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Editorial

This edition of NIU Journal of Social Sciences focuses on Development Administration, Social Psychology, Educational Pyschology as well as Human Resource Management.

The first part of the Journal addresses issues in Development Administration such as Sustainable Marketing, Crop Farming Management, Election Management, Youth Identity Formation, Public Accountability, Local Governance and Agricultural Economics. It is emphasized in one of the papers that there is need for targeted educational programs from child hood to enhance civic awareness and motivate active participation in the electoral process. This is because it is believed that there is a complex interplay between voters' apathy and voters' education.

Papers in the second part are on Social Psychology. It is revealed in one of the papers in this section that street hawking negatively affects the physical, socio-emotional, cognitive, and moral development of teenage girls. Hence, the study recommends amongs others that targeted advocacy campaigns to sensitize parents and guardians on the dangers of child street hawking.

In the third section on Educational Psychology, one of the papers reveals that gamified assessment is an effective pedagogical tool for promoting active learning and improving academic outcomes in Mathematics. The paper therefore recommends the integration of gamification elements into mathematics instruction, continuous professional development for teachers, and the adoption of innovative assessment practices to support deeper learning and enhance student performance.

Papers in the last part are on Human Resource Management. It is revealed in one of the papers in this section that psychometric assessment functions not merely as an evaluative tool but as a strategic mechanism that supports workforce planning, enhances decision quality, and contributes to sustainable organizational performance. The study therefore, recommends that organizations adopt a multi-theoretical approach when designing selection systems, invest in assessor training to ensure proper test administration and

interpretation, and consistently evaluate the fairness, relevance, and predictive validity of instruments used.

Readers are advised to make proper use of the ideas presented by the various authors in this issue of NIU Journal of Social Sciences. Some of these papers are empirical in nature while others have theoretical base. Each of them focuses on one specific social and management problem or the other; trying to proffer solutions to them.

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Part One
Development Administration

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Strategic Integration of AI-CRM Capabilities for Sustainable Marketing Performance in Lagos State, Real Estate Sector: Ab Holistic Lifecycle Approach

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Abstract. This study explores the strategic integration of AI-enabled Customer Relationship Management (AI-CRM) capabilities to enhance sustainable marketing performance in the Lagos real estate sector, employing a Holistic Lifecycle Approach. Despite a significant housing deficit and high market demand, real estate firms in Lagos experience a performance paradox, marked by intense competition and low lead conversion efficiency. The research focuses on four key dimensions: Customer Interaction Management (CIMC), Relationship Upgrading (CRUC), Win-back Capability (CWBC), and After-Sales Support Management (ASM). A quantitative survey design was employed, gathering responses from 202 real estate professionals. Multiple regression analysis examined both the combined and individual effects of the four dimensions on marketing performance. Results demonstrate a strong positive correlation ($R = 0.812$), with the integrated model accounting for 65.9% of the variance in sustainable marketing outcomes ($R^2 = 0.659$; $p < 0.001$). Among the predictors, Relationship Upgrading had the greatest impact ($t=5.086$), followed closely by Customer Interaction Management. The findings indicate that AI-CRM is no longer a peripheral tool but a strategic driver of long-term brand equity and operational resilience. The study recommends that Lagos-based developers adopt predictive analytics and automated post-purchase support systems to move beyond transactional sales, creating a data-driven approach to market leadership that fosters customer loyalty, lifecycle engagement, and sustainable competitive advantage.

Keyword: Artificial Intelligence-Powered Customer Relationship Management (AI-CRM), Customer Satisfaction, Customer Interaction Management, Relationship Upgrading, and Customer Win-back capabilities, After-Sales Support Management and Lagos State, Nigeria

1. Introduction

In today's fiercely competitive global economy, businesses can no longer rely solely on meeting basic customer expectations. While satisfying customers remains important, true competitive advantage now comes from nurturing meaningful relationships throughout the entire customer journey (Lemon et al., 2021). This is especially true in high-stakes sectors like real estate, where transactions carry significant financial risk and emotional weight. Here, marketing performance is less about simple service delivery and more about a firm's ability to communicate effectively and respond to complex client needs (Ahmad & Parsa, 2021).

The move from basic service to strategic customer engagement was initially supported by Customer Relationship Management (CRM) systems (Payne & Frow, 2017). However, traditional CRM approaches often struggle with "data silos" and manual inefficiencies, limiting their ability to keep pace with fast-moving market information (Kaplan & Haenlein, 2020). This has paved the way for AI-powered Customer Interaction Management Capabilities (CIMC). By integrating Machine Learning (ML) and Natural Language Processing (NLP) into CRM systems, firms can shift from reactive responses to proactive, context-aware engagement (Kumar et al., 2021). AI integration goes beyond automating tasks, it transforms CRM into a comprehensive engine for the entire customer lifecycle. Tools like predictive analytics and intelligent chatbots make every interaction consistent and personalized, from initial awareness through to post-purchase advocacy (Sauter et al., 2021). This approach lies at the heart of

sustainable marketing performance, helping firms use resources efficiently while maximizing long-term customer value.

This shift is particularly crucial in Lagos, Nigeria's commercial hub. The city's real estate sector is paradoxical: it faces a severe housing shortage while also hosting a crowded field of developers competing for a tech-savvy, digitally oriented clientele (Lagos State Government, 2020; Akinyele & Popoola, 2020). In such a fragmented market, traditional mass-market strategies often fail, leading to high customer churn and poor lead conversion. For real estate firms in Lagos, adopting AI-enabled CRM is no longer optional, it's essential for survival. Using AI to provide real-time interactions and personalized experiences allows companies to convert fleeting interest into lasting revenue (Babalola & Ogundele, 2020). Exploring the link between AI-CRM adoption and sustainable marketing performance in this context is key to navigating Nigeria's rapidly digitalizing marketplace.

1.1 Statement of the Problem

The real estate sector in Lagos faces a "performance paradox." Despite rapid urbanization and a severe housing shortage, many firms struggle to turn high market demand into sustainable marketing success (Babalola & Ogundele, 2020). Traditional marketing frameworks are ill-equipped to manage the full customer lifecycle in a high-stakes, digitally-driven environment, leaving firms reactive rather than strategic in their engagement (Chaffey & Ellis-Chadwick, 2019). A major challenge lies in the breakdown of the customer lifecycle funnel. Conventional CRM systems in Nigeria often function as static databases rather than dynamic engagement platforms. Manual data entry and fragmented outreach create gaps in lead management, causing high-quality prospects to be lost and slowing responsiveness, which undermines service quality for a tech-savvy client base (Memon et al., 2019).

This is compounded by a significant tech-strategy gap. While global research emphasizes digital transformation, there is limited empirical evidence on integrating Artificial Intelligence (AI) into CRM within Lagos's real estate sector. Current systems fail to anticipate client needs, convert one-off buyers into long-term investors, or leverage automated, data-driven strategies to re-engage dormant leads (Akinyele & Popoola, 2020). Without AI-enabled CRM, firms remain trapped in reactive marketing cycles, unable to personalize the property acquisition experience, and fall behind competitors leveraging data-driven insights (Nwabueze & Okeke, 2021). This study therefore investigates how AI-powered interaction management (Customer Interaction Management Capability (CIMC), Customer Relationship Upgrading Capability (CRUC), Customer Win-back Capability (CWBC), and After-Sales support management) can enhance sustainable marketing performance in Lagos's emerging real estate market.

1.1 Objective of the Study

The aim of the study is to examine the independent and joint effect of customer interaction management, customer relationship upgrading capability, customer win-back capability and After-Sales support management on marketing performance.

1.2 Research Questions

Is there any independent and joint effect of customer interaction management, customer relationship upgrading capability, customer win-back capability and After-Sales support management on marketing performance?

1.3 Research Hypothesis

There is no independent and joint effect of customer interaction management, customer relationship upgrading capability, customer win-back capability and After-Sales support management on marketing performance.

2. Literature Review and Theoretical Framework

2.1 AI-powered Customer Interaction Management Capability

At the core of this study is the AI-powered Customer Interaction Management Capability (CIMC), defined as an organization's strategic competency in leveraging advanced technologies specifically Machine Learning (ML) and Natural Language Processing (NLP) to orchestrate every touchpoint of the customer journey (Kumar et al., 2021). Within the context of sustainable marketing, CIMC shifts the organizational posture from a reactive, human-dependent model to a proactive, socio-technical system (Vargo & Lusch, 2004). By utilizing intelligent virtual assistants and real-time sentiment analysis, firms can interpret complex consumer behaviors, transforming fragmented transactions into data-informed, longitudinal relationships (Lemon et al., 2021; Stefanou et al., 2020). For the Lagos real estate market, where information asymmetry and high

financial stakes create significant buyer anxiety, this digital capability is operationalized through four interconnected dimensions of the holistic lifecycle:

2.2 Customer Interaction Management Capability (CIMC)

CIMC serves as the foundational layer of the lifecycle, focusing on the seamless management of initial and ongoing engagement (Kumar et al., 2021). In the Lagos property sector, where 24/7 responsiveness is a critical differentiator, AI-driven chatbots and automated inquiry systems provide the immediate, accurate feedback necessary to build early-stage trust (Bayo & Olamide, 2020). Beyond mere automation, this capability utilizes predictive engagement to resolve friction points before they escalate. By employing sentiment analysis to tailor communication styles, firms ensure that the "ease of doing business" remains high, even during the complex administrative phases of property acquisition (Boulding et al., 2020). Ultimately, robust CIMC ensures that the "top of the funnel" remains saturated with satisfied prospects, providing the necessary data for subsequent upgrading and recovery strategies (Kumar & Shah, 2021).

2.3 Customer Relationship Upgrading Capability (CRUC)

As the lifecycle progresses, Customer Relationship Upgrading Capability (CRUC) transitions the strategic focus from customer acquisition to value maximization (Kumar & Shah, 2021). This dimension is pivotal for sustainable performance, as it leverages AI to identify opportunities for cross-selling and up-selling based on a client's evolving financial profile and investment preferences (Chin & Natarajan, 2020). In the real estate context, CRUC allows firms to move beyond a "one-and-done" sales mentality. By analyzing deep datasets, AI predicts "upgrade readiness," allowing developers to present premium property offers or secondary investment opportunities at the precise moment of maximum relevance (Lemon et al., 2021). This precision-driven approach optimizes Customer Lifetime Value (CLV) and fosters a partnership-based relationship, reducing the likelihood of churn (Stefanou et al., 2020).

2.3 Customer Win-back Capability (CWBC)

Customer Win-back Capability (CWBC) represents the "resilience layer" of the holistic lifecycle. It is the organization's ability to identify and re-activate disengaged or at-risk clients a vital function in the volatile Lagos metropolis (Omotosho & Afolabi, 2021). Through predictive analytics, CWBC detects early warning signs of "silent churn," such as decreased portal logins or negative sentiment in communication, triggering automated, personalized recovery protocols (Verhoef, 2021). Strategically, CWBC embodies organizational learning. By analyzing the data behind customer departures, firms can refine their broader marketing strategies to prevent future losses (Kumar et al., 2020). This aligns with the Service-Dominant Logic (S-DL), where the firm must continuously co-create value to sustain the relationship through market fluctuations (Vargo & Lusch, 2004; Nwabueze & Okeke, 2021).

In the high-stakes Lagos real estate market, the conclusion of a property transaction does not mark the end of the customer journey but rather the commencement of a critical retention phase. After-Sales Support Management refers to the strategic orchestration of post-purchase services ranging from deed processing and facility management updates to ongoing maintenance queries (Ahmad & Parsa, 2021). Within an AI-enabled CRM framework, this function evolves from a cost center into a value-generating engine. By deploying AI-driven ticketing systems and automated milestone tracking, firms can provide the transparency and "peace of mind" that Lagos property buyers often find lacking in traditional transactions (Nwabueze & Okeke, 2021).

2.4 The Outcome Variable: Sustainable Marketing Performance

The ultimate goal of integrating AI-CRM capabilities across the holistic lifecycle is the achievement of Sustainable Marketing Performance. Unlike traditional performance metrics that focus on short-term sales volume, sustainable performance is characterized by the firm's ability to generate consistent, long-term value through resource optimization, brand equity, and customer loyalty (Rust & Zahorik, 1993). In the volatile Lagos metropolis, sustainability is defined by a firm's resilience against market fluctuations and its ability to maintain a competitive edge without a proportionate increase in acquisition costs (Babalola & Ogundele, 2020).

Sustainable marketing performance is conceptualized here as a multidimensional outcome of digital transformation. First, it involves the maximization of Customer Lifetime Value (CLV) where AI-driven personalization ensures that existing clients contribute to recurring revenue streams (Kumar et al., 2021). Second, it reflects Operational Efficiency; by automating routine interactions and after-sales workflows, firms reduce the "human-error" costs inherent in the Lagos property market (Omotosho &

Afolabi, 2021). Finally, it encompasses Brand Advocacy, where high levels of AI-facilitated satisfaction translate into organic word-of-mouth, which is arguably the most potent marketing tool in the Nigerian social-commercial landscape (Akinyele & Popoola, 2020). Ultimately, sustainable marketing performance represents the successful resolution of the "performance paradox." This holistic approach ensures that marketing outcomes are not merely transactional peaks but a steady, ascending trajectory of growth and market leadership in a digitally transformed era.

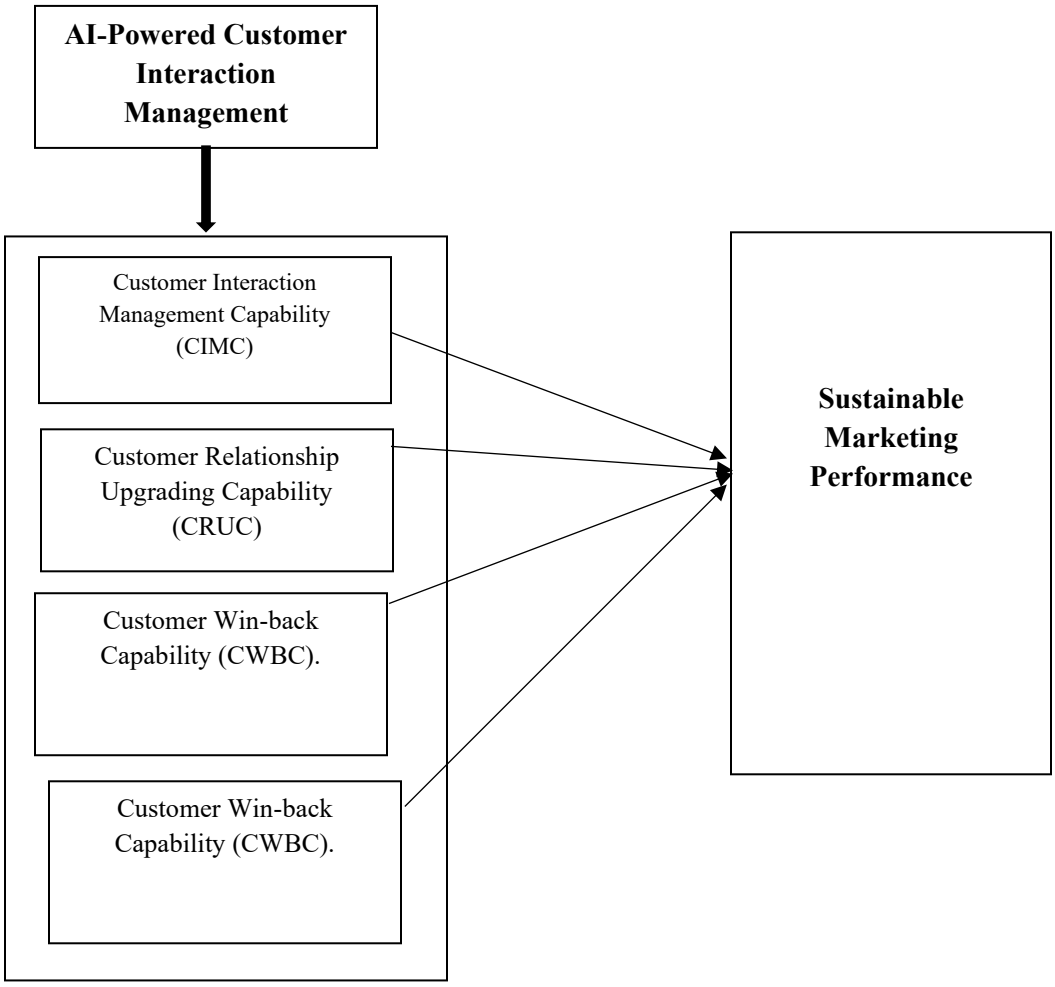

Figure 2.1: *Conceptual Framework of the Study*

2.5 Theoretical Framework: Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), propounded by Davis (1989), serves as a robust theoretical anchor for this study by elucidating the cognitive determinants of technology adoption. TAM posits that Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) are the primary drivers of an individual's attitude and subsequent intention to utilize a system. In the high-stakes Lagos real estate sector, PU translates to the belief that AI-powered CRM tools will substantively enhance marketing efficiency and lead conversion, while PEOU assesses the intuitive nature of these complex algorithmic interfaces for both practitioners and clients.

The critical justification for adopting TAM lies in its ability to bridge the gap between technological availability and functional performance. While AI offers immense predictive potential, its impact on marketing performance is contingent upon human-

system synergy. By analyzing how agents perceive the utility of AI in personalizing client interactions and how customers respond to the ease of navigating automated touchpoints, TAM provides a predictive lens into the successful integration of digital transformation. Consequently, this theory is essential for understanding the behavioral mechanics that transform AI-CRM capabilities into sustained competitive advantage and heightened customer satisfaction.

2.6 Empirical Review and Gap in Literature

Recent empirical research underscores a fundamental shift in organizational strategy, moving from static database management to the dynamic integration of Artificial Intelligence (AI) within CRM architectures. Across diverse economic landscapes, evidence suggests that AI is no longer a peripheral tool but the primary driver of data-driven marketing performance. For instance, studies by Ahmad and Parsa (2021) and Zhuang and Wang (2020) demonstrate that AI-powered CRM platforms significantly enhance customer engagement and lead conversion rates by automating complex decision-making processes.

This pattern is increasingly evident in emerging markets, where operational constraints often hinder traditional service delivery. In China, Zhang and Li (2020) found that AI-based behavioral analytics provide firms with deep-seated insights into shifting customer preferences, leading to superior sales outcomes. Similarly, in the Kenyan real estate sector, Gakuru and Njoroge (2020) observed that AI-enabled chatbots allow firms to maintain high service quality and real-time responsiveness even when human resources are limited. These findings suggest that AI adoption is a strategic necessity for navigating the complexities of modern property markets.

Further empirical work reinforces the link between AI capabilities and long-term marketing outcomes. Davis et al. (2021) utilized quantitative analysis to prove that Natural Language Processing (NLP) and machine learning enhance customer retention by facilitating personalized, context-sensitive communication. Moreover, Mehta and Yadav (2021) found that AI-driven lead scoring systems vastly outperform traditional methods in identifying high-potential prospects, thereby optimizing the entire sales funnel. Within the Nigerian context, Bayo and Olamide (2020) validated that embedding AI functionalities into CRM platforms increases operational efficiency by automating follow-ups and reducing the impact of resource scarcity.

2.7 Gap in Literature

Despite the growing body of evidence supporting the operational benefits of AI-CRM, a significant gap remains in the literature. Most existing studies focus on isolated metrics such as immediate conversion rates or lead scoring rather than examining AI-CRM as an integrated, holistic lifecycle tool. In the Nigerian real estate context specifically, there is a dearth of empirical research that connects AI-powered capabilities (Interaction Management, Relationship Upgrading, Win-back strategies and after-sales support management) to Sustainable Marketing Performance. While current literature acknowledges that AI improves efficiency, it fails to explain how these capabilities interact across the property acquisition lifecycle to ensure long-term resilience and brand equity in a volatile urban hub like Lagos (Akinyele & Popoola, 2020).

The present study addresses this void by shifting the focus from transactional AI benefits to a Strategic Holistic Lifecycle Approach. By investigating the nexus between AI-enabled CRM capabilities and sustainable performance, this research moves beyond "automation" to explore "sustainability." It provides much-needed empirical evidence on how Lagos-based firms can leverage AI not just for immediate sales, but to manage the entire customer journey from initial inquiry through to after-sales support and eventual relationship recovery. In doing so, this study offers a comprehensive framework for achieving long-term market leadership in a digitally transformed economy.

3. Research Methodology

The methodological framework for this study is rooted in the positivist research paradigm, utilizing a descriptive research design. To ensure a rigorous quantitative assessment, the study adopted a cross-sectional survey research design, allowing for the collection of standardized data from a specific population at a single point in time. The target population comprised marketing professionals, digital strategists, and estate managers operating within the Lagos Metropolis, a region selected due to its high concentration of real estate firms and rapid digital adoption. Using a purposive sampling technique, a sample size of 202 respondents was established. This cohort represents the primary drivers of marketing strategy within their respective firms.

Data for this study were collected using a structured self-administered questionnaire designed on a five-point Likert scale, ranging from Strongly Disagree to Strongly Agree. The instrument measured key

constructs including AI-enabled Customer Interaction Management, Relationship Upgrading, Win-back Capabilities, After-Sales Support Management, Customer Satisfaction, and Sustainable Marketing Performance. Established, psychometrically validated scales were adapted to ensure construct validity and reliability, with all measures demonstrating internal consistency above the recommended 0.70 threshold.

AI–Customer Interaction Management Capability was captured with five items adapted from Foltean et al. (2019), assessing real-time responsiveness, automated query handling, and reduced human intervention. AI–Customer Relationship Upgrading Capability used four items from Libai et al. (2020) and Shankar (2018), focusing on loyalty recognition, preference monitoring, and proactive value enhancement. AI–Customer Win-back Capability was measured with four items adapted from Wang and Feng (2012), emphasizing churn identification and automated re-engagement. After-Sales Support Management included five items from Foltean et al. (2019), evaluating responsiveness, issue resolution, professional communication, and its role in fostering loyalty. Customer Satisfaction and Sustainable Marketing Performance were measured using five items each from Trainor et al. (2014), capturing client contentment and sales performance outcomes. Overall, the instrument underwent rigorous validity and reliability testing, confirming its suitability for the study.

Data analysis was conducted using a two-tiered statistical approach. First, descriptive statistics (mean, standard deviation, and frequency distribution) were employed to profile the demographic characteristics of the respondents and the baseline adoption of AI. Second, Inferential Statistics, specifically Multiple Regression Analysis, was utilized to test the research hypotheses. This enabled the researcher to determine the degree of variance in marketing performance explained by the independent AI-CRM variables.

4. Results and Discussion

4.1 Demographic Profile of Respondents

The study was underpinned by a diverse demographic sample of 202 professionals. A critical analysis of the gender distribution reveals a pronounced female presence, with 137 respondents (67.82%) compared to 65 males (32.18%). This nearly two-to-one ratio suggests a workforce demographic that is significantly female-dominated, reflecting a potential shift in the gender composition of administrative and marketing roles within the Nigerian real estate landscape.

Regarding the age group distribution, the data indicates a predominantly mature and experienced workforce. A substantial 76.73% (155 respondents) fall within the "31 years and above" category, while the younger cohorts: 26–30 years (11.88%), 21–25 years (9.41%), and 17–20 years (1.98%) represent a much smaller fraction of the population. This concentration of older staff suggests high levels of institutional knowledge but highlights a critical gap in youthful, "digital-native" talent.

The educational qualification profile shows a workforce primarily grounded in basic academic backgrounds, with 103 respondents (50.99%) holding WASC/SSCE certificates. However, there is a significant tier of professional expertise, as 28.71% hold BSc/HND degrees and 13.86% possess MBA/MSc qualifications. The high-level research tier remains slim, with PhD holders and those "in view" totaling approximately 3%.

Furthermore, the marital status of the respondents is largely characterized by single individuals, accounting for 68.81% (139 respondents), followed by 29.21% who are married. Finally, the departmental distribution reinforces the study's focus on marketing performance, with the Administrative (42.08%) and Marketing (34.16%) departments comprising the vast majority of the sample. This distribution confirms that the data was primarily sourced from the core operational and client-facing units most affected by AI-CRM integration.

Tests of Hypotheses

The null hypotheses was tested through the use of regression analysis:

There is no independent and joint effect of customer interaction management, customer relationship upgrading capability, customer win-back capability and After-Sales support management on marketing performance.

Table 1: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of Estimate
1	0.812	0.659	0.651	0.41542

The model summary reveals an R value of 0.825, indicating a very strong positive correlation between the combination of the four independent variables and the dependent variable, marketing performance. This level of correlation suggests that as customer interaction, relationship upgrading, win-back strategies, and After-Sales services improve, there is a corresponding increase in the marketing performance of the firms. More importantly, the R Square (R^2) value of 0.680 implies that 68% of the variation in marketing performance is jointly explained by the four predictor variables. This is a significant finding, as it demonstrates the model's high explanatory power. With an Adjusted R^2 of 0.673, the model has also corrected for potential inflation due to the number of predictors, indicating that even with adjustments, the model maintains high reliability and robustness. The Standard Error of the Estimate (2.314) suggests the average deviation of the observed marketing performance scores from the regression line, reinforcing that while some variability exists, the model is generally well-fitted. (0.651) accounts for the number of predictors and indicates a very good model fit.

Table 2: ANOVA Table

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	78.923	4	19.731	114.397	0.000
Residual	40.831	197	0.207		
Total	119.754	201			

The ANOVA (Analysis of Variance) table provides further validation of the model. The F-statistic is 94.489, and the significance value (p-value) is 0.000, which is well below the standard alpha level of 0.05. This indicates that the overall regression model is statistically significant and explains a significant portion of the variance in marketing performance. In other words, the combination of customer interaction, relationship upgrading, win-back strategies, and After-Sales support provides a model that is significantly better than a model without these predictors (i.e., a model that only includes the constant). This significant F-statistic confirms that at least one of the independent variables contributes meaningfully to predicting marketing performance.

Table 3: Coefficients Table

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	0.514	0.132	—	3.894	0.000
Customer Interaction Management (CIM)	0.312	0.064	0.274	4.875	0.000
Customer Relationship Upgrading Capability (CRUC)	0.295	0.058	0.261	5.086	0.000
Customer Win-Back Capability (CWBC)	0.219	0.060	0.201	3.650	0.000
After-Sales Support Management (ASM)	0.187	0.051	0.177	3.667	0.000

Source: *Field Survey, 2025*

The coefficients table provides detailed insights into the individual contribution of each predictor variable to marketing performance. The constant value of 3.527 represents the expected value of marketing performance when all predictor variables are held at zero. While this value has limited practical meaning in isolation, it serves as a baseline for the regression equation.

Customer Interaction Management (CIM) B = 0.285, Beta = 0.298, t = 4.071, p < 0.001

Customer interaction management has a statistically significant and positive relationship with marketing performance. A one-unit increase in effective customer interaction management leads to a 0.285 increase in marketing performance, holding all other variables constant. The standardized beta value (0.298) indicates a moderately strong influence on marketing performance. This aligns with prior research showing that real-time, personalized interaction fosters brand loyalty and engagement (Trainor et al., 2014).

Customer Relationship Upgrading Capability (CRUC) B = 0.322, Beta = 0.316, t = 5.031, p < 0.001

CRUC has the highest standardized beta coefficient, showing it is the most powerful predictor in the model. It underscores the critical importance of deepening customer relationships through targeted value-added services and personalized engagement. Upgrading customer relationships enhances emotional connection and long-term satisfaction, as supported by Payne & Frow (2005) who emphasized relational depth in customer lifecycle management.

Customer Win-Back Capability (CWBC) B = 0.267, Beta = 0.272, t = 3.926, p < 0.001

Win-back strategies are also positively and significantly related to marketing performance. The ability of a firm to regain lost customers through targeted communication, incentive programs, or personalized solutions improves its retention rate and enhances overall marketing ROI. As Thomas et al. (2004) have argued, former customers already possess product knowledge and often cost less to re-acquire than new leads.

After-Sales Support Management (ASM) B = 0.243, Beta = 0.258, t = 3.984, p < 0.001
After-Sales support is another strong contributor to marketing performance. Services such as prompt complaint resolution, ongoing communication, and property management build trust and sustain client relationships post-purchase. This reinforces findings by Kotler & Keller (2016) on the role of After-Sales in enhancing the "total product concept," where services add value to the core product.

5. Discussion of Findings

The findings of this study reveal a transformative shift in the marketing landscape of the Lagos real estate sector. The results confirm that integrating AI-enabled CRM capabilities is not merely a technical improvement but a fundamental driver of sustainable marketing performance.

A key finding indicates that marketing performance is explained by the combined effect of the four AI-CRM dimensions, providing strong empirical support for the Holistic Lifecycle Approach. This aligns with Lemon et al. (2021), who argue that sustainable growth requires an integrated view of the customer journey rather than siloed initiatives. With an R-value of 0.812, the study validates Kumar et al.'s (2021) concept of a "proactive interaction engine," demonstrating that synchronizing interaction, upgrading, win-back, and after-sales support creates a resilient ecosystem capable of overcoming the "performance paradox" identified by Babalola and Ogundele (2020).

Customer Interaction Management Capability (CIMC) showed a significant positive effect, reinforcing the findings of Ahmad and Parsa (2021) and Gakuru and Njoroge (2020). In a rapidly urbanizing Lagos, AI-enabled chatbots and NLP tools that provide real-time communication reduce buyer anxiety, highlighting the essential role of "always-on" engagement. Moreover, Customer Relationship Upgrading Capability (CRUC) exhibited the highest statistical significance ($t = 5.086$), supporting Payne and Frow's (2017) emphasis on strategic engagement. This finding suggests that AI-driven behavioral analytics enable firms to move clients from single-property transactions to long-term portfolio management, offering a more sustainable path to revenue growth.

Customer Win-back Capability and After-Sales Support Management complete the lifecycle framework. The significance of CWBC aligns with Verhoef (2021) and Thomas et al. (2004), indicating that reclaiming disengaged customers is a viable strategy for maintaining ROI in a competitive Lagos market. ASM further underscores the importance of post-purchase support, reflecting the "total product concept" of Kotler and Keller (2016). By fostering satisfaction and loyalty after the initial transaction, ASM enables future interaction and upgrading opportunities, reinforcing the holistic approach to sustainable marketing performance. Overall, the findings demonstrate that AI-powered CRM capabilities work interdependently to enhance marketing performance, addressing a critical gap in Nigerian real estate literature.

6. Conclusions and Recommendations

The empirical evidence provided by this study confirms that the Strategic Integration of AI-CRM Capabilities is the definitive catalyst for achieving Sustainable Marketing Performance in the Lagos real estate sector. The transition from traditional, manual-intensive CRM to a Holistic Lifecycle Approach allows firms to effectively navigate the "performance paradox" by turning the vast housing deficit and intense competition into measurable growth opportunities. The study concludes that marketing performance is no longer a byproduct of aggressive sales alone; rather, it is a sophisticated outcome of how well a firm manages the continuum of customer engagement. By successfully rejecting the null hypothesis, this research proves that the synergy between interaction management, relationship upgrading, win-back strategies, and after-sales support creates a self-reinforcing loop of value. Firms that leverage AI to anticipate needs, personalize property portfolios, and proactively recover disengaged clients are better positioned to secure market leadership and long-term brand equity in a digitally transformed economy.

6.1 Recommendations

Based on the findings, the following recommendations were made for the study:

Firms should move beyond basic automated responses and invest in AI-powered Customer Interaction Management (CIMC) that utilizes sentiment analysis and Natural Language Processing (NLP). Real estate developers in Lagos must ensure that their digital touchpoints can interpret the emotional and financial urgency of potential buyers in real-time. This will reduce friction in the property acquisition process and establish the trust necessary for high-value transactions.

Given that Customer Relationship Upgrading Capability (CRUC) was identified as the strongest

predictor of performance, firms should utilize AI-driven behavioral analytics to identify "investment-ready" existing clients. Instead of focusing solely on new lead acquisition, marketing teams should use predictive modeling to offer personalized secondary investment opportunities or premium property upgrades to their current database, thereby maximizing Customer Lifetime Value (CLV).

To ensure sustainability, the "sale" should be viewed as a midpoint rather than an endpoint. Management should implement AI-enabled After-Sales Support systems that provide automated updates on documentation, construction milestones, and facility management. Concurrently, firms must deploy Win-back (CWBC) algorithms to identify "silent churn" or declining engagement early. By proactively re-engaging these clients with data-informed incentives, firms can protect their market share more cost-effectively than through fresh acquisition.

The Lagos State Government and industry bodies should encourage the adoption of digital standards in real estate marketing. For individual firms, this necessitates a shift in human resource strategy training marketing personnel to work alongside AI proactive interaction engines. This socio-technical synergy will ensure that the technology is used not just for automation, but for deep, strategic engagement that leads to sustainable competitive differentiation.

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Effect of Land Speculators Activities on Crop Farming Management Practices in Akinyele Local Government Area, Oyo State

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Abstract. The study was carried out to examine the effect of land speculators activities on crop farming management practices in Akinyele Local Government Area Oyo State. A four-stage random sampling was used to select 106 respondents. Data were collected through the use of questionnaire and were analyzed using descriptive and inferential statistics. The study showed that most (56.6%) of the respondents were male, married (66.0%) and 59.3% had farming experience between 1-10 years. The study also revealed that the management practices such as irrigation practices (54.7%) and Planting (71.1%) were mostly affected by land speculators. Furthermore, the effect of land speculators included, displacement of farmers (48.1%), livelihood insecurities (51.9%) and short-term production of crops (51.9%). The coping strategies used by respondents involved monitoring land prices and value (57.5%), joining and forming organization (54.7%), diversify of crop farming (50.9%), and strengthening community ties (42.5%). Chi square analysis revealed a significant relationship between sex ($\varkappa^2$ = 1.540), marital status ($\varkappa^2$= 5.280), educational level ($\varkappa^2$= 13.422), membership ($\varkappa^2$ = 5.694) and effect of land speculators on crop farming management practices. It is therefore recommended that extension services should deploy intervention programmes on land management that will increase productivity among farmers.

Keywords: Land Speculators, Crop Farming, Management Strategies, Activities

1. Introduction

The most prominent human activity that can affect land accessibility factors is land speculation, which has a detrimental effect on the land market's performance, making land unaffordable, unavailable, and raising concerns about the security of its tenure (Gemeda et al., 2019; Gemeda et al., 2020). The detrimental effects of land speculation extend beyond agricultural delivery to housing delivery (Joshua, Glanda, and Ilesanmi, 2016). The scholars also claim that land speculation has an impact on urban planning and development.

According to Dimuna (2016) and Nwoko (2016), the issue of massive land holdings and acquisitions by primarily private persons is wide spread in Nigeria's rural and urban areas. The claim was made by the scholars without assessing how these private individuals operated. Farmers in poor nations typically use informal risk management techniques to deal with a variety of price and production issues. These techniques range from common risk sharing based on kinship and social networks to income diversification activities and production tactics.

However, Smith and Jones (2022) claim that the invasion of agricultural landscapes by land speculators presents a serious threat to crop farming management techniques, jeopardizing the resilience and sustainability of the agricultural system. Although land speculation has been acknowledged as a

worldwide problem with extensive ramifications, there is still a dearth of empirical study concentrating on its particular implications on crop farming management techniques. The development of focused policies and actions to lessen the detrimental effects of land speculation on agricultural sustainability and food security is hampered by this research vacuum.

A type of investment known as "land speculation" aims to increase the value of the land in the future. Economic growth and progress are encouraged by land speculation (Bello, 2007; Mosha, 2010). It is impossible to overstate how crucial land accessibility is to all human endeavors. Land availability, tenure security, affordability, and simplicity of land transactions are all indicators of land speculation (Omirin, 2002; Odudu and Omirin, 2012). These land accessibility characteristics can be affected by a variety of human activities, the most prominent of which is property speculation.

Land speculators raise land prices, which decreases the amount of agricultural land available and makes farmers' problems with affordability worse. Agricultural land becomes more expensive and scarce as land speculation rises, which affects farmers' capacity to obtain and efficiently manage land for crop cultivation. The resilience of farming communities and the long-term sustainability of the agricultural production system are called into question by this occurrence.

