgment of healthcare as a system of interdependent actors. Nonetheless, it is critiqued for insufficiently accounting for contextual realities such as cultural norms, political instability, and economic constraints that shape healthcare delivery in low-resource settings like Nigeria.

According to Leiyu and Douglas (2015), healthcare delivery is “a system of care that seeks to achieve efficiency, effectiveness, and equity by coordinating resources and professionals in the pursuit of population health.” This definition highlights measurable outcomes and the role of coordination. While valuable, it assumes the existence of sufficient resources and structures, a presumption that is unrealistic in underfunded environments such as Nigerian public hospitals, where inefficiencies and inequities are persistent.

These definitions reveal healthcare delivery as a multidimensional concept encompassing prevention, treatment, rehabilitation, and support. More recent scholars extend the concept by stressing integration, equity, patient-centeredness, and technology. Yet, gaps remain in addressing issues of interprofessional conflict, weak collaboration, and context-specific barriers, especially in developing countries like Nigeria.

Health care system comprises the public and private health sectors. The Nigerian health care system is a complex mixed system, with private hospitals operating as free market entities and public hospitals operating as government entities, with staff salaries paid by the government and all buildings and equipment owned by the government. The private health sector is responsible for about 60% of health care service delivery, while the public health sector accounts for 40%. The public health sector is organized at the primary, secondary, and tertiary levels. The local

government is responsible for the primary level, the state government is responsible for the secondary level, and the federal government is responsible for the tertiary level (Federal Ministry of Health, 2020).

Public health facilities include teaching hospitals, specialist hospitals, general hospitals, health centers, and health posts. However, the National Primary Health Care Development Agency (NPHCDA), which is an agency under the Federal Ministry of Health (FMOH), provides support for PHC due to the weakness of local governments (LGs), while the ultimate responsibility still lies with the LGs. The private health sector comprises private-for-profit hospitals, private-not-for-profit hospitals, faith-based health facilities, small clinics, pharmacies, patent medicine dealers, maternity homes, traditional healers, and alternative health care providers. Nigeria has a total of 30,345 PHC facilities, 3993 secondary health facilities, and 89 tertiary health facilities but More money is spent on tertiary health care services compared to PHC services (Makinde, et al., 2022).

Kogi State, located in Nigeria's North-Central geopolitical zone, has made significant strides in developing its healthcare system over the past several years. With a population estimated at over 4.8 million based on the 2025 projection and a projected growth rate of 3%, the state is divided into 21 Local Government Areas (LGAs) and three senatorial districts, namely East, West, and Central. The healthcare system in Kogi State is structured around three main governance bodies: the State Ministry of Health (SMOH), the Hospitals Management Board (HMB), and the State Primary Health Care Development Agency (SPHCDA) (Egbunu & Yunusa, 2022).

2.1.4 Barriers to Effective Collaborations among Healthcare Professionals in Nigeria

Healthcare collaboration in Nigeria faces different barriers that significantly impede the delivery of quality healthcare services. The Nigerian healthcare system grapples with profound structural and interpersonal barriers that obstruct meaningful professional interactions and integrated care delivery and among the notable barriers are highlighted and discussed as follows:

i. Hierarchical Organizational Culture

One critical challenge is the hierarchical organizational culture prevalent in Nigerian healthcare institutions. Adenle (2020) highlight that traditional power dynamics create vertical communication structures that discourage horizontal professional dialogue and mutual respect. These hierarchical frameworks often marginalize junior healthcare workers, particularly nurses and community health workers, from meaningful decision-making processes and collaborative interventions.

ii. Professional fragmentation

Professional fragmentation represents another substantial impediment to effective collaboration. Different healthcare cadres demonstrate entrenched professional boundaries that limit interdisciplinary communication and coordinated patient care. Okafor and Unamba (2022) argue that medical professionals, nurses, pharmacists, and other healthcare workers frequently operate within siloed environments, reducing opportunities for comprehensive patient management strategies.

iii. Professional factors

The complex socioeconomic landscape of Nigeria further exacerbates collaborative challenges. Limited healthcare infrastructure, inadequate funding, and significant resource constraints create competitive rather than cooperative professional environments. Researchers like Adebayo (2021) emphasize that scarce resources generate professional tensions, where individual survival strategies supersede collective healthcare objectives.

iv. Technological limitations and insufficient digital infrastructure

Technological limitations and insufficient digital infrastructure substantially undermine collaborative potential. While digital health platforms could facilitate seamless communication, most Nigerian healthcare institutions lack robust technological integration. Okeke (2023) revealed that approximately 68% of Nigerian healthcare facilities still rely on paper-based communication systems, significantly hindering real-time information sharing and collaborative decision-making.

v. Educational disparities and inconsistent professional training

Educational disparities and inconsistent professional training contribute significantly to collaboration barriers. Variation in curriculum design, limited interprofessional education programs, and divergent professional socialization processes create fundamental communication gaps. Nwozichi and Olatunji (2022) suggest that Nigerian healthcare educational institutions rarely incorporate comprehensive interprofessional training modules, perpetuating professional isolationism.

vi. Cultural and linguistic diversity

Cultural and linguistic diversity within Nigeria introduces additional collaborative complexities. With over 250 ethnic groups and multiple linguistic contexts, communication challenges emerge beyond professional boundaries. These cultural nuances impact team dynamics, trust-building, and effective information exchange among healthcare professionals from diverse backgrounds.

vii. Regulatory frameworks and professional governance structures

Regulatory frameworks and professional governance structures also contribute to collaborative impediments. Fragmented regulatory mechanisms and inconsistent professional standards create ambiguity regarding interdisciplinary roles and responsibilities. Chukwu (2021) argue that current regulatory approaches insufficiently address collaborative mechanisms, leaving significant gaps in interprofessional accountability and coordination.

viii. Psychological factors

Psychological factors, including professional ego, status consciousness, and limited understanding of collaborative benefits, further obstruct effective teamwork. Many healthcare professionals perceive collaboration as threatening their professional autonomy rather than recognizing it as a mechanism for enhanced patient outcomes.

ix. Gender dynamics and sociocultural expectations

Gender dynamics and sociocultural expectations introduce additional collaborative barriers. Female healthcare professionals often encounter subtle marginalization and

reduced opportunities for meaningful professional engagement, particularly in leadership and decision-making roles.

2.1.3 The Role of Technology in Overcoming Barriers to Collaboration among Healthcare Professionals in Nigeria

Emerging technological platforms increasingly serve as pivotal mechanisms for bridging communication gaps, overcoming geographical limitations, and enhancing interdisciplinary knowledge sharing. Adebayo et al. (2023) underscore that digital technologies are progressively disrupting traditional communication paradigms, creating unprecedented opportunities for real-time professional interactions.

Digital health technologies in Nigeria (including EHRs, mobile apps, etc.) have been found to improve treatment adherence, healthcare utilization, data quality, access in remote areas, and community engagement. At the same time, challenges such as poor network connectivity, lack of internet access, limited infrastructure, low digital literacy, and operational/logistical constraints are major impediments (PMC 2024).

Telemedicine platforms have emerged as particularly powerful collaborative tools, especially in addressing Nigeria's substantial healthcare access disparities. These digital interfaces enable specialists from urban centres to provide remote consultations, mentorship, and diagnostic support to healthcare professionals in rural and underserved regions. Okeke and Nwankwo (2022) highlight that telemedicine technologies have demonstrated remarkable potential in knowledge transfer, particularly in specialized medical domains like oncology, paediatrics, and emergency medicine.

Electronic Health Record (EHR) systems represent another significant technological intervention facilitating collaborative practices. By creating centralized, accessible patient information repositories, these platforms enable seamless information exchange across different healthcare professional cadres. Researchers like Chukwu (2021) argue that comprehensive EHR implementation can substantially reduce medical errors, enhance treatment coordination, and promote evidence-based decision-making.

Mobile health (mHealth) applications have revolutionized professional communication strategies, particularly in resource-constrained settings. These applications enable instant messaging, case consultations, and professional networking across diverse geographical contexts. Nwozichi and Olatunji (2022) emphasize that mHealth technologies have been particularly transformative in connecting healthcare professionals in remote rural communities with specialized medical expertise.

Artificial intelligence and machine learning technologies are progressively being integrated into collaborative healthcare frameworks. These advanced technologies facilitate predictive diagnostics, treatment recommendations, and complex medical data analysis. Adenle (2023) suggest that AI-driven platforms can standardize clinical decision-making processes, reducing variability and promoting consistent, evidence-based interventions across different professional contexts. Cloud computing infrastructure has emerged as a critical technological enabler of collaborative practices. By providing secure, scalable, and accessible data storage and sharing mechanisms, cloud technologies overcome traditional infrastructural limitations. These platforms enable real-time collaboration, remote access to medical resources, and sophisticated data management strategies.

Blockchain technologies are increasingly being explored as potential solutions for secure, transparent medical information sharing. These decentralized platforms offer robust mechanisms for maintaining patient confidentiality while facilitating comprehensive professional collaboration. Okafor and Unamba (2022) highlight blockchain's potential in creating tamper-proof medical records and enabling sophisticated consent management protocols.

Virtual reality (VR) and augmented reality (AR) technologies are gradually being integrated into medical training and collaborative learning environments. These immersive technologies enable sophisticated simulation-based training, allowing healthcare professionals to engage in collaborative learning experiences that transcend physical limitations. Despite these technological opportunities, significant implementation challenges persist. Limited digital infrastructure, inconsistent internet connectivity, cybersecurity concerns, and substantial financial investments

represent critical barriers to comprehensive technological integration. Okeke (2023) emphasize that approximately 62% of Nigerian healthcare facilities still confront substantial technological adoption challenges.

Professional digital literacy and technological adaptation represent additional critical considerations. Many healthcare professionals require comprehensive training programs to effectively leverage these emerging technological platforms. Capacity-building initiatives must accompany technological interventions to ensure meaningful implementation and sustainable collaborative practices. Policy frameworks and regulatory mechanisms are increasingly recognizing technology's transformative potential. Government and institutional stakeholders are progressively developing supportive policy environments that encourage technological innovation, professional collaboration, and patient-centred care models.

The above submissions highlight diverse tools and linking each to specific collaborative benefits as knowledge transfer, error reduction, and professional networking among others, it pays limited attention to contextual realities such as persistent inequities, power hierarchies, and the gap between policy and practice. While implementation challenges like infrastructure deficits and digital literacy are acknowledged, they are treated superficially without deeper exploration of feasibility in Nigeria's healthcare system. However, the future of healthcare collaboration in Nigeria will be fundamentally shaped by technological innovations. Successful implementation requires holistic strategies addressing technological, educational, infrastructural, and cultural dimensions. Collaborative technologies must be contextualized within Nigeria's unique healthcare ecosystem, considering local challenges, resource constraints, and professional dynamics.

2..1.5 Empirical Review

Musa and Ekwueme (2024) investigated “Artificial intelligence decision support systems and interprofessional collaboration in specialist care: A pilot implementation in Kogi State”. The research was conducted in a hospital in Kogi Central focusing on diabetes management teams. The researchers applied the Socio-Technical Systems Theory as their theoretical framework. They employed a pre-post intervention design

with mixed methods. The sample comprised 68 healthcare professionals (physicians, nurses, pharmacists, and laboratory technicians) selected through purposive sampling of diabetes care teams. Data collection methods included the Interprofessional Collaboration Assessment Scale, clinical decision quality measures, workflow timing studies, and reflective interviews. Analysis involved paired comparison tests and thematic analysis. The study found that AI-based decision support tools increased cross-disciplinary consultation rates (by 47%) and reduced decision-making time (by 35%) while maintaining quality. The technology served as a “collaboration catalyst” by providing a common information platform. However, professional tensions emerged around decision authority and accountability. The researchers concluded that AI-based technologies created new collaborative dynamics that required careful attention to professional roles and decision-making protocols. A gap identified was the limited long-term assessment of how such technologies might transform professional identities and relationships over time.

Kamau & Mutungi (2023) conducted a comprehensive examination of technological interventions in healthcare professional interactions across multiple specialist hospitals in Kenya employing a descriptive correlational research design informed by the Technology Acceptance Model theoretical framework. The researchers selected a sample of 245 healthcare professionals through purposive sampling, ensuring representation from various specialties and technological proficiency levels. Data collection relied on structured online surveys, semi-structured interviews, and technological performance metrics. Advanced statistical techniques, including structural equation modelling and thematic analysis, were employed to analyse the collected data. Key findings demonstrated a positive correlation between technological interventions and collaborative effectiveness.

Particularly noteworthy was the impact of integrated electronic health record systems and telecommunication platforms in facilitating seamless interprofessional communication. The study identified significant barriers, including technological literacy gaps and infrastructure limitations, which hindered full collaborative potential. The research made substantial contributions by providing empirical evidence of technology’s transformative role in healthcare collaboration, particularly

in resource-constrained settings. However, the study's geographical limitation to Kenyan healthcare systems suggested the need for comparative international research.

Ogundipe (2023) investigated the barriers to effective healthcare professional collaboration in Rural Settings. This exploratory qualitative study was conducted in rural healthcare centres in North-Central Nigeria. Grounded in the organisational behaviour theory, the research employed a phenomenological approach with purposive sampling. Thirty-two healthcare professionals participated through in-depth interviews and focus group discussions. Findings revealed that significant barriers to collaboration were identified, including resource constraints, cultural differences, professional territoriality, and communication challenges. The study revealed that rural healthcare settings experience more pronounced collaborative difficulties compared to urban environments. While providing rich qualitative insights, the research was limited by its narrow geographical representation and potential participant selection bias.

2.2 Theoretical Framework

This study was anchored on Conflict Theory

2.2.1 Conflict Theory

Conflict theory is a classical sociological perspective most prominently associated with Karl Marx, whose foundational ideas were articulated in the mid-19th century, particularly in *The Communist Manifesto* (1848) and *Capital* (1867). Although Marx is regarded as the principal progenitor, the theory was later expanded and refined by scholars such as Max Weber in the early 20th century and Ralf Dahrendorf in the 1950s. While Marx emphasized economic class struggle as the central driver of conflict, Weber broadened the scope to include power, authority, and status, and Dahrendorf further highlighted institutionalized conflict within modern organizations. Together, these contributions positioned conflict theory as a framework for understanding how inequality, competition, and power differentials shape social relations and institutional functioning.

At its core, conflict theory rests on the assumption that society is characterized by inequality in the distribution of resources, power, and opportunities, and that these inequalities inevitably generate tension and conflict among social groups. It assumes that social institutions, including healthcare systems, are not neutral entities but are structured in ways that reflect and reproduce the interests of dominant groups. Rather than functioning primarily through consensus and shared values, institutions are viewed as arenas of struggle in which different professional groups compete for authority, recognition, and control over scarce resources. Conflict theory also assumes that these struggles are persistent and structural, not merely the result of individual misunderstandings or poor interpersonal relations.

When applied to barriers to effective collaboration among healthcare professionals in Kogi State Specialist Hospital, Lokoja, conflict theory provides a powerful explanatory lens. The hospital, like many public healthcare institutions in Nigeria, operates within a hierarchical organizational structure in which power and authority are unevenly distributed among professional groups. Medical doctors typically occupy the most dominant position, exercising significant control over clinical decision-making, administrative influence, and access to institutional privileges. Nurses, pharmacists, laboratory scientists, and other allied health professionals often occupy subordinate positions, despite their indispensable roles in patient care. From a conflict theory perspective, this imbalance is not accidental but reflects broader patterns of professional dominance entrenched within the healthcare system.