The connection between property speculation and land accessibility was highlighted by Aribigbola (2008). According to the scholar, a number of restrictions on land access resulted from the formal system's inefficiency, which in turn caused land speculation and an excessive increase in property prices. Land affordability, land availability, tenure security, and simplicity of land transaction can all be considered aspects of land accessibility (Omirin, 2002; Odudu and Omirin, 2012).

According to Ademade et al. (2014), just 35% of Nigeria's 98.3 million hectares of arable land are under cultivation, despite the fact that 72% of it has the capacity to be cultivated. The process of controlling how land resources are used and developed in both urban and rural areas is known as land management. Organic farming, reforestation, the production of permanent and arable crops, building construction, water resource management, and ecotourism initiatives are some of the various uses for land resources. Adopting suitable land management techniques that enable land users to optimize the economic and social advantages of the land while improving the ecological support functions of the land resources is known as sustainable land management (SLM) (FAO 2015).

There are agricultural crop management techniques that are well recognised. Results are obtained from these agricultural crop management techniques. These include, among other things, the use of cover crops, crop rotation, intercropping, agroforestry, soil testing, documentation, appropriate irrigation and water management, pesticide and/or fertiliser management, and tillage regimes. In agricultural crop management, paying strict attention to these important aspects will save overall environmental costs while maximising crop production, improving soil quality, and ensuring biodiversity protection.

Because it guarantees food security, maximizing agricultural crop output is essential to the survival of global society (Branca et al., 2011). The greatest agricultural crop management techniques must always be used in developing nations where agricultural production is the main source of income for the populace. This is essential to improving these communities' economic standing. According to UNPFA (2011), there will be 9.1 million people on the planet by the year 2050. Therefore, it is imperative that agricultural crops be managed sustainably and effectively in order to feed this growing population.

1.1 General Objectives

The general objective is to examine the effect of land speculator on crop farming management practices in Akinyele local government area, Oyo state. The specific objectives of the study are to:

- To identify the socioeconomic characteristics of the respondents.
- To examine the level of crop management practice in a study area
- To determine the effect of land speculator activities in the area
- To ascertain the coping strategies used by respondents against the activities of land speculator
- To identify the constraint to use of coping strategies against land speculators activities

2. Methodology

2.1 Area of study

The study was Akinyele Local Government Area (LGA) of Ibadan, Oyo State Nigeria It has an area of 518km2. Its geographic coordinates are 7°23' 47" N

and longitude3°55'0"E with her headquarters in Moniya, and shares boundaries with Afijio Local Government to the north, Lagelu Local Government to the East, Ido local government to the West and Ibadan North local government to the south, it has a population of 105,59 males and 106,217 females (NPC, 2006). The town has a tropical climate and it is generally experiences both raining and dry season as well as harmattan, (Efenakpo*et. al.* 2016). It is one of the eleven Local Governments that make up Ibadan metropolis. Akinyele Local government Area was created in 1976 and It occupies a land area of 464.892 square kilometres with a population density of 516 persons per square kilometre. Using 3.2% growth rate The target population of the study was farmers that are affected by the activities of land speculators in Akinyele local government area of Oyo state.

2.2 Sampling procedure and sample size

A four-stage random sampling method was used to select the respondents for this study. The first stage involved random sampling of 40% of wards (wards 1, 2, 3, 10 and 12) in Akinyele local government area. Secondly, this stage involved random selection village headquarters in each ward selected in local government area. Thirdly, this involved random sampling of 30% of villages affected by the activities of land speculators in each village headquarters from 2006 census figures, the 2010 estimated population for the Local Government is 239,745(NBS, 2009).

Akinyele LGA lies in the south – western zone of the state, which is roughly enclosed by latitude 7.53060 and 3.91100E north of the equator. The major occupation of the Akinyele local government area, LGA is farming. whereby the main crop grown are fruit and vegetables, also manyu of the people in the local government are involved in livestock production like snail and poultry. Akinyele local government area is sub-divided into 12wards.

selected, these are: Lastly, 35% of farmers in each village (Ikereku; 24, Arulogun:,22, Amosun:19, Olorisaoko 25 and Iroko:20) were selected using systematic random sampling to give 110 respondents out of which 106 questionnaires were retrieved.

Data for this study were collected through the use of a well-structured questionnaire. The secondary source was use of relevant literature, research journals and other relevant publication. The data were analyzed using both descriptive statistics such as frequency, percentage and mean score was use to present the results of the study while inferential statistics such as Chi-square to test hypothesis one and PPMC to test hypotheses.

3. Results and Discussions

Table 3.1 Socioeconomic Characteristics of the Respondents

Variables	Frequency	Percentage
Sex		
Male	60	56.6
Female	46	43.4
Total	106	100
Age (years)		
21-30	12	11.2
31-40	25	23.5
41-50	33	30.9
Above 50	36	33.7
Total	106	100
Marital status		
Single	14	13.2
Married	70	66.0
Divorced	11	10.4
Widow	11	10.4
Total	106	100
Religion		
Christianity	47	44.3
Islam	50	47.2
Traditional	9	8.4
Total	106	100
Education		
No formal education	24	22.6
Primary	22	20.8
Secondary	30	28.3
Tertiary	30	28.3

Total	106	100
Income		
Less than 100,000	55	51.5
100001-200000	38	35.8
200001-300000	11	10.2
Above 300000	2	1.8
Total	106	100
Years of experience		
1-10	63	59.3
11-20	22	20.8
21-30	8	7.6
31-40	9	8.3
Above 40	4	3.7
Total	106	100
Household size		
1-5	47	44.2
6-10	55	52.0
11-15	4	3.7
Total	106	100
Membership		
Yes	104	98.1
No	2	1.8
Total	106	100
Farm size		
1-5	89	83.9
6-10	15	14.1
Above 10	2	1.9
Total	106	100
Secondary occupation		
Artisan	24	22.6
Civil servant	19	17.9
Security agent	12	11.3
Trading	51	48.1
Total	106	100

The Table 3.1 above shows the socio-economic characteristics of respondents in the study area. It shows 56.6% are males and 43.4% are females which means males constitute a larger percentage which could be due to the energy requirement involved in farming and this is line with Ezekiel, *et al.,* (2019) that found out higher percentage of respondents are male. The age distribution shows 33.7% fall into the category above 50 are the largest group and the lowest group are those between the ages of 21-30 years and this means that most of the respondents are aged and are mature enough to make decisions on the farmland and this relates with Olawuyi and Moshunje, (2019) that reported age influence decisions making on farmland. Also, 66% are married, 13.2% are single and 10.4% are widowed and divorced respectively and this means most of the respondent are responsible and committed for the survival and living of the family. Educational background of the study shows 28.3% are having secondary and tertiary education respectively, and only 22..6% are not having formal education and this means a larger percentage of respondents are educated and will therefore increases the ability of farmers to use their resources efficiently and it enhances the farmer's ability to obtain, analyze and interpret information and this support Alene *et al.* (2000), in the case of Ethiopia, reported that farmers with a higher level of education had a higher probability of adopting improved farming practices than those with lower level of education.

The respondents years of experience in farming shows that 59.3% have between1-10 years, and 20.8% are having 11-20 years, with the least (3.7%) having above 40 years and this implies that most of the respondents are still young in crop farming and will therefore be able to take actions on land use practices in order to ensure farming is sustainable and this relates with Ezekiel, *et al.,* (2019) that reported most farmers are still young in crop farming. About 52% of the respondents have a large household size of about 6-10 members and 44.2% have between 0-5 members and this means most of the respondents have a reasonable amount of members that could be used as labour on farm and this support (Bekele and Drake, 2003) who reported that Larger family size is generally associated with a greater labour force being available to the household for the timely operation of farm activities. Majorities (98.1%) of respondents were members of an association except 1.8% which do not belong and this implies that they can have access to information on farming and the activities of land speculator. Social capital such as cooperative societies has been found to enhance the interaction and cross-pollination of ideas among farmers. This in effect will positively affect land management enhancing technologies (Bamire and Fabiyi, 2002). In addition, 83.9% have a farm size of about 1-5 hectares and 14.1% have between 6-10hectares and this can influence their spending on land management

technologies (Bekele and Drake, 2003). About 48.1% of respondents were traders as their secondary occupation, 22.6% are artisan and 17.9% are civil servant and this implies that most of the respondents have other income generating activities.

Table 3.2: Crop Farming Management Practices

	Larger extent	Lesser extent	Rarely	Not at all
Irrigation practices	58(54.7)	47 (44.3)	1(0.9)	0(0)
Improved soil quality by following the best practices	55(51.9)	51(48.1)	0(0)	0(0)
Fertilizer application	79(74.5)	26(24.5)	1(0.9)	0(0)
Harvesting	68(64.2)	36(34.0)	2(1.9)	0(0)
Crop nutrients	62(58.5)	38(35.8)	6(5.7)	0(0)
Pest management	63(59.4)	40(37.7)	3(2.8)	0(0)
Tillage practices	61(57.5)	35(33.0)	9(8.5)	1(0.9)
Crop Rotation	46(43.4)	49(46.2)	11(10.4)	0(0)
Seed bed preparation	65(61.3)	33(31.1)	8(7.5)	0(0)
Increasing harvesting	49(46.2)	49(46.2)	8(7.5)	0(0)
Increasing crop diversity	50(47.2)	49(46.2)	7(6.6)	0(0)
Use of improved weed control	59(55.7)	43(47.6)	4(3.8)	0(0)
Planting	76(71.7)	26(24.5)	4(3.8)	0(0)
Farm labour management	44(41.5)	58(54.7)	4(3.8)	0(0)
Keeping good farm record	41(38.7)	57(53.8)	8(7.5)	0(0)
Increase in storage	34(32.1)	66(62.3)	6(5.7)	0(0)

Source: *Field Survey, 2024*

The result on management practices engaged by respondents as presented in Table 3.2 shows that 74.5% practiced fertilizer application to a large extent, 24.5% to a little extent and only 0.9% practiced it rarely and this implies that respondents are aware of the important of nutrient for yield of crops and this is line with Ande, *et al.,* (2008) that identified the use of fertilizer was practices on cassava farm in order to prevent nutrient loss. In line with the above practice, 58.5% practice crop nutrients and 35.8% to a lesser extent. Also, 71.7% practice planting to a large extent, 24.5% to a less extent and only 3.8% practiced it rarely. Harvesting was practiced to a larger extent among 64.2% of the respondents and 34% practiced to a lesser extent and this could be attributed to the fact that timely harvesting help farmers to harvest at the right season in order to ensure other crops are planted while maintaining the quality of produce harvested (Alene, *et al.,* 2000). Pest management was practiced to a larger extent among 59.5% of respondents and 37.7% to a little extent and this suggest the fact that respondents were managing pest such as insect, lizards etc to avoid attacking crops. The use of tillage practices was used to a large extent among 57.5% and in the same line 61.3% reported they practice seed bed preparation and both findings implies that crops thrive well and survive in areas where there is proper tillage system and beds or rideges for planting as according to Enisan and Adeyemi, (2013) that identifies tillage system is practiced by the farmers in the study area.

Table 3.2.1: Categorization of the respondents based on their management practices on crop farmers.

Categorization	Frequency	Percentage (%)	Mean
High (above mean)	43	40.6	
Low (below)	63	59.3	39.7925
Total	106	100.00	

The result in Table 3.2.1 shows majority (59.3%) of the respondents considered the management practices on crop farmers. to be high while 40.6% had a low management practice on crop farmers.

Table 3.3: Effect of land speculators on crop farming management practices

Variables	Larger extent	Lesser extent	Rarely	Not at all
Displacement of farmers	51(48.1)	49(46.2)	6(5.7)	0(0)
Driving up high prices of land	60(56.6)	45(42.5)	1(0.9)	0(0)
Contribute to economic inequality among the farmers	63(59.4)	39(36.8)	4(3.8)	0(0)
Reduce resilience to rural communities	32(30.2)	71(67.0)	3(2.8)	0(0)
Uncertainty of crop production	57(53.8)	46(43.4)	3(2.8)	0(0)
Livelihood insecurities	55(51.9)	45(42.5)	6(5.7)	0(0)
Short term production of crops	55(51.9)	43(40.6)	8(7.5)	1(0.9)
Encouraging monoculture	36(34.0)	60(56.6)	10(9.4)	0(0)
Neglect of conservation practices	37(34.9)	56(52.8)	12(11.3)	1(0.9)
Crop farmland fragmentation	35(33.0)	59(55.7)	12(11.3)	0(0)

Source: *Field survey, 2024*

The findings above show the effect of land speculators in the study area. It shows 59.4% reported it contribute to economic inequality to a large extent, 36.8% to a lesser extent and this could be attributed to the fact land speculation brought about disparity in the financial capacity of respondents. Also, 56.6% reported driving up high prices of land was an effect due to land speculation. Fatta (2014) posited that land speculation negatively affected housing demand and housing supply and consequently led to a high increase in land prices beyond the reach of the citizens. About 53.8% claimed to a large extent and little extent among 43.4% that there is uncertainty of crop production and this is also in line with 52.9% that there is short term of production of crops and this could be attributed to the fact that land can be used for other non-agricultural purposed thereby affecting cultivation of crop. Joshua *et al.* (2016) established that uncontrolled land speculation led to poor farm management practices, lowering food crop production and premature urbanization of rural area. Livelihood insecurities was found out to be an effect of land spectators among 51.9% at a large extent and 52.5% to a little extent and this could be due to the fact that respondents are vulnerable to poverty, reduction in food security, and standard of living as a result of land speculation and this is in line with a Agwu, *et al.,* (2010) that reported the issue of food insecurity and other means of livelihood directly depends on the availability and quality of fertile land.

Table 3.3.1: Categorization of the respondents based on their effect of land speculators.

Categorization	Frequency	Percentage
High (above mean)	69	64.5
Low (below)	37	34.9
Total	106	100.00

The result in Table 3.3.1 shows majority (64.5%) of the respondents considered the effect of land speculators to be high while 34.9% had a low effect of land speculators

Table 3.4: Coping strategies used by farmers

Variables	Often	Sometimes	Rarely	Never
Monitoring land prices and value	61(57.5)	26(24.5)	19(17.9)	0(0)
Joining and forming organization	35(33.0)	58(54.7)	13(12.3)	0(0)
Negotiating with speculators	51(48.1)	49(46.2)	6(5.7)	0(0)
Developing alternatives land use	33(31.1)	57(53.8)	16(15.1)	0(0)
Diversifying of crops farming	54(50.9)	41(38.7)	11(10.4)	0(0)
Investing in land properties	43(40.6)	55(51.9)	8(7.5)	0(0)
Preserving tradition knowledge towards land use	44(41.5)	45(42.5)	16(15.1)	1(0.9)
Strengthing community ties	43(40.6)	45(42.5)	18(17.0)	0(0)
Partnership with government agencies on land use	41(38.7)	50(47.2)	15(14.2)	0(0)
Diversifying into the income generating activities	33(31.1)	55(51.9)	18(17.0)	0(0)
Seeking legal advice and advocating for fair policy	35(33.0)	59(55.7)	12(11.3)	0(0)
Collaboration with agricultural organization	36(34.0)	60(56.6)	10(9.4)	0(0)
Collaborating with farmers' cooperative societies	35(33.0)	64(60.4)	7(6.6)	0(0)
Building strong relationship with local community leaders and members	40(37.7)	57(53.8)	9(8.5)	0(0)

Source: *Field survey, 2024*

The Table 3.4 above shows the coping strategies used by farmers in the study area. It shows 57.5% often monitor land price and value, 24.55% sometimes and only 17.9% rarely and this means farmers monitor land price and value in order to know when the land is to be offered for sale and amount. Also, 48.1% of respondents often negotiate with

speculators and 46.2% sometimes negotiate and this means a larger percentage of the respondents negotiate with the speculators in terms of land usage, and land tenure and this support (Odudu and Omirin, 2012) who identified negotiation between farmers and speculators help to understand the land affordability, land availability, tenure security and ease of land transaction. About 50.9% often diversify from crops farming and 38.7% sometimes diversify from farming into other business in order to alleviate the problem faced by the activities of land speculators. In addition, 40.% invest in land properties often and 51.9% sometimes which means the farmers are also investing in landed properties in order to prevent the land speculators from converting agricultural land into non agricultural land and this was in line with Nwoko, (2016) that reported farmers invest in landed properties in order to generate wealth and also settle conflict between farmers and land speculators. Also, 40.6% of the respondents are often strengthening community ties and 52.5% sometimes and this could be due to the fact that the sales of the land is made by the community residents and therefore good relationship with the community residents will allow for easy negotiation when land speculators want to purchase land meant for agriculture and this finding also corroborates the finding of Oyedeji and Sodiya (2016) who established that family was the most prevalent source of land acquisition in Nigeria and therefore farmers make good relationship with them as a strategy against effect of land speculators. Most (41.5%) reported preserving the tradition knowledge towards land use was often used and 52.5% were sometimes used. Furthermore, 38.7% reported they often partner with government agencies on land use and only 47.2% sometimes partner and this means farmers are engaging government in the decisions making on land use and this support Adeniyi, (2011) that identified that there is collaboration between government and other relevant stakeholders on decisions regarding land use.

Table 3.4.1: Categorization of the respondents based on their coping strategies used by farmers.

Categorization	Frequency	Percentage	Mean
High (above mean)	70	65.9	
Low (below)	36	33.9	31.8113
Total	106	100.00	

The result in Table 3.4.1 shows majority (65.9%) of the respondents considered the coping strategies used by farmers. to be high while 33.9% had a low coping strategies used by farmers.

Table 3.5: Constraints of use of coping strategies

Variable	Major constraints	Minor constraints	Not a constraints
Inadequate training on farm land use and regulations	63(59.4)	41(38.7)	2(1.9)
Literacy level of the farmers	54(50.9)	44(41.5)	8(7.5)
Inadequate information on farm land ownership and tenureship	65(61.3)	41(38.7)	0(0)
Inadequate fund	48(45.2)	53(50.0)	5(4.7)
Poor training support on crop management practices	58(54.7)	48(45.3)	0(0)
Cultural and traditional land barrier	39(36.8)	64(60.4)	3(2.8)
Unfavorable land ownership system	51(48.1)	53(50.0)	2(1.9)
Poor access to improved technologies on crop land management	54(50.9)	51(48.1)	1(0.9)
Poor implementation of land use by government	56(52.8)	49(46.2)	1(0.9)
Poor loan facilities to farmers	45(42.5)	58(54.7)	3(2.8)

Source: *Field Survey 2024*

Table 3.5 shows the constraints of use of coping strategies against land speculator activities in the study area. It reveals the major constraints were Inadequate training on farm land use and regulations (59.4%), Inadequate information on farm land ownership and tenureship (61%), literacy level of the farmers (50.9%), poor training support on crop management practices (54.7%), poor implementation of land use by government (52.8%) and poor access to improved technologies on crop land management (50.9%) and this is similar to Titus and Adefisayo, (2012) that many smallholder farmers in Nigeria were not active adopters of coping strategies due to their limited access to information on land ownership, meagre resources , low educational level, lack of technical know-how, and poor knowledge on sustainable crop management practices were known to pose challenges on the adoption of coping strategies in Sub-Saharan Africa, including southwest Nigeria.

Table 3.5.1: Categorization of the respondents based on their constraints of use of coping strategies against land speculators activities

Categorization	Frequency		Percentage	Mean
High (above mean)	54		50.9	
Low (below)		52	48.9	14.9717
Total		106	100.00	

The result in Table 3.5.1 shows majority (50.9%) of the respondents considered the constraints of use of coping strategies against land speculators activities to be high while 48.9% had a low constraints of use of coping strategies against land speculators activities.

3.6 Hypothesis of Study

H_{o1}: There is no significant relationship between socio-characteristics and the effect of land speculator on crop farming management practices

Table 3.6.1: Chi square analysis of socio economic characteristics of respondents

Variable	Chi square value	p- value	Decision
Sex	1.540	0.673	NS
Marital status	5.280	0.809	NS
Religion	16.941	0.050	S
Education	13.422	0.144	NS
Membership	5.694	0.770	NS

The Chi square analysis in Table 3.6.1 shows that there is no significant relationship between the effect of land speculator on crop farming management practices and the socio-economic characteristics of respondents in the study area except religion (x value= 16.941 and p value=0.050). This means most of the socio-economic characteristics does not have significant influence on the effect of land speculator on crop farming management practices.

Ho_2: There is no significant relationship between the coping strategies used against the effect of land speculation and the effect of land speculator on crop farm management practices

Table 3.6.3: PPMC analysis showing the relationship between crop management practices and effect of land speculators

Variables	r-value	p-value	Decision
Effect of land speculators and crop farming management practices	0.602	0.000	S

Source: *Field Survey, 2024.*

The table 3.6.3 above shows there is significant relationship between the coping strategies used against the effect of land speculation and the effect of land speculator on crop farm management practices and by implication means the respondents develop the strategy in line with the effect, i.e the more the effect the more the strategies and vice versa.
Ho_3: There is no significant relationship between the coping strategies used against constraints faced in using the coping strategies and the effect of land speculator on crop farm management practices

Table 3.6.3: PPMC analysis showing the relationship between constraints and effect of land speculator on crop farm management practices

Variables	r-value	p-value	Decision
Effect of land speculators and crop farming management practices	0.431	0.000	S

The table 3.6.3 above shows there is significant relationship between the coping strategies used against constraints faced in using the coping strategies and the effect of land speculator on crop farm management practices

4. Conclusion

Based on the findings of the study, it could be inferred that the communities were dominated by old household head with secondary and tertiary education with large household size and have stayed long in the community. The study shows majority of the respondents practice some management techniques such as irrigation practices (54.7%), harvesting (64.2%), and pest management (59.4%) etc. The result shows the majority of the respondents had effect of land speculators. It further revealed that the respondents had high coping strategies. The Chi square test statistic revealed a significant relationship existed between sex ($\varkappa^2$ = 1.540), Marital status ($\varkappa^2$= 5.280) and Educational level ($\varkappa^2$= 13.422),

membership capacity ($x^2 = 5.694$) while religion ($\varkappa^2 = 16.941$) had no significant relationship between the effect of land speculators on crop farming management practices and the socioeconomic characteristics of the respondents except religion ($\varkappa^2$ value=16.941 and p value=0.050).

5. Recommendations

The following recommendations were made from the findings of the study:

- Extension services should seek to deploy intervention programmes that will intensify dissemination information on land management strategies in improving crop farming practices for increased productivity among farmers.
- There should be strict compliance to land use act and town planning master plan as designed by the government planning authorities, such that lands are not committed to the purpose they are not meant for.
- Farmers should be given enough notice to round up their farming activities to avert being abruptly chased out of their farmland, making them lose their investments, where it becomes inevitable that land be acquired for other purposes aside agriculture
- There should be a thorough examination of the quality or fertility of the land, such that only lands that have been depleted in fertility and nutrients are committed to other purposes aside agricultural production

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Sustainable Approaches to improving Textile Design Aesthetics in Home Décor in Ondo West Local Government

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Abstract. The study examined sustainable approaches to improving textile design aesthetics in home décor: A case for emerging markets in Ondo-West Local Government Area. Decoration is the act of beautifying, adorning, or enhancing an object, place, or individual to make it attractive, elegant, and presentable. It also serves as a medium for recording the creative expressions of the decorator through visual and sensory forms. Three objectives were set to guide the study, and a survey research design was employed. A total of 0.0022% of the study area's population was selected as respondents. Data were collected using a structured questionnaire. Tables and bar charts were used as instruments for analysis. Findings from the study reveal that leather furniture is common in homes, and respondents agreed that fabrics are excellent options for home furnishing. Conclusions were drawn based on the study' s objectives, and nine recommendations were made at the end of the study.

Keywords: Sustainable Approaches, Textile Design, Aesthetics and Home Decor.

1. Introduction

Decoration is the act of beautifying, adorning, or enhancing an object, place, or individual to make it attractive, elegant, and presentable. It can also be defined as the act of honoring an individual with a medal, award, or position based on merit. Decoration refers to anything used to make something more attractive or festive. For instance, if you are hosting a Valentine's Day party, you might drape your house in red and pink decorations. Additionally, decoration can signify a type of honor, such as a soldier's medal or stripe. It is an act or object intended to enhance the beauty of a person or space. Moreover, it can serve as a token of recognition awarded to a recipient for wearing (Sherbert, 2021).

In modern English, the term "aesthetic" also refers to a set of principles underlying the works of a particular art movement or theory (Rlink, 2022). Aesthetic materials are those that enhance the visual appeal of a place or individual, contributing to a pleasant, positive, or artistic appearance. These materials serve as mediums with visual and sensory forms that record artistic creations. Some common aesthetic materials used in home decoration today include leather, stone and mosaic, wood, ceramics, textiles, books and magazines, collections, lamps, mirrors, pictures, sculptures, wall hangings, plants, and indoor trees. However, for the purpose of this research, only textiles were considered and analyzed.

Textile design is the systematic process of planning, organizing, and manufacturing a fabric's appearance and structure through the creation of motif designs or patterns visible on knitted, woven, and printed fabrics. Textile design is associated with the creation of innovative, stylish, and contemporary patterns and requires specialized skills. The core areas of textile design involve various techniques, including printing, weaving, ornamenting fabric, print techniques, embroidery tracing, and color detailing. Additionally, textile designers assist clients in visualizing designs and refining prototypes. Vexations (2022) opined that textile design is a creative and technical process in which thread or yarn fibers are woven or interlaced to form a flexible, functional, and decorative fabric that is subsequently printed upon or otherwise adorned.

Textile design is further categorized into three major disciplines: printed textile design, woven textile design, and mixed-media textile design. Each discipline utilizes distinct methods to produce surface-ornamented fabrics for various uses and markets. Over time, textile design has evolved into an industry

integral to other disciplines such as fashion, interior design, and fine arts. It has been widely used in decorating homes, offices, and apartments. A design does not necessarily have to be new, different, or impressive to be successful in-home decoration, but it must fulfill a specific need. However, the process of designing often leads to innovative products and services.

The main thrust of this study is to research and find out Sustainable Approaches to Improving Textile Design Aesthetics in Home Décor, A Case for Emerging Markets in Ondo West Local Government. Specifically, the study examined the following objectives: Identification of some of the textile materials used in Ondo West Local Government Area, highlights what each textile materials can be used for; suggests strategies and ways in which textile materials and designs can be better used in the decorating of our home interior and exterior. For and indept knowledge of study, relevant and scholarly literature were review. Discreetly survey research design was adopted for the study. A structure questionnaire was the major instrument for data collection. Data collected were analyzed using Bar Charts. Results were extensively discussed, conclusion made base on the findings and ten recommendations made based on set objectives of the study

1.1 Statement of the Problem

The main problem this study seeks to address is sustainable approaches to improving textile design aesthetics in home décor, with a focus on emerging markets in Ondo West Local Government Area. This includes examining the quality and quantity of textile materials and designs being used and how they are applied.

The quest for better and more exotic interiors has led to an unprecedented rise in the use of textile materials, as more people seek to incorporate them into their home décor. Despite this growing interest, it appears that some Nigerians, both educated and uneducated, do not fully understand the aesthetic value of textile materials or how to use them correctly in their homes. Some lack knowledge of proper color combinations, while others purchase textile materials simply because they like them, without considering how they fit into the overall color scheme of their interiors. Additionally, some buy textiles without considering their quality, quantity, or the types of designs that best complement their space.

This has made it necessary to investigate the value of textile materials and designs being used in home interiors.

1.2 Purpose of the Study

The main purpose of this study was to examine Sustainable Approaches to Improving Textile Design Aesthetics In Home Décor A Case for Emerging Markets in Ondo West Local Government Area, Specifically, the study:

- Identified some of the textile materials used in Ondo West Local Government Area of Ondo State.
- Highlighted what each textile materials can be used for.
- Suggested strategies and ways in which textile materials and designs can be better used in the decorating of home interior and exterior.

1.3 Research Questions

The following research questions guided the study:

- What are the different types of textile materials used in Ondo West Local Government Area of Ondo State?
- What are these textile materials be used for?
- What are the strategies or ways in which textile materials and design can be better used In the Decorating of our home interior and exterior?

1.4 Significance of the Study

The study on the Sustainable Approaches to Improving Textile Design Aesthetics in Home Décor: A Case for Emerging Markets in Ondo West Local Government Area would be of immense benefit to individuals, interior decorators and people who love to use textile materials and designs in their home interiors and decorations. The findings of the study will help to clearly state to interior decorators the aspects of textile design and how it can be enhanced. It is believed that when the findings of this study are published electronically and in hard copies, it would improve the overall development and usage of textile materials and design and help to build a society that is well sensitized and enlightened about the aesthetic value of textile materials and design in home interior and decoration. The findings of this study will also help the house owners and the interior decorators to understand the influence of textile materials and design in home interior and decorations and would

form the basis on which another research like the subject can be carried out.

1.5 Scope of the Study

This study is limited to Sustainable Approaches to Improving Textile Design Aesthetics In Home Décor: A Case for Emerging Markets and decorations in Ondo West Local Government Area of Ondo State.

2. Concept of Decoration

According to Merriam webster (2021), decoration is the act or process of decorating, something that adorns, enriches, or beautifies, or a badge of honour (such as a U.S. military award). So, decoration is all about making an object, a place or an individual more presentable and look more attractive to increase the aesthetic beauty of the individual, object, or place.

Tarafder (2019), posited that interior decorating concentrates on the aesthetics of a space, how to pair an open floor with complementary furniture and decor accents or create atmosphere or mood with lighting or wall sconces. Interior decorating deals with the Look and feel of a room by adding accessories like drapes and rugs, interior designers make the best use of the space. Interior design enhances the experience of shaping the interior space with the help of certain manipulation of special volume and surface change techniques. In addition to traditional decoration, interior design deals with environmental psychology, architecture, and development in production design. Interior design is the process of creating and coordinating elements inside many kinds of structures. These elements might include colour schemes, textiles, surfaces finishes, furniture, and decorative pieces. It is a process used in residences but also in offices, retail stores and even places like restaurants and airports. Interior decorating is not just about finding the right furniture and accessories, but it is also important to choose the right fabrics. From the proper materials to the best patterns (Tarafder 2019).

2.1 Textile materials used in Ondo West Local Government area of Ondo State

Tarafder, (2019), It is an age-old practice to use fabrics for making interior decoration. Fabrics are wonderful options for home furnishings. Fabrics like silk, chiffon, organza and stretch fabrics are chosen by the interior decorators for making interior decoration as per the modern concepts in interior designing. Stretch fabrics have the great advantage of their durability and excellent washing ability for use in interior designing. Apart from the great variety and wide range of colours of fabrics it is the replacement benefit of the same and the cost-effectiveness due to their replacement benefit. Interior design textiles work to unify the room and help during the space together. This is the area where the colour palate comes into the picture. Once it is decided about a colour, one or two of the colours usually secondary and accent shades may be selected and can use them in various textiles throughout the room. For example, the faux-far gives the room a glamorous and feminine feel. Since it is white, it ties in with the walls, the bedding, and the furniture to help the room feel cohesive. From such ideas, one may know what textiles are and why they are so important for the design and the next step comes to learn how to use them correctly. Examples of textile materials used in Ondo West Local Government area of Ondo state are Aso oke, tie and dye fabrics, Batik fabrics, Marbled fabrics, printed fabrics, Damask, Velvet, Denim, Lace, Ankara, Wool fabrics, Embroidered fabrics, patchwork fabrics, Découpe, Applique, knitted fabrics, crocheted fabrics among others.

2.2 The aesthetic value of textile materials and design in home interior and decorations.

The aesthetic value of textile materials and designs in home and interior decorations includes the fact that textiles help to set a tone or bring elements together for a very finished appearance. It also provides a set of aesthetically pleasing but efficient solutions for better use of the space in question. The goal of textile materials and design is to improve the user experience by better managing the space available in the intervened environment. Textiles also work to unify the room and help bring the space together. This is where your colour palette comes into play. Once you have one in mind, you can take one or two of the colours usually your secondary and accent shades and use them in various textiles throughout the room. Simply put, aesthetics makes us happy. On an emotional level, they elicit feelings of happiness and calm. They connect us to our ability to reflect on and appreciate the world around us which in turn gives us feelings of contentment and hope. Textile materials and designs help to uplift our spirits and help to effectively optimize the space in our home making the best use of the available space. Interior design plays a very important role in our life today, making our lifestyle more modern and stylish (Schnurr 2019).

Strategies and ways in which textile materials and designs can be better used in decorations and the decorating of home interior.

According to Holowko (2021), The use of textile materials and designs can be improved or better used in decorations and the decorating of our home interior

in other to improve their aesthetic value using the following ways:
Select a successful colour palette.

Colour is one of the most important elements within a surface pattern design as it can determine the mood and feel of a design. Your choice of the colour palette can make or break a design so it's important to take the time to consider what colours you are going to use. A colour palette is a group of colours that have been chosen to work together. The colour palette you choose will be greatly determined by your target market or product so make sure you have a good understanding of these before you start designing (Holowko, 2021).

Make sure your design is balanced.
According to Holowko (2021), Balance will help your design feel visually complete and harmonious. You want the elements within your design to work together as a group.
Balance within a design can be considered in many ways including:
Colour- making sure your colours are well balanced and work together
Texture- make sure your choice of textures works together
Layout- choose a layout that works with the motifs you are using and desired outcome
Size- think about the size of your motifs and their relationship to each other
Add contrasting elements.
Adding contrast to your design will help create depth and interest.
Contrast can be used in many ways including:
Colour e.g., bright versus dull colours.
Texture e.g., textured areas versus plain areas.
Size e.g., large versus small motifs (Holowko, 2021).
Create a focal point
It's a good idea to have some areas of your surface pattern design that have more focus than others otherwise your design can appear too busy and difficult to read.
A focal point could be created through your choice of motif e.g., a decorative motif with simpler elements around it will become a focal point. It can also be created through your choice of colour, texture, or size of your design elements. (Holowko, 2021).
Try altering the repeat type
If your design isn't working or doesn't feel quite right, consider changing the repeat type you're using. By changing the repeat type, you can drastically change the look of your design. For example, if you change your repeat type from a full drop/block repeat to a half drop or brick repeat, your design can appear less formal. It will also be harder to find where the repeat starts and finishes. (Holowko, 2021).
Ensure you create a seamless repeat
One of the most important jobs of a surface pattern designer is to be able to create seamless surface pattern repeats. In a seamless repeat, you will not be able to see where your design starts or finishes. It should appear flowing and seamless. (Holowko, 2021).
Add in areas of texture
Texture can be a really simple way of adding interest to your design. One of the simplest ways of adding texture to your surface pattern designs is by using line texture techniques. Consider changing the thickness of your lines, altering the directions of your line or using lines to create patterns within your design.
Texture can also be created with printed techniques such as block printing, lino printing, and stamping (Holowko, 2021).
Add a sense of depth to your designs
Creating depth for your design is a great way of creating interest.
The easiest way of creating depth is to overlap your design elements. This will allow you to have some elements in the background and some in the foreground.
When using this technique, you need to consider your colour palette so that your design remains harmonious (Holowko, 2021).
Consider both the positive and negative space of your design
We're often guilty of spending all our time creating beautiful motifs that we forget to consider the space around our designs. The negative space (or the background space) is just as powerful as the positive areas. Stop to think about those areas and make sure you use the negative space to enhance your design. (Holowko, 2021). For example, select furniture that aligns that with the overall design style of the space / room.
Think about the size of your motifs
Consider the size of your motifs and how they work together as a whole. Sometimes by simply changing the scale of the elements within your design, you can create more interest. Try making some elements larger and some smaller. Make sure you take the time when you've finished your design to stand back and critically review what you have created.

3. Methodology

Descriptive survey research design was adopted for the study

3.1 Population of the Study

This study was carried out in Ondo West Local Government Area of Ondo State. The population of the study was all the households in Ondo West Local Government Area with a population of 283,672 (census 20006) with its headquarters in Ondo city. The population of this study comprised of selected households in study area State 0.0022% which amounts to 150 houses out of the total number of houses was used in this study.

3.2 Sample and Sampling Technique

For this study, simple random sampling technique was used to select 150 households in the study area

3.3 Instrument of Data Collection

The instrument of data collection was a well-structured questionnaire

3.4 Instrument Administration and Data Collection

150 copies of the questionnaire were administered to the respondents personally by the researcher.

3.5 Method of Data Analysis

The data gathered were collated and analysed using Bar Charts

Research Question 1: What are the different types of textile materials used in Ondo West Local Government Area of Ondo State?

Table 1: Showing the responses of the respondents on the different types of textile materials used in Ondo West Local Government Area of Ondo State.

S/N	The different types of textile materials used in Ondo West Local Government Area of Ondo State	The total number of those who agreed	The total number of those who disagreed
1	Ankara is widely used in Ondo west Local Government Area of Ondo state.	134	16
2	Leather furniture are common in our homes.	120	30
3	The use of tie and dye fabric is old fashioned in interior decoration in Ondo West Local Government Area of Ondo State.	108	42
4	Hand woven fabrics are usually very common in interior decoration in Ondo West Local Government Area of Ondo State.	102	48
5	Embroidered fabrics is best used to cast decorative items in our homes in Ondo West Local Government Area of Ondo State.	98	52

Chart 1: Bar chart of responses of the respondents on the different types of textile materials used in Ondo West Local Government Area of Ondo State.

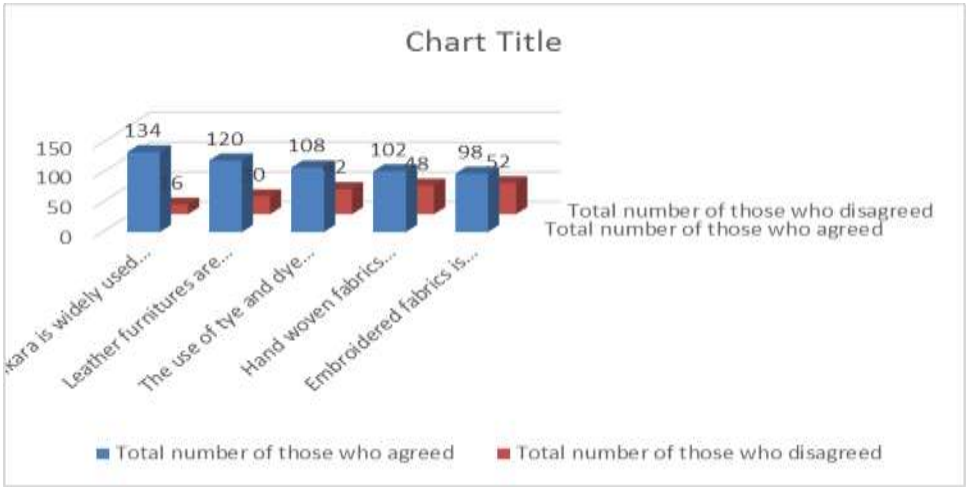

Table 1 and chart 1 revealed that the number of respondents that agreed with the items under the research question 1 as part of the textile materials used in Ondo West Local Government Area of Ondo State are within 134 and 98 while the number of those that disagreed are within 16 and 52. 134 respondents agreed while 16 respondents disagreed that Ankara is widely used in Ondo west local government area of Ondo state, 120 respondents agreed while 30 respondents disagreed that leather furniture are common in our homes, 108 respondents agreed while 42 respondents

disagreed that the use of tie and dye fabric is old fashioned in interior decoration in Ondo West Local Government Area of Ondo State, 102 respondents agreed while 48 respondents disagreed that hand woven fabrics are usually very common in interior decoration in Ondo West Local Government Area of Ondo State and 98 respondents agreed while 52 respondents disagreed that embroidered fabrics is best used to cast decorative items in our homes in Ondo West Local Government Area of Ondo State

Research Question 2: What are these textile materials be used for?

Table 2: Showing the responses of the respondents on what the materials can be used for.

S/N	Uses of textile materials	Total number of those who agreed	Total number of those who disagreed
1	Knitted and crocheted textiles can be used for table covers	138	12
2	Leathers can be used for cushions.	130	20
3	Tie dye and batik textiles can be used for bed spread and duvet.	126	24
4	Wool fabrics can be used for cushions.	118	32
5	Adire fabrics can be used for wall hangings.	102	48

Chart 2: Bar chart of responses of the respondents on what the materials can be used for.

Table 2 and chart 2 revealed that the number of respondents that agreed with the items under the research question 2 of what this textile materials used in Ondo West Local Government Area of Ondo State can be used for are within 138 and 102 while the number of those that disagreed are within 48 and 12. 138 respondents agreed while 12 respondents disagreed that knitted and crocheted textiles can be used for table covers, 130 respondents agreed while 20 respondents disagreed that leathers can be used for cushions, 126 respondents agreed while 24 respondents disagreed that tie dye and batik textiles can be used for bed spread and duvet, 118 respondents agreed while 32 respondents disagreed that wool fabrics can be used for cushions and 102 respondents agreed while 48 respondents disagreed that adire fabrics can be used for wall hangings.

Research Question 6: What are the strategies or ways in which textile materials and design can be better used In the Decorating of our home interior and exterior?

Table 3: Showing the responses of the respondents on the strategies or ways in which textile materials and design can be better used In the Decorating of our home interior and exterior.

S/N	Strategies or ways in which textile materials and design can be better used In the Decorating of our home interior and exterior	Total number of those who agreed	Total number of those who disagreed
1	Get textiles with very high tensile strength.	134	16
2	Get textiles that have good flame-resistance.	138	12
3	Placing and proper handling of the fabric.	124	26
4	Use the right equipment to maintain the textiles.	134	16
5	Get quality and long-lasting products for your interiors and decoration.	126	24
6	Get textiles with excellent colour fastness.	130	20
7	Use and combine the right colours that are your colour scheme that goes with your interior.	134	16

8	Get textiles with high resistance to seam slipping and yarn distortion.	114	36
9	Proper application or use of textiles.	120	30
10	Avoid using textiles near heat or fire and avoid staining the textiles.	128	22

Chart 3: Bar chart of responses of the respondents on the strategies or ways in which textile materials and design can be better used In the Decorating of our home interior and exterior.

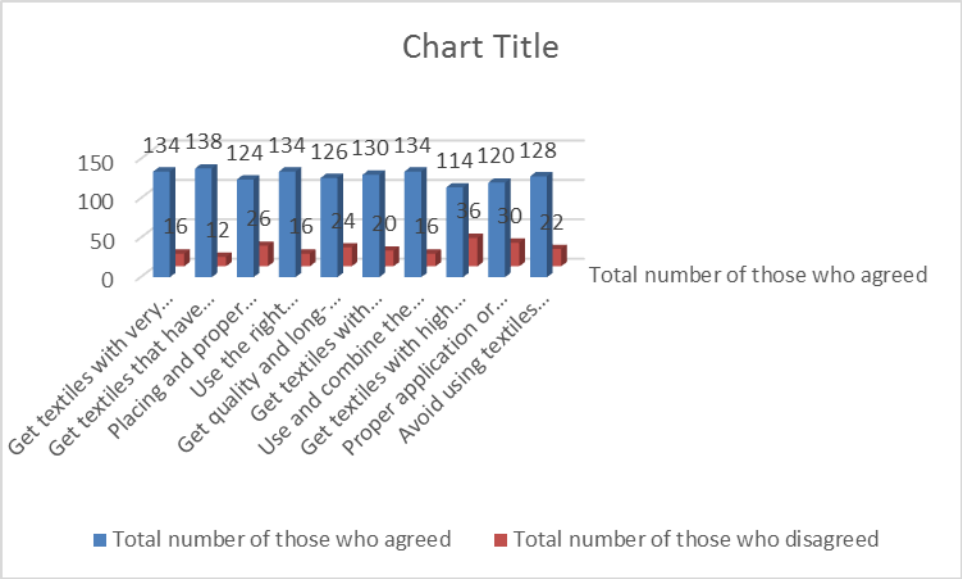

Table 6 and chart 6 revealed that the number of respondents that agreed with the items under the research question 6 as part of the textile materials used in Ondo West Local Government Area of Ondo State are within 134 and 114 while the number of those that disagreed are within 36 and 12. 134 respondents agreed while 16 respondents disagreed that to getting textiles with very high tensile strength, 138 respondents agreed while 12 respondents disagreed that to getting textiles that have good flame-resistance, 124 respondents agreed while 26 respondents disagreed that placing and proper handling of the fabric, 134 respondents agreed while 16 respondents disagreed that use the right equipment to maintain the textiles, 126 respondents agreed while 24 respondents disagreed that get quality and long-lasting products for your interiors and decoration, 130 respondents agreed while 20 respondents disagreed that get textiles with excellent colour fastness, 134 respondents agreed while 16 respondents disagreed that use and combine the right colours that are your colour scheme that goes with your interior, 114 respondents agreed while 36 respondents disagreed that get textiles with high resistance to seam slipping and yarn distortion, 120 respondents agreed while 30 respondents disagreed that proper application or use of textiles and128 respondents agreed while 22 respondents disagreed that avoid using textiles near heat or fire and avoid staining the textiles.

4. Discussion

From research question 1, the responses of the respondents shows that Ankara is widely used in Ondo West Local Government Area of Ondo State, Leather furniture are common in our homes, The use of tie and fabrics is old fashioned in interior decoration, and that Embroidered fabrics is best used to cast decorative items in our homes. This corroborate past research findings as Anomie (2021) explained that African wax prints, Dutch wax prints or Ankara, are omnipresent and common materials for clothing in Africa, especially West Africa, Nevertheless, some fabrics are a little bit more preferred than others. Ankur (2019) so as shown in his findings that Ankara is preferred more than the other fabrics. it is also supported by Nnadi and Chioma (2019) Aso oke is used to make men gowns, called agbada and hats, called fila, as well as women' s wrappers, called Iro, and head tie known as Gele

From research question 2, the responses of the respondents show that knitted and crocheted textiles can be used for table covers, leathers can be used for cushions, tie dye and batik textiles can be used for bed spread and duvet, wool fabrics can be used for cushions and adire fabrics can be used for wall hangings. It is emphasised by Oknazevad (2021) that leather can be used for a variety of things including

bags, clothing, footwear, furniture, cushions and so on, also supported by Tarafder (2019) it is an age-old practice to use fabrics for making interior decoration. Fabrics are wonderful options for home furnishing.

From the research question 3, the responses of the respondents shows that following Strategies or ways in which textile materials and design can be better used In the Decorating of our home interior and exterior which includes getting textiles with very high tensile strength, getting textiles that have good flame-resistance, placing and proper handling of the fabric, use the right equipment to maintain the textiles get quality and long-lasting products for your interiors and decoration, getting textiles with excellent colour fastness, using and combining the right colours that are your colour scheme that goes with your interior, getting textiles with high resistance to seam slipping and yarn distortion, proper application or use of textiles, and avoid using textiles near heat or fire and avoid staining the textiles. As supported by Holowko (2021), the use of textile materials and designs can be improved or better used in decorations and the decorating of our home interior in other to improve their aesthetic value using the following ways; Select a successful colour palette as colour is one of the most important elements within a surface pattern design and it can determine the mood and feel of a design, Make sure your design is balanced as balance will help your design feel visually complete and harmonious. You want the elements within your design to work together as a group, add in areas of texture as texture is a really simple way of adding interest to your design. One of the simplest ways of adding texture to your surface pattern designs is by using line texture techniques, it can also be created with printed techniques such as block printing, lino printing, and stamping.

5. Conclusion

From the finding of this study on the strategies for improvement in the aesthetic value of textile materials and designs used Ondo West Local Government Area of Ondo State. It was divulged that, there are the different types of textile materials used in Ondo West Local Government Area of Ondo there, what each textile material is used for and factors to be considered before buying textile materials, it also revealed that their various kind of textile designs used in Ondo West Local Government Area of Ondo State and the aesthetic values of textile materials and designs in the decorating of our home' s interior and exterior. It also pointed out strategies or ways in which textile materials and design can be better used in decorating our home' s interior and exterior from the getting of textiles with very high tensile strength, getting textiles that have good flame-resistance, placing and proper handling of the fabric, use the right equipment to maintain the textiles, getting quality and long-lasting products for your interiors and decoration, getting textiles with excellent colour fastness, using and combining the right colours that are your colour scheme and goes with your interior, getting textiles with high resistance to seam slipping and yarn distortion, proper application or use of textiles, to avoiding the use of textiles near heat or fire and avoid staining the textiles.

These findings and strategies for improvement stated in this study will go a long way in helping in the long-term use of our home interior and decorations materials and designs and help in increasing and maintaining the aesthetic value of our home interiors and decorations.

6. Recommendations

Based on the findings of this study, the following recommendations were made:

- Take your time to plan and prepare for the interior decoration.
- Select a successful colour palette, Use, and combine the right colours that are your colour scheme that goes with your interior and get textiles with excellent colour fastness.
- Get textiles with very high tensile strength, have good flame-resistance and high resistance to seam slipping and yarn distortion, avoid using textiles near heat or fire and avoid staining the textiles.
- Placing, proper handling, and Proper application or use of textiles materials.
- Use the right equipment to maintain the textiles and get quality and long-lasting products for your interiors and decoration.
- Making sure the design is balanced by adding contrasting elements and create a focal point.
- Trying to alter the repeat type and ensuring you create a seamless repeat pattern of design.
- Add in areas of texture, a sense of depth to the designs and Think about the size of your motifs
- Consider both the positive and negative space of your design.

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Peace, Conflict and Sustainable Development: Management Implications for Peace Education in Nigeria

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Abstract. This paper discusses the concepts of Peace, Peace Education and Conflicts and its management implications which always unavoidably rare its head in interrelationships between humans in societies, thereby deterring strong volitions to achieving sustainable development. The paper dwells on the role of peace education as a globally acclaimed measure for achieving sustainable education and to a greater extent, sustainable development. It also highlights the rationale for peace education in Nigeria, while recommendations for achieving sustainable development through peace education were made. Among these, is that peace education should be introduced to teachings and trainings of each age group; teachers; head teachers; public servants and in research institutes both as pre-service and as in-service trainings. The paper also highlighted several management implications on social institutions in Nigeria such as Strategic management, peace building and governance, conflict management and sustainable development goals.

Keywords: Peace, Peace education, Conflict, Sustainable education, Sustainable development and Management

1. Introduction

With globalization and knowledge era, the permeability between the borders of Countries has increased and because of this, cultures have interacted with each other with the help of individuals. During this process, the representatives of different cultures have had to interact with people from different races, ethnicities, religions, sects, dialects and cultures (Arslan, Guncavdi and Polat, 2015). Within the Nigerian landscape also, there are frequent intermixture of cultures through daily interrelationships between nationals from different tribes and localities. If this interaction process is not desired to cause chaos, it depends on creating environments where peace-focused cultures are dominant.

In the contemporary world where people from different races, ethnicities, cultures, social classes, and political views live together and it is inevitable; being tolerant is of great importance to create the environment with mutual understanding and respect (Totar, 2009). It is necessary to create a culture based on freedom, justice, democracy, tolerance and unity to build a peaceful culture globally (UNESCO 2005). For this sharing culture to blossom and for peace culture to be dominant, it is vital to develop peace culture with the help of education (Demir, 2011). The biggest agent to create peace culture is the human beings themselves, because peaceful relations and structures can be improved through individuals' efforts. For individuals to place peace-loving understanding into their lives, they should be trained with peace education since early ages (Polat 2015), and the quality and the effectiveness of this education, that is, sustainability is closely related to preventing bullying, creating safe and peaceful cultures at schools. To provide this,

children should be taught alternatives of violence and the skills to live in peace (Harris and Morrison 2003).

As a matter of fact, the preponderant percentage of the fora where education is the subject of discourse, the youth automatically become the ultimate focus. There has been a growing concern over several issues that affect the well-being of youths in most nations of the world including Nigeria. Some of those issues are education, health, employment, poverty, drug abuse and involvement in crime. These critical areas have been predominant in the annals of the development of some countries because of its effect on sustainable development.

The conceptualization of the term "youth" varies from one country to the other depending on the interplay of socio-cultural, economic, instructional and political factors. In Nigeria, a youth is any person aged between 12 to 35 years, Federal Republic of Nigeria (FRN, 1999). Although the UN Convention on the Rights of the child defines children as persons below the age of 18 (United Nations, 2002), it appears the age categorization for children and youth by the United Nations are overlapping, this was international in view of the fact that it had no separate plan for a convention on the Right of the youth. However, it is important to note that in many societies, a dividing line is drawn between a child, youth and adult based on a few characteristics and traditions (Ojedele et. al 2015). Several conflicts around the world, in Africa and Nigeria have had devastating effect on the all-round development of the people particularly, the youth's indicative of lack of qualitative and sustainable education. Besides the psychological trauma, they could be stigmatized for perpetrating violence and its attendant consequences.

Youths are faced with a 'double disadvantage' as victims and perpetrators of violence. They represent a sub-group of the population in any community or nation that are vulnerable and susceptible to involvement in violence either voluntarily or by coercion. Moreover, they represent an unlimited reserve of manpower, which could be harnessed negatively to achieve the control of power by the elite through violent means as was opined by the Buhari led administration, in the September 2020 nationwide youth protest against the Nigeria Police tagged #EndSARS, which the government accused the opposition and some elites as the Youths sponsors.

The older generation owes the youth a relatively stable and peaceful world as reiterated by the UN's Declaration of 2001-2010 as the "International Decade for a culture of Peace and Non-violence" for the children of the world. In fact, this should serve as a rallying point for fundamental change towards the active involvement of youth in peace building. Sustainable peace in Africa and Nigeria will prove elusive without the involvement of the youth. They are important stakeholders in peace building due to their dual role as victims and perpetrators of conflict (Ojedele et al. 2015).

2. The Concept of Peace

Turkish Language Association (TDK, 2015) defined the concept of peace as the discourse created with harmony, reciprocal understanding and tolerance; and this definition emphasizes interpersonal peace. Keskin-Cosku and Keskin (2009) cited in Polat (2016) described peace as 'the group of values which includes respecting features such as race, gender, religion physical appearance and age; appreciate diversity, unity, cooperation, tolerance and being fair'. Harris (2012) divided the concept of peace into two levels which are internal peace and external peace. While internal peace is about an individual's thinking about others and respecting them, external peace represents peace in families, societies, cultures and international relations. Galtung (1969) cited in Arslan, Y et al (2015), on the other hand, dealt with concept of peace as positive peace and negative peace. Negative peace was defined as solving contradicts without any violence. One of the most effective ways to battle with contradicting and discriminating attitudes, to create tolerant communities, and to build a peaceful society based on positive peace culture is to train individuals with peace education UNESCO 1994).

2.1 What is Peace Education?

Peace education is a process during which concepts, information, attitudes, skills and values are taught to individuals which help them live in peace. In other words, peace education is an educational process during which peaceful problem-solving methods, instead of problem-solving methods based on violence and conflict, are taught to individuals. (Polat. 2015). During peace education, which uses adopting an educational understanding for fairer and more peaceful world and making a move in this way as base (Wulf 1999) cited in Polat et al. (2015), individuals and students are taught problem-solving, consensus, reflection, conflict solution skills and attitudes such as love, respect, tolerance, empathy (Sagkal, 2011). Peace education is aimed to teach the peaceful alternatives necessary for solving conflicts without violence, and for building reciprocal harmony. (Reardon, 2002).

Peace education hopes to create in the human consciousness a commitment to the ways of peace. Just as a doctor learns in medical school how to minister to the sick, students in peace education classes learn how to solve problems caused by violence. Social violence and warfare can be described as a form of pathology, a disease. Peace education tries to inoculate students against the evil effects of violence by teaching skills to manage conflicts non-violently and by creating a desire to seek peaceful resolutions of conflicts. Societies spend money and resources training Doctors to heal the ill. Why should they not also educate their citizens to conduct affairs nonviolently. Peace educators use teaching skills to stop violence by developing a peace consciousness that can provide the basis for a just and sustainable future.

The word 'education' comes from the Latin word 'education', to draw or lead out. Peace education draws out from people their instincts to live peacefully with others and emphasizes peaceful values upon which societies should be based. Educators from early childhood to adult, can use their professional skills to tell their students about peace. The study of peace attempts to nourish those energies and impulses that make possible a meaningful and life-enhancing existence. (Harris, 2003).

A European peace educator has defined peace education as: "The initiation of learning processes aiming at the actualization and rational resolution of conflicts regarding man as subject of action". (Nor Staehr, 1974) cited in Harris (2003). An American peace educator, Betty Reardon, defines peace education as "learning intended to prepare the learners to contribute toward the achievement of peace" (Reardon, 1982) cited in Harris (2003). She goes on to state that peace education "might be education for authentic security" where a need for security motivates humans to form communities and nations; because individuals disagree about how to achieve security, there are many different parts to peace. An Israeli educator (Salomon, 2002) has stated that peace education programmes take different forms because of the wide variety of conflicts that plague human existence. Each different form of violence requires a unique peace education strategy to resolve its conflicts. Peace education in intense conflicts attempts to demystify enemy images and urges combatants to withdraw from warlike behaviours. Peace education in regions of interethnic tension relies upon an awareness about the sufferings of the various groups involved in the conflict to reduce hostilities and promote empathy for the pain of others.

Peace educators in areas free from collective physical violence teach about oppression within that society, explain the causes of domestic and civil violence, and develop a respect for global issues, environmental sustainability, and the power of violence. From the foregoing, Salomon hinges his proposition on the fact that since conflict is inevitable in human interrelationship, the twin brother of conflict which doubles as the remedy for both violence and nonviolence warfare is peace, and its attainment requires well thought out measures for the purpose of achieving sustainable development through qualitative and sustainable education.

In addition to providing knowledge about how to achieve peace, peace educators promote a pedagogy based upon modeling peaceful democratic classroom practices. They share a hope that through education, people can develop certain thoughts and dispositions that will lead to peaceful behaviours. Key aspects of this disposition include kindness, critical thinking, and cooperation (Harris and Morrison, 2003). Developing such virtues is an important part of peace education. However, it is not the complete picture. The struggle to achieve peace takes place at both individual and social levels. Peace educators work with individuals to point out how the root problems of violence lie in broader social forces and institutions that must be addressed in order to achieve peace.

Peace activists use community education to alert people about the horrors of violence. Working through non-governmental organizations, they use Public Relations techniques-guest speakers, press releases, media interviews, and newsletters – to provide awareness about nonviolence solutions to conflict. Educators from many different academic disciplines also practice peace education. Sociologists in college classrooms talk about violence in civil society. Political scientists describe world order models meant to manage global conflicts. Psychologists explain the structures in the human psyche that lead to violent behaviours. Anthropologists debate about violent and peaceful tendencies of collective human behaviours. Historians write about the history of peace movements. Literature professors review works of art devoted to peace. Professional teachers in primary and secondary schools teach about peace in many settings from early childhood to high school. Most infuse peace themes into their curriculum while some organize peace studies programmes that provide a more comprehensive overview of peace strategies; meanwhile, the role of the school in contributing to community and by extension, the larger society is of immense value. Aside producing educated citizens for the community, the school also directly contributes to

the development of the community. (Ebire, 2020), which is why peace education is one of the main aims of basic education. (Vered, 2015) cited in Polat, 2015).

Peace education encompasses the key concepts of education and peace. While it is possible to define education as a process of systematically institutionalized transmission of knowledge and skills, as well as of basic values and norms that are accepted in a certain society, the concept of peace is less clearly defined. Harris, I and M, Morrison (2003). Many writes make an important distinction between positive and negative peace. Negative peace is defined as the absence of large-scale physical violence – the absence of the condition of war. Positive peace involves the development of a society in which, except for the absence of direct violence, there is no structural violence or social injustice. Accordingly, peace education could be defined as an interdisciplinary area of education whose goal is institutionalized and non-institutionalized teaching about peace and for peace. Salomon G. and Nevo B. (2002). Peace education aims to help students acquire skills for nonviolence conflict resolution and to reinforce these skills for active and responsible action in society for the promotion of the values of peace. Therefore, unlike the concept of conflict resolution, which can be retroactive trying to solve a conflict in advance or rather to educate individuals and a society for a peaceful existence on the basis of nonviolence, tolerance, equality, respect for differences, and social justice.

2.2 Discrepancies in Peace Education

In the active process of achieving positive peace, peace education is faced with a few basic discrepancies, which can as well be referred to as challenges of Peace education, discrepancy between the individual and the group, discrepancy between groups within one society or from different societies, and the discrepancy of conflict as an imbalance of different interests that need to be resolved without violence. Each different form of violence requires a unique peace education strategy to resolve its conflicts. (Ian Harris 2003):

2.3 What is Conflict?

Quicy Wright (1990:19) cited in Oladoyin (2011) defines conflict as opposition among social entities directed against one another, it is distinguished from competition defined as opposition among social entities independently striving for something of which the supply is inadequate to satisfy all. Two points which are directly related to conflict analysis and management can be deduced from this definition. Conflict and competition are two points of a continuum on which conflict represents aggravated competition. In order words conflict arises when disagreement emerging from competition cannot be resolved. It follows therefore that conflict management has to begin with supposedly ordinary competition. The other point that can be inferred from Wright definition is that conflicts are processes that tend to degenerate from non-violent to violent and from crisis to full-scale war.

Conflicts take on a wide variety of forms and have been classified based on intensity or scale of violence, structural and character of parties in conflict (class, ethnic, groups, religious group, racial group) and so on and manifesting a distinct spatial character (national, regional, inter-state or international). However, non-violent conflict has the potential to become violent if the regulatory mechanism is ineffective.

2.4 Types of Conflict

Conflict occurs among different classes of people and produces different kinds of results. There are many types of conflicts: some are based on where the conflict happens while some are based on the kind of effect the conflicts produce. Oladoyin (2011) dichotomized conflicts as follows:

2.4.1 Conflicts based on Locus/Organization:

Intrapersonal Conflict: This occurs within a person as he takes a decision on the use of time, choice of partner, moral, goals and aspirations etc. This can produce anxiety and tension within the person going through this kind of conflict. This type of conflict can affect the sense of direction or decision of the Educational Manager.
Interpersonal Conflict: This is a conflict that occurs between two or more individuals. It may result from differences in opinion, motives and actions, this kind of conflict is what is seen when two people are having disagreement among themselves.

Intra-Group/Department/Unit Conflicts Conflict: This may occur between individuals within a group. This is like interpersonal conflicts except that it occurs within a particular group. This kind of conflict can be seen when, for example two members of the Labour Union are having disagreement about something which has to do with the Union in a School System.

Inter-Group/Department/Unit Conflict: This is a conflict that occurs between groups of people such as solidarity groups, activity groups and Student's Union. This kind of conflict occurs when, for example

members of the Staff Union are in disagreement with members of the Students Union or one country at war with another country.

Class Conflict: This is the type of conflict that takes place among occupants of different social, political or working classes e.g. head of the School and Staff Union.

National Conflicts: Conflicts within a nation, involving different groups within the nation. This could be inter-ethnic, inter-religious, or competition for resources.

International Conflict: These are conflicts between nations presumably traceable to ideological differences and reasons; territorial claims or political competition.
Conflicts based on the effects produced include:

Functional or Constructive Conflict: This kind of conflict improves the quality of decisions, stimulates creativity and innovation through which problems can be aired and tensions released.

Dysfunctional or Destructive Conflict: This type of conflict leads to retarded communication, reduction in group cohesiveness and a subordination of goals to primacy of in-fighting among members. This kind of conflict produces bitterness, envy, anger and unforgiveness. This type of conflict is usually protracted with no immediate and permanent solution at sight.

2.5 Causes of Conflict

Conflicts have several causes. Albert (2010) identified the major cause of conflict in Nigeria as competition for resources.

Conflict is inevitable in an organization. It starts from complaint by a worker who is dissatisfied with conditions of service in his/her place of work and if care is not taken, complaint graduate to grievances, disputes and conflict. Oladoyin (2011) gave a broad classification of the causes of conflict.
Economic causes – wage, salaries. Profit, etc.
Social causes- low morale, corruption, pollution, mounting, unemployment, etc.
Technical causes – fear of loss of job on computerization, unsuitable technology, technology, etc.
Psychological causes – fear of job, propaganda, instigation, etc.
Market cause – competition loss, recession, etc.

It is also generally believed that abject poverty makes people to be susceptible and thus become what Alabi (2010) refers to as pliable instruments in the hands of conflict entrepreneurs. It then implies that there is a correlation between poverty, natural resource abundance and violent conflict (Agbonifo 2011).

2.6 Sustainable Education

The 2030 Agenda for Sustainable Development unites global development goals in one framework. The fourth global goal on education (SDG 4) succeeds the Millennium Development Goal and Education for All priorities for education.

At the world Education Forum in Incheon, Republic of Korea, in May 2015, representatives of the international education community signed the Incheon Declaration, embracing the proposed SDG 4 as the single universal education goal, which commits countries to 'ensure inclusive and equitable quality education and promote lifelong learning opportunities for all'. SDG 4 and its 10 targets advance a model where learning, in all its shapes and forms, has the power to influence people's choices to create more just, peaceful, inclusive and sustainable societies. To provide a clear blueprint for implementing SDG 4, the international educational community adopted the Education 2030 framework for Action in Paris in November 2015 (UNESCO, 2015).

3. Sustainable Development

According to Adelakun (2020), development is the efforts put collectively by individuals or groups to improve the well-being of the society. Development is purposeful process initiated by man to improve the well-being of mankind. National Development refers to the growth, changes and improvements occurring in each economy, with the aim of promoting the quality of life among the populace. A nation is developed when it can meet the needs of the present generations and also the needs of the future. When the development in the present can be perfectly forecasted to the future needs, we say such development is sustainable. Sustainable development is when what you have said about development is going and does not stop, also considered the ongoing and does not stop future. But Nigeria of today is not even meeting the needs of the present and it is likely there is no future. Therefore, Nigeria is underdeveloped. According to Nwadiani (2000), Development tends to address all these questions:

- What is happening to employment?
- What is happening to literacy and illiteracy?
- What is happening to health?

- How is the GNP of the people?
- What is the standard of living?
- What is the security state?

When all of these are in the right place and position, then sustainable development occurs. Thus, the overall goal of sustainable development (SD) is the long-term stability of the economy and the environment; this is only achievable through the integration and acknowledgement of economic, environmental, and social concerns throughout the decision-making process.

Sustainable development is the development that meets our present needs without compromising the ability of future generations to meet their own needs (UN/ISDR, 2009). The United Nations asserts that the components that work together to produce sustainable development are economic development, social development and environmental protection (MCkeown, 2002; UN General Assembly, 2005). These three must be conceptualized together, planned together and implemented together to achieve the desired results (Sofoyeke et al, 2015).

To achieve sustainable development, there is the need to develop human resources. This becomes imperative as it is the major way of enabling people to free themselves and also think objectively. Volunteering options (2008), corroborates this opinion as it maintains that achieving human development is a measure of freeing people from obstacles that affect their ability to develop their own lives and communities. It further maintains that developmental efforts should be geared towards enabling local people to take control of their own lives, expressing their own demands and finding their own solution to their problems.

It is based on this that Karl Max opines that sustainable development is that which is people centered and enables them to be self-reliant, a condition which would bring lasting satisfaction to their needs and improve quality of their lives (Okly, 2004).

3.1 The Role of Peace Education in Achieving Sustainable Education/Development

Peace education embodies studies and teachers in a process which is change oriented; also it contributes to them behaving peacefully, and to be an accommodationist. The contribution maintains after education has finished, so it makes solution-oriented environments, where no elements of violence exist or where conflicts are resolved functionally, possible; and this is valued as quite important for educational processes, development and quality of life (Salomon, 2002: UNESCO, 2005). Peace education is taken into consideration with peaceful pedagogy, and the content of this pedagogy is made up of cooperative learning, democratic society, moral sensitivity, critical thinking, tolerance. (Harris 2002). Also, it is stated that individual's aggression tendencies and psychological problems decrease, their constructive conflict solution skills improve, and they have more positive attitudes towards being isolated from violence with the help of peace education. (Sagkal 2011). Thus, peace education is seen as one of the most effective ways to create positive, peaceful culture-oriented societies. (UNESCO, 2005). According to Johnson and Johnson (2005), the basic aim of peace education is to provide peace in individuals' internal worlds, their interpersonal relations, and to provide peace among groups, countries, societies and cultures. (Harris 2002), on the other hand, listed the aims of peace education as understanding the wealth of peace, scrutinizing the fears, providing knowledge about systems for living safely, understanding violent behaviours, improving intercultural understanding, supporting concepts of social justice and peace, encouraging respect for life and ending violence.

In addition to these, Sammers (2002) defines the aims of peace education as ensuring students' evaluating the conflicts with more positive-based thinking methods; approaching more universally towards social problems; increasing tolerance and acceptance of conflicts that result from political, religious or racial difference; bringing individuals' skill of taking responsibilities in decision making; action and reflective thinking, and by doing these maintaining peace both in individuals' internal world and in society.

4. Rationale for Peace Education in Nigeria

We need peace education in Nigeria because the country has lost too much both in the past and in the more enlightened present-day Nigeria when both Nigeria youths and elites are very conversant with the enabling provisions of International Law that provides for fundamental rights of citizens both to qualitative and sustainable education, which are congruently embedded in Peace education. The losses are due greatly to numerous, avoidable incessant conflicts. The negative aftermath of the Nigeria civil war is still with us (Osaghae, Onwudiwe and Suberu, 2002). The Igbo are still left out of the scheme of things in Nigeria (Albert 2002) and this has been creating tensions in the Nigeria political landscape. There is the palpable fear of unending disharmony as a result of the perceived North-South dichotomy. Violent ethnic nationalism and religious fundamentalism is threatening the peace

of the country. The age-long marginalization uproar of the Niger Delta oil rich region has not subsided at all. Also, assassinations, killings campus cultism and related social vices are now more reported by the Nigeria media than ever before. Violent community conflicts are on the rise in the country (Albert, 1998), cited in Ojedele et al (2015). In many parts of Northern Nigeria, Muslims and Christians are locked in seemingly intractable conflict over the practice of sharia, the Boko Haram Insurgence; from Zamfara, to Katsina, Plateau, Adamawa/Bornu and Bauchi to Kano States (The Nation 2014) cited in Ojedele et al (2015). Nigerian Leaders who are supposed to be preaching peace, tolerance and peaceful coexistence, dissipate their energies on setting their constituencies against one another.

The latest of the violent conflicts in Nigeria and which still enjoys global attention and wider coverage is the Nigerian Youths Protest against the purported high handedness, brutalities and flagrant killings of innocent Nigerians, most especially the youths by the arm of the Nigeria Police codenamed SARS – Special Anti-Robbery Squad. The National Protest that lasted for about twelve days was reported (Punch, 2020) to have climaxed into massive shootings of Protests by the Nigeria Army, on Tuesday October 20, 2020 at Lekki toll gate, Lagos a day tagged 'Back Tuesday', occurrence which has culminated into setting up of Judicial Panels of Enquiry in Abuja, Lagos and many States of the federation. Albeit, the Nigerian government has apart from disbanding the SARS and replaced it with another body-SWAT, (Special Weapon and Tactics Team) has also acceded to the demands of the Nigerian Youths; the CNN (Cable Network News) – a multinational and internationally renowned Media outfit) and the Nigerian government have not sheathe their swords in vociferous verbal attacks and disenchantment over the shootings at harmless, peaceful Nigerian Youths at Lekki, Lagos, by the Nigerian Army.

In the wake of these protests and attacks that left several government and Nigerian Leaders' properties razed with loss of very many lives including policemen; schools including tertiary institutions were closed, even when nations and Nigeria in particular has not recovered from the downturn inflicted on citizens by Covid-19 Pandemic.

All these violent conflicts have contributed in no small measure to contemporary underdevelopment of Nigeria, destabilization and destruction as well as distortion of the Nigeria Educational system; for example, children can no longer go to school in most parts of the North – Borno, Kebbi, Gombe, Adamawa to mention just a little since schools were burnt down, girls were serially kidnaped as occurred to Chibok girls. Young males were forced to carry guns and other animations at warfronts at the expense of being educated appropriately.

5. Conclusion

It is explicitly clear and globally accepted that peace education takes pivotal and a long-lasting precedence over and above all other forms of education. Peace education is the key to achieving endurable, equitable, qualitative and sustainable development. Qualitative and Sustainable education are well embedded in peace education, through which the well-being of human beings can be legitimately taken care of, for the world to become genuinely habitable for everybody living herein. Not all education brings the same benefits to everyone. Time, place, situation and context matter. Peace education has long been recognized by International Law as a critical catalyst for addressing environmental and sustainability issues and ensuring human well-being.