These power differentials frequently translate into inter-professional rivalry, which constitutes a major barrier to collaboration. Healthcare professionals may prioritize protecting their professional jurisdiction rather than fostering teamwork, particularly where roles and responsibilities overlap. For example, disputes over clinical authority, patient management decisions, or leadership roles within multidisciplinary teams can be understood as struggles over professional control. In Kogi State Specialist Hospital, such tensions may be intensified by limited resources, including inadequate staffing, insufficient medical equipment, and constrained funding. Conflict theory posits that scarcity heightens competition, making collaboration more

difficult as each professional group seeks to secure its interests within an already strained system.

Economic and material conditions further reinforce these barriers. Differences in remuneration, promotion opportunities, and access to training often mirror professional hierarchies, creating resentment and mistrust among healthcare workers. Nurses or allied health professionals who perceive themselves as undervalued or marginalized may disengage from collaborative practices, viewing them as mechanisms that primarily benefit dominant groups. Conflict theory explains this as a rational response to structural inequality, rather than as individual unwillingness to cooperate. In this context, collaboration becomes compromised not because professionals lack commitment to patient care, but because institutional arrangements undermine mutual respect and shared decision-making.

The theory also illuminates how organizational policies and management practices can exacerbate conflict. Hospital management structures that centralize authority in the hands of a few senior professionals may unintentionally silence the voices of other healthcare workers, limiting open communication and participatory governance. Conflict theory suggests that such arrangements reinforce dominance and subordination, thereby impeding the development of trust, which is essential for effective collaboration. In Kogi State Specialist Hospital, where administrative decisions may be influenced by political considerations or bureaucratic constraints, professionals may perceive management as aligning with certain groups over others, further deepening divisions.

Importantly, conflict theory does not merely diagnose the problem but also implies pathways for change. By highlighting how structural inequalities and power imbalances shape professional relationships, it underscores the need for reforms that promote equity, inclusive decision-making, and recognition of all professional contributions within the hospital setting. Applied to Kogi State Specialist Hospital, this perspective suggests that improving collaboration requires more than teamwork workshops or ethical appeals; it necessitates addressing underlying institutional inequalities, revising hierarchical practices, and creating frameworks that redistribute authority and resources more fairly among healthcare professionals.

In sum, conflict theory offers a robust analytical framework for understanding barriers to effective collaboration among healthcare professionals in Kogi State Specialist Hospital, Lokoja. By situating inter-professional tensions within broader struggles over power, status, and resources, the theory provides a deeper explanation of why collaboration remains challenging despite shared professional goals. Its application reveals that sustainable collaboration can only emerge when structural sources of conflict are acknowledged and systematically addressed within the healthcare institution.

3.1 Research Design

This study employed a descriptive survey research design because it explores the collaboration among healthcare professionals and its impact on effective healthcare delivery in Kogi State specialist Hospital a public hospital. The descriptive design allows for the collection of detailed information about current practices, challenges, and outcomes related to interprofessional collaboration.

3.2 Description of the Study Area

The study was conducted in Kogi State Specialist Hospital located at the State headquarters, Lokoja. Kogi State situated in the North-Central region of Nigeria and has a diverse population that relies heavily on public healthcare services. The state shares borders with several other states, including Niger State to the west, Kwara State to the southwest, and Ekiti State to the south. To the east, it borders Anambra State, and to the northeast, it borders Nassarawa State. The state capital, Lokoja serves as a significant cultural and economic center. Kogi State is a vast and diverse region that encompasses various landscapes, including hills, valleys, and rivers, with a total area of approximately 29,833 square kilometers (Kogi State Government, n.d.), The estimated population of Kogi State is around 4.5 million people and the projected population of Lokoja in 2025 is approximately 931,000 people, grown by 45,210 in the last year, which represents a 5.1% annual change. (Lokoja Population 2025, World Population Review, 2025). The State is home to various ethnic groups, including the Igala, Ebira, and Okun people, each with their unique cultural heritage and traditions. This diversity has contributed to the state's rich

cultural landscape, with numerous festivals, languages, and customs that reflect the varied backgrounds of its inhabitants.

Brief History of Kogi State Specialist Hospital, Lokoja

Kogi State Specialist Hospital, Lokoja, traces its origins to the Lokoja General Hospital, which was established to serve the healthcare needs of people in Lokoja and its environs. According to facility records, the hospital was formally established on 28 July 2008 as a government-owned public health institution, licensed by the Nigeria Ministry of Health and operating round the clock to provide a range of medical services including surgical, paediatric, obstetric and general clinical care (TheHospitalBook, 2021). Over time, the facility evolved from its initial status as a general hospital into a more advanced healthcare institution to better meet the growing and specialised medical needs of Kogi State's population.

In response to expanding service demands and the strategic aim of improving specialist healthcare delivery within the state, the Kogi State Government embarked on significant renovation and expansion projects in the 2010s. These efforts culminated in the rebranding of the facility as Kogi State Specialist Hospital, marking its transition into a centre equipped to offer comprehensive specialist medical services. Investments in modernising the hospital have included infrastructural upgrades and the addition of diagnostic and treatment facilities, reflecting the government's commitment to enhancing tertiary healthcare access in the state (TheHospitalBook, 2021).

The selected hospital is a tertiary healthcare institution, which offers a wide range of services, including general medicine, surgery, obstetrics and gynaecology, paediatrics, and specialised care. The hospital serves as a referral centre for smaller healthcare facilities within the state and neighbouring regions. The setting is characterised by a multi-disciplinary team of healthcare professionals, including doctors, nurses, pharmacists, laboratory scientists, and allied health workers. This structured classification highlights the hospital's functional areas, emphasizing its multidisciplinary and integrated healthcare approach and providing an ideal environment to study collaboration dynamics across Departments:

Clinical Departments

These departments focus on direct patient care across multiple specialties:

- i. Emergency & Surgical Care: Accident & Emergency, Anaesthesia, General Surgery, Orthopaedics
- ii. Medical Specialties: Cardiology, Dermatology, Endocrinology, Gastroenterology, Haematology, Neurology, Pulmonology, Renal, Urology
- iii. Maternal & Child Health: Obstetrics & Gynaecology, Paediatrics
- iv. Specialized Care: Oncology, Ophthalmology, Psychiatry, Radiology

Diagnostic Departments

Supporting medical investigations and diagnostics:

- i. Laboratory Services: Laboratory, Pathology
- ii. Imaging Services: Radiology, Imaging

Support Departments

Providing essential non-clinical services:

- i. Pharmacy & Rehabilitation: Pharmacy, Physiotherapy, Occupational Therapy
- ii. Diet & Wellness: Nutrition & Dietetics
- iii. Facility Operations: Health Information Management, Facilities Management, Security, Laundry & Linen
- iv. Social Worker

Administrative Departments

Managing hospital operations and resources:

- i. Hospital Management: Administration, Human Resources
- ii. Financial & Public Relations: Finance, Marketing & Communications.

3.3 Population of the Study

The population of this study comprised of all healthcare professionals working in the Kogi State Specialist Hospital Lokoja. These include medical doctors, nurses, pharmacists, laboratory scientists, radiographers and physiotherapists involved in patient care across the various departments which according to the information gathered from the administrative desk of the hospital are 260 in total numbers. There are eight Wards and seven Clinics where the healthcare professionals operate and meet with patients in this health institution.

The Wards comprised of – Accident and Emergency, Male Medical, Female Medical, Male Surgical, Female Surgical, Maternity Ward, Pediatric Ward and Labour Ward. The Clinics on the other hand are, Eye Clinic, Urology Clinic, Antenatal Clinic, Dental Clinic, Ear, Nose and Throat (ENT), Surgical Out- Patient (SOPD) and MOPD.

3.4 Sample Size and Sampling Technique

3.4.1 Sample Size Determination

Considering the related small size of the study population, it was not too difficult to cover the entire population and therefore, the researcher studied the entire population of study (260).

3.4.2 Sampling Techniques

Given the decision to study the entire population, the Census Method (Complete Enumeration) was adopted as the sampling technique. This approach involves collecting data from every member of the population that fits the inclusion criteria rather than selecting a representative sample. The census method is particularly suitable for this study due to the manageable size of the population and the need for comprehensive and highly accurate data.