6. Recommendations

Peace education should be applied to each age group and especially to students who are in their puberty age for peace education to reach its aims.

Peace education should be introduced to trainings of teachers both as pre-service and as in-service training. For peace education to be able to achieve its optimum aim, there is the need for teachers to be at peace with themselves, with social sensitivity, to adopt solutions for solving problems peacefully.
The Nigerian government should facilitate meaningful and effective medium for skills acquisition to address the issue of youth unemployment in the Country.

It is essential that the government should embark upon sensitization and orientation of youths on conflict resolution, to inculcate in them, the values and attitudes towards developing a culture of peace. Through this, they will be encouraged on the need for dialogue, negotiation, respect for human rights and other traditional ways of resolving conflicts for the purpose of peace building.

Various governments also need to amplify the opportunity of in-service training on peace education for governments line officers, to de-emphasize overzealousness and insensitivity on the part of government officers, against the citizens and the youths.

Governments at various levels should adhere to the tenets of transparency, accountability and should also avoid paying lip service to enabling and vital policies in governance.

The Federal Ministry of education should endeavor to fast track a realistic process of including Peace education in curriculums, right from pre-school education, as a means of inculcating innate peaceful coexisting interrelationship in the psyche of Nigerian citizens. In many countries with low levels of development, such as Kenya, Ethiopia, Uganda, Somali and Sudan, the peace education is included in curriculums since preschool education (Tumuklu; 2006).

The Nigerian Government should also introduce peace education as a mandatory course in the trainings of all categories of officers of the Nigeria Police, the Army, the Navy, the Air force and all other Security Agencies or bodies, including Private Security Organizations, that are licensed by the Federal Government of Nigeria.

Management implications: Here's the breakdown of the key management implications for Peace, Conflict and

Sustainable Development

Peacebuilding and Governance

Inclusive Governance: Promoting participatory democracy and inclusive decision-making helps reduce marginalization and fosters national unity.

Rule of Law and Justice: Strengthening legal institutions ensures accountability and fairness, which are critical for long-term peace.

Transparency and Anti-Corruption: Reducing corruption builds public trust and ensures resources are used for development rather than conflict escalation.

Conflict Management

Early Warning Systems: Establishing mechanisms to detect and respond to potential conflicts can prevent escalation.

Dialogue and Mediation: Encouraging intergroup dialogue and using neutral mediators helps resolve disputes peacefully.

Controllable Conflicts: Recognizing that some level of conflict is inevitable, management should focus on making conflicts constructive rather than destructive.

Sustainable Development

Peace as a Prerequisite: Sustainable development thrives in peaceful environments where policies can be implemented without disruption.

Equitable Resource Distribution: Fair access to resources reduces grievances that often lead to conflict.

Capacity Building: Investing in education, infrastructure, and technology empowers communities and reduces dependency on volatile systems.

Strategic Management Implications

Area	Management Focus	Impact on Peace Education and Development
Policy Formulation	Inclusiveness and evidence-based policies	Reduce marginalization and builds trust
Human resource	Training in conflict resolution and ethics	Build institutional resilience
Resource Allocation	Transparent budgeting and equitable spending	Prevent resource – based conflicts
Monitoring and Evaluation	Continuous feedback and adaptive strategies	Ensures accountability and responsiveness

All the above we guide in effective implementation of Peace Education in Nigeria towards achieving the Sustainable Development Goals (SDG) specifically the SDG 4.

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Cult Violence and Irregular Migration in Edo State: An Assessment (2014-2024)

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Abstract. This study seeks to understand the influence of cult violence on irregular migration from Edo State, Nigeria, between 2014 and 2024, with a focus on the interplay between insecurity, youth vulnerability, and targeted killings, which pushes individuals to adopt irregular migration as a survival mechanism. The study relied on qualitative data which was drawn from both primary and secondary sources. The research however applies the Push and Pull Theory to interpret how unmet security needs trigger irregular migration, as people flee violence to assert individual autonomy. Findings reveal that spikes in cult violence coincide with notable surges in irregular migration, as residents seek to escape from immediate harm and long-term economic marginalization. This study further highlights the role of cult violence as a contributing factor to irregular migration, especially among vulnerable youth. The systemic violence has caused many young people to flee to other places as a result of the climate of fear and instability. The study recommends strengthening law enforcement, dismantling cult networks, addressing youth unemployment, social cohesion programs, judicial and legal reform, and international collaboration on human trafficking and irregular migration.

Keywords: Cult Violence, Survival Strategy, Migration Drivers, Irregular Migration, Insecurity.

1. Introduction

Irregular migration remains a significant challenge for many countries in the Global South, particularly in Nigeria, where Edo State has become a key source of migrants to Europe. The state according to International Organization for Migration (2021) is well known as a place of origin particularly for young people leaving Nigeria. 37% of all returned migrants under the joint EU-IOM initiatives are reported to have come from the state. Scholars and watchers have attributed socio-economic factors such as poverty, unemployment, and insecurity to this migration pattern (Ogbanga, 2024). However, cult violence has emerged as a critical but under-examined factor influencing irregular migration. Cult groups have established a strong presence in Edo State's social and political landscape, often accused of destabilizing the region and driving youths toward unlawful migration routes (Osaghae, 2023).

Between January 2021 and December 2023, gang violence in Edo State led to over 180 fatalities, with incidents of increasing violence (Partnership Initiatives in the Niger Delta, 2024). In December 2023 alone, more than 30 people were killed in rival cult clashes, including a journalist and two vigilante leaders, one in Oredo Local Government Area and the other in Ekosodin in Ovia North East Local Government Area (George, 2024). In 2025, the law-making body of the state condemned the rising tide of cultist activities, highlighting a distressing increase in both fatalities and serious physical injuries across the state (Edo State House of Assembly, 2025).

While many migrants from Edo State seek better opportunities abroad, they often rely on dangerous migration routes and human traffickers, leading to exploitation (Ogbanga, 2024). Cult violence is a significant, yet often overlooked, push factor for migration within the state. They are reported to be involved in organized crime, territorial control, and violent conflicts, all contributing to insecurity (Lime, 2024). These groups, often linked to larger criminal organizations, exacerbate the issue of irregular migration. No special thanks to the socio-economic, cultural, and political environment in Edo State that has fueled an increase in cult violence. The breakdown of traditional social structures and the absence of economic opportunities have rendered youths particularly susceptible to criminal gangs. For many years, cult groups have fought each other with guns

over stolen funds and even sold drugs (Yabagi & Okah, 2025). This violence has made people, particularly the youths within the state to feel less safe, which has led many of them to flee by moving illegally (IOM, 2021).

More disturbing is the work link between cult violence and migrant traffickers. Particularly at a period where traffickers are on the look to lure young people with false promises of better opportunities abroad only to forcefully exploit them through force labour and abuse (Ariyo, 2021). Most agents of these traffickers have been reported to be cult members who act as middlemen between migrants and traffickers, which makes it easier for them to take advantage of people (Healy, Jesrani, Leggett, Socher, Viollaz 2023). This partnership makes it harder to deal with both cult violence and illegal immigration because the two issues are linked.

The link between cult violence and human trafficking is so tight that young people fleeing from such violence take to illegal migration as the best option available to stay alive and have a better life because a lot of young people think that moving is the only way to get away from violence and poverty. This again makes the fight against illegal migration in Edo State in particular even harder. Unemployment, poverty, peer pressure, even societal pressure and lack of education have long been seen as significant causes of illegal migration, but the rise in cult violence has added a new level to the trend. More young people, especially those who live in cities like Benin City, are moving illegally to find better jobs and get away from the violence of criminal gangs alike (IOM, 2021).

The socio-political climate in Edo State, which powerful criminal groups dominate, has made it a key player in West African transnational migration. People leave the state not only because they are poor, but also because they are afraid of violence, coercion, and criminal extortion. It is necessary to learn more about the migratory trends and the causes of those trends because cult violence, human trafficking, and irregular migration coexist simultaneously (Stamping out trafficking in Nigeria, 2020).

Existing research on irregular migration from Edo State has focused on socio-economic push factors, such as poverty, unemployment, and insecurity, but has overlooked the role of cult violence. Previous studies by Ogbanga (2024) and Braimah, Gberevbie, Chodozie, Osimen (2024) focus on broad socio-economic factors driving migration without addressing how local violence, particularly cult-related, directly influences migration decisions. The IOM (2021) and Healy et al. (2023) discuss criminal networks and human trafficking but do not consider the individual experience of victims who are coerced into migration due to cult violence. Kangiwa (2015) examines the political economy of cult groups but does not link cult violence to irregular migration. Yabagi & Okah's (2025) study fails to capture the recent rise in violence in Edo State. This study provides a localized analysis of the escalating violence in Edo State between 2014 and 2024 and its direct impact on irregular migration patterns.

1.1 Statement of the Problem

History has shown that most Nigerian trafficking victims in Europe have come from Edo State, via Libya route. A development that has been considered to be detrimental to growth of the Nigeria state that has continued to lost her active age to other countries in Europe illegally. This trend has continued despite combined efforts from both the Nigerian state and international organizations like IOM to address the problem particularly for youths who crosses perilous and unlawful paths in search of newer frontiers in other countries. With most scholars concentrating on the traditionally accepted causes of migration like economic deprivation, absence of job opportunities promises of greener pasture, the role of cult violence in Edo State as a push factor have been completely overlooked.

Cult activity a menace that was within the student environment has historically grown to have gained a widespread cutting across of levels of society within Edo State and is posing serious danger to the state's occupants, especially the youth demographic. Violence from these cult activities have gone even worse and is now manifesting as violent confrontations, extortions and killing which have created fear and instability within and around the state. The want to survive has caused many youths within the communities that made up the state have resulted to migration as a way out of the cult violence snare. The majority of these youth resort to illegal migration as it is considered cheaper and free from documentation stress. Hence, migration to many of these youth is not only seen as an economic option, but as a survival strategy as it is the best option to escape the cult snare.

Irregular migration may also be a strategy to avoid forced recruitment, violent revenge, and the economic cost of residing in the regions that are characterised by armed conflicts and crimes. In this regard, irregular migration serves as an effective means for people to restore their livelihoods in safe environments, as

observed in Nigeria and other countries. Although the security problem of cultism has been increasingly recorded in Edo State, there is still a significant gap in the empirical studies of the direct relationship between cult violence and irregular migration.

1.2 Research Objectives

This study primarily aims to examine the impact of cult violence on irregular migration in Edo State between 2014 and 2024. In particular, this study sought to:

- To examine the dynamics of irregular migration out of Edo State.
- To examine how cult violence affects the way people perceive irregular migration.
- Examine the socio-economic implications of cult violence on migration patterns from Edo State.

2. Theoretical Framework: The Push and Pull Theory

When people move from one country to another, they are involved in what is called migration. Over 150,000 years ago, the earliest populations of modern humans began to migrate out of the Africa Continent. Since then, different people have moved out of their original place of origin across the world either been pulled by opportunities or is even been pushed by circumstances within the present environment (Walker, 2019).

As a theory of migration trace to Ernst Georg Ravenstein, the pull and push theory describes the voluntary migration people undertook that is driven by negative push factors at origin and positive pull factors at desired destination. That is, the push factors include variables like poverty, lack of social mobility, generalized violence or even directed persecution that describe why an individual chose to leave his or her home. By contrast, the pull factors like better work opportunities, higher chances of human security and even presence of basic social amenities can pull a person to settle in new location from his or her destination (Bruzzone, n.d.).

Every human has the desire to survive, hence when life is threatened by violence or its kind, man desire to find peace somewhere else. This desire to leave a place of stay is not only controlled by this push factor of threat to life, but is also be determine by the pull in the destination of interest. The Edo State cult violence that has been on the rise as confirmed by the Edo State house of Assembly has thrown many of the young populations into the desire to migrate to stay alive. More so that the Libya route is considered cheap without documentation procedure, they opted to use the route for greener pasture. For those that can afford the regular migration process, they did all they can to migrate to stay alive.

3. Research Methodology

The research method employed is qualitative research, to explore the impacts of cult violence on irregular migration in Edo State between 2014 and 2024. Data was gathered using the unstructured interviewed method. Sample was however drawn from the study chosen population that includes young people between the ages of 15-35 in Edo State who have been directly or indirectly involved in cult activities or irregular migration under the year of study, International Organization for Migration, Voluntary Humanitarian Return and families of migrants. Respondents were identified using the purposive and snowball sampling techniques. Besides personal interview, Telephone and Whatsapp call were also used to interview some respondents. Even though some respondents were not confortable in answering questions posed to them, they were however ready to refer someone that can give the needed data to analyze. Themes were therefore identified in the course of interviewing respondents which were used to analyze data gotten.

4. Discussion of Findings

Trends and Patterns of Irregular Migration

The incidence of irregular migration out of Edo State is one concerning trend: the more violent the cult related violence, the more the youths leave the state. To begin with, unemployment, poverty, and insufficient opportunities to promote socially were the leading economic causes that prompted migration out of Edo (Ogbanga, 2024). However, due to increasing cult violence, especially since 2017, the trends of migration have changed. Disappearing under the pressure of violence, the social arrangement of the Edo State began to disintegrate, and cult groups were distributed not only on the university campuses, but also in urban and rural regions, thereby forming an atmosphere of terror that affected the everyday lives devastatingly (Ushe, 2019).

This culture of relentless insecurity made too many youngsters feel confined and that the only way out of this menace of violence was to migrate. The paradigm shift is due to the transition from economic migration to survival migration, where the motivation behind migration has undergone a drastic change. Previously, youngsters might have considered migration as a solution to finding more favorable economic

prospects; towards the end of the 2010s, it instead became a necessity to flee the violent dangers that engulfed them (Pope, 2024).

I rather die in that desert than waiting to be killed for what I know nothing about. I was caught in an unfortunate web, friends I move with threatened someone that feel I was part of the plan to eliminate him. Before I ran away through Libya to Europe, I was shot twice, nobody told me to migrate to stay alive before I left with just five hundred thousand naira with me.

...to me, death threat took me to a better place in life (Respondent)

In Edo State, the period between 2020 and 2022 registered a notably alarming increase in cult violence that was accompanied by an exponential increase in irregular migration. The local and international organisations report that cult-related deaths were registered in the state more than 192 during the period between January 2020 and March 2024. These are just the tip of the violence, and numerous deaths and intimidation are not reported because many are afraid of the repercussions. The growth of violent conflict between competing cult groups, extortion, targeted assassinations, and kidnappings has provided an atmosphere in which young people have found survival to be a more dangerous thing. *"...after our rival cult group killed my younger brother thinking I was the one, my parent had to quickly put money together for me to leave the country"* (Respondent)

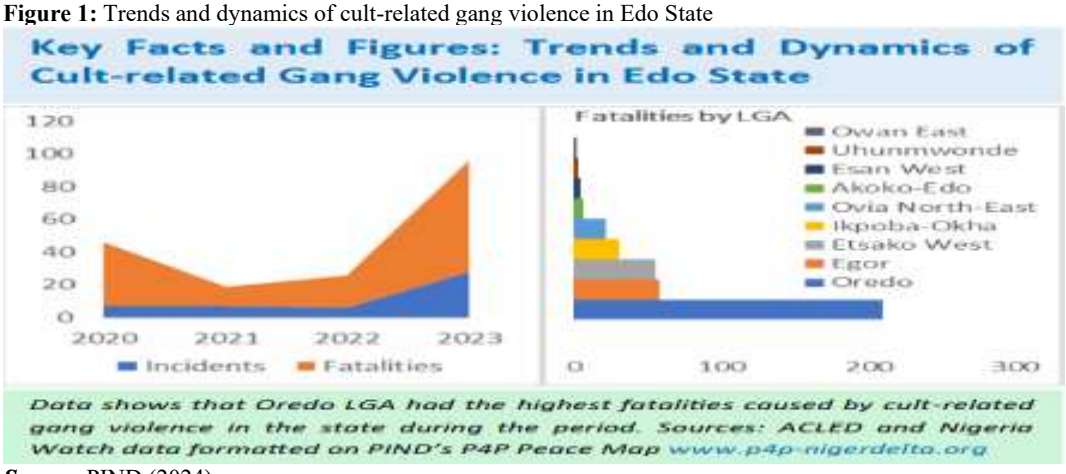
Irregular migration, previously regarded as an economic opportunity, is now viewed as a survival necessity (Healy et al., 2023). This highlights the effect of violence on the reasons for moving as dictated by reason. The International Organisation for Migration (IOM) has provided numerical evidence that indicates an increase in cult violence and migration in Edo State is directly related to one another. Between 2020 and 2022, when violence was at its worst, more young people tried to cross borders illegally (Pope, 2024). The findings of this study underscore the unequivocal correlation between the rise of cult violence and the increasing trend of irregular migration from Edo State.

It took me 8 months to know the where about of my son after he ran away to Libya for fear of been killed. He told me that some cult members were looking for him because of one person killed in our community. Since he left, things have been difficult for him in Libya and he has refuse to return back home. As a mother I want him to stay alive for me, so I don't want him to come back now. (Respondent)

Role of Cult Violence in Shaping Migration Perceptions

The causal connection between violence and migration choices has been studied in different studies. However, little has been directly investigated about violent conditions like those generated by cult groups, which influence the perception of migration as a survival strategy. The literature indicate that the aggression of cult groups substantially revised the world view of most youths and compelled them to consider migration not only as a means of economic improvement, but as a desperate measure that they should save themselves from the violence and unstable environment (Uduji Okolo-Obasi, & Asongu 2023). In other words, the increase in irregular migration is in part necessitated by the surge in cult-related violence in recent times (See Figure 1).

Figure 1: Trends and dynamics of cult-related gang violence in Edo State



Source: PIND (2024)

As shown in figure 1, an upsurge in cult-related violence was recorded in 2023. As a result, young people started to leave the state not as a voluntary decision to go to a better place, but as a reason to escape violence. Cult groups actively terrorised communities with violent recruitment tactics and forceful indoctrination. The increased number of violent conflicts between opposing cult groups, assassinations, and threats of force towards the members of the community strengthened the idea that living in Edo State was an existential threat. Those against recruitment were brutally retaliated against, and the members of the existing cult were in constant fear of being killed or involved in violent clashes with the opposing groups (Ushe, 2019). The atmosphere of coercion and fear compelled numerous youths to reevaluate their own futures in Edo State, and this made them consider migration as a way of escaping actual danger and also stemmed from the mental pressure of being in a war-like country.

Notably, migration at this time was not solely driven by economic desires, but also by the need to flee in the face of recruitment, retaliation, or the penalty for disobedience towards the mighty cults. Youths who had previously dreamt about working in the cities of Edo, going to schools in their neighbourhoods, were faced with the stark truth of violence, within which there were no guarantees of safety or well-being. Migration was not only an escape option, but a foregone conclusion, leaving was perceived as the only means of avoiding the crossfire of cult violence.

…bros, instead of getting killed I chose to stay alive and marry white woman to raise beautiful children for myself. Over 5 years that I arrived Italy, I have been sleeping with my two eyes closed. No fear of I will be killed by some people (Respondent).

The Extent to Which Cult Groups Facilitate Irregular Migration

Our clients that are in haste to leave are particularly the ones that are fleeing from something. They are mostly agitated if our date of departure is shifted forward. And many of them are in habit of not having the complete money for our service. But because we have our network everywhere, we particularly not scared that they will pay us our complete money. At best, we make them work and collect the pay in their behalf (Respondent)

Cult groups have expanded in larger urban and rural communities, as well as on college campuses. They are making it easy to migrate as much as they are making it. Cult violence is connected with human trafficking networks, and it has been growing in Edo State over the last ten years, making it hard to distinguish between victims and offenders (Oyibo, 2020). Ironically, people who escape a violent situation usually end up being at the mercy of those same people who did them harm so that they can escape. By the end of the decade, cults in Edo State had become significantly more influential. They had a far-reaching impact that extended beyond university campuses to the politics, social life, and economies of urban and rural communities (Amanda, 2024). These cult groups started as student confraternities, but they developed into strong criminal organisations that practised illegal acts, such as armed robbery, drug trafficking, and human trafficking. The shifts that occurred between campus-based and community-based criminal networks directly changed the migration patterns (Ushe, 2019). When cult violence escalated, more violent confrontations and extortion were increasingly taking their toll on local communities.

The peculiarity of such a situation is that the migration of cult groups is actively promoted. With the rise in violence, these groups were linked to the human-trafficking activities, which took advantage of the frailty of the escape victims of the violence. They often provided aid to migrants and helped them escape Edo State in exchange for payment, rendering services, or complying with their requests (Ariyo, 2021; Interpol, 2024). In other cases, members of the cult have been involved as intermediaries between the vulnerable migrants and human traffickers or have organised their escape. The fact that cults are associated with trafficking rings reveals that there exists a complex relationship in which individuals who would otherwise prefer to avoid violence are the very individuals who rely on the same organisations that hurt them. This symbiosis relationship facilitated the migration, besides assisting in the exploitation of those who were on the run from violence and were therefore vulnerable to another round of manipulations and mistreatments (Interpol, 2024).

Meanwhile, demarcations have been eroded between perpetrators and victims in the differences between cult violence and irregular migration. This role became more contradictory because the cult groups contributed to the migration with their ties to the trafficking connections. Cult violence, on the one hand, was the primary motive of the migration since individuals desired to eliminate the imminent threat of recruitment, violence, and murder. While on the other hand, cults, by their connection to the traffickers, performed the functions of migrants as the enabling mechanisms, often exploiting the vulnerabilities of the migrants to their homicidal predilections. This kind of

relationship forms a vicious cycle of exploitation wherein the migrants become involved in a system that only feeds the same situation that they were already trying to escape. *"...I was running from law enforcement agency as a suspect; my only option was Italy through the desert"* Respondent

The connection between cult organisations and human-trafficking rings is a salient revelation of this study. Cults, which are characterised by violent methods and domination over local groups, often work with or as intermediaries of trafficking syndicates. Local and transnational networks also exploit the desperation and vulnerability of the people as they flee the cult violence, promising them a way out of Edo State for several payments. The importance of cult groups in trafficking activities has a profound impact on understanding migration trends in Edo State, as it suggests that the movement is not driven by violence but rather by a criminal syndicate (Oyibo, 2020).

5. Conclusion and Recommendations

This research paper examines the role of cult violence in contributing to irregular migration in Edo State between 2014 and 2024, with the aim of identifying the factors that promote such tendencies. Findings indicate that cult violence is the cause and contributing factor to irregular migration, especially among vulnerable youth. The migration out of the state of Edo has long been considered a reaction to the desperate economic state there. The increase in violence in cults, however, transformed the concept of migration from a matter of free will to a necessity, as per this research. The systemic violence has caused many young people to flee to other places as a result of the climate of fear and instability, which is characterised by several incidents of extortion, kidnapping and targeted assassinations, among others. The study indicates that these groups not only increase the socio-economic susceptibility, but also the direct source of sustainability of the irregular migration is their affiliations to human trafficking networks. Some victims of cult violence are easy to manipulate and fall into the hands of the traffickers, who can provide them with an opportunity to escape the situation of violence in Edo State. These findings also provide the broader socio-political implications of cult violence that has destabilised the trust of the people in the institutionalisation of government and law enforcement, and also that it is the cause of further migration to escape the perceived state failure.

5.1 Recommendations

Strengthening law enforcement and dismantling cult networks: The first recommendation is that the reinforcement of the law enforcement agencies would assist in combating cult violence within Edo State. This entails the formation of specialised anti-cult units that do not rely on politics and corruption. The idea behind such units is to deconstruct cult networks, prosecute the offenders, and hold law enforcement processes transparent and responsible. Intimate collaboration among local and international security forces is indispensable to track and dispel the human trafficking networks that exploit the people who are already vulnerable to leave their homes to evade the cult violence.

Addressing youth unemployment and the provision of alternative livelihood: Unemployment among youth is a significant reason for cult violence and irregular migration. Consequently, vocational training programmes should be strengthened to ensure that young people acquire requisite skills. The government can also establish programmes to assist youths in establishing businesses by providing them with microloans, mentors, and other resources. This will help them become independent and deter them from joining cult to achieve financial benefits.
Community-based prevention of conflict and social cohesion programmes: Programs for preventing conflict and building social cohesion in the community: To stop cult violence from spreading and bring people together, community-based interventions should be given top priority. Another opportunity is that programs that engage young people and efforts to bring people together will be crucial in rebuilding trust and strengthening the community. Reforming cults with programs like restorative justice that help former members reintegrate into society and find new ways to live will also stop more people from joining cults in the future. Moreover, through community sensitisation programmes, society can be informed about the harm of cultism and how social solidarity can be used to combat violence.

Judicial and legal reform: Since corruption and inefficiency are factors that contribute to the continued perpetuation of cult violence, there must be judicial reform. Improving the judicial system to prosecute cult-related crimes more rapidly, enforce anti-cult laws consistently, and increase transparency in the judicial process will rebuild trust in the law enforcement system among the population. Citizens should be educated on their rights and the legal framework available to combat the cult through a public awareness campaign.

Comprehensive migration management strategies: The migration policies of Edo State and Nigeria need to change to accommodate the security-driven irregular migration. Although border control and reintegration programmes have a place, they should be supplemented by policies that address the factors that have caused migration. This involves the identification of the role of violence in migration choices and protection given to cult-fleece. Migrant support services, including legal aid, counselling, and safe housing, should be increased in quantity to cover vulnerabilities in Nigeria and in the countries receiving the migrants.

International collaboration on human trafficking and irregular migration: Since irregular migration and trafficking networks are cross-border, it is essential to jointly work with international organisations, including the International Organisation for Migration (IOM) and the United Nations Office on Drugs and Crime (UNODC). International cooperation could help implement anti-trafficking laws, support victims of migration, and establish long-term systems for managing migration effectively. Edo State will be able to work with other states to find a more complete and humane way to deal with irregular migration by finding a way to fight both trafficking and violence at the same time.

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Impact of Party Coalitions on Electoral Outcome: A Case Study of the 2015 General Elections

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Abstract. This study explores the impact of political party coalitions on electoral outcomes and governance in Nigeria, with a specific focus on the 2015 general elections. Utilizing a qualitative methodology, the research analyzes secondary sources including electoral data from the Independent National Electoral Commission (INEC) and academic literature. The formation of the All Progressive Congress (APC) from the merger of four major opposition parties in 2013 is examined as a strategic response to the People's Democratic Party's (PDP) dominance from 1999 to 2015. Key figures such as Bola Ahmed Tinubu and Muhammadu Buhari were instrumental in this process. Findings reveal that the APC's unified opposition led to significant electoral victories, including Buhari's presidential win and major gains in the National Assembly and gubernatorial elections. However, challenges in maintaining policy continuity and effective governance within the coalition framework were noted. The study recommends developing mechanisms for policy continuity and inclusive governance practices to enhance political stability and democratic consolidation in Nigeria.

Keywords: Political Party Coalitions, Electoral Outcomes, Governance, Nigeria, APC Merger

1. Introduction

The dynamics of party coalitions have long been a critical factor in shaping the political landscape of many democracies. The formation, stability, and impact of these coalitions can significantly influence electoral outcomes, not only determining the immediate results but also shaping the broader trajectory of national politics (Lijphart, 2012). This study investigates the intricate interplay between party coalitions and electoral outcomes, using the 2015 general elections in Nigeria as a detailed case study to explore these dynamics comprehensively.

Party coalitions represent strategic alliances formed among political parties, often with divergent ideologies and agendas, with the intent of maximizing electoral success. These coalitions can secure a parliamentary majority or exert greater influence in the legislative process. They reflect a strategic adaptation to electoral systems, especially in contexts where single parties may struggle to achieve outright majorities (Golder, 2006). The impact of these coalitions is multifaceted, influencing voter perceptions, party strategies, and ultimately, the electoral results.

The 2015 general elections in Nigeria offer a poignant example of the transformative potential of party coalitions. The formation of the All-Progressives Congress (APC) coalition marked a significant shift in the Nigerian political landscape. The APC emerged as a formidable force by amalgamating four major opposition parties: the Action Congress of Nigeria (ACN), the Congress for Progressive Change (CPC), the All Nigeria Peoples Party (ANPP), and a faction of the All Progressives Grand Alliance (APGA) (Omilusi, 2016). This coalition was strategically orchestrated to challenge the longstanding dominance of the incumbent People's Democratic Party (PDP), which had held power since the end of military rule in 1999 (Ogundiya, 2015). The success of the APC in the 2015 elections, culminating in the victory of Muhammadu

Buhari as president, signaled a historic change. This event ended the PDP's 16-year rule and introduced a new era of governance in Nigeria (INEC, 2015). The formation and success of the APC coalition can be attributed to several factors, including the unification of opposition forces, effective voter mobilization, and strategic campaign messaging (Adejumobi, 2015). Additionally, the coalition capitalized on widespread public dissatisfaction with the PDP's governance, particularly issues related to corruption, economic management, and security challenges (Campbell, 2014, Cheeseman, 2015).

This study aims to dissect the factors that contributed to the APC's success and the broader implications for coalition politics in electoral outcomes. It seeks to answer several critical questions: How do coalitions form and function in practice? What are the strategic advantages and potential pitfalls of such alliances? How do coalitions influence voter behavior and election results? By addressing these questions, the research provides valuable insights into the mechanics of coalition politics (Musa, 2018). The significance of this research extends beyond the Nigerian context. The study has potentials to inform both academic discourse and practical policymaking. By providing empirical evidence on the long-term effects of coalition governments, the study can offer valuable insights for political strategists, policymakers, and scholars interested in the sustainability of coalition politics. It can also guide future research on coalition dynamics, encouraging a more holistic approach that considers both immediate and enduring impacts on democratic governance. The findings contribute to the global discourse on the role of coalitions in electoral systems, offering comparative insights that can be applied to other democratic contexts. The study highlights the potential of coalitions to transform political landscapes, challenge entrenched power structures, and redefine electoral strategies.

1.1 Statement of the Problem

The influence of party coalitions on electoral outcomes is a well-explored topic in political science. Scholars have extensively examined how coalitions can lead to electoral success, political stability, and broader voter appeal by uniting fragmented opposition forces and achieving parliamentary majorities necessary for forming a government (Christensen, 2019; Golder, 2016). The prevailing academic focus has been on the immediate electoral advantages that coalitions can bring, with numerous studies emphasizing their role in facilitating broader voter appeal and achieving parliamentary majorities (Bäck, Debus, & Müller, 2016; Deschouwer, 2018).

Despite this extensive research on the influence of party coalitions on electoral outcomes, a significant gap persists in the literature regarding the long-term impacts of these coalitions on governance and policy implementation. Much of the existing scholarship focuses on the immediate electoral advantages and the political stability that coalitions can bring. These studies typically emphasize how coalitions can enhance electoral success by uniting fragmented opposition forces, facilitating broader voter appeal, and achieving parliamentary majorities necessary for forming a government.

However, there is a dearth of empirical analysis concerning the enduring effects of coalition governments on governance effectiveness and policy-making (Golder, 2016). This gap is particularly evident in the context of emerging democracies, such as Nigeria, where the formation and success of coalitions have marked critical junctures in political history. While the short-term benefits of coalition-building, such as electoral victories and initial political stability, are well-documented, the literature lacks comprehensive insights into how these coalitions impact the long-term governance landscape. The limited exploration of the long-term consequences of coalition governments raises several pertinent questions: How do coalition governments influence the effectiveness of governance and the continuity of policies over time? What are the implications of coalition dynamics for democratic consolidation and public service delivery in emerging democracies? Do coalitions contribute to sustained political stability and effective policy implementation, or do they create challenges that undermine long-term governance.

In the case of Nigeria, the success of the All Progressives Congress (APC) coalition in the 2015 general elections presents an opportunity to investigate these questions. The APC's victory ended the 16-year dominance of the People's Democratic Party (PDP) and ushered in a new era of governance under President Muhammadu Buhari. While the immediate electoral impact of the APC coalition is evident, there is a need to assess its long-term influence on governance and policy-making.

This study aims to address the identified gap by examining the long-term impacts of the APC coalition on Nigeria's governance and policy landscape. It will explore how the coalition has influenced democratic consolidation, policy continuity, and public service delivery since coming to power. By doing so, the research will contribute to a better understanding of coalition politics beyond the electoral context,

highlighting the broader implications for governance in emerging democracies.

2. Theoretical Framework

This study adopts Riker's Theory of Political Coalitions, also known as the "Rational Choice Theory of Coalitions". The theory was proposed by political scientist William H. Riker and posits that political actors form coalitions not out of ideological alignment or a shared commitment to public service, but rather as strategic alliances designed to maximize their power and influence (Riker, 1962).

2.1 Riker's Theory of Political Coalitions

Riker's theory, which is rooted in the principles of rational choice, suggests that political parties are rational actors seeking to optimize their chances of gaining and maintaining power. According to this perspective, coalitions are formed based on strategic calculations where parties assess potential partners to create the most advantageous power-sharing arrangements. The primary motivation behind these coalitions is the acquisition of sufficient political leverage to secure electoral victories and control government institutions (Riker, 1962; de Swaan, 1973).

Key assumptions of Riker's theory include:

1. **Power Maximization:** Political parties aim to maximize their influence by forming coalitions that can command a majority or significantly alter the balance of power.
2. **Minimal Winning Coalitions:** Parties strive to form the smallest possible coalition that can achieve a majority, minimizing the need to share power and resources with additional partners.
3. **Instrumental Rationality:** Coalition decisions are driven by pragmatic considerations rather than ideological congruence or policy goals (Riker, 1962; Laver & Schofield, 1998).

2.1.1 Application to the 2015 Nigerian General Elections

The 2015 Nigerian general elections provide a compelling case for applying Riker's Theory of Political Coalitions. The formation of the All Progressives Congress (APC) coalition was a strategic move by opposition parties to unseat the incumbent People's Democratic Party (PDP). The APC was an amalgamation of four major opposition parties: the Action Congress of Nigeria (ACN), the Congress for Progressive Change (CPC), the All Nigeria Peoples Party (ANPP), and a faction of the All Progressives Grand Alliance (APGA).

The formation of the APC coalition can be analyzed through the lens of Riker's theory in the following ways:

The primary goal of the APC coalition was to consolidate opposition forces to create a formidable political entity capable of challenging the PDP's long-standing dominance. By combining their resources and voter bases, the coalition aimed to enhance their electoral competitiveness and secure political power.
The coalition was carefully constructed to include just enough parties to achieve a majority without diluting power excessively. This approach ensured that the coalition could function cohesively while maximizing the influence of each constituent party.

The coalition partners prioritized strategic gains over ideological compatibility. Despite having diverse political ideologies and policy preferences, the coalition members united under a common objective: to dislodge the PDP and gain control of the federal government.

2.1.2 Implications for Governance and Policy Implementation

Riker's theory also helps explain some of the challenges that coalition governments face in terms of governance and policy implementation. Since coalitions are primarily formed for electoral success rather than ideological coherence, they often struggle with internal conflicts and policy disagreements once in power. These challenges can undermine governance effectiveness, policy continuity, and public service delivery, as coalition partners may have divergent priorities and approaches to addressing national issues.
In the Nigerian context, the APC coalition has faced similar challenges. The need to balance the interests of diverse coalition partners has sometimes led to policy gridlock and inconsistent governance. These dynamics highlight the limitations of coalitions formed primarily for power maximization, as opposed to those built on shared policy goals and a genuine commitment to public service.

3. Research Methodology

This study employs a qualitative research methodology, relying extensively on secondary sources to analyze the impact of party coalitions on electoral outcomes and subsequent governance. The primary data sources include electoral data from the Independent National Electoral Commission (INEC)

of Nigeria, which provides comprehensive details on election results from the 2015 general elections. Secondary sources such as academic journals, books, news articles, and previous research studies offer contextual insights and support the analysis of the political environment and coalition dynamics. The data collected is analyzed using content analysis. This method allows for a thorough examination of how coalition strategies were communicated, the consistency and coherence of policy promises, and the overall narrative constructed by the coalition parties. This provides understanding of the strategic formation of coalitions, their immediate electoral advantages, and the long-term implications for governance and policy implementation in Nigeria.