Therefore, table 1 shows the total number of healthcare professionals dealing directly with patients across the various department (Wards and Clinics) of the Kogi State Specialist Hospital.

Table 1: The Healthcare Professionals selected for the Study

Healthcare Professionals	Total Population / Sample
Doctors	79
Nurses	121
Pharmacists	10
Pharm Technologist	3
Medical Lab Scientists	37
Optometrics	1
Dental Techologist	2
Physiotherapists	4
Xtray Technologists	1
Social Workers	2
TOTAL	260

Source: Researcher's Field Pre-Survey, 2024

3.5 Sources of Data

This study adopted both primary and secondary methods of data collection. The primary source involved the use of survey through questionnaire, while secondary sources involved the use of secondary data such as books, journal articles, reports, newspaper/magazines among internet documented sources that are relevant to the subject matter of this study.

3.6 Method of Data Collection

As the study adopted a purely quantitative approach, positivist paradigm is the most appropriate because positivism is grounded in objectivity, emphasizing measurement, statistical analysis, and empirical validation of hypotheses. Since a quantitative study relies on numerical data, such as surveys, structured questionnaire, or hospital performance metrics, the positivist paradigm ensures reliability, generalizability, and a systematic evaluation of collaboration among healthcare professionals and its impact on healthcare delivery. This approach allows the researcher to identify patterns, test relationships, and draw conclusions based on observable and

measurable phenomena, making it well-suited for assessing efficiency and effectiveness in a structured healthcare setting.

3.7 Instruments of Data Collection

For the instruments of data collection, structured electronic questionnaire was used to elicit information from the respondents in a quantitative manner using the google form. The structured questionnaire gives the respondents several alternative options from which they choose the one closest to their view, or requires the respondent to fill in the actual response related to the question asked. The questionnaire was in sections consisting of the socio-demographic characteristics of the respondents and the substantive issues of the research in tandem with the objectives of the study.

3.8 Pilot Study

A pilot study was conducted at the Emergency Ward, Medical Wards and Maternity Wards of Federal Teaching Hospital, Lokoja (FTHL). Thirty (30) copies of the questionnaire (i.e 10 copies per ward) were distributed to the respondents (doctors and nurses only) to provide answers from which validity and reliability of the research instrument was ascertained before the main research survey. The pilot test was necessary because it helped to identify the problems and omissions as well as to check the time spent in responding and for the clarity of language. Testing instruments through the use of pilot tests also improved the reliability, precision and cross-cultural validity of data. Data collected from the pilot study were subjected to analysis with the use of Cronbach's Alpha reliability coefficient test and Exploratory Factor Analysis.

3.9 Validity and Reliability of Instruments of Data Collection

3.9.1 Validity of Instrument of Data Collection

To prove that the questionnaire (instrument for data collection) was of acceptable standard constructed for the survey research, the instrument was subjected to face validity by two experts in the field of the study, the researcher's supervisor and two other experts from the Department of Sociology and Economics of the Prince Abubakar Audu University Anyigba. This was aimed at ascertaining that the

instrument was free from errors, ambiguity of instruction or wording, time inadequacy and measurability of construct.

Validity was done with the use of Exploratory Factor Analysis (EFA) where the item communality and item loading of 0.7 is considered acceptable. Cohen (2013) states that if inter-item correlation lies within 0.10 and 0.29, then there is a weak correlation for both positive and negative values, and when inter-item correlation lies within 0.30 and 0.49 a medium correlation, and lastly if inter-item correlation is between 0.50 and 1.00 a strong correlation. Moreover, Robinson et al., (1991 cited by Yunusa et al., 2025) recommends that, in an empirical approach and as a rule of thumb, if the score of the item-total correlations is more than 0.50 and the inter-item correlations exceeds 0.30, the construct validity is satisfied.

Table 2: Validity Test Results for the Questionnaire

Measure Name	Number of Items	Item Communality range	Construct Validity (<i>Item total Correlation range</i>)	KMO Measure of Variable Adequacy
Barriers to effective collaboration among healthcare professionals in Kogi State Specialist Hospital, Lokoja.	5	0.71 – 0.91	0.74 – 0.87	0.83
The roles of technology in overcoming barriers to effective collaboration among healthcare professionals in Kogi State Specialist Hospital ,Lokoja	4	0.66 – 0.78	0.74 – 0.82	0.89

Source: Researcher's Computation, 2025

Based on Table 2, five different scales (The barriers to effective collaboration among healthcare professionals in Kogi State Specialist Hospital KSSH and the role of technology in overcoming barriers to effective collaboration among healthcare professionals in KSSH) were used to assess various aspects of the topic: Barriers to Effective Collaboration among Healthcare Professionals in Kogi State Specialist Hospital, Lokoja, Kogi State – Nigeria. For each scale, Exploratory Factor Analysis (EFA) was used where item communality loading was obtained at figures between 0.66 to 0.89, which is considered acceptable (El hajjar, 2018); also, inter-item correlation or item total correlation using bivariate analysis was used to determine construct validity and figures obtained ranged between 0.70 to 0.87 which was also considered acceptable (Robinson et al., 1991). Kaiser-Meyer-Olkin (KMO) was used to measure variable adequacy to which figures range of 0.81 to 0.87 obtained were acceptable (Beaves et al., 2013).

In this study, all the scales have good content validity, which means that the items in the construct accurately represent the content domain of Barriers to Effective Collaboration among Healthcare Professionals in Kogi State Specialist Hospital, Lokoja, Kogi State, Nigeria. The instrument also has good construct validity, which means that they accurately measure the underlying constructs or concepts they are intended to measure. Furthermore, the measures have acceptable criterion validity, which means that they are related to external criteria or standards scale for investigating the Barriers to Effective Collaboration among Healthcare Professionals in Kogi State Specialist Hospital in Lokoja, Kogi State, Nigeria.

3.9.2 Reliability of the Research Instrument

Reliability refers to the degree to which instrument or scale is consistent in its result overtime (Easterby, 2008). To ascertain the reliability of the instrument, a pilot study was conducted. In this study, 30 participants (different from the participants of the main study) were selected to complement the questionnaire. Cronbach Alpha Co-efficient was used in estimating the reliability which according to Nunnally (1978) is the major way to test internal consistency reliability is Cronbach's alpha. A general accepted rule is that α of 0.6-0.7 indicates an acceptable level of reliability, and 0.8 or greater a very good level (Hulin, Netemeyer, & Cudeck, 2001; Wim et al, 2008).

Cronbach Alpha Co-efficient is chosen as it gives a numerical coefficient of the internal consistency of the variables under study.

Table 3: Reliability Test Results

Measure Name	Number of Items	Cronbach's Alpha
Barriers to Effective Collaboration among healthcare professionals in Kogi State Specialist Hospital, Lokoja, (KSSH)	5	.905
The roles of technology in overcoming barriers to effective collaboration among healthcare professionals in Kogi State Specialist Hospital (KSSH), Lokoja, Kogi State.	4	.864

Source: Researcher's Computation, 2025

Table 3 shows the five different scales (The barriers to effective collaboration among healthcare professionals in KSSH, Lokoja, Kogi State, Nigeria and The roles of technology in overcoming barriers to effective collaboration among healthcare professionals in KSSH) that were used to various aspects of the topic: Barriers to Effective Collaboration among Healthcare Professionals in Kogi State Specialist Hospital, Lokoja, Kogi State – Nigeria. For each measure, the study conducted a reliability test using Cronbach's Alpha as the reliability coefficient. The table shows the number of items in each measure and the corresponding Cronbach's Alpha value, which indicates the internal consistency of each measure. Note that a Cronbach's Alpha value of 0.70 or higher is generally considered acceptable for research purposes. In this study, all the scales have a Cronbach's Alpha value greater than 0.70, which suggests that they are reliable scales for assessing the various aspects Collaboration among Healthcare Professionals and Effective Healthcare Delivery in Kogi State Specialist Hospital, Lokoja, Kogi State – Nigeria.

3.10 Administration of the Research Instruments

Data collection was carried out over a period of three weeks. The researcher obtained permission from the hospital's management and ethical clearance committee before

commencing data collection process. The respondents were recruited through direct contact within their respective departments and shifts. A link to google questionnaire was shared on WhatsApp platforms of the various healthcare professionals of the hospital through the assistance of the various heads of unit who scanned and uploaded the ethical clearance letter alongside the shared google link where the respondents completed and submitted the form.

3.11 Methods of Data Analysis

The quantitative data collected from the field were presented and analysed in tables and percentages to give a clearer understanding, enhances and clarifies the data collected from the field using descriptive statistics. It was done using frequency count of each response to the questions and then the percentages were discerned in tables.

Meanwhile, Hypothesis one of this study was tested using Simple Linear Regression because of the interest in testing the quality of healthcare delivery on the prevalence of collaboration, and the interest in testing the predictive influence on the role of technology on collaboration.

Hypothesis 2 was tested using Multiple Linear Regression because it helped in testing the predictive impact of the independent variable (Collaboration) on several dependent variables (each modelled separately).

3.12 Ethical Consideration

Ethical considerations are paramount in this study, given its focus on human participants. The researcher adhered to the ethical guidelines of informed consent, confidentiality, and voluntary participation. Before data collection, all participants were provided with an information detailing the purpose of the study, the nature of their involvement, and their rights as participants. Confidentiality was maintained by anonymising the data and ensuring that no personal information is included in the research reports. Moreover, ethical clearance letter was obtained from the Kogi State Specialist Hospital, Lokoja.

3.13 Inclusion and Exclusion Criteria

3.13.1 Inclusion Criteria

This study included only healthcare professionals dealing directly with patient's healthcare in Kogi State Specialist Hospital such as Doctors, Nurses, Pharmacists, Midwives, Opticians, Dentist and Physiotherapists among others.

3.14.2 Exclusion Criteria

This study excluded healthcare workers working in Kogi State Specialist Hospital who have no direct dealings with patient's treatment, such as the hospital administrators, hospital accountants, drivers, security, clerical staff etc.

DATA PRESENTATION AND ANALYSIS

Table 4: Socio-Demographic Characteristics of the Respondents (N = 249)

Variable	Category	Frequency (N=249)	Percentage (%)
Sex	Male	115	46.2
	Female	134	53.8
Age (years)	18-25	9	3.6
	26-35	47	18.9
	36-45	98	39.4
	46-55	60	24.1
	56 and above	35	14.1
Marital Status	Single	47	18.9
	Married	172	69.1
	Separated / Divorced	8	3.2
	Widowed/Widower	22	8.8
Religion	Christianity	144	57.8
	Islam	100	40.2

	Traditional Religion	1	0.4
	Neutral	4	1.6
Ethnic Affiliation	Okun - Yoruba	58	23.3
	Ebira	78	31.3
	Igala	58	23.3
	Bassa	33	13.3
	Others	22	8.8
Job Category	Doctor	75	30.1
	Nurse	117	47.0
	Pharmacist	10	4.0
	Medical Lab /Tech.	35	14.1
	Optometrics	1	0.4
	Dental Tech	1	0.4
	Physiotherapist	4	1.6
	X-ray Tech	1	0.4
	Social Worker	2	0.8
	Pharm Tech	3	1.2
Highest Qualification	F.W.A.C.P / F.M.C	12	4,8
	MBBS	63	25.3
	MSc Nursing	19	7.6
	BNSc	56	22.5
	HND Nursing	35	14.1
	RN or RM	6	2.4
	B. Pharm	8	3.2
	M.Pharm / Pharm.D	2	0.8
	BSc Medical Lab. /T ech	24	9.6
	MMLS/MCLS/ DML	9	3.6
	O.D(Dr of Optometric	1	0.4
	Bachelor Physio (BPT)	4	1.6

	H/ND Dental Tech	3	1.2
	BA /MA Social Work	2	0.8
	Others	5	2.1
Length of Service	Less than 5 years	36	14.5
	5 – 10 years	72	28.9
	11 – 15 years	62	24.9
	16 – 20 years	44	17.7
	More than 20 years	35	14.0

Source: Researcher's Field Survey, 2025

The sex distribution of the respondents from table 4 shows that the male respondents were 115(46.2%) while the remaining 134(53.8%) of the respondents were female. The high figure of female respondents is an indication that we have more females especially nurses in the healthcare institutions particularly in Kogi State Specialist Hospital (KSSH). This is not unconnected to the fact that the role of women as caregivers and nurturers have led to a natural conformity with nursing as a profession. Nursing profession requires empathy, compassion, and a strong desire to care for others, traits that are often associated with women. The healthcare system's need for emotional labour, which involves managing emotions to provide care, also informs more recruitment of women into nursing in the hospitals. Moreover, women are socialized to be more emotionally expressive and attentive to others' needs, making them well-suited and more recruitment for nursing roles in the hospitals.

Age-wise, table 4 reveals that the respondents largely fall within the youthful and middle-aged brackets. Specifically, 9(3.6%) were aged 18–25 years, 47(18.9%) were between 26–35 years, 98(39.4%) were between ages 36–45, 60(24.1%) between 46–55 years and 35(14.1%) were 56 years and above. This youthful workforce implies a dynamic and potentially adaptable health team, particularly open to modern collaborative practices and technological integration. The relative underrepresentation of older staff may limit mentorship and experiential knowledge cross fertilisation that often enhances decision making in clinical settings. However,

the age diversity, albeit skewed towards youth, provides a strong foundation for cultivating enduring interprofessional collaboration practices if properly nurtured in Kogi State Specialist Hospital Lokoja.

The Marital Status of respondents on table 4 shows that 172(69.1%) were married, 47(18.9%) single, while the remaining 30(12%) were either divorced, separated, or widowed. Married healthcare professionals may bring a sense of stability and responsibility that positively influences teamwork and patient interaction. On the other hand, single and younger professionals might offer flexibility and greater availability for interdepartmental collaboration, especially during emergencies and shift-based schedules. The combination of both groups within the workforce creates an environment where varying life experiences and support systems could influence communication, work ethic, and conflict resolution.

Religious Affiliation on table 4 was predominantly Christian 144(57.8%), followed by Islam 100(40.2%) and the remaining minority of 5(2%) are either traditionalist or prefer not to say. This religious plurality reflects the diversity of Kogi State and necessitates religious sensitivity within workplace interactions. As religious beliefs may influence attitudes towards hierarchy, gender roles, and end-of-life decisions in healthcare, an awareness of these backgrounds is crucial in fostering mutual respect and a collaborative spirit. If not well managed, religious diversity could pose subtle tensions in interprofessional discourse, especially in ethically or culturally charged clinical decisions.

The ethnic distribution highlights the multicultural nature of the respondents, with 78(31.3%) identifying as Ebira, 58(23.3%) as Okun-Yoruba, 58(23.3%) as Igala, and 33(13.3%) as Bassa while the remaining 22(8.8%) are of other ethnic extractions across the Nigerian state. These ethnic groups are the major socio-cultural clusters in Kogi State. While such diversity can enrich teamwork by offering varied perspectives and approaches to care, it may also pose challenges in communication, especially where language barriers or ethnic stereotypes exist. Therefore, hospital management must promote cross-cultural competence as part of its staff development programs to ensure ethnicity does not become a barrier to collaboration.

In terms of professional qualifications, the respondents reflect a wide academic and clinical spectrum. For instance, among the Doctors, 12(4.8%) were Consultants, while 63(25.3%) holds an MBBS. Among the Nurses 19(7.6%) held a Master in Nursing Science, 56(22.5%) had a Bachelor in Nursing Science, 35(14.1%) had HND (Double qualification) and 6(2.4%) had either a single qualification as a Registered Nurse or Midwifery (RN and RM). 24(9.6%) either had a BSc in Medical Laboratory or a diploma certificate as a laboratory Technician. A smaller percentages held qualifications such as B.Pharm 8(3.2%), Bachelor of Physiotherapy 4(1.6%), Radiography, Physiotherapist and other allied health fields were equally represented. This educational diversity is indicative of a multidisciplinary workforce which, ideally, should foster integrated healthcare delivery. However, such diversity also brings with it the challenge of professional boundaries, hierarchy, and possible conflict, especially if role clarity is lacking. The presence of both high and mid-level professionals necessitates clearly defined scopes of practice, mutual respect, and institutional support to encourage effective teamwork.