4. Empirical Studies on Party Coalitions and Electoral Outcomes

4.1 Party Coalitions and Electoral Outcomes in Nigeria

The dynamics of party coalitions in Nigeria have been critical in shaping electoral outcomes, particularly in the 2015 general elections. According to Adejumobi (2015), party coalitions in Nigeria emerged as a strategic response to the fragmented nature of the political landscape. The alliance between the All Progressives Congress (APC) and other smaller parties was pivotal in their electoral victory. Adejumobi argues that this coalition was not just a merger of parties but a convergence of diverse political interests and ideologies united by the common goal of unseating the incumbent government. This coalition significantly altered the electoral landscape, leading to increased voter turnout and a more competitive political environment. The success of the APC coalition underscores the importance of strategic alliances in overcoming political fragmentation and achieving electoral success in Nigeria.

In another study, Omilusi (2016) highlights the role of party coalitions in consolidating democratic practices in Nigeria. Omilusi's research indicates that the formation of coalitions often leads to more inclusive governance structures as parties negotiate power-sharing arrangements that reflect a broader spectrum of societal interests. The 2015 elections, according to Omilusi, were a testament to how coalitions can enhance democratic stability by reducing the likelihood of post-election violence and fostering a culture of political compromise. This is particularly important in a diverse country like Nigeria, where ethnic and regional divisions have historically influenced electoral outcomes. The coalition strategy, therefore, not only impacts the immediate electoral results but also contributes to the long-term stability of the political system.

4.2 Party Coalitions and Electoral Outcomes in Africa

Beyond Nigeria, party coalitions have played significant roles in shaping electoral outcomes across Africa. Cheeseman and Larmer (2015) provide a comprehensive analysis of coalition politics in Africa, focusing on countries like Kenya and Zambia. Their study reveals that coalitions are often formed in response to the need for broader political support in highly competitive and polarized electoral environments. In Kenya, for instance, the formation of the National Super Alliance (NASA) in the 2017 elections was a strategic move to consolidate opposition forces against the ruling Jubilee Party. Cheeseman and Larmer argue that such coalitions can enhance the legitimacy of electoral processes by ensuring that elections are not just contests between dominant parties but involve a wider representation of political interests. This inclusivity can mitigate electoral violence and promote political stability.

In South Africa, Booysen (2018) examines the impact of coalitions on municipal elections, particularly in the wake of declining dominance by the African National Congress (ANC). Booysen's research indicates that coalitions have become a necessary strategy for opposition parties to challenge the ANC's hegemony. The study highlights the 2016 municipal elections where coalitions between the Democratic Alliance (DA) and other smaller parties led to significant electoral gains in key municipalities, including Johannesburg and Tshwane. Booysen argues that these coalitions not only altered the electoral map but also introduced new governance dynamics, as coalition partners had to navigate complex power-sharing arrangements. This has implications for policy implementation and governance, as coalition governments often require consensus-building and compromise.

4.3 Party Coalitions and Electoral Outcomes in Europe and America

In Europe, the role of party coalitions is well-documented, particularly in countries with proportional representation electoral systems. Gallagher, Laver, and Mair (2011) provide an in-depth analysis of coalition politics in parliamentary democracies, highlighting the importance of coalitions in forming stable governments. In Germany, for instance, coalitions have been a fundamental aspect of

the political system since World War II. The study notes that the formation of the Grand Coalition between the Christian Democratic Union (CDU) and the Social Democratic Party (SPD) in several electoral cycles has been crucial in providing stable governance despite the fragmentation of the party system. Gallagher et al. argue that coalitions can enhance policy continuity and stability, which are essential for effective governance.

In the United States, although the two-party system dominates, coalitions within parties play a crucial role in electoral outcomes. Abramowitz and Saunders (2008) discuss how intra-party coalitions, such as the alignment of progressive and moderate factions within the Democratic Party, influence electoral strategies and outcomes. Their study highlights the 2008 presidential election, where the coalition of diverse groups within the Democratic Party, including minority voters, young people, and progressive activists, was instrumental in Barack Obama's victory. This coalition-building process is critical in a highly polarized political environment, as it enables parties to mobilize a broad base of support and enhance their electoral prospects.

4.4 Research Gap

Despite the extensive research on party coalitions and electoral outcomes, there is a notable gap in the literature concerning the long-term impacts of coalitions on governance and policy implementation. While many studies focus on the immediate electoral advantages and political stability brought about by coalitions, there is limited empirical analysis on how these coalitions influence governance effectiveness and policy-making over time. Future research could address this gap by exploring the long-term consequences of coalition governments on democratic consolidation, policy continuity, and public service delivery, particularly in emerging democracies like Nigeria.

4.5 The Dominance of the People's Democratic Party (PDP) from 1999-2015

The People's Democratic Party (PDP) was the dominant political force in Nigeria from the onset of the Fourth Republic in 1999 until 2015. During this period, the PDP maintained a significant hold on the political landscape through successive electoral victories and control over key political offices.
Analysis of PDP's Dominance in Nigeria's Election (1999-2015)

1999 Elections: The 1999 general elections marked Nigeria's return to civilian rule after years of military dictatorship. The PDP, under the leadership of Olusegun Obasanjo, emerged victorious in the presidential election, securing 62.78% of the vote against the All People's Party (APP) and Alliance for Democracy (AD) coalition candidate, Olu Falae, who garnered 37.22% (Ibrahim, 2003). In the legislative elections, the PDP secured a majority in both chambers of the National Assembly. They won 206 out of 360 seats in the House of Representatives and 59 out of 109 seats in the Senate (Omotola, 2010). Additionally, the PDP won gubernatorial elections in 21 out of 36 states, establishing a robust foundation for its dominance.
2003 Elections: The 2003 general elections further cemented the PDP's dominance. President Olusegun Obasanjo was re-elected with 61.94% of the vote, defeating Muhammadu Buhari of the All Nigeria Peoples Party (ANPP), who received 32.19% (Lewis, 2003). The PDP's hold on the National Assembly was strengthened, winning 223 out of 360 seats in the House of Representatives and 76 out of 109 seats in the Senate (Suberu, 2007). The party also increased its control at the state level, winning gubernatorial elections in 28 states.

2007 Elections: The 2007 general elections, which were widely criticized for irregularities and electoral malpractice, saw the PDP maintain its dominance. Umaru Musa Yar'Adua, the PDP candidate, won the presidential election with 69.82% of the vote, while Muhammadu Buhari of the ANPP secured 18.66% (Smith, 2011). In the legislative elections, the PDP won 263 out of 360 seats in the House of Representatives and 87 out of 109 seats in the Senate (Ibrahim, 2007). The party continued to dominate the gubernatorial elections, winning in 27 states.

2011 Elections: The 2011 general elections were relatively more credible compared to previous elections and further solidified the PDP's dominance. Goodluck Jonathan, the PDP candidate, won the presidential election with 58.89% of the vote against Muhammadu Buhari of the Congress for Progressive Change (CPC), who received 31.98% (Owen & Usman, 2015). In the National Assembly elections, the PDP secured 202 out of 360 seats in the House of Representatives and 71 out of 109 seats in the Senate (Ojo, 2014). The PDP's gubernatorial wins remained substantial, with victories in 23 states.

4.6 Data on Election Results (1999 - 2015)

Table 1: Presidential Election Results

Year	Party	Percentage of Votes
1999	PDP	62.7%
	APP/AD Coalition	37.22%
2003	PDP	61.94%
	ANPP	32.19%
2007	PDP	69.82%
	ANPP	18.66%
2011	PDP	58.89
	CPC	31.98%

Table 2: National Assembly Results

Year	House of Representatives Seats	Senate Seats
1999	PDP - 206 OTHERS - 154	PDP- 59 OTHERS – 50
2003	PDP -223 OTHERS - 137	PDP- 76 OTHERS - 33
2007	PDP- 263 OTHERS - 97	PDP – 87 OTHERS – 22
2011	PDP - 202 OTHERS - 158	PDP – 71 OTHERS – 38

Table 3: Gubernatorial Results

Year	PDP States	Others
1999	21	15
2003	28	8
2007	27	9
2011	23	13

From 1999 to 2015, the PDP's dominance in Nigeria's political arena was unprecedented. The party's consistent electoral victories at the presidential, legislative, and gubernatorial levels underscored its control over the country's political processes. This dominance was facilitated by strategic alliances, broad national appeal, and the ability to leverage incumbency advantages. However, it also faced criticisms related to electoral malpractices and internal party conflicts, which eventually contributed to its decline in 2015. Despite its decline, the leaders of the opposition were convinced that the only way to defeat the PDP in 2015 was through a merger.

5. The Political Party Merger of 2015 in Nigeria

5.1 Background and Rationale for the Merger

The political party merger of 2015 in Nigeria was a significant development in the country's political landscape, driven by the need to create a formidable opposition capable of challenging the dominance of the People's Democratic Party (PDP). The PDP had been in power since the return to civilian rule in 1999, and by 2015, there was widespread dissatisfaction with its governance, characterized by issues such as corruption, insecurity, and economic mismanagement. According to Campbell (2014), the impetus for the merger was rooted in the recognition among opposition leaders that fragmented efforts would continue to yield suboptimal results against the entrenched PDP machinery. Therefore, the coalition was conceived as a strategic response to unify the opposition and present a united front. Formation of the All Progressive Congress (APC)

The All Progressive Congress (APC) was officially formed in February 2013, following the merger of four major opposition parties: the Action Congress of Nigeria (ACN), the Congress for Progressive Change (CPC), the All Nigeria Peoples Party (ANPP), and a faction of the All Progressives Grand Alliance (APGA). This merger marked the first successful amalgamation of opposition parties since Nigeria's return to democracy. Adejumobi (2015) highlights that the merger process was complex, involving extensive negotiations and compromises among party leaders.

The APC's formation was driven by the common goal of dislodging the PDP, necessitating the subsuming of individual party identities and interests into a larger collective identity.

5.2 Negotiations and Compromises

The negotiations leading to the merger were marked by significant compromises and strategic alignments. According to Omilusi (2016), one of the critical aspects of the merger talks was the agreement on power-sharing arrangements and the selection of a consensus candidate for the presidential election. The leaders of the merging parties had to reconcile differing political ideologies, regional interests, and personal ambitions to forge a unified entity. For instance, the ACN, predominantly rooted in the Southwest, had to align its liberal economic policies with the more populist and conservative stances of the CPC, which had a strong base in the North. Similarly, the ANPP, with its historical roots in the northern states, had to integrate its structures and support base into the new party framework.

5.3 Challenges and Internal Dynamics

The merger was not without its challenges. One significant issue was the management of internal party dynamics and the integration of various party structures. As noted by Adebanwi and Obadare (2014), the APC had to address the concerns of local party officials and supporters who were wary of losing their influence and positions in the new arrangement. There were also fears of potential conflicts arising from the distribution of party offices and the selection of candidates for various political positions. The APC leadership worked to mitigate these issues through extensive consultations and the establishment of committees to oversee the integration process. This approach helped to manage internal dissent and ensure a relatively smooth transition into a unified party structure.

5.4 The Role of Key Figures

The success of the merger was significantly influenced by key political figures who played pivotal roles in brokering the alliance. Notable among them were Bola Ahmed Tinubu of the ACN, Muhammadu Buhari of the CPC, and other influential leaders from the ANPP and APGA. According to Onapajo (2014), Tinubu's political acumen and strategic vision were instrumental in negotiating the merger and persuading other party leaders to join forces. Buhari's personal popularity and political capital, especially in the northern regions, provided the APC with a strong electoral appeal. The involvement of these key figures not only lent credibility to the merger but also galvanized support from their respective constituencies, enhancing the APC's prospects as a unified opposition party.

5.5 Strategic Alliances and Electoral Preparations

Beyond the formal merger, the APC also sought to build broader coalitions with civil society organizations, youth groups, and other stakeholders dissatisfied with the PDP's rule. Ogundiya (2015) discusses how the APC leveraged widespread discontent to mobilize support across different sectors of society. This strategic outreach was aimed at creating a broad-based movement that transcended traditional party lines and appealed to a wider electorate. The APC's preparations for the 2015 elections involved meticulous planning, including the formulation of a comprehensive manifesto that addressed key national issues such as security, corruption, and economic development. This strategic focus on critical national concerns helped to consolidate the party's support base and enhance its electoral viability.

5.6 Impact of the 2015 Merger on the Electoral Outcome of the General Elections

The merger that led to the formation of the All Progressive Congress (APC) had a profound impact on the 2015 general elections in Nigeria. This historic alliance transformed the political landscape, challenging the long-standing dominance of the People's Democratic Party (PDP). The APC's success in the 2015 elections was a direct result of the strategic merger and coalition-building efforts, which enabled it to secure significant victories across presidential, legislative, and gubernatorial contests.

5.7 The 2015 General Election Results

The most notable outcome of the 2015 elections was the presidential victory of the APC candidate, Muhammadu Buhari. Buhari won the presidential election with 53.96% of the vote, defeating the incumbent President Goodluck Jonathan of the PDP, who garnered 44.96% of the vote (INEC, 2015). This was a historic win as it marked the first time in Nigeria's history that an incumbent president was defeated in a democratic election. The total number of votes for Buhari was 15,424,921, while Jonathan received 12,853,162 votes. The 2015 presidential election results indicated a significant shift in voter

preference and political dynamics, driven largely by the formation of the APC and its broad-based appeal (INEC, 2015).

The APC also made substantial gains in the legislative elections, securing a majority in both chambers of the National Assembly. In the House of Representatives, the APC won 225 seats out of 360, while the PDP won 125 seats. In the Senate, the APC won 60 seats out of 109, while the PDP won 49 seats. The 2015 legislative election results showcased the APC's effective mobilization and strategic advantage post-merger, disrupting the PDP's long-held majority (INEC, 2015).

Furthermore, the APC also achieved remarkable success in the gubernatorial elections, securing control over a significant number of states. According to official results, the APC won gubernatorial elections in 20 states, while the PDP won in 13 states. The gubernatorial election results of 2015 underscored the APC's enhanced political strength and its ability to consolidate power at the state level, further weakening the PDP's influence (INEC, 2015).

5.8 Analysis and Impact

The 2015 merger significantly altered the political equilibrium in Nigeria. The unification of major opposition parties into the APC created a formidable political force capable of effectively challenging the PDP's dominance. The APC's victory in the presidential election was particularly impactful, symbolizing a shift towards a more competitive and pluralistic political system.
Strategic Advantages of the Merger

The merger provided several strategic advantages to the APC:

1. Unified Opposition: By consolidating various opposition parties, the APC was able to pool resources, unify their voter base, and present a cohesive platform to the electorate (Suberu, 2015).
2. Broader Appeal: The merger allowed the APC to broaden its appeal across different regions and demographics, overcoming the regional and ethnic divisions that had previously fragmented the opposition (Omotola, 2015).
3. Enhanced Credibility: The inclusion of prominent political figures from various parties lent credibility and legitimacy to the APC, boosting its electoral prospects (Campbell, 2014).

5.9 Long-term Implications

The success of the APC in the 2015 elections had several long-term implications:

Political Competition: The emergence of the APC as a powerful opposition marked a new era of political competition, contributing to the deepening of Nigeria's democratic processes (Lewis & Kew, 2015).
Accountability: The alternation of power between parties underscored the principle of accountability in governance, encouraging better performance from political leaders (Cheeseman, 2015).
Electoral Reforms: The 2015 elections highlighted the need for continued electoral reforms to ensure free, fair, and credible elections in Nigeria (Ibrahim, 2015).

6. Long-term Consequences of the APC Government on Democratic Consolidation, Policy Continuity, and Public Service Delivery

The formation of the APC and its victory in the 2015 elections marked a significant moment for democratic consolidation in Nigeria. For the first time since the transition to civilian rule in 1999, an incumbent president was defeated, showcasing the maturing of Nigeria's democratic processes. The peaceful transition of power set a precedent for democratic alternation, which is crucial for the health and stability of any democracy (Suberu, 2015).

However, the long-term consolidation of democracy depends on the APC's ability to uphold democratic principles while in power. During its tenure, the APC government faced accusations of undermining democratic institutions and processes. Reports of selective anti-corruption campaigns targeting opposition figures, while sparing allies, raised concerns about the impartiality of the judiciary and anti-corruption bodies (Human Rights Watch, 2017). Additionally, allegations of electoral malpractice in subsequent elections, such as those held in 2019, posed further challenges to democratic consolidation (INEC, 2019). For a coalition government, maintaining a unified stance on democratic principles can be challenging, particularly when diverse political interests must be balanced.

One of the critical challenges for coalition governments is maintaining policy continuity, given the need to reconcile different agendas and interests among coalition partners. The APC government, upon assuming power, promised significant reforms in areas such as anti-corruption, economic diversification, and security. While some progress was made, the APC’s

internal divisions often led to policy inconsistencies and reversals.

For instance, the APC's economic policy aimed to diversify Nigeria's oil-dependent economy. However, internal disagreements and bureaucratic inefficiencies hindered the implementation of coherent economic policies. While initiatives such as the Economic Recovery and Growth Plan (ERGP) were launched to stimulate growth, the inconsistency in policy application and the fluctuating commitment of coalition partners undermined these efforts (Kale, 2019). The lack of a unified vision within the coalition often resulted in fragmented policy execution, which is a common issue in coalition governments (Musa, 2018).

Public service delivery under the APC government faced significant challenges, reflecting the broader difficulties of coalition governance. While the APC made ambitious promises to improve public infrastructure, healthcare, education, and other services, the results were mixed. Healthcare delivery, for example, saw some improvements with the launch of the Basic Health Care Provision Fund aimed at expanding access to healthcare. However, systemic issues such as funding shortfalls, corruption, and administrative bottlenecks limited the program's effectiveness (WHO, 2018). Similarly, efforts to improve education through initiatives like the School Feeding Program had a positive impact but were often hampered by logistical challenges and inconsistent funding (UNICEF, 2019).

In terms of infrastructure, the APC government made strides with projects like the Lagos-Ibadan railway and various road construction projects. Nonetheless, the pace of progress was slowed by bureaucratic delays and the complexities of coordinating projects across different coalition interests (Adeniyi, 2016). The coalition's need to balance diverse political and regional demands often led to compromises that diluted the effectiveness of public service delivery initiatives.

The APC government's approach to security and anti-corruption also provides insights into the long-term consequences of coalition governance. While the APC prioritized combating Boko Haram and other insurgent groups, the persistence of these security challenges indicated underlying issues within the coalition's approach to governance. Internal disagreements and lack of cohesive strategy among coalition partners often hampered decisive action (International Crisis Group, 2019).

The anti-corruption drive, a cornerstone of Buhari's campaign, achieved some notable successes, such as the recovery of stolen assets and the prosecution of high-profile individuals. However, perceptions of selective justice and the use of anti-corruption measures as political tools against opponents raised questions about the integrity of the efforts. This selective application not only undermined the credibility of the anti-corruption campaign but also pointed to the difficulties in maintaining a unified stance on governance issues within a coalition (Transparency International, 2018).

In sum, the APC government's tenure post-2015 offers a complex picture of the long-term impacts of coalition governments on democratic consolidation, policy continuity, and public service delivery. While the coalition succeeded in breaking the PDP's long-standing dominance and set a precedent for democratic transitions, it faced significant challenges in maintaining policy coherence and improving public service delivery. The internal dynamics of coalition governance, marked by diverse and sometimes conflicting interests, often led to inconsistencies and inefficiencies that hindered the realization of its ambitious reform agenda.

7. Summary

From 1999 to 2015, the People's Democratic Party (PDP) maintained a dominant position in Nigeria's political arena. The party consistently won presidential elections, controlled the majority of seats in the National Assembly, and held a significant number of gubernatorial positions. This dominance was facilitated by strategic alliances, national appeal, and incumbency advantages, but was also criticized for electoral malpractices and internal conflicts, contributing to its decline. In the face of growing dissatisfaction with the PDP, the need for a formidable opposition led to the formation of the All Progressive Congress (APC) in 2013. This merger combined four major opposition parties: the Action Congress of Nigeria (ACN), the Congress for Progressive Change (CPC), the All Nigeria Peoples Party (ANPP), and a faction of the All Progressives Grand Alliance (APGA). The merger aimed to unify the opposition and present a strong challenge to the PDP.

The formation of the APC involved extensive negotiations, compromises, and strategic alignments, addressing power-sharing arrangements and candidate selections. Key political figures such as Bola Ahmed Tinubu and Muhammadu Buhari played crucial roles in brokering the alliance and galvanizing support. The APC's strategic outreach to civil society organizations,

youth groups, and other stakeholders, along with a comprehensive manifesto addressing critical national issues, helped build a broad-based movement. The 2015 general elections marked a significant shift in Nigeria's political landscape, with Muhammadu Buhari winning the presidency and the APC securing majorities in both legislative chambers and numerous gubernatorial seats.

The merger and subsequent APC victory in 2015 signified a move towards a more competitive and pluralistic political system. However, the APC government faced challenges in maintaining policy continuity and improving public service delivery due to internal divisions and bureaucratic inefficiencies. Issues such as selective anti-corruption campaigns and allegations of electoral malpractice also raised concerns about the impartiality of governance and democratic consolidation.

8. Conclusion

The PDP's long-standing dominance from 1999 to 2015 was effectively challenged by the strategic formation of the APC, which unified opposition parties and leveraged widespread dissatisfaction with the incumbent government. The APC's victory in the 2015 elections marked a historic turning point, demonstrating the potential for democratic alternation and competitive politics in Nigeria.
However, the success of the APC merger highlighted both the opportunities and challenges of coalition governance. While it facilitated the first democratic defeat of an incumbent president in Nigeria, the APC struggled with internal cohesion and policy implementation, impacting public service delivery and democratic principles.

The 2015 merger and its outcomes underscore the importance of unified opposition in a dominant-party system and the complexities involved in maintaining effective governance within a coalition framework. The APC's experience illustrates the potential for democratic progress and the need for ongoing reforms to strengthen Nigeria's democratic institutions and processes.

9. Recommendations

To enhance the long-term effectiveness of party coalitions and coalition governments in Nigeria, it is recommended that political parties develop and implement robust mechanisms that ensure policy continuity beyond electoral cycles. This includes establishing bipartisan committees and long-term strategic plans that transcend individual administrations, thereby mitigating the risks of policy inconsistency and promoting sustainable development.

Political parties should prioritize inclusive governance practices that foster greater political stability and democratic consolidation. This involves creating frameworks for transparent decision-making processes and equitable power-sharing among coalition partners. Encouraging active participation from all coalition members can help address governance challenges and ensure that the coalition's policy implementation aligns with the broader public interest, ultimately contributing to more effective and stable governance.

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Voters Apathy and Voters Education in Nigeria: An Assessment of the Fourth Republic (1999-2023)

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Abstract. Voters' apathy has emerged as a significant challenge to the democratic process in Nigeria, particularly during the Fourth Republic (1999-2023). This study examines the factors contributing to low voters' turnout and the implications of insufficient voters' education on civic engagement. Through a comprehensive analysis of electoral patterns, demographic trends, and the effectiveness of voters' education initiatives, this assessment highlights the critical role that informed participation plays in shaping a robust democracy. The findings reveal a complex interplay between voters' apathy and voters' education. Furthermore, the paper underscores the necessity for targeted educational programs from child hood to enhance civic awareness and motivate active participation in the electoral process. By exploring these dimensions, the study aims to provide actionable insights for policymakers, civil society organizations, and stakeholders committed to revitalizing democratic engagement in Nigeria.

Keywords: Voters' Apathy, Voters' Education and Behaviour

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1. Introduction

Representative democracy world over is built on active participation of eligible citizens in the electoral process. However, the practice of this exercise in both old and emerging democracy depends on the regime type in the polity concerned. Thus, the principle upon which democratic government rests is put at the risk of survival. In many democracies, (especially emerging ones), the participation of the citizenry in the electoral process is often hampered by nuance often put in place by the ruling elites. Since the return of democracy to Nigeria, the country as successfully conducted seven successive elections with not higher than 40% of the nation's population involve in selecting who governs them. This had been occasioned by a regular decline in voters turn out in the nation. Today the Nigeria population is about two hundred and thirty five million, six hundred and forty thousand five hundred and forty nine (Countrymeterinfo 2025). Of this figure, only 27% of eligible voters decided who became Nigeria's president becomes in 2023 (Premiumtimesng. 2025), while the rest 73% were uninterested in the electoral process. This trend reflects the general pattern in the elections conducted so far in the fourth republic. From 1999 the nation has continually moved towards voter apathy in a geometric progression with eligible voters losing interest in the country's electoral process,

Scholars have conducted research extensively to look at the reasons why voters' apathy is on the increase. A study conducted by Omoregie and Omigie opined that "electoral fraud is a major reason for voter apathy" Omoregie and Omigie (2024), They continued that, due to electoral fraud, citizens feel that their votes do not count and, as such, the best thing to do is to stay away from voting to keep their sanity. Ugbagu and Oyemaobi provided evidence from three consecutive elections in their study on South-east Nigeria. Ugbagu and Oyemaobi (2023) Their study discovered and attributed the reason for voter apathy in the region to the entrepreneurial nature of people in the region as one reason that has impeded their engagement. The second reason for voters' apathy in South-east Nigeria is that they feel suppressed, cheated, and neglected. As such, they prefer to focus on their business and forget about the electoral processes.

While this reason of theirs sounds convincing, it can only be taken as some of the reasons for voters' apathy in Nigeria. This study therefore focuses on the lack of proper voters' education as the reason for voters' apathy in Nigeria.

1.1 Statement of the Problem

Voters' apathy has significantly permeated Nigeria's democratic landscape resulting in a consistent decline in voters' turnout in each election cycle. This trend has adversely affected the quality of leaders elected over time, paving the way for manipulation of voting outcomes. Presently, Nigeria is at the crossroads where the electoral process has become commercialized. The political class, recognizing that many citizens are disengaged from the electoral process, fostered a culture of vote monetization, (appealing to disillusioned individuals who increasingly view voting as a financial transaction rather than a genuine participation in democracy). As a result, many citizens approach elections not with a true desire to engage but rather to exchange their votes for monetary gain. This situation has led to a reality where elected leaders, (believing they have purchased their way into power), show little concern for the citizens. The consequences of this trend manifest in the form of inadequate basic amenities, broken promises and harsh, unresponsive government policies.

1.2 Research Questions

- What is the cause of voter apathy
- What are the effects of voter apathy
- What the relationship between voter apathy and voter education

1.3 Research Objectives

This study has the following objectives:

- To examine the possible cause of voters' apathy in Nigeria
- To analyze the effect of voters' apathy in Nigeria
- To access the relationship between voters' education and voters' apathy in Nigeria

2. Theoretical Framework

This study deployed the social learning theory for its analysis. The social leaning theory as propounded by psychologist Albert Bandura, posits that learning takes place through observation, imitation, and modeling, and is shaped by factors like attention, motivation, attitudes, and emotions. It considers the interplay between environmental and cognitive elements that influence how individuals learn.

The theory posits that learning happens as individuals witness the outcomes of others' behaviours. The model extends beyond behavioural theories, which argues that all actions are acquired through conditioning, as well as cognitive theories that emphasize psychological factors such as attention and memory. According to Bandura, individuals witness behaviour either directly through social interactions or indirectly by watching behaviour depicted in media. Behaviours that receive rewards are more likely to be copied, while those that face punishment are typically avoided.

The social learning theory has three basic elements that are core to it application. They are: (A) the concept suggests that individuals can acquire knowledge by watching others. (B), it emphasizes that mental states within a person play a crucial role in this learning process. (C), this theory acknowledges that learning something does not necessarily lead to a change in behaviour. Applying this theory to voters' apathy and voters' education, just like the theory posit that learning is transmitted, according to Agbebaku (2000) political culture are concerned with orientations towards political activities, these political activities are transmitted from infantry to adult hood.

3. Research Methodology

This study adopts the qualitative research methodology, it made use of secondary data which included textbooks, journals, newspaper publications and official elections results

4. Voter's Apathy in the Fourth Republic in Nigeria

Voter apathy refers to the disinterest exhibited by eligible voters towards participating in elections or the electoral processes within a country, Omoregie & Omigie (2024). The term originates from the Greeks, literally meaning "without feelings." It indicates a lack of enthusiasm among the populace for the electoral process, (especially in terms of voting). Although there are various interpretations of apathy, it generally signifies the absence of interest. Broadly speaking voters' apathy denotes a lack of engagement in elections. Yakubu (2012), defines it as "the indifference of electorates towards electoral processes like voting." Similarly, Cloud (2010) describes it as a scenario where eligible voters abstain from participating in public elections.

However, Agaigbe (2020) argues that it extends beyond mere indifference; it reflects voters' insensitivity to electoral processes, (especially voting), stemming from disenfranchisement in the political arena, ignorance, and insufficient education. It is important to recognize that 30% of

disenfranchisement of Nigerian voters is not a result of self-disfranchisement but rather a reaction to the fraudulent nature of the electoral process, including electoral fraud and a lack of electoral education, Omoregie & Omigie (2024). The consequence of this is low voters' turnout. Statistics indicate that voter turnout has consistently declined since the 2003 election, which recorded the highest level of voter participation since Nigeria's return to democracy in 1999. The 2003 elections experienced a turnout of 67% while the 2007 elections saw a decline to 57% followed by 54.53% in 2011, 40% in 2015, and a further drop to just 34.06% in the 2019 elections, in the recent off-season election in Osun State, out of more than 1,955,657 registered voters, slightly over 800,000 voters participated on Election Day.

Prior to the 2023 general elections, politicians, political analysts, and influential leaders urged Nigerians to refrain from political disputes and come out on Election Day to vote for their preferred candidates based on their conscience. Leading up to the 2023 general elections, there were significant efforts to encourage Nigerians to engage actively in the electoral process. Registration periods were extended to enable citizens to register for their Personal Voter's Card (PVC) to participate in the elections. All these measures were aimed to promote greater political engagement and voters' turnout for the elections.

Analyzing Nigeria's political history, several factors have contributed to voters' apathy; Omoregie & Omigie (2024) identify electoral fraud as a key contributor, while Obiora in Nwankwo (2008) suggests that the loss of trust in the Independent National Electoral Commission (INEC) has led to the observed voters' apathy in Nigeria. Many political analysts believe that votes do not truly matter, claiming that the outcomes of most Nigerian elections are essentially pre-ordained, that the electoral process is fraught with violence, and that the political class is unworthy of their positions due to their perceived insincerity regarding electoral promises and the continual failure of political parties and candidates to fulfill their electoral promises.

While the issues mentioned above are valid, it is crucial to understand that all problems leading to voter's apathy stem from an erroneous political culture developed since the inception of the country's representative democracy. The nation has consistently lacked political, electoral, and, democratic culture, by hastily adopting representative democracy without adequately educating citizens about its principles. Citizens are misled into believing that winners can be declared in elections irrespective of their participation, while politicians often lack an understanding of what representative democracy involves and are primarily focused on winning elections by any means necessary.

This enduring pattern has resulted in a situation where average politicians in the country presume that electoral malpractice, vote-buying, ballot box stuffing and snatching are the only ways to secure electoral victory. Collectively, this has led to increased disillusionment and despair among Nigerians regarding the current state of affairs, where leaders seem confused and as such citizens are disinterested in turning out for elections. The following Table 1 below illustrates the extent to which voter's apathy has deeply permeated Nigeria's representative democracy, there by leading to electing leaders who lacks integrity, capability and capacity.

Table 1:

Year	Registered Voters	Invalid vote	Valid vote	Total Vote
1999	57,938,945	431,611	29,848,441	30,280,052 52%
2003	60,823,022	2,319,620	39,012,071	41,331,691 67%
2007	61,567,036	0	35,397,517	35,397,517 57%
2011	67, 422,005	1,259,506	38,209,978	39,469,484 54.53%
2015	73,528,040	844,519	28,587,564	29,432,083 40%
2019	84,004,084	1,289,601	27,324,583	28,614,190 34.06%
2023	93,469, 008	939,278	24,025,940	24,965,218 26.70%

Sources: Authors compilation (2025)

5. Conceptualizing Voter's Education

Voter education refers to the knowledge that equips the electorates with the necessary information to make informed choices when selecting candidates who will govern them, (Oduola, Hassan and Sawaneh 2020). It encompasses vital aspects such as when and where to register and cast votes (ECI, 2016). While the definition provided above includes some elements of voters' education, it however narrowed the concept down to a sectional or seasonal perspective. In this study, we explored voters' education as a comprehensive concept that involves instilling democratic norms, values and rules in the citizens of a given nation. Beginning with fostering a political culture grounded in democratic principles and

practices, where free, fair, credible and participatory elections are emphasized. It teaches citizens their civic rights and obligations within the political system from an early age. Thus, voters' education entails the process of instilling in citizens, starting from childhood, the importance of participating in governance and the electoral process, recognizing voting as both a civic right and responsibility essential for the sustenance of democracy. Without proper voters' education, voters' apathy and issues such as election rigging, vote commercialization, and ballot stuffing and snatching, which are unfortunately prevalent in Nigeria will be the order of the day.

6. The Relation between Voters' Apathy and Voters' Education

The relationship between voters' apathy and voters' education, are both significant and reciprocal, warranting comprehensive analysis within the context of civic engagement and democratic participation. Voter's education is fundamental to fostering active civic involvement; any deficit in this regard could precipitate widespread apathy among the electorates. It equips citizens with essential knowledge regarding their civic rights and responsibilities, thereby enhancing their understanding of the electoral process intrinsic values. When individuals are informed about the ramifications of their participation in elections, they are more likely to develop a sense of civic duty and engagement. Conversely, the absence of such educational initiatives can contribute to a lack of awareness regarding the electoral process and its effects on governance, resulting in heightened disengagement and indifference. A robust framework of voters' education promotes a political culture that values participation and upholds democratic norms and practices. This educational approach can effectively inspire citizens to engage in electoral processes. In contrast, a populace that lacks understanding of the electoral mechanism and democratic principles may become disillusioned with the political systems perceiving it as irrelevant or corrupt, ultimately exacerbating voters' apathy. Moreover, voters' education plays a crucial role in mitigating issues such as election rigging and vote commercialization. When voters possess a clear understanding of the significance of free and fair elections and recognize the tactics that undermine democratic integrity, they are more likely to engage in the political process actively and hold elected officials accountable. In the absence of this understanding, apathy can prevail, allowing fraudulent practices to persist unchallenged. It is important to emphasize that voters' education, should not be confined to isolated efforts during election cycles, as it necessitates an ongoing commitment. By instilling democratic values from a young age, individuals are more likely to cultivate a lifelong habit of voting and civic participation. In the absence of such education, individuals may develop an apathetic mindset as they mature, (viewing political engagements as unworthy of their time and efforts). The interconnectedness between voters' apathy and voters' education, underscores the vital importance of informed and engaged citizenship in sustaining a healthy democracy. Thus, the provision of comprehensive voters' education represents a significant intervention that can diminish apathy, resulting in increased electoral participation and enhanced accountability in governance.

7. Discussion of findings

Finding from this study reveals that lack of proper voters' education, could be a catalyst to propel voter's apathy. According Agaigbe (2020), voter apathy extends beyond mere indifference. It reflects voter's' insensitivity to electoral processes, (especially voting), stemming from disenfranchisement in the political arena, ignorance, and insufficient voter's education. On the other hand, Oduola, Hassan and Sawaneh (2020), see voter's education as the knowledge that equips the electorate with the necessary information to make informed choices when selecting candidates who will govern them. It encompasses vital aspects such as when and where to register and cast votes (ECI, 2016). Omoregie and Omigie (2024), see voters' apathy as the disinterest exhibited by eligible voters towards participating in elections or the electoral processes within a country. From their definition of voters' apathy, one can deduce that lack of knowledge of a particular situation or event can bring disinterest towards such event or situation. From the foregoing analysis, lack of proper and early child hood voters' education, is identified as the major cause of voters' apathy in Nigeria. This finding is line with objective one of the study which seeks to examine the possible cause of voters' apathy in Nigeria.