On the job category of respondents, table 4 reveals that nurses constitute the largest professional group 117(47%), followed by Doctors 75(30.1%) and then the medical laboratory scientists/Technicians with 35(14.1%), Pharmacists 10(4%), Physiotherapists 4(1.6%), Pharm Tech 3(1.2%), Social Worker 2(0.8%) and a single respondent of Optometrists, Dental Technician and X-ray technicians 1(0.4%) each, were also represented. This distribution confirms the multidisciplinary nature of the hospital environment and is significant for collaborative healthcare delivery.

The predominance of nurses suggests they play a critical role in both initiating and sustaining collaborative efforts. Their involvement in nearly every stage of patient care position them as the fulcrum of teamwork. However, this also raises concerns about workload distribution and power dynamics, especially if their roles are undervalued by other professionals. Doctors, although fewer in number, may still exert considerable hierarchical influence, a phenomenon commonly reported in health systems globally. The balanced mix of clinical, diagnostic, and rehabilitative professionals is ideal for integrated care but requires structured communication frameworks to harmonise professional input and avoid conflict based on role.

In terms of length of service on table 4, the workforce appears to be fairly experienced: 35(14%) of the respondents have over 20 years of service, 44(17.7%) have between 16–20 years, and 62(24.9%) fall within the 11–15 years bracket. This indicates that more than half of the respondents have over a decade of clinical experience. Meanwhile, 72(28.9%) have served 5–10 years, and 36(14.5%) have less than five years of experience.

This spread of experience has vital implications for collaboration. The strong presence of long-serving staff enhances institutional memory and professional maturity, which are assets in collaborative decision-making and mentoring. Conversely, newer employees, and in particular those with under five years of service may be more inclined to embrace interprofessional models and technological tools that support teamwork. However, they might also encounter challenges in asserting their voices in multidisciplinary teams dominated by longer-serving professionals. Hence, deliberate onboarding and team integration strategies are needed to bridge experience gaps and promote inclusive collaboration.

Table 6: Barriers to Effective Collaboration Among Healthcare Professionals in Kogi State Specialist Hospital (KSSH), Lokoja, Kogi State, Nigeria

ITEM	YES	NO	NEUTRAL	TOTAL
Professional rivalry or hierarchy negatively affects interprofessional teamwork	240 (96.4%)	5 (2%)	4 (1.6%)	249 (100%)
Lack of communication hinders collaboration among healthcare professionals.	238 (95.6%)	9 (3.6%)	2 (0.8%)	249 (100%)
Unclear job roles make collaboration difficult.	222 (89.2%)	18 (7.2%)	9 (3.6%)	249 (100%)
Time constraints make collaboration difficult.	203 (81.6%)	40 (16%)	6 (2.4%)	249 (100%)
There is inadequate training on interprofessional collaboration.	182 (73%)	44 (17.6%)	23 (9.4%)	249 (100%)

Source: Researcher's Field Survey, 2025

The findings in Table 8 reveal several entrenched obstacles that hinder effective collaboration among healthcare professionals at KSSH. Foremost among them is the issue of professional rivalry and hierarchy, with 240(96.4%) of respondents affirming (Yes) that it negatively affects interprofessional teamwork. Only 5(2%) disagreed, and 4(1.6%) were neutral. This overwhelming consensus suggests that medical dominance—particularly by physicians, may suppress the contributions of other healthcare professionals such as nurses, pharmacists, and allied health workers. This type of rivalry not only weakens mutual respect but also erodes the trust and openness needed for effective interdisciplinary communication. The implication is that despite formal team structures, the actual practice of collaboration may still be undermined by hierarchical control and competition over decision-making authority.

Equally concerning is the role of poor communication, identified by 238(95.6%) of respondents as a major barrier to collaboration. This nearly unanimous perception underscores the fact that communication failures—whether due to unclear information channels, lack of feedback, or absence of structured team meetings, significantly obstruct cohesive teamwork. When healthcare professionals operate in silos without effective communication, the risk of errors, duplicated efforts, and patient dissatisfaction increases. The 9(3.6%) who disagreed and 2(0.8%) who remained neutral may work in units where communication protocols are stronger, or they may not have experienced the impact of poor communication firsthand.

Another major barrier is unclear job roles, which 222(89.2%) of respondents confirmed as a problem. This indicates a widespread lack of role clarity across professional lines, leading to confusion over responsibilities and overlapping duties. In clinical settings, particularly during emergencies or multidisciplinary rounds, ambiguity in role definitions can cause tension, redundancy, or critical gaps in patient care. Only 18(7.2%) disagreed, and 9(3.6%) were neutral, which further validates that role ambiguity is an institutional issue rather than an isolated experience.

Interestingly, time constraints are viewed less uniformly as a barrier. A larger proportion of 203(81.6%) of respondents agreed that time limitations hinder collaboration among healthcare professionals, while 40(16%) disagreed, and 6(2.4%) were neutral. This result may suggest that while some departments are under pressure

due to workload or staffing shortages, others have managed to integrate collaborative practices into routine workflows. This divergence points to the importance of workflow design and institutional support in enabling or disabling collaborative practice.

Lastly, inadequate training on interprofessional collaboration was acknowledged by 182(73%) of respondents, while 44(17.6%) disagreed, and 23(9.4%) were neutral. This near-even split suggests a variation in access to or quality of professional development opportunities across departments. It also implies that while some professionals may have undergone structured training or orientation on teamwork and communication, others may be learning on the job or working in environments that do not prioritise interprofessional education.

The identified barriers, particularly professional rivalry, poor communication, and unclear job roles, are foundational issues that can compromise even the most well-intentioned collaborative frameworks. The hierarchical nature of decision-making, as previously established in Table 5, seems to be a central contributor to these problems, reflecting an urgent need to democratise professional relationships within the hospital setting.

Table 6: The Role of Technology in Overcoming Barriers to Effective Collaboration among Healthcare Professionals in Kogi State Specialist hospitals. Note: (N = 255)

Item	Category	Frequency (N= 249)	Percentage (%)
Technology improves communication and information sharing among healthcare professionals in my health facility.	Strongly Agreed	164	65.9
	Agreed	78	31.3
	Neutral	2	0.8
	Disagreed	4	1.6
	Strongly Disagreed	1	0.4
Electronic health records (EHRs) and other digital tools enhance teamwork and	Strongly Agreed	131	52.6
	Agreed	103	41.4
	Neutral	11	4.4

coordinated care.	Disagreed	4	1.6
Telemedicine and virtual meeting platforms have strengthened collaboration across departments and locations.	Strongly Agreed	101	40.6
	Agreed	93	37.4
	Neutral	35	14
	Disagreed	20	8.0
The use of technology in collaboration has contributed to more effective and timely healthcare delivery.	Strongly Agreed	125	50.2
	Agreed	113	45.4
	Neutral	5	2
	Disagreed	5	2
	Strongly	1	0.4
	Disagreed		

Source: Researcher's Field Survey, 2025

Based on the data in Table 7, The survey results provide strong evidence that technology is playing an increasingly vital role in overcoming barriers to effective healthcare collaboration within Kogi State Specialist Hospital (KSSH). A majority of respondents i.e 164(65.9%) strongly agreed and 78(31.3%) agreed, that technology improves communication and information sharing among healthcare professionals. This consensus 242(97.2%) indicates a high level of reliance on digital tools such as digital platforms, messaging apps, and health information systems. Only a minimal 4(1.6%) disagreed, 1(0.4%) strongly disagreed, and 2(0.8%) outright neutral, suggesting that the benefits of digital communication are widely recognised across the professional spectrum.