Voters' apathy has caused Nigeria lots of embarrassing situation. Apart from the fact the last general election, a country which population about 250 million citizens, million, (country Meterinfo 2025), only 26.7 of registered voters decide who became the President becomes, (Suleiman 2023). While the rest 73.3% of total registered voters are uninterested in electoral process and voting, leading to voters' apathy. Findings from the study reveals that voters' turnout have been on the downward trend since 2003 with every subsequent election affected by voters' apathy. This trend has negatively impacted the quality of leaders in the country. Today Nigerians are

seriously paying for their lack of interest in politics, electoral process and governance. Voters' apathy has affected the country governance to the extent that in a country that is blessed with intellectually gifted citizens, incompetent leaders are at the center if affairs. This aligns with Plato's assertion that "One of the penalties for refusing to participate in politics is that you end up being governed by your inferiors". These findings address objective two of this study which sought to analyze the effect of voters' apathy, from the analysis above it shows that voter apathy has affected Nigeria in every facet.

Finally, the relationship between voter apathy and voter education is both significant and reciprocal, warranting comprehensive analysis within the context of civic engagement and democratic participation. Voters' education is fundamental to fostering active civic involvement. Any deficit in this area can precipitate widespread apathy among the electorates. It equips citizens with essential knowledge regarding their civic rights and responsibilities, thereby enhancing their understanding of the electoral process intrinsic values. When cetizens are informed about the ramifications of their participation in elections, they are more likely to develop a sense of civic duty and engagement. Conversely, the absence of such educational initiatives can contribute to a lack of awareness regarding the electoral process and its effects on governance, resulting in heightened disengagement and indifference.

8. Conclusion

This study conclude with the assertion that for Nigeria to get it right politically and move beyond its current political and economic gridlocks, and to prevent the coming generation from partaking in the chaotic democratic system bedeviling the nation today, there is serious need to initiate an holistic voters education beginning from our primary education were the principle of governance and representative democracy will be taught with the rules of engagement entrenched.

9. Recommendations

Voter education should be given the right place in our primary education. Incorporating voter education into primary education is essential for fostering informed and responsible citizenship. By introducing the principles of voting and civic engagement at an early age, we can ensure that students understand the importance of participation in democracy and are equipped with the knowledge they need to make informed decisions as future voters. This foundational education can promote active engagement in society and empower children to take part in the democratic process as they grow older.

Enlightened people with the right attitude to democratic principle must as a matter of urgency engage in voluntary and serious voter education. It is essential for individuals who are well-informed and committed to democratic principles to prioritize the importance of voters' education. Engaging in voluntary and comprehensive efforts to educate voters is a critical step that needs to be taken urgently.

Nigerian must wake up from there slumber and see the need to participate in governance and electoral process. It is essential for Nigerians to recognize the importance of actively participating in governance and the electoral process. Engaging in these areas is crucial for ensuring that their voices are heard and represented.

INEC and political parties should take the responsibility for a comprehensive. The Independent National Electoral Commission (INEC) and the various political parties must acknowledge their responsibility in ensuring a thorough and comprehensive electoral process. It's essential for both entities to work collaboratively to uphold the integrity and effectiveness of elections.

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The Kampala Convention and the Plight of Internally Displaced Persons in Nigeria: A Case Study of Uhogua IDP Camp in Edo State

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Abstract. Sub-Saharan Africa is home to 46 per cent of the world's internally displaced persons (IDPs) with Nigeria being amongst the 10 countries with the largest number of IDPs globally. This article interrogates the extent to which Nigeria adheres to the stipulations of the Kampala Convention in managing Boko Haram terrorism survivors at the International Christian Centre for Missions. The article relied on semi-structured interviews and secondary data to shed light on the debilitating conditions of the IDPs. The findings reveal that despite the efforts of the camp management at addressing the plight of the over 3,000 IDPs, their conditions still terribly fall short of the requirements of the Kampala Convention. Thus, it is recommended that the Nigerian government and its international partners should provide much-needed support to the Camp to effectively ameliorate the plight of the terrorism survivors.

Keywords: Kampala Convention, Uhogua, Internally Displaced Persons, Boko Haram survivors

1. Introduction

In the last decade and a half, the plight of internally displaced persons (IDPs) and their management have significantly worsened globally, leaving them in more adverse conditions and borderline of poverty and destitution. With the plight of IDPs birthing a growing concern around the world, forced displacement is now increasingly perceived not only as a humanitarian concern but also as a developmental challenge. In recent years, the number of IDPs in Nigeria has grown exponentially to an estimated 3.3 million (IDMC GRID 2024). Most cases of internal displacements in the country have been associated with armed conflicts in the North-East, banditry in the North-West and farmer-herder violence in the North-Central with ramifications across the country (Oduwole and Fadeyi, 2013). Undoubtedly, this poses a huge threat to country's fragile democracy and national cohesion.

However, the crisis of IDP is not exclusive to Nigeria. The Global Report on Internal Displacement 2024 revealed that a staggering 75.9 million displacements were recorded globally at the end of 2023, three times higher than the average in the last decade. Conflict and violence accounted for 68.3 million of these figures, the highest ever recorded since data became available (GRID 2024). In 2023 alone, 20.5 million new displacements were recorded across 45 countries and territories with Sudan, DRC, and Palestine accounting for almost two-thirds of the figure (insert ref). Mirroring the last decade, Sub-Saharan Africa, North Africa, and the Middle East recorded the highest number of IDPs globally with Sub-Saharan Africa alone having an estimated 32.5 million IDPs in 2023. This signals a consistent increase in the past five years (IDMC 2024). Of these figures, Sudan, DRC, Somalia, Ethiopia, and Nigeria alone were home to over 32 million IDPs which is 46% of the global total (GRID 2024).

However, the IDP epidemic is terrible in Nigeria which doubles as Africa's most populous nation. In 2021, the United Nations reported that around 2.2 million people (531,000 women, 423,000 men, 677,000 girls, and 569,000 boys) were harboured across 890,000 IDP camps in the sprawling North-East region of Nigeria (Nigeria 2021 Year End Report: Population Trends). In December 2023 the figure stood at 3.3 million out of which 1.9 million IDPs were living in protracted displacement in Borno State. This was the highest total since 2013 when records began pointing to the near absence or absolute lack of sustainable and durable solutions to the internal displacement challenge in Nigeria (GRID 2024).

The increasing rate and appalling state of IDPs in Nigeria and other African countries are puzzling because the African Union Convention for the Protection and Assistance of IDPs (otherwise known as the Kampala Convention) was enacted to address such a scenario. The Convention provides for the protection and proper management of IDPs and spelled out the obligations and duties of state and non-state parties. Even more puzzling is the fact that Nigeria and many other African countries afflicted by internal displacement epidemic are signatories to the Convention, yet the plight of IDPs continues to deteriorate.

Surprisingly, while there has been an increased scholarly and policy interest in the plight of IDPS in the North-East and North-central regions of Nigeria (see Raji, Adekayaoja, Agaku, Akujobi, & Hamzat (2021), Gwadabe, Salleh, Ahmad, & Jamil (2018), Onuoha & Chukwu (2022), Olanrewaju, Omotoso, & Alabi. (2018), Olufadewa, Adesina, Oladele, & Ayorinde (2022), little or no interest has been shown in the plight of IDPs beyond northern Nigeria. The reason for this could be that northern Nigeria has been under the siege of Boko Haram and ISWAP jihadist terrorism for over a decade and a half. As a result, the plight of those displaced by this seeming intractable violence within the region has attracted enormous scholarly, policy, and media attention. However, the predicament of victims of the same terrorism who are living in sprawling conditions and abject poverty beyond the region is neglected. This research focuses on the only IDP camp of Boko Haram survivors which is located in the South-South region of Nigeria and managed by a faith-based organization.

This article seeks to examine the extent to which the Kampala Convention has been implemented in managing the IDPs in the Uhogua camp in Edo State. The article is guided by two interrelated questions: What challenges are faced in the implementation of the Kampala Convention at Uhogua IDP Camp in Benin City? How can the challenges face at Uhogua Camp be mitigated?

Focusing on the Uhogua IDP camp is significant as most scholarly works have dwelt primarily on the plight of IDPs living in government-managed formal camps in the North-east and North-central zones of Nigeria in collaboration with non-governmental organizations. However, an estimated 75 percent of IDPs in Nigeria live in informal camps in host communities administered by non-State actors (Iweze 2022). This article seeks to unravel the precarity and poverty suffered by the IDPs living in informal camps. It holds relevance for various stakeholders involved in addressing the issue of internal displacement in Nigeria and has the potential to inform and guide them in overcoming the challenges impeding the effective implementation of the Kampala Convention in Nigeria.

The article is divided into five sections for analytical convenience. Following this introductory section is the review of relevant literature and conceptual framework. The third part outlines the methodology, data collection, and data analysis techniques used in the research. Section four contains the analysis and discussion of findings while the fifth section wraps up with a conclusion and recommendations.

2. Literature Review

The Kampala Convention defines internal displacement as "the involuntary or forced movement, evacuation or relocation of persons or group of persons within internationally recognized state borders" (Kampala Convention, 2012: 3). Both the United Nations Guiding Principles on Internal Displacement and the Kampala Convention guarantee that IDPs as citizens or habitual residents of their country are entitled and should enjoy equal and full rights without discrimination based on their situation of being internally displaced within their national borders. IDPs are presumed to enjoy the same rights, privileges, and freedom under both national and international laws as all other persons and citizens in their country. However, due to the character of their forced displacements, IDPs are naturally and habitually at great risk and are extremely vulnerable to various forms of deprivation, protection risks, lack of access to basic amenities and services, family separation, sexual and gender-based violence, trafficking, harassment, loss of property, discrimination and further exposure to the risk of secondary or onward displacement (Harild & Christensen 2011). Worthy of note is the fact that IDPs retain the right at all times irrespective of their phase of displacement to seek safety in another part of their country, and to be protected against a forceful return to or resettlement in any place where the safety, liberty health and well-being of their life will be at risk.

The phenomenon of internal displacement is global and transcends several continents, regions, countries, and territories. Although countries have the primary obligation and responsibility to protect, assist, and provide for those persons displaced within their territorial borders, situations, have become apparent where sometimes states are outright weakened and unable or in some cases unwilling to provide adequate

support for internally displaced. Zolberg (1999) posits that while there is the existence of an international framework for the protection and assistance of refugees regarding the Geneva Convention, the African Union (AU) realized that African countries were more prone and deeply engulfed in conflict which made them the host to the largest number of IDPs as a continent. The AU therefore felt compelled to draw up laws, policies, and strategies for the protection of the lives and rights of African people affected directly and indirectly by the phenomenon of internal displacement in the continent as a means to enhance good governance (Zolberg, 1999). Internally displaced persons include but are not limited to: Communities, families, and persons caught between warring and conflicting parties are therefore forced to flee their homes or habitual residences as a result of countless and relentless bombardments and the threats of armed and violent attacks on them. IDPs also include communities and persons who have been forced to flee their residences and livelihoods on account of natural disasters and adverse climatic conditions, making them unable to feed and provide for themselves and their families and therefore seek external help and refuge elsewhere within their national borders.

According to Lusigi (2022), Africa is the worst-hit continent when it comes to internal displacement and hosts over one-third of the forced displacement population. Of those forcibly displaced, three-quarters, or about 21.8 million Africans are internally displaced, meaning they remain within their country's borders. Internal displacement therefore constitutes a significant economic burden for individuals, communities, and economies. Furthermore, internally displaced persons suffer some form of protection issues and challenges such as child protection and gender-based violence. The women and younger female victims of internal displacement are vulnerable to rape, domestic violence, trafficking, forced prostitution, and many other abuses in violent situations. Kalin & Schrepler (2012) argue that internal displacements are often fluid, with new displacements and movements of people in search of durable solutions sometimes happening simultaneously.

The causes of internal displacement both in Africa and globally are manifold and complex. Internal displacements can be a result of poverty, violent conflicts, natural disasters, and climatic changes. Conflict-induced displacement refers to displacement that occurs as a result of people being forced to flee their homes and places of habitual residence for several different reasons including armed conflicts, generalized violence, civil war, communal conflict, and where state authorities are either unwilling or not able to protect them. On the other hand, disaster-induced displacement includes displacement brought about by natural disasters and hazards such as floods, droughts, hurricanes, earthquakes, and other environmental and climatic variations and changes. In 2022, the United Nations High Commission for Refugees (UNHCR) responded to 15 emergency declarations which were made concerning displacements brought about by climate shocks including droughts, cyclones, flooding, or a combination thereof which had occurred across all regions globally (UNHCR Global Trends Report 2022).

The upsurge in the phenomenon of Internal displacement in Nigeria is the result of a profusion of overlying and complex triggers including natural disasters and protracted violence. The total number of 3.3 million internally displaced persons in Nigeria accounts approximately for a third of the total number of IDPs in Africa and 10% of IDPs in the world (IDMC GRID, 2023). Atim &Atsiya (2019) noted that the key factors and drivers that have contributed significantly to the high level of forced movements of the population (displacement) in Nigeria are the Boko-Haram insurgency, violence between farmers and nomadic herders, land disputes, resource-based conflicts, election-related violence, and banditry. Despite the ratification of the Kampala Convention, Nigeria has an inadequate legal and policy framework to assist IDPs. This amongst other factors, poses a challenge in addressing the gnawing problem of internal displacement in Nigeria and this has been identified as the primary cause of the worsening of IDP plight (Gwadabe et al. 2018). Alobo & Obaji (2016), and (Ekpa, & Nuarral 2016) equally put forth similar arguments that although Nigeria has ratified the Kampala Convention, the lack of domestic legislation explains the disparity of government policies with international human rights standards they further argued that the overwhelming nature of the displacement caused by Boko Haram and the absence of a regulatory framework in the management of internal displacement has made government non-proactive in planning and managing displacements in Nigeria. This problem creates a gap between policy and practice, leading to inadequate protection and assistance for IDPs. There also exists a lack of coordination and cooperation among the various stakeholders involved in the protection and assistance of IDPs in Nigeria, including government agencies, civil society organizations, and humanitarian actors. This lack of coordination can lead to duplication of

efforts, inefficiencies, and a failure to comprehensively address the needs of IDPs.

According to Gbigbiddje, Fredrick & Onwordi (2020), the upsurge of violence and insurgency between all parties and in various parts of North-eastern Nigeria since 2009 resulted in mass displacement and deprivation of an estimated 200,000 individuals which led to the International Organization for Migration (IOM) implementation of its displacement tracking matrix program in September 2014. This was done in collaboration with the National Emergency Management Agency (NEMA) and all other State Emergency Management Agencies (SEMAs). From the perspective of Harild, and Chrislensen (2011) forced displacement is a humanitarian crisis. It also has significant developmental impacts affecting human and social capital, economic growth, poverty reduction efforts, and environmental sustainability.

Forced displacement has an important bearing on countries meeting the SDGs (Sustainable Development Goals) since displaced populations tend to be the poorest and often experience particularly difficult access to basic services. Internal displacement greatly impoverishes communities, individuals as well as families. Its most significant impact can be seen in the loss of livelihood, property, land, and access to basic health, social, and educational services suffered by IDPs. The host communities of IDPs invariably get caught up in the impoverishment cycle as they may exhaust their resources in coping with the new arrivals, especially in Africa where most IDPs stay in IDP camps in host communities. Displaced persons also encounter a myriad of challenges which include forced labor, sexual molestation, violence, deteriorating health conditions, and loss of fundamental human rights. As a way to mitigate the vulnerability suffered by IDPs in Nigeria, IDP camps were set up by the Nigerian government with support from international donor agencies, local and international humanitarian and non-government organizations, and civil society organizations. Nigeria has a total of 143,110 internally displaced persons camps 84 percent of which is located in Borno State (Human Rights Watch Report 2022).

2.1 Theorizing Humanitarianism

Humanitarianism as a concept can be viewed as a broad dedication to and the belief in the sanctity of the fundamental value of human life. Humanitarianism can also be seen as a systemic response to crisis which involves addressing and managing the needs of people who have been affected by famine, epidemic, conflicts, violence, and natural disasters. De Lauri (2021) further affirms that humanitarianism can be seen to manifest in a plurality of actions, ethics, and movements that are coherent with core humanitarian principles even though these actions are different in their modes of expression and implementation.

In the view of Fassin (2021), humanitarianism is defined as the government of life itself which encompasses the whole set of procedures established and actions conducted to manage, regulate, and support the existence of human beings. It is based on the view that all human beings irrespective of age, sex, social class race, religion, or location deserve respect, dignity fairness, and equity and should be treated as such. At the core of the humanitarianism concept are the principles of humanity, neutrality, voluntary service, impartiality, unity, universality, and independence which are fundamental to all humanitarian actions geared towards helping people in need during emergencies, armed conflicts, natural disasters, and manmade crises to alleviate human sufferings, sustain and maintain human dignity. Redfield (2005) averred that humanitarianism possesses a common-sense nature which is derived from its ethical injunction to manage and save lives in crisis.

Humanitarianism is also focused on the prevention and strengthening of the levels of preparedness in the event of the occurrence of a humanitarian crisis. Hyndman (2000) opines that humanitarian practices tend to be spatially confined to the locality where people in crisis need assistance, be it in camps or Mediterranean zones of crossing, humanitarians intervene within and across borders to manage the lives of those kept in place by poverty to save those in crises.

Humanitarian operations are governed by basic humanitarian principles of humanity, neutrality, impartiality, and independence without regard to race, nationality, religion, or political affiliation UNHCR (2024). Humanity emphasizes the alleviation of human suffering and the protection of human life; the principles of neutrality and impartiality involve not taking sides in any conflicts in the provision of aid and humanitarian services. It espouses that aid is distributed based on need, urgency, and severity without discrimination and recourse to political affiliations, independence from external influences must also be seen in the way humanitarian actions are carried out.

The OECD DAC Evaluation criteria which were updated in 2019 serve as criteria for the evaluation of humanitarian actions covering key issues that are important to consider when assessing the performance

of humanitarian actions. Effectiveness establishes the extent to which the humanitarian action is achieving its objectives set out in the humanitarian intervention action plan. Relevance measures if the humanitarian action or intervention is doing the right things as humanitarian actions will only be seen to be relevant to both the humanitarian actors and to the recipients of these humanitarian interventions if the interventions are done rightly for the greater good of those in need of these interventions. Efficiency measures how well the resources deployed in providing humanitarian actions are being used. Do these resources deliver or are likely to deliver results in a timely and economical way? Only when this is achieved can such humanitarian interventions be adjudged efficient. Impact assesses the extent to which the humanitarian action is expected to generate measurable and significant effects which could be positive or negative, intended or unintended. Coverage has to do with the need to reach groups and populations facing critical humanitarian situations, while Sustainability measures how sustainable the benefits of the humanitarian actions will be when implemented.

3. Data and Methods

The primary data for the study was collected at the International Christian Centre for Missions (ICCM) which was established in Uhogua by Pastor Solomon Folorunsho in the year 1991. Uhogua is a prominent suburban community situated approximately 30 kilometers North-West of Benin City. By 2009 the church had expanded its scope of activities to include but not restricted to taking care and serving as a camp for about 3000 internally displaced people mainly from the minority Christian communities in Chibok, Damboa, Gwoza and several parts of Borno and Adamawa states in north-eastern Nigeria. The camp also has IDPs from other states such as Zamfara, Bauchi, Niger, Jos, Sokoto and Taraba who had become internally displaced due to the escalated and worsening Boko Haram insurgency which had devastated their areas and had forced them to seek refuge in several camps one of such is the Uhogua camp.

Primary data was collected through semi-structured in-depth interviews of IDPs and camp workers randomly selected in ICCM Uhogua camp. The interviews were physically conducted and lasted for one week between the 4th and 10th of September 2023 because of the busy schedule of research participants. The use of the semi-structured interview method was to enable the researcher to obtain first-hand information from interviewees, allow them to express themselves freely, and get varied opinions and perspectives. The questions were open-ended to guide the interview and allow the interviewer and interviewee to discuss some questions about the interview in more detail or follow relevant lines of inquiry and all answers to the interview questions were electronically recorded to ensure that the answers provided were not misrepresented. The secondary data was collected through several publications, media sources, online databases, and repositories such as the UNHCR Global reports, and IDMC tracking matrix reports.

The interviewees were 15 persons including camp workers, camp administrators, and IDPs. The data collected was coded and analyzed thematically and the secondary sources were used to confirm the findings emanating from the primary data. Considering the sensitive nature of the research on account of the trauma suffered by the IDPs in the hands of Boko Haram terrorism, the study was guided by several ethical considerations including objectivity, anonymity, confidentiality, and informed consent. All interviewees were assured of their anonymity and that the answers provided would be treated with utmost confidentiality. Informed consent was sought and obtained from all research participants and the ICCM camp management before the commencement of the interviews. Verbal consent was used because some of the IDPs were illiterate. However, the meaning of consent was properly explained to all the interviewees to ensure their complete willingness to participate in the study. To avoid secondary traumatization, the interview questions were vetted before use by an expert on terrorism Dr. Iro Aghedo of the Department of Political Science, University of Benin.

4. Analysis and Discussion

The study revealed that all the IDPs in the camp were from Christian communities in the northeastern states of Nigeria whose communities had been sacked and overrun by Boko Haram terrorists beginning in 2012. 65% of the IDPs were from Gwoza local government area in Borno State, 15% were from Adamawa, while IDPs from Bauchi, Niger, Zamfara, Jos, Taraba and Sokoto made up the remaining 20%. Several facts and discoveries emerged from the interviews conducted in the Uhogua camp regarding its management of IDPs and its conformity to the provisions of the Kampala convention. For analytical convenience, the findings are discussed in the themes below.

Vocational Empowerment

The management of the Uhogua camp did a lot within its scarce resources and capabilities to ensure that the

IDPs could live decently and have access to basic social amenities as stipulated by the Convention. For example, a commendable level of skill acquisition and training was available at the Uhogua camp. A lot of training in different skills and crafts was observable in the camp. It was discovered that the camp management constantly employed the services of trainers and facilitators to equip the IDPs with the necessary skills and crafts for fitness as well as to enable them to earn some income.

Respondent 8 was able to throw more light on what the camp management has been doing in this regard:
The camp management must be commended for the work they are doing. The camp trains IDPs in different skills such as tailoring, bleach making, soap and Vaseline making, poultry, fish farming etc. Currently, there is a tailor who comes to the camp daily to continuously train people in tailoring there is a caravan within the camp for this purpose…

Additionally, it was observed in the camp that some IDPs displayed some of their wares for sale to those who visited the camp and to the camp management as well. This initiative and efforts by the management of the Uhogua camp are commendable not only because it meets the OECD DAC evaluation parameters for measuring humanitarian actions, but also because it serves as the first step in the IDPs' quest for empowerment for them to return to a semblance of normalcy in their lives.

Protection against Sexual Exploitation

In line with the Kampala Convention *Article 9(1)(d),* which stipulates protection against sexual violence for IDPs, the Uhogua ICCM camp management has been able to provide sufficient protection against all forms of sexual exploitation, assault, and violence for IDPs living at the camp. An interviewee revealed that the IDPs were adequately protected and sensitized against all forms of sexual assault, exploitation and violence as well as the preying activities of traffickers.
The camp management understands that the state is well known for the activities of human traffickers so they properly sensitize and teach the IDPs about the activities of such people and the dangers of such endeavors. There is restricted access and screening of people into the camp and the IDPs are not allowed to leave the camp without permission by the camp authorities…(Respondent 2)

It was also observed that there are separate hostels for males and females which are demarcated by the large open football field, given that it is a camp owned and run by a Christian mission headed by a pastor. Thus, there is a high premium placed on morality, chastity, and decorum. The Uhogua camp can therefore be adjudged to be meeting the stipulations of the Kampala Convention concerning protection against all forms of sexual exploitation, violence, and assault as contained in *Article 9(1)(d).* However, this cannot be said for most IDP camps especially those located in Borno, Adamawa, and Yobe states where there were several reports of sexual abuse, rape and exploitation of girls and women including pregnant ones who were raped in the presence of their children in exchange for food, water and protection (XXX)

Feeding and Food Security

The discussions on the themes of feeding and accommodation, from facts which stemmed from this research threw up the harsh and unpleasant realities experienced by the IDPs living in the camp, chief of which was the level of poor feeding and overcrowded shelter. *Article 9 (1) (e)* of the Kampala convention clearly outlines that IDPs should be protected from starvation ensuring that they are fed and provided with accommodations. Most of the accommodation provided was small and uncomfortable and was heavily overcrowded seeing that over 3000 IDPs live within the camp premises. Though alternate accommodation was provided for married couples within proximity to the IDP camp, most of the over 1000 children of primary school age along with all other unmarried IDPs (teenagers, young adults) and widows live in the camp. The accommodations provided for the widows were mostly built with wood, except for the two modern brick hostel structures for males and females.

Respondents lamented the lack of governmental assistance and presence not only in the provision of shelter in the camp but in all aspects of the management of the IDPs in the camp. The interviews further revealed that electricity has been absent in the IDP camp since its inception. This makes the accommodation hot and uncomfortable to live in and it places a heavy financial burden on the management which has expended enormous funds on the purchase of diesel or fuel generators to pump water from boreholes. The implication was that some of the IDPs had to sleep in front of their hostels during the oppressive heat of the dry seasons to gain respite from the heat at night due to the overcrowded nature of the accommodations. Those who slept inside the hostels came down with severe heat rashes and other skin diseases which were major sources of discomfort to them. The situation though prevalent in Uhogua can also be observed in other IDP camps across Nigeria. A case in point was on December 21st, 2018 when the

International Centre for Investigative Reporting (ICIR) beamed its spotlight on the plight of IDPs in camps in Borno State agonizing over the poor and inadequate shelter in their camps despite the Presidential Committee on the North East intervention (PCNI) interventions and assistance.

Respondents noted that another critical aspect which is feeding in the camp is very poor and does not meet the dietary and nutritional needs of the IDPs living in the camp, the World Health Organization Department of Nutrition for Health and Development recommends daily intake of fruits, vegetables, grains meat and beans for adults and dairy products in addition to the aforementioned for children WHO (2019). It was discovered that hunger is rife in the camp with over 3000 mouths to feed and the escalating cost of food items, the management of the IDP camp at Uhogua groans under the excruciating burden of having to feed these IDPs. According to one of the camp administrators:

The IDPs are fed mostly once and told to fast or rarely twice a day with foods such as rice, yam, plantain, Garri (Eba), Tuwo, and beans. Donations of food items from well-meaning individuals and agencies do not come in as regularly as before, aid from the state government has been non-existent for the past 8 years, religious bodies do not visit as regularly as they used to before and this has greatly impacted negatively on the food level in the camp that is available for feeding the IDPs daily (Respondent 4)

Even though most of the IDPs living in the camp were mostly farmers in their home towns before they became displaced by the Boko Haram insurgency, there is a dearth of largely available farmland in the camp for them to engage in large-scale farming of staple foods as this would have gone a long way in buffering the acute shortage of foodstuffs that is been experienced in the camp. Furthermore, it was noted by one of the respondents that they had been informed that the nitrogen levels in the soil in the camp were high, making it impossible for them to cultivate crops such as yams, beans corn, and grains.

The resultant effect of this is that the IDPs were living in acute hunger daily therefore normalizing hunger and starvation in the camp. Hunger and starvation are rife at the camp and this implies a contravention of the Kampala convention in the management and care of IDPs at Uhogua. With regards to the OECD DAC evaluation criteria for the evaluation of humanitarian actions, the camp can be adjudged to be barely meeting the efficiency and relevance parameters but seriously failing and trailing behind in the effectiveness parameter. This can be greatly attributed to the lack of state presence and support in the management of the Uhogua camp. It should however be noted that the Uhogua camp is not the only IDP camp guilty of failing consistently in this regard. The United Nations through the UN World Food Programme on 15th October 2021 released a report that vividly portrays the acute starvation and malnourishment suffered by IDPs in camps across north-eastern Nigeria. The WFP has been providing lifesaving nutrition and food assistance to the severely food-insecure IDPs in IDP camps and vulnerable people living in host communities since 2016.

Education, Basic, and Social Amenities

This research revealed that on the theme of education, basic and social amenities, the reality on the ground is one of severe lack and deprivation. *Article 9 (2)(b)* of the Kampala convention states that IDPs are to be provided with education, and basic and social amenities to the fullest extent practicable with the least possible delay. Basic amenities at the camp are very poor even though there are a few boreholes in the camp that provide portable water for cooking, drinking, and other uses in the camp, it is grossly inadequate due to the huge number of IDPs living in Uhogua camp. There are various basic facilities for sporting activities such as red soil handball and volleyball courts, open space football field, and two table tennis tables that are utilized by the IDPs at specific times for sporting activities, but concerning the education facilities, the classrooms are not sufficient and are overcrowded, and most of them are without chairs and tables. Most of the IDPs sit on the floor to learn all year round without textbooks to read and learn, an entire class may be asked to read and pass around the few textbooks available amongst themselves weekly.

The roofs of some of the classrooms are leaking, while some classes are devoid of learning materials and aids. Amidst all these daunting and seemingly unsurmountable challenges the camp continues to provide education to all the IDPs, a pioneer class is available for adults who never went to school to learn and be educated. The camp continues to make provision for a small number of teachers who are employed in addition to a few volunteer teachers who come from the Uhogua community and other parts of the city, with assistance from older IDPs who are in tertiary institutions. These IDPs in collaboration with the volunteer teachers teaches the younger ones in the primary and secondary sections. Respondent 13 who is a 20-year-old 300-level law student in the University of Benin explained how he helps out with teaching in the camp.

I teach SS1-SS3 in the camp subjects like English, Literature and Government. I am happy I can do that since the camp has allowed me to access education and achieve my dreams, I feel so happy giving back to my fellow IDPS by teaching them……..

With over 200 IDPs in tertiary institutions one of which just graduated with a first class in Chemical Engineering from the Edo State University Uzaire, most of the IDPs in tertiary institutions owe tuition fees of the institutions they are currently schooling in different tertiary institutions in neighboring states like Delta and Ekiti, while management of the camp struggles yearly to foot the tuition bills of the IDPs in tertiary institutions. This is a feat that can be adjudged to be completely absent in all other IDP camps in the country as noted by Duru (2022) that 50 percent of the over 1.5million IDPs in Benue were children of schooling age at different levels, whose schooling had been brought to an abrupt end when they were sacked from their ancestral homes by insurgency and marauding herdsmen. The implication of this was the children idling away without any form of education being provided for them since they came to the camps in 2018. However, the situation is direr in north-eastern and north-central Nigeria (Rwang, 2023). The provision of education for IDPs of all ages even up to the tertiary level by the Uhogua camp is worth noting and highly commendable as it can be argued that concerning the provisions of *Article 9 (2)(b)* of the Kampala convention as it relates to the provision of education, the Uhogua camp management is fulfilling its provisions to an extent, with its focus on education of all ages of IDPs living in the camp at all cost irrespective of the acute shortages of resources and materials needed for providing education to the IDPs and are equally meeting all three parameters for judging humanitarian actions (effectiveness, relevance, and efficiency) according to the OECD DAC evaluation criteria as it pertains to the provision of education, but not so much success as it pertains to basic and social amenities.

Sanitation and Healthcare

Article 9 (2)(b) of the Kampala Convention stipulates that IDPs should be able to live in good sanitary conditions and be provided with good healthcare without delays. Sanitation in the ICCM IDP camp as discussed below revealed that the sanitary conditions of the camp were observed to be very poor, unhealthy, and overstretched concerning toilet facilities. The sanitary facilities are very few and grossly inadequate as it is used by the over 3000 IDPs living in the Uhogua camp.

Respondent 8 recounts how the water situation in the camp becomes dire during the dry season:
Sanitation is a huge challenge in the camp because there isn't an adequate supply of water in the camp Rainy seasons are seasons of respite as we can collect water whenever it rains but dry seasons are very tough and challenging in the camp because of the low water supply leading to very poor sanitary conditions.....

The boreholes in the camp are not sufficient to pump enough water for the bulging number of IDPs living in the camp and this is further exacerbated by the lack of electricity in the camp as it was revealed that there has never been any source of electricity at the Uhogua camp since its inception. The implication of this is that the management of the camp is unable to pump water sufficiently because of the extremely high cost of fuel and diesel to be used in the generators, water is therefore scarce, and this has led to open defecation in the surrounding bushes by the IDPs and such actions can lead to a widespread outbreak of infectious diseases and contamination of food and water in the camp. This has been of grave concern to the management of the camp and the federal government of Nigeria, as observed by Asare(2023) which led to the Federal government on the 22nd of May 2023 through the Ministry of Humanitarian Affairs, Disaster Management and Social Development to take its campaign against open defecation and personal hygiene to the camp at Uhogua to create awareness of the health dangers of open defecation and poor sanitary conditions to the IDPs living in the camp

Sadly, this is the reality across all IDP camps in Nigeria. Daily Post Nigeria News in its publication of 6th Sept 2022 captured the report of the deplorable sanitary conditions and sanitation facilities in IDP camps across the country when the Director of Social Development in the Ministry of Humanitarian Affairs and Social Development Mr. Taiwo Ademola Bashorun spoke at the IDP camp at Bakassi Cross River state in which she appealed for good and more toilets to be provided for IDPs in camps across the country and improved environmental hygiene. This situation does not conform to the provisions of *Article 9(2) (b)* of the Kampala convention thereby hindering the full applicability of these provisions in the management of IDPs not only in Uhogua camp but in other IDP camps across the country.

Ekezie, Timmons, Myles, Siebert, Bains & Pritchard (2018) noted that deplorable sanitary conditions were prevalent in IDP camps across Nigeria. With very limited access to basic amenities such as clean water and adequate proper sanitation which invariably increased health risks and susceptibility of IDPs to

various health challenges and risks. They observed the poor disposal of waste in most IDP camps across the country, which increases the risk of surface water, groundwater, environmental pollution, and potential food contamination in the camps which can lead to all manner of infectious disease outbreaks within these camps.

The healthcare amenities at Uhogua camp were observed to be very poor and unable to meet the needs of the IDPs living in the camp, and the complete absence of government intervention in the camp as it pertains to the provision of healthcare facilities, medical consumables, drugs or medical personnel was evident as there was complete neglect of the camp by the state and federal government. There was no form of aid or supplies coming to the IDPs living in the camp, the infirmary at the camp is very small and mostly overcrowded with insufficient beds for the sick to lie on leading to sickest IDPs lying on the floor in the infirmary. There is no resident doctor in the infirmary nor medical personnel in the camp, but a few volunteer nurses who come around occasionally to treat the sick. There is no ambulance or means of transportation in the camp to carry the sick in cases of medical emergencies. In such cases of emergencies, the sick persons are usually transported via commercial motorcycle operating in the community to the closest standard hospital which is the University of Benin Teaching Hospital located in Benin City 10 kilometers from the camp which is about 27 minutes' drive from the camp at Uhogua.

Respondent 11 explains the plight of the IDPs in the camp as it pertains to healthcare services:
The University of Benin Teaching Hospital had earlier established a mobile clinic at the camp but that was gradually returned to the hospital and such facility doesn't come from the hospital management anymore. Now we have to pay for hospital bills in full for any IDP who is treated or admitted at the University of Benin Teaching Hospital. Some of the IDPs who are in the university studying medicine also join the volunteer nurses in the infirmary. There were instances where medical intervention in the form of medical personnel from the University of Benin Teaching Hospital and other hospitals visited the camp in the early years of the influx of IDPs into the camp, but that no longer obtains...
The above information paints a distressing picture of the healthcare amenities that the IDPs can access in the Uhogua camp. Even though it was noted that some donor agencies had in the past years trained some IDPs in the techniques of first aid and medical assistance, it was still not in-depth enough for them to provide any tangible help or assistance to the very few volunteer nurses who rarely manned the infirmary at the camp.
There are very few beds in the infirmary and there is a huge lack of drugs and medical consumables making it very difficult to meet the health needs of the IDPs, especially during this rainy season when they are mostly prone to malaria, cough, catarrh, and other illness. There are no drugs such as anti-malaria drugs, drugs for flu (cough and catarrh) no balms or inhalers for those who have asthma or cold allergies. There is no provision for rapid test kits for malaria tests, PCV tests, and typhoid tests. There are no medical consumables such as cotton wools, methylated spirit, and other things that can be used to treat minor injuries or cuts sustained by the young children in the IDP camp…….. Respondent 9

This situation of poor feeding, terrible housing provisions, absence of basic and social amenities poor sanitation and lack of healthcare services prevalent in Uhogua and other IDP camps runs contrary to the provisions of *Article 9 (2)(b)* of the Kampala convention which stipulates that IDPs should be provided with decent and adequate humanitarian assistance such as food, water, shelter and other social amenities and where possible extend to the host communities. The offshoot of this is that all the IDPs living at Uhogua camp are unable to access basic healthcare amenities, receive medical attention from professionals, and get the appropriate medical attention swiftly in cases of emergencies which runs contrary to the provisions of *Article 9(2)(b)* of the Kampala convention nor does it meet any of the OECD DAC evaluation parameters for measuring humanitarian actions. This paints a sad picture given that health issues and emergencies can be very delicate and time-sensitive with little or no healthcare amenities at the camp. The same fate is shared by other IDPs in camps across the three geopolitical zones of Northeast, Northwest, and North-central zones in Nigeria (Ekezie et al 2018).

The Uhogua camp management has always added a Christian religious approach to the rehabilitation of the IDPs through prayers, counseling, and study of the bible in addition to sporting activities. Sports are used as a form of therapy in the camp, we allow them to play football and different games in the camp with the available facilities. At the initial stages of their relocation to the camp, if one of them had a nightmare of the trauma he/she suffered at the hands of the insurgents and screamed out of their sleep. It would trigger a huge panic across the camp with all other IDPs screaming and running out of their hostels. Breaking down their doors in the process, and running frantically across the open field thinking there was

another attack by Boko Haram on the camp. We the camp workers had to start sleeping outside their hostels in the open to always calm them down when such incidences occurred at night….. (Respondent 5).

We are a Christian mission, we always admonish them with God's word and pray for them, and this has produced tremendous results in their lives. The management of the camp has tried in this regard given the absence of trained personnel to provide the needed mental and psychological rehabilitation (Respondent 14).

The above demonstrates the camp's management doggedness and willingness to ensure that the IDPs living in the camp continue to build resilience to triumph over the trauma they have suffered. While it has been noted that IDP camps in Northeast Nigeria have received mental health and psychological support from the IOM via its MHPSS (Mental Health and Psychological Support) program to IDPs living in those camps, such assistance is not obtainable at the Uhogua camp.

Security and Protection

Article 9(2)(a) of the Kampala Convention obligates state parties to provide adequate security for IDPs living in IDP camps. The provision of security was also observed to be a major problem in the ICCM IDP camp Uhogua The security that is provided at the camp is barely adequate. Although there is a perimeter fence in some parts of the camp, the fence barely covers some parts of the camp while the majority of the camp is left unfenced and unmanned by any security personnel. As described by Respondent 6:
In my opinion, the security provided for the safety of the IDPs in the camp is not sufficient. Though the management is trying its best this current state government since they came into power has gradually reduced the amount of security personnel available at the camp. The security that is provided for the safety of IDPs in the camp is not sufficient, though the camp has the presence of two policemen who are stationed at the entrance of the camp, the other two female police officers who are stationed at the camp are rarely around at the camp. There is the local community vigilante presence too around the vicinity of the camp but this is hardly enough…….

Respondent 15 further buttresses the assertions raised above:
The security in the camp is not okay, although we have not had any form of security breach or attacks since we came to the camp, the perimeter fence has still not been completed till now by the current governor, who has starved the camp of security personnel since he came into office and rendered no form of assistance to the camp and the IDPs living in the camp……..

These assertions are bothersome given the current state of insecurity in the country presently. It therefore follows that owing to the minimum security available at the camp, the IDPs in the camp are sufficiently exposed to attacks and security breaches. Even though such has never occurred in the camp, it still poses a huge problem, especially considering the spate of farmer-herders' clashes in some communities such as Odighi and Odiguetue all of which are located in the same local government area as the camp (Ovia North East) in Edo state.

Article 9(2)(a) of the Kampala Convention obligates state parties to provide adequate security for IDPs living in IDP camps. When this is not the case, cases of attacks on IDP camps begin to happen such as the attack on LGEA primary school, located in Mgban, Nyiev council ward in Guma local government area of Benue state. It was reported by Vanguard News on April 8th, 2023 that the LGEA primary school which is an IDP camp was attacked by marauding herdsmen at about 10 pm on Good Friday leaving 43 IDPs dead and several scores severely injured with some missing from the camp. When IDP camps are left with little or no security in the camps it therefore can be argued that the IDPs have moved from insecurity in their ancestral homes to insecurity in their supposed places of refuge the IDP camps.

5. Conclusion and Recommendations

The overall objective of the Kampala convention is to provide and strengthen the rights of some of the most vulnerable people in the continent which are IDPs who have become displaced due to several reasons, and to ensure that the effects of the displacement are properly mitigated to guarantee the continuance of their living conditions within an acceptable level of normalcy even while in protracted displacement. Given the fact that aside from the Kampala convention, Nigeria has a national policy on the management of IDPs which came into force in August 2012, there is still a long way to go in improving the lot of the IDPs living in IDP camps across Nigeria. Therefore, collaboration on all fronts and at all levels must be vigorously pursued and achieved to ensure the implementation of not only the Kampala convention but also the national policy of management of IDP. Only when this synchronization is achieved by all relevant stakeholders can there be an improvement in the management of IDPs in the country?

To enhance the management of IDPS in Nigeria in conforming to the provisions as outlined in the Kampala convention, certain recommendations have been derived from the findings of the study. Beyond the ratification of the Kampala Convention, there is a need for the wholesale domestication of the convention and its implementation in our management of IDPs by ensuring there are proper legal frameworks for the implementation of the convention. The Federal Government must also strengthen and empower the relevant and appropriate agencies by allocating enough funds and resources in a transparent and accountable way to make agencies such as NEMA, and SEMA, both at the federal and state levels to enable them function efficiently and effectively in their response and management of victims of internal displacements The Federal Government must take strategic steps and display political willingness to end the reign of terror unleashed by Boko Haram in the regions that have been decimated by the protracted insurgency as this is the number one driver of internal displacement in the country and other causative agents of conflicts. Once an increased level of security is achieved and maintained nationwide, IDPs can therefore look with hope towards returning and resettling in their ancestral homes.

To tackle this crisis, and to ensure sustainable humanitarian aid to the bulging number of IDPs, the government both at the state and federal levels must collaborate and support other non-state actors such as faith-based organizations to ensure better management of IDPs in the provision of basic amenities, provide resources to guarantee their protection and security as enshrined in the provisions of the National Policy on IDPs and the Kampala Convention. This can be done by providing resources and sufficient funding in a timely and consistent manner to such camps this is to ensure that the IDPs living in those camps are not suffering from starvation, have access to basic social and health amenities, and are properly secured in the camps where they have found refuge from the trauma and pains, they have suffered as a result of internal displacement. Non-state actors such as the ICCM who are directly involved with the management of IDPs in the country must seek out strategic and workable ways to partner and maintain a working relationship with governmental actors and agencies, international humanitarian organizations, and other regional agencies to adopt the provisions of the Kampala Convention in their management and care of IDPs in their camp, this is to guarantee that IDPs are living within the basic standards of the convention even while in displacement.

There must be enhanced collaboration and synergy between all relevant stakeholders involved directly in the management of IDPs in the country both at the federal, state, and local levels, this is to ensure there is no abandonment of duties and obligations in providing the needed care and attention to IDPs living in IDP camps. There is a need for that same synergy and synchronization between state and non-state actors including local and international NGOs and faith-based institutions directly involved in the care and management of IDPs in the country. Additionally, the government must adopt gender-sensitive approaches in its policy-making and implementations to incorporate the special needs of women, girls, and children in IDP camps to guarantee greater protection for them from all forms of GBV (gender-based violence), especially in the IDP camps located in the north-eastern and north-western parts of the country.

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Historical Accountability and Reparative Pathways: Addressing the Legacies of the Transatlantic Slave Trade

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Abstract. The transatlantic slave trade received substantial boost from consistent exploitation and systematic inhumanity making it one of humanity's worst experiences. Its repercussions are still observed, with it's economic, and cultural implications. Contrary to many other prejudices which began in human history, this lasted for 400 years where millions of Africans were forcefully captured, transported through forced labor under inhuman conditions to the Americas and Europe. The wealth of the West was built on a system that perpetuated racism and formularies as well as socio-economic and cultural trauma. It also involves asking and offering forgiveness, restoration and reflection among the victims of this historical legacy in today's society. Thus, this paper aims to analyze this paradigm in its postcolonial context and the ways to achieve reparative justice. In pursuing these, the paper discusses how the concept of historical accountability can form the context within which societies still suffering from the repercussions of the recent past can begin to come to terms with their past traumas. Therefore, this paper aims at identifying both the historical realities behind this sad past and directions on how reparative justice can be implemented appropriately. This paper focuses on the current exclusion of slave descendants as well as duties owed to historical and present-day societies that were beneficiaries of the slave trade. It makes a call for restorative justice, with the focus being on compensation which should make the victims in question return to their pre-slavery position. These should include; Financial remunerations, Education, culture, and other noble endeavors with the intention of empowering these deprived groups of people. As methodology, this paper uses historical and socio-economic review, as well as a comparison of state and non-state practices of reparation and localization of justice throughout different periods and areas. While employing qualitative approaches, including interviews with professionals and document analysis, it combines these approaches with quantitative data to demonstrate present-day economic inequity and social prosperity among descended people. This paper thus emphasises racially and gendered representational politics when considering reparative possible, laying out a holistic framework for thinking about reparative futures. Thus, dealing with eradicating the effects of the transatlantic slavery that requires historical responsibility and reparative justice comes not only as an imperative moral and ethical obligation, but as the social requisite for the construction of the just society. This paper therefore calls for continuous policy discussion and engagement between policymakers, civil societies and descendant communities. In this connection, it is our collective intention to contribute towards the conceptualisation and practical arrangements for crucial reparations that may open the way towards justice, peaceful coexistence, socio-economic emancipation as well as vision of reconciled and fair society on the global level.

Keywords: Transatlantic, Slave Trade, Reparation, Racism.

1. Introduction

The transatlantic slave trade stands as one of the darkest epochs in human history, marked by relentless exploitation, severe brutality, and profound suffering. Spanning from the 15th to the 19th centuries, the trade forcibly uprooted millions of Africans from their homelands, subjecting them to inhumane conditions during their torturous journey across the Atlantic Ocean. Despite the abolition of the slave trade and slavery itself, the legacies of this colossal injustice

resonate to this day, manifesting in various forms of economic disadvantage, social disenfranchisement, and cultural dislocation for the descendants of enslaved individuals. Historical accountability is critical in understanding the systemic inequalities arising from this trade, as well as the moral obligations contemporary societies have toward acknowledging and addressing these wrongs.

The discourse around reparative justice seeks to rectify the harms inflicted upon individuals and communities through compensatory and restorative measures. Reparative justice extends beyond mere financial reparations; it encompasses a holistic approach to healing that aims to restore dignity, promote economic empowerment, and facilitate cultural revitalization. Recognizing the urgency for reparative frameworks highlights ongoing social and economic inequities that disproportionately affect the descendants of enslaved people. The legacy of slavery intertwines with contemporary issues of racial injustice, poverty, and marginalization, necessitating an exploration of historical contexts and mechanisms for reparative justice to facilitate a more equitable future for marginalized communities.

Evidently, the transatlantic slave trade represents one of the most egregious violations of human rights in history. The consequences continue to reverberate through societies globally, affecting African societies and descendants of enslaved people in the diaspora. The paper explores three interrelated issues: the profound breakdown of traditional African societal structures due to the slave trade, the persistent socio-economic disparities affecting descendants of enslaved individuals, and the challenges and inadequacies of contemporary reparative justice initiatives aimed at rectifying these lasting injustices and inequities.

First, the slave trade led to the disintegration of familial and communal ties within African societies. With millions of Africans forcibly removed, social networks built over generations were destroyed. This fragmentation weakened the social fabric of many African communities, creating divisions and conflicts exploited by European colonizers intending to profit from the trade. Consequently, the loss of individuals integral to their communities deprived these societies of mutual support, effective governance, and cultural continuity. These disruptive social impacts manifest today as conflicts, weakened governance structures, and societal divisions within many African nations.
Second, socio-economic disparities arising from historical injustices rooted in the transatlantic slave trade persistently affect descendants of enslaved individuals. In places like the United States and other Western nations, systemic racism and discriminatory practices have entrenched socio-economic disadvantages for Black communities, stifling access to quality education, employment opportunities, and essential resources. These disparities, insufficiently understood or addressed in contemporary policy discussions, perpetuate a cycle of poverty and disenfranchisement. Similarly, African nations grapple with economic challenges exacerbated by colonialism's historical legacy, hindering socio-economic development and well-being.

The third aspect of the problem is the inadequacy of contemporary reparative justice initiatives addressing the transatlantic slave trade's grievous wrongs. Although calls for reparations and systemic changes have gained momentum, existing frameworks often fall short. Many reparative approaches prioritize financial compensation over structural changes necessary for educational, economic, and cultural empowerment. Moreover, the dialogue surrounding reparations often excludes the voices of those most affected, perpetuating a disconnect between policymaking and the communities enduring injustice. This paper is therefore set out to address the following questions:

- What are the historical circumstances and impacts of the transatlantic slave trade that necessitate reparative measures today?
- How can societies effectively achieve historical accountability for the injustices committed during the slave trade?
- What frameworks or models of reparative justice show promise for addressing deep-seated injustices stemming from the slave trade?

In what ways can reparative justice be attainable to enhance inclusivity, global peace and security.

By addressing these questions, the paper will provide a comprehensive understanding of historical accountability and reparative pathways, contributing solutions to ameliorate the legacies of the transatlantic slave trade and advance justice for impacted communities.

1.1 Methodology

Employing qualitative method, this paper evaluates historical documentation, socio-economic data, and interviews with professionals to assess disparities faced by descendants of enslaved individuals (Creswell & Creswell, 2018). By comparing state and non-state practices of reparation across various

regions and historical periods, we draw conclusions on effective models for reparative justice and their implementation. Document analysis and interviews with historians, economists, and community leaders provide insights into the lived experiences of descendants and highlight ongoing efforts to address their grievances.

1.2 Historical Context of the Transatlantic Slave Trade

The transatlantic slave trade, spanning from the late 15th to the 19th centuries, remains a deeply complex and tragic chapter in history, marked by forced migration, exploitation, and profound human suffering. As European colonial powers expanded across the Americas, the demand for a labor force to sustain burgeoning plantations led to the systematic enslavement of millions of Africans. This inhumane practice established a trade network that reshaped global economic, social, and political landscapes, leaving a long-lasting mark on societies worldwide (Patton, 2015).

The origins of the transatlantic slave trade are inextricably linked to Europe's economic ambitions in the New World. Following the drastic reduction of Indigenous populations due to European conquests and diseases, colonizers turned to Africa as a source of labor. The Portuguese were among the first to engage in this trade, establishing trading posts along the West African coast in the late 15th century. The cultivation of lucrative cash crops such as sugar in the Caribbean further fueled the demand for enslaved Africans, resulting in the infamous triangular trade. Enslaved individuals were transported from Africa to the Americas, while trade goods such as sugar, tobacco, and cotton were shipped back to Europe, alongside manufactured goods sent to Africa in exchange for slaves (Williams, 1944).

Throughout the 16th to the 19th centuries, the transatlantic slave trade intensified, driven by the increasing demand for slave labor in the Americas. The Middle Passage, a perilous journey across the Atlantic, illustrated the brutality of this system. Between 1500 and 1866, an estimated 12.5 million Africans were forcibly transported to the New World, with around 2 million perishing during the voyage (Eltis & Richardson, 2010). European nations including Portugal, Spain, England, France, and the Dutch Republic played significant roles in sustaining this trade. England, emerging as a dominant force by the mid-17th century, established the Royal African Company in 1672 to supply colonies in North America and the Caribbean. However, the economic gains from this exploitation began to draw public scrutiny and fostered growing abolitionist movements in both Europe and the Americas, culminating in the gradual outlawing of the slave trade by the early 19th century (Thornton, 1998).

The economic impacts of slavery were transformative, particularly for Western nations involved in the trade. The wealth accumulated from the production of cash crops like sugar, tobacco, and cotton significantly contributed to the development of colonial economies. Notably, the sugar trade created unprecedented wealth for plantation owners and European investors, with enslaved Africans constituting the backbone of this enterprise. By the mid-18th century, it was estimated that about 80% of the world's sugar supply was produced by enslaved labor (Eltis, 2000). The profits derived from slavery played a pivotal role in funding the Industrial Revolution in Britain, further demonstrating the symbiotic relationship between slavery and capitalism (Williams, 1944).

Simultaneously, the cultural impact of slavery on African and diasporic communities was profound. Enslaved Africans, despite extreme hardships, maintained and transformed elements of their cultural heritage in the Americas. Music, dance, and oral storytelling became powerful means of cultural expression and resistance. These cultural forms have significantly influenced modern genres such as jazz, blues, and hip-hop, showcasing the resilience and creativity of African-descended populations (Holloway, 1990). Furthermore, the establishment of maroon societies—communities formed by escaped enslaved individuals—reflects efforts to preserve cultural identity and forge new social structures despite systemic oppression.

In Africa, the slave trade resulted in the breakdown of traditional societal structures. The forced removal of millions not only decimated local populations but also led to the fragmentation of family units and weakened social networks. The material wealth gained from the trade motivated some tribal leaders to participate in capturing and selling fellow Africans, further fragmenting communities and intensifying conflicts (Dohrn, 2008). These internal divisions were often exploited by colonial powers, leading to the erosion of traditional authority structures and social cohesion.

The socio-economic effects of the slave trade continue to resonate in the African diaspora. Descendants of enslaved individuals face persistent disparities in wealth, education, and health outcomes, rooted in the systemic injustices of slavery. In post-slavery America, discriminatory laws such as Jim Crow perpetuated racial segregation and limited opportunities for Black

populations (Coates, 2014). In African nations, colonial legacies contributed to ongoing economic challenges, hampering development and perpetuating dependency on Western nations (Acemoglu & Robinson, 2012).

Understanding these lasting impacts is crucial for fostering a broader appreciation of the need for reparative justice and historical accountability. Acknowledging the complexities and enduring repercussions of the transatlantic slave trade offers a foundation for addressing the deep-seated inequalities borne of this history. Engaging with this legacy provides a path towards constructing a society that recognizes the traumas of the past and actively works towards equity and justice for future generations.

2. The Moral Imperative for Historical Accountability

The transatlantic slave trade wrought enormous suffering upon millions of individuals and left a legacy that continues to affect the descendants of enslaved Africans as well as the societies that participated in it. This dark chapter in history calls for what many consider to be a moral imperative: historical accountability. This concept involves recognizing and addressing past injustices, which is crucial for fostering reconciliation and paving the way for restorative justice. Historical accountability demands both the acknowledgment of wrongdoing and a commitment to rectify its enduring consequences. In the context of the transatlantic slave trade, this means understanding not only the brutal experiences of enslaved Africans but also the systemic inequalities that arose from this exploitation and persist today (Blight, 2001).

Ignoring historical wrongs can have severe implications for social cohesion and justice. When societies neglect to acknowledge past injustices, they deny the legitimacy of the suffering experienced by marginalized groups, thereby perpetuating systemic inequalities. This denial manifests in various forms, such as inadequate reparative policies and continued economic disenfranchisement. An illustrative case is the United States, which has historically denied the need for reparations for African Americans, despite clear socio-economic disparities stemming from slavery and Jim Crow laws. As Ta-Nehisi Coates argues in his seminal essay, "The Case for Reparations," the persistent failure to recognize these wrongs entrenches racial inequalities even further (Coates, 2014).

For the African diaspora, refusing to acknowledge the psychological and cultural ramifications of the slave trade has left communities grappling with identity issues and systemic barriers without the necessary support for healing and growth. This neglect can lead to cycles of trauma, disillusionment, and socio-economic exclusion, ultimately threatening the prospects for building equitable societies.

Addressing historical injustices also involves forgiveness and restoration, which are crucial components of healing. While accountability concerns recognizing past wrongs, forgiveness provides a pathway to emotional and social healing, potentially allowing reconciliatory processes to flourish. However, forgiveness should not be mistaken for absolution; it must be rooted in acknowledgment, reparative actions, and a commitment to preventing similar injustices in the future. For example, the Truth and Reconciliation Commission (TRC) in South Africa addressed apartheid's injustices by offering individuals a platform to share their experiences. This initiative fostered public acknowledgment of historical wrongs and cultivated forgiveness between past oppressors and victims, creating a groundwork for reconciliation (Tutu, 1999).

In the United States, community-based initiatives like the "Listening Project" demonstrate how restorative justice can be advanced through encouraging dialogues about race, history, and accountability. By sharing stories of racial injustice and exploring paths toward mutual understanding, such programs exemplify how forgiveness can facilitate healing and restoration (Harris, 2019).

The perspectives of descendants of enslaved individuals are vital to these discussions. Many advocate for a measured approach to forgiveness that incorporates reparations and the restoration of dignity. This approach demands an understanding and acknowledgment of historical trauma, highlighting that genuine healing cannot occur without addressing systemic racism. Desmond Meade, an advocate for the rights of formerly incarcerated individuals, emphasizes that until societies commit to rectifying injustices, calls for forgiveness may seem insincere or dismissive (Meade, 2020).

Contemporary societies face ethical dilemmas regarding historical accountability and reparative justice. A significant ethical consideration is the debate over reparations as an obligation to redress past injustices, offering a framework for social and economic justice (Coates, 2014). While some argue for reparations as a moral necessity, others voice

concerns about logistics, potential backlash, and the perceived unfair burden on certain segments of society. These ethical considerations extend beyond individual countries, emphasizing global accountability for slavery and colonialism. The responsibility of European nations in addressing these legacies underscores the need for international cooperation and advocacy. This global perspective frames historical accountability as not only a national challenge but also a moral imperative with significant global implications.

The moral imperative for historical accountability is essential for addressing the legacies of the transatlantic slave trade. Recognizing and accepting the weight of the past is crucial for fostering justice and social cohesion in contemporary societies. By understanding the significance of forgiveness and restoration, communities can pave the way for reconciliation and healing. Furthermore, ethical considerations require a collective commitment to rectifying historical wrongs through reparative actions. This commitment is integral for building a more inclusive and equitable future and recognizing that our interconnected humanity transcends historical injustices. As such, engaging deeply with the past provides the foundation for constructing just societies that actively work towards equity and reconciliation.

3. Conceptualisation of Reparative Justice and Models of Reparations

Reparative justice seeks to address historical injustices faced by marginalized groups such as those affected by the transatlantic slave trade. This approach emphasizes accountability, acknowledging past wrongs, and implementing measures to restore dignity and equity for affected communities. By examining theories and frameworks within reparative justice, we better understand how to confront the legacies of slavery and systemic racism. At its core, reparative justice focuses on rectifying historical injustices through restorative measures, emphasizing healing and rebuilding trust, unlike punitive justice (Mamdani, 2016). This approach encourages meaningful dialogue between oppressors and oppressed communities and active participation in the pursuit of justice. Key components include acknowledging injustices, taking responsibility, providing reparations, and facilitating reconciliation. Scholars argue that without acknowledgment and accountability, reparations may become performative rather than transformative (Mamdani, 2016). Thus, reparative justice extends beyond financial compensation, aiming to dismantle systemic inequalities perpetuated by historical injustices.

4. Models of Reparations

Reparative justice can manifest through various models of reparations designed to address the diverse needs of affected communities. Here, we explore three primary models: financial compensation, educational opportunities, and cultural restoration initiatives. Each approach positions itself as a critical aspect of achieving comprehensive reparative justice.

4.1 Financial Compensation

Financial compensation is one of the most discussed forms of reparations, often seen as a direct acknowledgment of the economic benefits derived from slavery and the exploitation of marginalized communities. Financial reparations serve multiple purposes: they provide immediate economic relief to descendants of the enslaved, help to rectify historical injustices, and symbolize acknowledgment of the ongoing impact of such injustices.

For instance, the concept of financial reparations for African Americans gained considerable traction following the publication of Ta-Nehisi Coates's seminal essay, "The Case for Reparations" (Coates, 2014). Coates argued that historical policies and practices, such as slavery, segregation, and redlining, have contributed to pervasive wealth gaps between Black and white Americans. He posited that financial reparations could serve as an essential tool to begin addressing these systemic inequities. By offering direct compensation or funding for community development initiatives, governments and institutions might begin to alleviate some of the economic burdens inherited by descendants of the enslaved.

Critics of financial compensation argue that such reparations are insufficient if not accompanied by structural changes that confront the underlying causes of systemic inequality. This calls for a multipronged approach that pairs financial reparations with supplementary initiatives aimed at fostering long-term equity.

4.2 Educational Opportunities

Educational opportunities represent another vital model for reparations, recognizing that access to quality education remains a significant barrier for marginalized communities. By investing in education, societies can empower individuals with the knowledge, skills, and resources necessary to break cycles of poverty and inequality.

In the context of reparations, educational opportunities may include scholarship programs specifically

designated for descendants of enslaved individuals, funding for historically Black colleges and universities (HBCUs), and expanded access to resources that promote academic success. Such initiatives acknowledge the long-term impacts of educational disenfranchisement faced by African Americans and other marginalized groups and seek to redress these injustices.

Furthermore, educational initiatives should extend beyond traditional academic settings. Programs designed to promote financial literacy, skills training, and vocational opportunities are essential to addressing the diverse needs of communities affected by historical injustices. By focusing on holistic educational reform, societies can foster an environment where descendants of marginalized individuals are equipped to navigate and contribute to the socio-economic landscape effectively.

4.3 Cultural Restoration Initiatives

Cultural restoration initiatives aim to reclaim and revitalize cultural practices, traditions, and identities disrupted by the legacy of slavery and colonialism. These initiatives acknowledge the rich cultural history of African-descended populations and seek to promote cultural awareness and respect for diverse identities. Cultural restoration may involve funding for the preservation and promotion of historical sites significant to the African, supporting cultural festivals that celebrate African heritage, and providing platforms for artists and cultural practitioners to share their work. This approach emphasizes that reparations should also involve the recognition and celebration of marginalized cultures, allowing them to thrive and flourish in contemporary society.

Additionally, cultural restoration initiatives can serve as important sites of healing and community-building. By facilitating spaces where members of the community can connect, share their stories, and celebrate their heritage, these initiatives can help to foster resilience, agency, and empowerment among descendants of the enslaved.

The various models of reparative justice, financial compensation, educational opportunities, and cultural restoration initiatives, highlight the multidimensional nature of addressing historical injustices. By operating within a reparative justice framework, these initiatives aim not only to acknowledge past wrongs but also to enact meaningful transformations that promote equity and healing for marginalized communities. As societies engage with reparative frameworks, it is crucial that they incorporate the voices and needs of affected communities in the decision-making process, ensuring that these models genuinely reflect the desires and aspirations of the populations they aim to serve. Ultimately, successful reparative justice requires a commitment to long-term change and active engagement with the systemic injustices rooted in our histories.

5. Comparative Analysis of Reparative Practices Worldwide / Case Studies

Reparative practices aimed at addressing past injustices have emerged globally, with various nations and communities grappling with the legacies of colonialism, slavery, genocide, and systemic discrimination. While some initiatives have found success in acknowledging historical grievances and facilitating reparations, others have faltered, offering essential insights into what works and what does not in the pursuit of justice and restoration. This comparative analysis looks at successful case studies, highlights lessons learned from failed initiatives, and considers the implications for reparative justice worldwide.

5.1 Successful Case Studies

One of the most prominent examples of successful reparative practices is found in South Africa after the abolition of apartheid. The Truth and Reconciliation Commission (TRC) was established in 1995 to investigate human rights violations that occurred during apartheid, offering a platform for victims to share their experiences while also granting amnesty to perpetrators who fully disclosed their involvement in abuses (Tutu, 1999). This process aimed not only to uncover the truth but also to foster national healing and reconciliation. The TRC's findings were instrumental in holding accountable those who contributed to systemic injustices while providing a means of acknowledgment and validation for the marginalized populations. It set a precedent for how truth-telling can serve as a foundation for reparative justice.

In Canada, the federal government has pursued reparative measures in acknowledging and addressing the injustices faced by Indigenous peoples, particularly regarding residential schools. The Indian Residential Schools Settlement Agreement, established in 2007, recognized the severe abuses experienced by Indigenous children and their families. This agreement included monetary compensation for survivors, as well as measures to support healing programs within Indigenous communities (Truth and Reconciliation Commission of Canada, 2015). Canada’s commitment to reconciliation, albeit

challenged, provides a significant case study in how formal acknowledgment, compensation, and ongoing support can contribute to healing historically marginalized populations.

Cultural reparations also play a crucial role in successful initiatives. For instance, Germany's approach to reparations for Holocaust survivors has included a range of compensatory measures, including financial reparations, social support, and the establishment of memorials to honor victims. The German government has continually engaged with Jewish organizations regarding Holocaust reparations, demonstrating a commitment to making amends for past atrocities. These same principles of acknowledgment, compensation, and remembrance can be applied to contemporary reparative justice models as they seek to engage communities in meaningful ways.

5.2 Lessons Learned from Failed Initiatives

While there are notable successes, several reparative practices have struggled to achieve their intended goals, providing valuable lessons in the challenges of implementing reparative justice. One glaring example is the case of the United States and its approach to reparations for descendants of enslaved Africans. Although some local and state initiatives, like those in Evanston, Illinois, have sought to implement reparations, a national framework for reparations remains absent. Many proposed initiatives have failed to gain traction due to societal division and political resistance. This lack of cohesive, actionable policy creates a situation where the reparative process lacks the necessary support and resources to be effective. Moreover, the Rwandan government's post-genocide initiatives serve as another cautionary tale. While the Gacaca courts, which aimed to promote community reconciliation, encouraged dialogue and provided a platform for justice, the consolidation of power by the ruling party hindered true accountability and healing. Many critics argue that the Gacaca process led to superficial engagements with the past without meaningful resolution for victims' suffering (Mamdani, 2001). The experience in Rwanda underscores the importance of ensuring that reparative processes remain transparent, inclusive, and capable of earning the trust of affected communities.

Additionally, international reparative efforts, such as those initiated by some countries in addressing colonial injustices, often face significant challenges. For instance, the British government's response to calls for reparations for the atrocities of colonial rule and particularly the Mau Mau uprising in Kenya has been marred by controversy and resistance. While some reparations have been given to individuals, broader systemic change targeted at addressing historical grievances remains elusive, often resulting in skepticism from affected communities regarding the authenticity of governmental intentions (Ogot, 2012).

The failures and successes of reparative practices worldwide reveal that reparations must involve more than financial compensation; they require acknowledgment, cultural sensitivity, and a commitment to addressing the underlying social inequities that perpetuate injustice. Successful reparative measures are characterized by genuine engagement with affected communities, comprehensive frameworks that address their unique needs, and commitment to long-term restorative action.

In the pursuit of reparative justice, drawing upon the successes and failures of various initiatives worldwide serves as a critical foundation for policy development and implementation. Successful cases like South Africa's TRC and Canada's reconciliation efforts with Indigenous peoples offer valuable insights into effective reparative practices yet highlight the need for sustained commitment and collaboration with communities most affected by historical injustices. Conversely, lessons learned from failed initiatives underscore the difficulties and complexities inherent in reparative justice, stressing that it requires authentic engagement, adaptability, and a focus on long-term equity. As societies continue to confront their histories and seek paths toward reconciliation, these insights can inform more effective and responsible approaches to reparative justice.

6. Recapitulation of Key Findings

The importance of historical accountability cannot be overstated. Throughout the paper, we have seen how the transatlantic slave trade dismantled traditional African societies and incurred immense economic and cultural costs. The removal of millions of individuals not only disrupted family structures but also devastated communal ties, leading to a breakdown in the social fabric of many African nations. Furthermore, the exploitation of enslaved individuals built immense wealth for colonial powers, creating economic structures predicated on the systemic oppression of Black bodies. By addressing these historical realities, societies take a crucial step toward acknowledging the injustices that have shaped the present-day experiences of descendants of enslaved people. Historical accountability allows for articulation of these untold narratives, thus empowering affected

communities to regain authority over their histories and identities.

Equally important is the exploration of viable reparative pathways. As discussed, reparative justice extends beyond monetary compensation; it encompasses a holistic approach towards redress that includes education, healthcare, economic opportunities, and cultural restoration. There is growing recognition among scholars, activists, and policymakers that reparative measures can facilitate healing and social cohesion within communities that have been historically marginalized. The paper emphasizes that successful reparative models exist globally, demonstrating that concrete actions can contribute to redressing historical injustices and promoting social equity. Reparative redress can serve as a means for societies to proactively dismantle the systemic inequities rooted in colonization and enslavement, transitioning toward a more just future.

7. Recommendations

To effectively address the deep-rooted exclusion faced by descendants of slavery, policymakers must adopt a multi-faceted approach that incorporates both immediate and long-term strategies. Therefore, this paper proposes the following long-term and short-term strategies:

7.1 Review of Current Legislation

Despite various civil rights advances, current legislation has often fallen short in addressing the systemic issues faced by descendants of enslaved people. For instance, while programs like affirmative action have sought to enhance opportunities for racial minorities, they often encounter resistance, leading to inconsistent implementation and impact.

Furthermore, existing laws such as the Fair Housing Act and the Equal Employment Opportunity Commission (EEOC) regulations have not fully eradicated discriminatory practices. The persistent racial wealth gap and social disparities highlight the inadequacy of these measures in bringing about meaningful change. Legislatively, there is an increasing acknowledgment of systemic racism, as evidenced by recent measures introduced at both federal and state levels.

Initiatives that recognize and seek to address historical injustices, such as reparations proposals, have gained traction within certain political circles. Yet, these efforts often remain fragmented, lacking the necessary coherence and scale to effect systemic change.

7.2 Recommendations for Policy Development

To effectively address systemic inequalities and the legacy of the transatlantic slave trade, policy development should encompass a range of comprehensive reparations and reform initiatives.

Firstly, reparations programs should be established to offer financial compensation, educational funding, and investments in wealth-building initiatives for communities disproportionately impacted by systemic racism. This requires legislation that ensures reparations are equitable, transparent, and sustainable.

Additionally, education funding models must be redesigned to allocate resources based on need and equity, rather than relying solely on local property taxes. This will improve educational quality for schools serving Black communities and increase access to higher education opportunities.

Criminal justice reform is also crucial, and must include measures such as the decriminalization of drug offenses, elimination of mandatory minimum sentences for non-violent crimes, and investment in rehabilitation-focused, community-based programs. Mandatory bias training for law enforcement and judicial officers can further promote accountability and fairness within the justice system.

Governments should also prioritize economic development initiatives aimed at creating jobs in marginalized communities, through subsidies for businesses, grants for entrepreneurship, and community wealth-building programs. These initiatives should involve community stakeholders to empower descendants of enslaved people and grant them a direct role in development issues.
Finally, combating healthcare inequities requires policies that enhance access to quality healthcare services for Black communities, including expanding Medicaid, ensuring culturally competent care, and addressing social determinants of health like housing stability and food insecurity.

7.3 Holistic Framework for Future Reparative Initiatives, Intersectionality Inclusive

The enduring legacy of the transatlantic slave trade demands a comprehensive framework for reparative justice, one that transcends mere financial compensation to address the intricate social and cultural impacts faced by descendants of enslaved individuals. A holistic approach must integrate intersectionality, examining how intersecting

identities—particularly racial and gender dimensions—influence oppression and inequality experiences. This framework requires inclusive strategies that recognize these complexities while fostering collaboration among governments, civil society, and affected communities. Reparative justice should involve a nuanced understanding of the diverse experiences within impacted populations, urging a departure from one-size-fits-all solutions toward targeted approaches that honor specific subgroup concerns. For example, educational initiatives could illuminate slavery's historical narratives and its enduring impacts, thereby fostering empathy and understanding. These programs would benefit from incorporating marginalized perspectives, amplifying voices that have historically been silenced.

Furthermore, community-centered reparative efforts must be prioritized, advocating for investments in social initiatives that address healthcare, education, and economic empowerment, ultimately aligning reparations with community-defined needs and aspirations. Diverse stakeholders should be actively engaged in formulating policies, ensuring their narratives are central to these developments. A holistic approach also necessitates long-term cultural revitalization commitments, supporting projects that preserve African heritage, promote the arts, and provide platforms for authentic storytelling. As Tatum (2017) suggests, such initiatives can restore historically severed values, practices, and connections, contributing significantly to community empowerment and healing. This expansive vision of reparative justice emphasizes an inclusive, empathetic approach that honors the complex legacy of slavery while steering toward meaningful restoration and equality.