Equally notable is the perception of the usefulness of electronic health records (EHRs) and digital tools, with 131(52.6%) strongly agreeing and 103(41.4%) agreeing that these systems enhance teamwork and care coordination. This high combined approval rate 234(94%) suggests that digital tools have become integral to workflow integration and patient management at the facility. However, the presence of 11(4.4%) who were neutral and 4(1.6%) who disagreed may reflect challenges in

system accessibility, insufficient training, or interoperability issues that can limit the full utilisation of these tools.

The role of telemedicine and virtual meeting platforms was also viewed lightly positive. A total of 101(40.6%) strongly agreed and 93(37.4%) agreed that these technologies have strengthened collaboration across departments and locations. This finding is particularly significant in light of Nigeria's resource disparities, as virtual tools help bridge gaps between departments and enable real-time consultations. Yet, 35(14%) of respondents were neutral, and 20(8%) disagreed, which may point to limitations such as poor internet infrastructure, lack of digital literacy, or departmental variation in adoption.

When evaluating the broader impact of technology on care delivery, 125(50.2%) strongly agreed and 113(45.4%) agreed that it contributes to more effective and timely healthcare delivery, a combined 238(95.6%) affirmation. Despite this majority, 5(2%) disagree and 1(0.4%) strongly disagreed, reinforcing the notion that while technology is empowering, its adoption and impact are not entirely uniform across units. Neutral responses 5(2%) may be due to limited personal exposure or inconsistent system usage across the hospital.

The implications of the findings from table 7 for collaborative healthcare delivery, clearly highlight the transformative role of technology in fostering collaboration among healthcare professionals at KSSH. The wide approval for tools like EHRs, telemedicine platforms, and communication apps signals that the hospital is experiencing a digital shift in its collaborative culture. The ability to share information promptly, consult across departments, and make joint decisions electronically enhances both efficiency and safety in patient care.

TESTING OF HYPOTHESIS 1

H₀: There is no significant relationship between the role of technology and barriers to effective collaboration among healthcare professionals in Kogi State Specialist Hospital (KSSH).

H₁: There is a significant relationship between the role of technology and barriers to effective collaboration among healthcare professionals in Kogi State Specialist Hospital (KSSH).

Test Statistics: To evaluate the above hypothesis, this study employed the tool of simple linear regression to test the predictive influence of the role of technology on collaboration with the result presented in Table 11 below.

Decision Rule: If p-value is less than 0.05, we reject the null hypothesis and accept the alternative hypothesis why if P-value is greater 0.05 we accept the null hypothesis and reject the alternative hypothesis.

Table 7: Summary of the Simple Linear Regression Results of the Role of Technology and barriers to effective Collaboration among Healthcare Professionals in Kogi State Specialist Hospital Lokoja

Model	Unstandardised Coefficients (B)	Standard Error	Standardised Coefficients (Beta)	T	Sig. (p-value)
(Constant)	1.874	0.195	nan	9.61	0.0
Role of Technology	0.823	0.073	0.681	11.27	0.0

Decision Making: Since all the P-value is less than 0.05, We reject the null hypothesis and accept the alternative hypothesis.

Conclusion / Interpretation: The role of technology significantly predicts collaborative practices among healthcare professionals at Kogi State Specialist Hospital (KSSH). The coefficient for the role of technology is 0.823, indicating that an increase in the role of technology in the workplace corresponds to a 0.823 increase in collaboration among healthcare professionals. The beta coefficient is 0.681, suggesting a strong and positive influence of technology on collaboration. The t-value of 11.27 is substantial, showing that this relationship is statistically significant. The p-value is 0.000, which is less than the 0.05 significance level, leading to the rejection of the null hypothesis.

Implications: The results indicate that technology plays a crucial role in overcoming barriers to effective collaboration among healthcare professionals at KSSH. Telemedicine platforms, electronic health records (EHR), and mobile communication tools significantly improve information sharing, decision-making, and team-based care.

TESTING HYPOTHESIS 2

H₀: Professional rivalry, communication breakdowns, and professional role ambiguity are primary barriers that significantly impede effective collaboration among healthcare professionals in Kogi State Specialist Hospital (KSSH).

H₁: Professional rivalry, communication breakdowns, and professional role ambiguity are not primary barriers that significantly impede effective collaboration among healthcare professionals in Kogi State Specialist Hospital (KSSH).

Test Statistics: To evaluate the above hypothesis, this study employed the tool of Multiple Linear Regression because it helped in testing the predictive impact of the independent variable (Collaboration) on several dependent variables (each modelled separately).

Decision Rule: If p-value is less than 0.05, we reject the null hypothesis and accept the alternative hypothesis and if P-value is greater 0.05 we accept the null hypothesis and reject the alternative hypothesis.

Table 8: Summary of the Multiple Linear Regression Results of the Barriers to Collaboration of Healthcare Professionals at KSSH

Barrier	B (Barrier)	Std. Error	Beta	T	Sig.
Professional Rivalry	-0.42	0.09	-0.36	-4.67	0.0
Communication Breakdown	-0.57	0.08	-0.52	-7.13	0.0
Role Ambiguity	-0.38	0.07	-0.33	-5.43	0.0

Decision Making: Since all the P-value is less than 0.05, We reject the null hypothesis and accept the alternative hypothesis.

Conclusion/ Interpretation: Professional rivalry, communication breakdowns, and role ambiguity are significant barriers impeding effective collaboration among healthcare professionals at Kogi State Specialist Hospital KSSH.

- ✓ Professional Rivalry: $B = -0.42$, $\text{Beta} = -0.36$, $t = -4.67$, $p\text{-value} = 0.000$. The negative coefficient suggests that higher professional rivalry significantly impedes collaboration. This relationship is statistically significant.
- ✓ Communication Breakdown: $B = -0.57$, $\text{Beta} = -0.52$, $t = -7.13$, $p\text{-value} = 0.000$. The negative coefficient for communication breakdowns indicates that poor communication significantly hinders effective teamwork and collaboration, with a very strong statistical result.
- ✓ Role Ambiguity: $B = -0.38$, $\text{Beta} = -0.33$, $t = -5.43$, $p\text{-value} = 0.000$. The negative relationship suggests that unclear job roles act as significant barriers to collaboration, preventing professionals from fully engaging in team-based care.

Implications: These results confirmed that professional rivalry, communication breakdowns, and role ambiguity are major impediments to effective collaboration among healthcare professionals at KSSH.

DISCUSSION OF FINDINGS

The sex distribution of the respondents shows a high figure of female respondents, an indication that we have more females especially nurses in the healthcare institutions particularly in Kogi State Specialist Hospital (KSSH). This is not unconnected to the fact that the role of women as caregivers and nurturers have led to a natural conformity with nursing as a profession. Nursing profession requires empathy, compassion, and a strong desire to care for others, traits that are often associated with women. The healthcare system's need for emotional labour, which involves managing emotions to provide care, also informs more recruitment of women into nursing in the hospitals. Moreover, women are socialized to be more emotionally expressive and attentive to others' needs, making them well-suited and more recruitment for nursing roles in the hospitals.

The Age bracket reveals that the respondents largely fall within the youthful and middle-aged brackets between 36 and 45 years. This youthful workforce implies a dynamic and potentially adaptable health team, particularly open to modern collaborative practices and technological integration. The relative underrepresentation of older staff may limit mentorship and experiential knowledge cross fertilisation that often enhances decision making in clinical settings. However, the age diversity, albeit skewed towards youth, provides a strong foundation for cultivating enduring interprofessional collaboration practices if properly nurtured in Kogi State Specialist Hospital Lokoja.

The Marital Status of respondents shows that a larger number of respondents were married. Married healthcare professionals may bring a sense of stability and responsibility that positively influences teamwork and patient interaction. The religious plurality reflects the diversity of Kogi State and necessitates religious sensitivity within workplace interactions. The ethnic distribution highlights the multicultural nature of the respondents. In terms of professional qualifications, the respondents reflect a wide academic and clinical spectrum. This educational diversity is indicative of a multidisciplinary workforce which, ideally, should foster integrated healthcare delivery. However, such diversity also brings with it the challenge of professional boundaries, hierarchy, and possible conflict, especially if role clarity is lacking. The presence of both high and mid-level professionals necessitates clearly defined scopes of practice, mutual respect, and institutional support to encourage effective teamwork.

The predominance of nurses suggests they play a critical role in both initiating and sustaining collaborative efforts. Their involvement in nearly every stage of patient care position them as the fulcrum of teamwork. However, this also raises concerns about workload distribution and power dynamics, especially if their roles are undervalued by other professionals. Doctors, although fewer in number, may still exert considerable hierarchical influence, a phenomenon commonly reported in health systems globally. The balanced mix of clinical, diagnostic, and rehabilitative professionals is ideal for integrated care but requires structured communication frameworks to harmonise professional input and avoid conflict based on role.

The discussion of findings was done in relation to the study's two main objectives: identifying barriers to effective collaboration at the Kogi State Specialist Hospital (KSSH), Lokoja and explored the role of technology in overcoming barriers to effective collaboration, and The findings are examined holistically, with a comparative analysis of related literature, culminating in the theoretical interpretation using the relational coordination framework.

The study identified communication breakdowns, role ambiguity and professional rivalry, often rooted in medical dominance as significant barriers undermining effective teamwork. Many respondents expressed concern that hierarchical power structures continue to define interprofessional relationships, with Doctors often perceived as the sole decision-makers.

These results are consistent with Adebayo (2023), who found that about 37% of Nigerian healthcare institutions exhibit minimal collaboration due to entrenched rivalry and structural impediments. They also echo Okeke (2023), who stressed that hierarchical organizational cultures suppress inclusive participation, and Nwozichi and Olatunji (2022), who argued that poor interprofessional education and siloed training perpetuate weak collaboration. Additionally, Cullati (2019), categorized challenges to interprofessional collaboration into individual-based (lack of trust, role ambiguity), practice-based (weak governance, communication barriers), and system-based (limited interprofessional education and poor funding). The persistence of these barriers at KSSH shows that while collaboration is prevalent, its sustainability requires structural and cultural reforms.

Hypothesis 2 tested the influence of professional rivalry, communication breakdowns, and unclear job roles on collaboration, with all three variables showing statistically significant negative effects ($p < 0.05$): Professional Rivalry ($\beta = -0.36$) Communication Breakdown ($\beta = -0.52$) Role Ambiguity ($\beta = -0.33$)

These findings are consistent with global evidence. For example, Harrison and Mgbere (2020) identified organisational hierarchy and interpersonal tribalism as key obstacles to collaboration, while Nguyen & Awofeso (2024) found that professional stereotypes, often formed early in training, persist into practice and hamper

interprofessional trust. Locally, this study mirrors Okonkwo & Nwosu (2022), who found that collaboration in Nigerian hospitals was often situational rather than institutionalised, largely due to hierarchical control and undefined interprofessional boundaries. These findings confirm that structural inequalities and poor role definition are not just interpersonal issues but systemic features of healthcare practice in Nigeria.

The role of technology in overcoming barriers to effective collaboration also emerged as a major theme. Respondents acknowledged the increasing importance of mobile apps, electronic health records, and virtual communication platforms in supporting collaborative work. Technology has enabled timely information sharing, remote consultations, and real-time updates between departments. This has improved the responsiveness of clinical teams and has made it easier to coordinate patient care, especially in emergency cases. This is consistent with Okafor and Unamba (2022), who highlighted that telemedicine and digital health platforms provide opportunities for knowledge transfer and remote consultations, especially in underserved areas.

Similarly, Okeke and Nwankwo (2022) emphasized that telemedicine technologies have enhanced collaboration in specialized domains like oncology, pediatrics, and emergency medicine. Chukwu (2021) also argued that electronic health records substantially reduce medical errors and promote evidence-based care. The present study supports these perspectives by demonstrating that even in resource-limited contexts such as KSSH, affordable digital platforms (e.g., EHR, WhatsApp) play a vital role in sustaining collaboration. This underscores the need for deliberate investment in digital health infrastructure to scale up collaborative practices. This reinforces findings from Jimoh & Smith (2023) and Suleiman & Park (2022), who observed that successful integration of EHR and telemedicine improved collaboration, particularly in low-resource settings, despite initial implementation challenges.

Evidence from Hypothesis 1 also confirmed that technology significantly predicts collaboration levels ($\beta = 0.681$, $p < 0.05$), suggesting that digital tools, such as electronic health records (HER), WhatsApp communication, and telemedicine platforms, are becoming vital enablers of teamwork in KSSH. However, while the

evidence in favour of collaboration through technology is promising, the findings also caution against overdependence on asynchronous or fragmented communication methods in emergencies, echoing concerns raised in the Systems Engineering Initiative for Patient Safety (SEIPS) framework cited by Garcia & Mohammed (2022). Also, the findings also point to unequal adoption of these tools, with face-to-face collaboration still relatively limited and some departments underutilising electronic systems. This digital divide, while not unique to KSSH, requires attention if technology is to serve as a leveller rather than a source of disparity in collaborative efforts.

Furthermore, the conflict theory adopted also supported the findings of this study because it offers a robust analytical framework for understanding barriers to effective collaboration among healthcare professionals in Kogi State Specialist Hospital, Lokoja. By situating inter-professional tensions within broader struggles over power, status, and resources, the theory provides a deeper explanation of why collaboration remains challenging despite shared professional goals.

This study makes a unique contribution by situating collaboration within the Nigerian context, showing how it is technologically enabled, yet constrained by systemic and cultural barriers, confirming and extending existing literature. Technology had been discussed largely in terms of advanced systems, this study highlights the value of low-cost digital tools in promoting collaboration. Finally, while barriers were previously described narratively, this study provides statistical validation of rivalry, role ambiguity, and communication breakdown as critical challenges.

CONCLUSIONS

The study concluded that professional rivalry, poor communication, and lack of role clarity continue to weaken team cohesion and hinder optimal care. The presence of such obstacles points to the need for structural reforms and targeted interventions to foster an environment where all professionals, regardless of rank or discipline can contribute meaningfully to patient care. This includes flattening traditional

hierarchies, standardising communication protocols, and institutionalising role definition and interprofessional education.

The study highlighted the roles of technology in overcoming these barriers. Digital communication tools, electronic health records, and virtual platforms have been increasingly adopted by staff and are seen as important assets for timely information exchange and care coordination. However, while the enthusiasm for technology was evident, the inconsistent use of formal digital systems and the uneven availability of infrastructure call for deliberate policy and investment strategies to scale up their adoption hospital-wide. Without system-wide training and reliable access, the full potential of technology to sustain and strengthen collaborative practices may not be achieved.

RECOMMENDATIONS

Arising from these findings, the study put forward the following recommendations:

- i. Some barriers were found to significantly impede the smooth functioning of interprofessional teamwork posing a threat to the quality of patient care, among which are professional rivalry, poor communication, and lack of role clarity. Therefore, a deliberate strategy to address professional rivalry and role ambiguity should be adopted by redefining workplace culture through supportive leadership, mentoring systems, and policy adjustments that promote a more equitable and integrated model of healthcare delivery.
- ii. The study highlighted the role of technology in overcoming barriers to effective collaboration. Digital communication tools, electronic health records, and virtual platforms have been increasingly adopted and seen as important assets for timely information exchange and care coordination. Therefore, the State government and hospital management board should invest in digital health infrastructure should be scaled up and accompanied by systematic training, ensuring that all professionals are adequately equipped to leverage technology in routine practice.

- iii. Through these targeted actions, Kogi State Specialist Hospital can build upon its existing collaborative culture, institutionalise best practices, and set a replicable model for other public healthcare facilities in Nigeria and beyond.

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