7.4 Development of Policy for Inclusive Reparations

Developing inclusive reparations policies necessitates robust community engagement strategies and collaborative efforts between governments and civil society. Effective reparative initiatives hinge on actively involving those affected by slavery's legacies in shaping discussions and policies. This involves using participatory methods like town hall meetings and focus groups to amplify marginalized voices and ensure their concerns are central to decision-making. Partnerships between local organizations, grassroots movements, and national entities are vital for mobilizing community resources to implement reparations that align with community priorities. For instance, the UK's "People's Assembly on Reparations" serves as a successful example of how community involvement can influence policy recommendations and collective action (Kaba, 2020). Funding should prioritize community-led initiatives to ensure that resulting policies are both relevant and transformative.

In addition, reparative justice requires effective collaboration between governments, civil society, and local communities. Co-developed policies that incorporate affected communities' perspectives are essential for ensuring governmental accountability. Partnerships with civil society organizations can extend reparative efforts beyond financial compensation to include actions such as land advocacy and healthcare equity initiatives. International cooperation enhances these efforts by aligning them with global human rights standards. Employing an inclusive, intersectional approach facilitates healing, empowerment, and reconciliation, thus reinforcing commitments to equity and social cohesion.

8. Conclusion

The transatlantic slave trade represents one of the most egregious violations of human rights in history, leading to profound and lasting impacts on individuals, societies, and cultures. The examination of historical accountability and reparative justice in relation to the legacies of this trade highlights the moral imperative for acknowledgment and corrective measures regarding the injustices faced by millions of enslaved Africans and their descendants. As we conclude this discussion, it is critical to recapitulate key findings that underscore the importance of historical accountability and the viability of reparative pathways, while also emphasizing the necessary actions that policymakers and society must undertake to foster a reconciled and equitable future.

8.1 Call to Action for Policymakers and Society

Given the insights and findings presented, it is essential for policymakers and society as a whole to embark on a deliberate and sustained effort to confront the legacies of slavery. Policymakers must recognize that addressing historical injustices is not just a moral imperative but also a necessary step toward fostering social cohesion. This includes establishing comprehensive reparative frameworks that consider the unique historical contexts and contemporary challenges faced by affected communities. Governments should promote collaborative dialogue with civil society, community organizations, and descendants of enslaved people to develop restorative initiatives that reflect their needs and priorities. Moreover, education systems should integrate

curricula that accurately portray the history of slavery and its legacies, fostering a sense of shared responsibility within all segments of society. Emphasizing historical context not only generates awareness but also cultivates empathy and a commitment to promoting social justice. Programs designed to engage with the descendants of enslaved Africans can facilitate healing and allow for the reclamation of cultural identities that were stifled by systemic oppression. Furthermore, inclusive policies, particularly in the realms of housing, education, and employment, must be enacted to dismantle ongoing socio-economic disparities. Attention to structural inequalities will help ensure that the descendants of enslaved people can access opportunities that were historically denied to them, allowing them to thrive in a more equitable society.

8.2 My Final Thoughts and Vision for Reconciled and Just Global Society

Looking forward, the vision for a reconciled and just global society rests on a commitment to acknowledging the past while actively working to rectify the resultant inequities. A fully reconciled society requires an enduring commitment to historical accountability and the implementation of reparative measures that resonate across cultural boundaries. Embracing restorative practices enables societies to foster conditions where collective healing can occur, allowing for integration of diverse narratives and experiences into the broader historical discourse.

In this vision, it is vital for international collaboration and solidarity to shape the pursuit of dignity and outreach across borders. Global dialogue about the impacts of the transatlantic slave trade must embrace the voices of the Africans, empowering them to lead efforts toward social healing and historical recognition. This collaborative framework can inform discussions on global reparative justice, promoting cooperation among nations to address systemic inequalities that still prevail. Additionally, arts and cultural initiatives can play a transformative role in healing and reconciliation. Celebrating African heritage and history, alongside creating spaces for expression, storytelling, and education, empowers people to resist the erasure of their past and cultivate pride in their identities. By embedding this cultural reclamation into societal structures, we can ensure that the histories and experiences of those affected by slavery are not only remembered but also serve as powerful tools for change.

In conclusion, the legacies of the transatlantic slave trade demand a proactive response, one that recognizes the past and takes meaningful steps toward reparative justice. The importance of historical accountability and viable pathways for reparations is evident in the comprehensive examinations we have undertaken in this paper. By recognizing our collective responsibility, policymakers and society can forge a reconciled and just global society where equity, dignity, and healing are core values. The journey toward justice demands perseverance and commitment, yet it is through these efforts that a more just world can emerge, honoring the resilience of those who endured the cruelties of slavery and ensuring that future generations inherit a society grounded in respect and equality.

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Assessment of the Challenges faced with Timber Marketing Business in Osun State, Nigeria

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Abstract. Timber marketing plays a significant role in the economic development of Osun State; however, the sector faces numerous challenges that limit its efficiency and growth. This study assessed the major challenges confronting timber marketers in Osogbo, Osun State, Nigeria. Data were collected from 62 timber marketers using a well-structured questionnaire. Result was analysed using descriptive statistics and Likert scale ranking. Findings revealed that the timber market is dominated by males (71%), with respondents largely within the active age bracket of 41–60 years. The majority earned above ₦500,000 monthly, showing that timber marketing is a viable livelihood source in the study area. However, various challenges impede the smooth operation of the business. The most critical constraints identified were population increase and urbanisation (100%), outdated forest inventory (95.2%), bad roads (95.2%), high transportation costs (93.5%), and lack of innovation and access to government loans (80.7% each). Other prominent issues included shortage of skilled labour, environmental regulations, inadequate market education, weather-related disruptions, machinery restrictions, unavailability of specialised equipment, and competition from alternative materials. These challenges collectively contribute to reduced efficiency, increased operational costs, and unstable timber supply. The study concludes that improving road infrastructure, updating forest inventories, enhancing access to finance, promoting innovation, and providing market education are essential for strengthening the timber marketing sector in Osun State. It recommends strategic government support, improved regulatory frameworks, and capacity building to ensure a more sustainable and competitive timber market.

Keywords: Timber marketing, Challenges, Osogbo, Osun State, Market constraints.

1. Introduction

Timber remains one of the most important renewable natural resources supporting economic development, employment, and livelihood sustenance across many developing countries, including Nigeria. The forestry sector contributes significantly to national and local economies through the production, processing, and marketing of timber and other forest products. Timber marketing, in particular, plays a critical role in linking producers, processors, builders, furniture makers, contractors, and final consumers. In urban and rapidly growing cities such as Osogbo, the capital of Osun State, timber markets serve as major supply points for construction and wood-based industries.

Despite its importance, timber marketing in Nigeria is confronted with numerous challenges that threaten efficiency, profitability, and sustainability. These challenges often include poor market and transportation infrastructure, erratic timber supply and fluctuating prices, limited access to capital, inadequate government regulation or support, and competition from alternative materials (Sambe *et al.* 2022).

For example, a study of timber marketing in Lokoja (Kogi State) found that marketers reported scarcity of demanded wood species, low patronage, and high taxes as major constraints. Another study reviewing timber production and market dynamics observed that poor road networks, lack of modern processing equipment, and lack of reliable supply chains hinder the viability of timber businesses.

Moreover, unsustainable exploitation and over-harvesting of forest resources often combined with weak enforcement of forestry laws have led to a reduction in standing timber stock, contributing to scarcity and supply instability (Esiere *et al.* 2020;

Sambe *et al.* 2016). These environmental and resource-based pressures reduce reliability of supply, which in turn affects market performance and business sustainability.

Osogbo, being a commercial centre with increasing demand for timber for housing and industrial activities, hosts several timber markets that depend heavily on surrounding forest reserves and timber routes within and outside Osun State. However, timber marketers in Osogbo likely face a combination of the challenges documented elsewhere; from supply scarcity, high cost of transportation or processing, to regulatory and infrastructural constraints. Understanding these local dynamics is essential for implementing appropriate interventions, improving market performance, and enhancing the livelihoods of individuals involved in the trade.

Although several studies have examined timber production, supply, and marketing in Southwestern and other parts of Nigeria, there is limited empirical work focused specifically on Osogbo. A localised assessment is important because challenges faced in timber marketing vary across regions due to differences in forest resource availability, regulatory frameworks, market organisation, and economic activities. Therefore, this study aims to assess the major challenges confronting timber-marketing businesses in Osogbo, Osun State, Nigeria. The findings will provide policymakers, forest managers, timber associations, and entrepreneurs with evidence-based information needed to strengthen the timber marketing sector and improve sustainable forest resource utilisation.

1. Methodology

2.1 Study area

Osogbo is the capital city of Osun State, located in the southwestern part of Nigeria. The city lies approximately between latitude 7°46' North and longitude 4°34' East, and serves as one of the major administrative, commercial, and cultural centres in the state. Osogbo is bounded by Olorunda Local Government to the north, Ede North and Ede South to the south, Egbedore to the west, and Boripe Local Government to the east. According to available population estimates, Osogbo has experienced rapid urban growth over the past decades, driven by migration, commercial expansion, and its role as the state capital.

The city falls within the tropical rainforest ecological zone, characterised by two major seasons: a rainy season from March to October and a dry season from November to February. Annual rainfall ranges between 1,000 mm and 1,250 mm, while temperatures typically vary from 22°C to 32°C. This ecological setting supports forest-related activities and contributes to the supply of timber products from nearby forest reserves and rural communities.

Osogbo is a major hub for timber marketing due to its strategic location, road connections to other towns such as Ilesa, Ikirun, Ede, and Ibadan, and the presence of active timber markets and wood-processing clusters. Timber marketers in the city engage in activities such as sourcing logs, processing, sales, distribution, and supply to builders, carpenters, and industries within and outside the state.

1.2 Sampling Procedure and Sampling Technique

A multi-stage sampling procedure was employed for this study. The first stage involved the purposive selection of Osogbo, the state capital of Osun State, due to its commercial significance and its role as a major hub for timber marketing activities in the region. Osogbo was chosen intentionally because it hosts a large concentration of registered timber marketers, making it suitable for assessing the challenges confronting the timber marketing business.

In the second stage, the sampling frame consisted of 330 registered timber marketers obtained from the relevant timber association within Osogbo. A 20% sampling intensity was applied to the total population of 330, resulting in a sample size of 66 respondents selected for the study.

Structured questionnaires were administered to the selected 66 timber marketers. After the data collection process, 62 properly completed questionnaires were retrieved analysed, representing a 94% response rate, which is considered sufficient for reliable statistical interpretation.

2.3 Sources of Data and Instruments for Data Collection

Primary and Secondary data were used. The primary data was collected with the aid of a structured questionnaire. Secondary data was collected from relevant journals, literature, websites and reports, to complement the primary data.

2.4 Data Analysis

A total number of Sixty-six (66) questionnaires were administered while 62 was retrieved and analysed. To assess the challenges faced by the Timber marketers in

the study area, Descriptive statistics (frequencies, percentages, and mean) were used and the result was presented using tables. Likert scales was used to rank the results and presented in percentage.

2. Results and Discussion

Table 1: Socio economic Characteristics of the Timber Marketers in Osun State

Variables	Categories	Frequency	Percent %
Gender	Male	44	71.0
	Female	18	29.0
	Total	62	100.0
Age	21-30	3	4.8
	31-40	9	14.5
	41-50	19	30.6
	51.60	21	33.9
	61-70	6	9.7
	Above 70	4	6.5
	Total	62	100.0
Estimate Income level	N100,000-200,000	18	29.0
	201,000-300,000	11	17.7
	301,000-400,000	4	6.5
	401,000-500,000	4	6.5
	Above 500,000	25	40.3
	Total	62	100
Have other Sources of Income?			
	Yes	31	50.0
	No	29	46.8
	No response	2	3.2
	Total	62	100
Other sources of livelihood			
	Artisanship	8	12.9
	Building Contracting	4	6.5
	Furniture making	2	3.2
	Trading other products	9	14.5
	Others	3	4.8
	No response	36	58.1
	Total	60	100
Languages Spoken by the Respondents			
	Yoruba Yes	62	100
	No	0	0
	Total	62	100
	Hausa Yes	2	3.2
	No	60	96.8
	Total	62	100
	English Yes	32	53.3
	No	28	46.7
	Total	60	100
	Pidgin Yes	5	8.1
	No	57	91.9
	Total	62	100

Academic Qualifications of Respondents	Quar'anic education	3	34.8
	Pry Sch Cert	12	19.4
	Sec Sch Cert	33	53.2
	OND/HND/NCE	9	14.5
	Univ. Degree	5	8.1
	Total	62	100
Types of Information Technology/System	Mobile phone Yes	62	100
	No	0	0
	Total	62	100
	Internets Yes	4	11.5
	No	58	88.5
	Total	62	100
	Library Yes	-	-
	No	62	100.0
	Total	62	100
Proficiency of the Respondents at using information technology	Novice	-	-
	Intermediate	52	83.9
	Highly proficient	8	12.9
	No response	2	3.2
	Total	62	100

Source: *Field Survey, 2025*

Table 1 shows the socio-economic characteristics of the Timber marketers in Osun State.

The table revealed that 71.0% of the respondents are male while 29.0% were female. This shows that there are more of male gender than female gender in the plank market in Oyo State. This is in agreement with the findings of Olawumi and Okunlola, 2015 who stated that majority of the respondents in Ondo sawmill were males. The involvement of more male gender in timber business in Osun State might imply that men can do more tedious activities better than female gender as they are not as muscular as men. This is in agreement with the findings of Birner and Allison (2006) who reported that males resilient to stress management makes it possible for them to engage in more tedious work than their female counterparts. According to Ndaghu *et al*. (2012), labor-demanding livelihoods are typically male dominated.

The result of the ages of the respondents showed that 33.9% of the respondents are between the age of 51-60, 30.6% are 41-50 years, 14.5% are between 31-40years. The result shows that the respondents are within the active age-group and are able to source for income for their sustenance. This is close to the submission of Okumadewa *et al.* 2000 who said that those in the age range of 40-50 years of age are productive and have the power to produce work. Also, Salawu (2001) stated that the highly productive age in agricultural and all forestry activities fall within the age of 31-50 years.

For the estimate income level of the respondents, it is revealed that majority (40.4%) of the respondents had an estimate income level of above N500,000 monthly, followed by 29.9% having an estimate of N100,000 -200,000 monthly and the least was 17.7% with an estimate monthly income of between N201,000 –N300,000. From this result, it is revealed that Timber marketing business is a good source of income for livelihood in the study area which enables the marketer to carry out their responsibility in their various families. This agrees with Adedokun *et al.,* (2017) that sawn wood production in all our major sawmill is a very profitable enterprise.

Half (50%) of the respondents had other sources of livelihood, while 46.8% did not have other source of income, while 3.2% held on to the information about whether or not they have other sources of livelihood. The few respondents with other sources of income revealed that 14.5% of them are into trading of other products other than Planks and 12.9% of them were artisans while 6.5% and 3.2% are into building contracting and furniture making respectively.

The languages spoken by the respondents are majorly Yoruba (100%) and English language (53.3%) with very few 3.3% and 5% speaking Igbo and Hausa respectively. The reason for the many respondents speaking Yoruba could be affiliated or traced to the fact that the study area is a Yoruba speaking community, and the high percentages being able

to speak English is attributed to their being educated as it was revealed that 53.2% had an SSCE certificate, 19.4% had primary school certificate, 14.5% had an OND/HND/NCE certificate with an appreciable percentage of 8.1 having a university degree certificate in timber marketing business. This showed that these respondents had the basic knowledge of education sufficient for their business to influence their decision making. This goes in line with the findings of Swanson (2008) that education gives an enablement to make informal decisions regarding production and marketing which also allows to realize opportunities. This also corroborated Aiyeloja *et al.,* (2013) who said that being educated will enable sellers to be more effective communicators and provide access to information easier, particularly regarding price changes and any new innovations in the marketing of sawn wood.

Findings made on the information technology used by the timber marketers revealed that all (100%) of them make use of phones, few (6.5%) uses the internet and are intermediately proficient with its usage. This agreed to the findings of Ajewole and Fasoro (2013), that the use of phone made communication easier and had helped sawnwood marketers in their business transactions as it makes it easier for them to locate and communicate with customers within a short time-frame.

Table 2: Likert Analysis on Challenges faced by Timber Marketers in Osun State

	CHALLENGES	AGREE	DISAGREE	NOT SURE
1	Outdated Forest Inventory	95.2	0	4.8
2	Population increase and Urbanisation	100	0	0
3	Unavailability of specialised equipment	66.2	8.1	25.7
4	Expansion of cities' markets	69.4	4.8	25.8
5	Bad roads	95.2	0	4.8
6	High Cost of Transportation	93.5	0	6.5
7	Lack of Innovation for adaptability	80.7	0	19.3
8	Environmental Regulation	67.8	0	32.2
9	Limitations to Timber Harvesting Areas	50	6.5	43.5
10	Restrictions on Machineries used in timber industry	62.9	14.5	22.6
11	Lack of Skilled workers	74.2	19.4	6.4
12	Inefficiency due to lack of young people's interest	37.1	53.3	9.6
13	Lack of Information	45.2	12.9	41.9
14	Shortage of labour in timber industry	69.3	13	17.7
15	Inaccessibility to Governments' loans	80.7	4.8	14.5
16	Competition from alternative materials	62.9	21	16.1
17	Weather conditions	67.7	14.6	17.7
18	Inadequate market education	64.5	25.8	9.7
19	Government Policies	48.3	45.2	6.5

Source: *Field Survey, 2025*

Table 3: Percentage Ranking of Challenges faced by Timber marketers in Oyo State

CHALLENGES	AGREE	RANKING
Population increase and Urbanisation	100	1st
Outdated Forest Inventory	95.2	2nd
Bad roads	95.2	2nd
High Cost of Transportation	93.5	4th
Lack of Innovation for adaptability	80.7	5th
Inaccessibility to Governments' loans	80.7	5th

Lack of Skilled workers	74.2	7th
Expansion of cities' markets	69.4	8th
Shortage of labour in timber industry	69.3	9th
Environmental Regulation	67.8	10th
Weather conditions	67.7	11th
Unavailability of specialized equipment	66.2	12th
Inadequate market education	64.5	13th
Restrictions on Machineries used in timber industry	62.9	14th
Competition from alternative materials	62.9	14th
Limitations to Timber Harvesting Areas	50	16th
Government Policies	48.3	17th
Lack of Information	45.2	18th
Inefficiency due to lack of young people's interest	37.1	19th

Source: *Field Survey, 2025*

Tables 2 and 3 shows the result of analysis on the challenges faced by Timber marketers in the study area. Increased population and urbanisation have a profound impact on the timber market in several ways. As the population increases, there will be increased in demand for Timber Products for increased need for housing, infrastructure, and commercial buildings, all of which require timber. The construction sector is one of the largest consumers of timber products, and urbanisation increases this demand as cities expand. This is in line with the work of Kastner *et al.* (2020) and Schneider *et al.* (2018) that says consumption of goods such as furniture, flooring, and decorative wood products increases, driving demand for timber. Also, as urban areas expand, forests are often cleared for development, and this leads to deforestation (Emmanuel, 2021), causing reduction in the supply of timber in the long term. Increased demand for land for urban development also raises competition for forested areas (Bicknell *et al.* 2021).

Outdated inventories may not reflect the actual condition of the forest, leading to unsustainable harvesting practices. Inaccurate data can result in overharvesting in certain areas, potentially leading to deforestation and degradation of forest ecosystems. As a result, timber market participants may face long-term supply challenges, as unsustainable practices deplete resources. A study by Adebiyi *et al.* (2020) highlighted how poor forest management and outdated inventories in Nigeria have contributed to the unsustainable exploitation of forest resources, which ultimately affects timber market dynamics. Timber prices are influenced by the availability of timber, which is determined by the forest inventory. When forest inventories are outdated, prices can become unpredictable. Traders and manufacturers may face higher costs due to the perceived scarcity of timber, while consumers may experience inflated prices. This discussion supports Omojola *et al.* (2022) and, Bakker and Stocker (2023) who noted that outdated forest inventories in Nigeria have led to inflated timber prices, especially in regions where the data does not account for the true extent of forest resources.

Osun timber market is said to be faced with the challenge of bad roads. One of the primary economic effects of bad roads on the timber market is the increase in transportation costs, which Osun timber markers are really complaining about. When roads are in poor condition, timber trucks are forced to take longer, less efficient routes, leading to higher fuel consumption and additional maintenance costs. Furthermore, bad roads increase wear and tear on vehicles which may also result in more frequent breakdowns, compounding the challenges and leading to further market disruptions. These factors can significantly increase the final cost of timber, making it less competitive in global markets. Poor roads cause unpredictable supply, which in turn leads to production delays, missed deadlines, and lost opportunities in timber markets. This supports the findings of Dhakal *et al.* (2020) and Amorim *et al.* (2021) that noted that noted that in Brazil, poor road conditions during the rainy season result in seasonal delays, which create a fluctuating supply of timber, affecting pricing and availability in both domestic and international markets.

In Nigeria, the timber industry often faces high transportation costs due to poor road conditions, inefficient transport systems, and high fuel prices. Alabi *et al.* (2018) in their study highlighted the effect of high transportation cost on Nigeria's timber sector.

The study found that delays caused by poor infrastructure were common, especially in the delivery of logs from rural forests to urban areas. The resulting inefficiencies increased transportation costs and often led to unreliable timber supply, contributing to price fluctuations in the market. The volatility of fuel prices is another key factor that contributes to high transportation costs. As fuel prices rise, the cost of transporting timber increases, and this has a direct impact on the cost of timber products. In the recent days in Nigeria (Osun state inclusive), fuel price fluctuations have been a constant issue, making transportation planning difficult for timber businesses.

The lack of innovation in adapting to environmental changes and market demands impacts the Nigerian timber sector, leading to inefficiencies and unsustainable practices. A lack of innovation is slowing down market responsiveness to global demands and technological advancements. Lack of innovation could be as a result of shortage of young, learned and experienced personnel in forestry sector especially in Timber marketing.

Inaccessibility to government loans significantly hinders the growth and sustainability of the timber market in Osun State. The timber marketers complained of lack of support from the Government comparing how Agricultural sectors are receiving government support while Forestry is left behind, especially the timber marketers. Access to loans is crucial for maintaining a stable supply chain in the timber marketing. Timber companies often rely on seasonal operations, which require upfront financing to secure raw materials and labour. When loans are inaccessible, timber companies may face cash flow issues that prevent them from maintaining operations during off-seasons, disrupting the entire supply chain. This, in turn, causes market volatility, price fluctuations, and supply shortages, which negatively impacts both suppliers and consumers. This attested to a study by Jiang *et al.* (2019) who highlighted how small timber producers in Canada were unable to keep pace with market demand due to lack of access to government financing, leading to supply chain disruptions during peak seasons.

Another significant challenge in the timber market is the shortage of skilled labour/worker. The timber industry faces an aging workforce, with many experienced workers nearing retirement and fewer younger workers entering the field. This demographic shift exacerbates the shortage of skilled labour in the industry, particularly in the areas of logging, sawmilling, and forest management. This corroborated Johann and Franz, (2020) who explored the effects of an aging workforce in Europe's forestry sector, noting that younger generations are not replacing retiring professionals, leading to a skills gap that negatively impacts productivity and operational efficiency. The timber industry must comply with environmental regulations, which are becoming more stringent as concerns about climate change and sustainability increase. Skilled labour is crucial for implementing sustainable practices, managing forest resources responsibly, and complying with regulations, because without enough trained professionals, companies may struggle to meet these environmental demands (Gunningham and Sinclair, 2021).

Environmental regulations in the timber market are crucial for promoting sustainability, preventing deforestation, and mitigating climate change. However, these regulations can also create significant challenges for timber producers, particularly in developing countries where governance structures may be weak. Compliance with environmental regulations such as certification programs (e.g. FSC) can impose substantial costs on timber producers. Small and medium-sized enterprises (SMEs) are especially vulnerable to these added costs, which can make it harder for them to compete in the global market. According to ITC, (2020), the costs of certification, legal documentation, and compliance with sustainability standards can be prohibitive for SMEs in the timber industry. These regulations increase operational costs, and without proper support, SMEs are at risk of being excluded from international markets.

Weather conditions are an ongoing challenge for the timber market, as they affect timber harvesting, transportation, production costs, and the overall supply chain. From the impact of floods, droughts, and wildfires to the challenges posed by climate change, these weather events introduce uncertainty into the market. Weather conditions also influence timber export markets, particularly when extreme weather events disrupt ports or transportation routes. In countries that rely heavily on timber exports, like Canada and Brazil, natural disasters such as hurricanes or flooding can damage infrastructure, delay shipments, and increase shipping costs, ultimately making timber less competitive on the global market (Chan *et al.* 2017). The unpredictability of weather conditions leads to increased operational costs for timber businesses companies may need to hire extra labour during specific weather windows when conditions are more favorable for harvesting, further increasing costs. This is in line with a study by Thomas *et al.* (2022), who found that companies spent more on machinery that could operate in harsher weather conditions, such as snowstorms, but this increased

overall production costs and reduced profitability, especially during extreme winters.

The unavailability of specialised equipment is a great challenge to the timber market in Osun State. Lack of available specialised equipment such as mechanized feller-bunchers, skidders, and harvesters affects both the efficiency and sustainability of timber production, processing, and transportation. When sophisticated equipment is not made available for logging, impact on timber harvesting and extraction efficiency reduces. According to Tolosana *et al.* (2021), mechanisation in timber harvesting has been shown to improve productivity and reduce labour costs, however, the high capital cost and limited availability of modern equipment in developing regions are substantial barriers to adoption, ultimately affecting the competitiveness of the timber sector. The high cost of acquiring and maintaining specialized equipment further complicates market access, especially in low-income countries or regions with small-scale timber operations. Smaller timber producers such as in Osun State may struggle to invest in such machinery, thus limiting their ability to compete in the global market. This corroborated Singh and Lata (2022) who discussed the capital-intensive nature of modern timber production equipment and its implications for small and medium-sized enterprises (SMEs).

Inadequate market education can lead to the lack of awareness about sustainable timber harvesting practices. Without proper education, producers may focus solely on short-term gains rather than long-term sustainability, damaging forest ecosystems. Unsustainable practices can reduce timber supplies in the long term, harming both the environment and the timber market's stability. Adebayo, (2016) outlined that impact of poor market education on the adoption of sustainable forestry management practices ultimately leads to long-term market instability. In Nigeria (Osun state inclusive), the education system for timber producers and forestry workers is insufficient to promote sustainable timber practices. Lack of understanding of market trends, sustainable harvesting methods, and certification schemes results in unsustainable practices that harm the timber market. The impact of restrictions on machinery used in the timber industry could have far-reaching effects on the timber market, influencing everything from production capacity and efficiency to pricing, labour dynamics, and even environmental sustainability. The introduction of restrictions on machinery, such as more stringent emission controls, limitations on machine types, or reduced machinery availability, can reduce the efficiency of timber production. This can lead to a decline in overall timber supply, as the same volume of timber might require more time or labour to process, reducing the capacity of mills and increasing the operational costs. Pereira *et al.* (2020) explore how technological constraints in forest harvesting equipment, such as restrictions on the use of large harvesting machines in certain regions, can negatively impact operational efficiency and ultimately lead to reduced production volumes. This results in a supply bottleneck, which can push timber prices higher, affecting the overall market equilibrium. A study by Soares *et al.* (2019) outlines how increasing operational costs in forestry operations due to environmental restrictions on machinery can lead to cost-push inflation within the timber market. They emphasize that smaller producers may find it harder to absorb these costs, potentially leading to a decrease in market competition and consolidation within the timber industry. Machinery restrictions can increase production costs in the timber industry, especially in Nigeria, where many forest-based operations rely on older and less efficient machinery. Bamidele *et al.* (2019) discuss the economic implications of machinery limitations in Nigeria's timber industry. They argue that restrictions can drive up costs due to the increased labour required and the reduced availability of mechanised equipment, leading to higher prices for timber products. This increase in costs can be passed on to consumers, affecting both the domestic market and export competitiveness.
In Nigeria, restrictions on machinery in the timber industry can significantly affect timber production, labour dynamics, and market prices. While these restrictions can lead to inefficiencies, higher costs, and labour challenges, they may also encourage more sustainable forest management practices. The timber market will likely experience short-term disruptions, but these could be mitigated through technological advancements, better management practices, and increased reliance on sustainable forestry equipment

Competition from alternative materials such as steel, concrete, plastics, and engineered wood products can pose significant challenges to the timber market. These materials often offer advantages such as durability, cost-effectiveness, and sustainability, which can reduce demand for timber products, especially in construction and manufacturing. One of the key challenges posed by competition from alternative materials is the potential erosion of market share. As industries adopt materials like steel, concrete, and engineered wood (e.g., cross-laminated timber), the demand for traditional timber products can diminish. According to Karlan *et al.* (2018), substitution effects are particularly evident in the construction industry, where materials like steel and concrete have come to dominate due to their superior

structural properties and perceived long-term cost benefits. This shift can reduce the volume of timber needed for construction projects and lead to a decline in timber prices due to reduced demand.

3. Conclusion and Recommendation

4.1 Conclusion

The study assessed the challenges affecting timber marketing businesses in Osogbo, Osun State, and revealed that although timber marketing remains a viable and lucrative economic activity, the sector faces numerous operational, infrastructural, and administrative constraints. The market is dominated by experienced and active-age participants; however, their operations are hindered by population growth pressures, urbanisation, bad road networks, high transportation costs, outdated forest inventories, and limited access to government financial support. Other constraints such as inadequate market education, shortage of skilled labour, environmental regulations, and competition from alternative building materials further reduce market efficiency and profitability. These challenges collectively weaken the supply chain and hinder sustainable timber market development. The findings underscored the need for coordinated intervention by government, associations, and private stakeholders to improve infrastructure, enhance market capacity, and strengthen policy frameworks that support sustainable timber marketing.

4.1 Recommendations

To address the numerous challenges facing timber marketing in Osogbo, Osun State, it is recommended that government prioritise the rehabilitation of access roads to forest reserves, while forestry authorities regularly update forest inventories to support sustainable harvesting and accurate market planning. Timber marketers should be granted accessible and affordable credit facilities to invest in modern equipment and innovation that will improve productivity. Continuous training and market education should be provided to enhance marketers' skills in pricing, business management, and sustainable practices. Regulatory frameworks should be strengthened and clearly communicated to reduce unnecessary restrictions, while youth participation should be encouraged through vocational support to address the labour shortage. Improving market infrastructure; including storage facilities and modern measurement tools, alongside promoting reforestation initiatives and stronger market associations, will further enhance efficiency, ensure steady timber supply, and support long-term sector sustainability.

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Contextualizing Psychometrics: Implications for Industrial and Organizational Psychology in Emerging Economies

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Abstract. Psychometric assessment has become a cornerstone of Industrial and Organizational (I-O) Psychology, offering scientific tools for measuring individual differences and predicting work-related outcomes. However, the applicability of psychometric instruments across different socio-economic and cultural settings particularly in emerging economies remains a significant challenge. This study examines the implications of contextualizing psychometric assessment within emerging economies, where cultural diversity, technological disparities, and evolving labor markets shape the effectiveness and fairness of psychological testing. Drawing on secondary data sourced from scholarly articles, cross-cultural assessment guidelines, global HR reports, and empirical findings from Africa, Asia, and Latin America, the study synthesizes existing evidence to explore how socio-cultural, economic, and institutional factors influence the validity, reliability, and utility of psychometric tools. Findings indicate that while psychometrics enhances evidence-based HR decision-making, its effective application in emerging economies is constrained by cultural bias, lack of local norms, limited technical capacity, and weak regulatory frameworks. The analysis further highlights the need for culturally grounded assessment models, localized test development, improved practitioner competence, and integration of indigenous psychological constructs. The study concludes that contextualizing psychometrics is essential for strengthening the scientific relevance and ethical practice of I-O Psychology in emerging economies. It recommends collaborative research, policy reforms, and capacity-building initiatives to ensure that psychometric assessments are culturally valid, equitable, and strategically aligned with workforce realities in diverse socio-economic contexts.

Keywords: Psychometrics, industrial and organizational psychology, emerging economies

1. Introduction

Psychometrics has historically played a central role in shaping the development and practice of Industrial and Organizational (I-O) Psychology, particularly in core functional areas such as personnel selection, performance appraisal, organizational diagnostics, training evaluation, and leadership assessment. At its core, psychometrics is defined as the scientific discipline concerned with the theory and technique of psychological measurement, including the development, validation, and interpretation of instruments that assess latent psychological constructs such as cognitive ability, personality traits, attitudes, and work behaviors (Anastasi & Urbina, 1997; Kaplan & Saccuzzo, 2018). These instruments include tests, questionnaires, rating scales, situational judgment tests, and performance simulations that convert intangible psychological attributes into quantifiable indicators capable of supporting structured decision-making processes.

In the context of I-O Psychology, psychometrics provides the foundational framework that enables practitioners to evaluate individual differences in ways that are objective, reliable, and valid. By establishing principles of standardization, reliability, validity, norming, anditem analysis, psychometrics ensures that assessments used for workplace decisions meaningfully reflect the constructs they are intended

to measure and can predict relevant job outcomes (Cascio & Aguinis, 2019). Over the past century, psychometric assessment has evolved significantlyfrom early paper-and-pencil intelligence tests to sophisticated computer-adaptive testing systems, gamified assessments, digital work simulations, and AI-enhanced scoring algorithms. These technological advancements have enabled organizations worldwide to adopt more efficient, scalable, and data-driven assessment methods, improving both predictive accuracy and user experience (Chamorro-Premuzic et al., 2020; Salgado & Anderson, 2018).

Despite the global expansion of psychometric applications, the extent to which these tools effectively translate across diverse socio-economic environments remains highly uneven. Emerging economies, typically characterized by rapidly developing labor markets, heterogeneous cultural systems, varied educational infrastructures, and evolving human resource ecosystems, face distinct challenges in adopting, localizing, and sustaining psychometric practices (Hambleton & Zenisky, 2011). Many psychometric instruments used in Africa, Asia, Latin America, and parts of the Middle East are developed in Western contexts, where psychological constructs, language norms, and test-taking cultures differ substantially from those in non-Western settings. Consequently, applying these tools without contextual adaptation raises concerns related to cultural bias, construct equivalence, test fairness, measurement invariance, and the broader ecological validity of test scores (Van de Vijver & Leung, 2011).

When psychometric assessments are used without attention to contextual realitiessuch as literacy levels, technological accessibility, cultural norms, and organizational readinessthere is a significant risk of generating inaccurate interpretations, unfair hiring decisions, and reduced predictive utility in workplace settings. These challenges can undermine organizational trust in assessments and limit the extent to which I-O Psychology contributes to evidence-based human resource practices in emerging economies (Oppong, 2019).

At the same time, the growing demand for evidence-based HRM, combined with increased globalization of labor markets and rising competition for talent, underscores the strategic importance of developing contextually relevant psychometric systems. As organizations in emerging economies continue to embrace modern HR technologies and international standards of workforce analytics, the need for culturally sensitive, locally normed, and psychometrically rigorous assessment tools has become increasingly pronounced (Aguinis et al., 2020). The contextualization of psychometricsdefined as the process of adapting assessment tools, constructs, and validation procedures to align with local socio-cultural, economic, and institutional realitiesthus emerges as a dual imperative: a scientific requirement for measurement accuracy and an ethical obligation for ensuring fairness, equity, and inclusivity in organizational decision-making.

Given these complexities, this study contributes to the ongoing discourse by examining the implications of contextualizing psychometric practices for the growth, effectiveness, and cultural legitimacy of Industrial and Organizational Psychology in emerging economies. Through a theoretical and conceptual analysis, it interrogates the unique challenges and opportunities associated with localized psychometric development, the limitations of unadapted Western assessment tools, and the strategic pathways through which emerging economies can strengthen their assessment systems. In doing so, the study aims to advance scholarly understanding and provide actionable insights for practitioners, policymakers, and researchers committed to building culturally grounded, scientifically robust psychometric infrastructures that support the evolution of I-O Psychology in diverse global contexts.

1.1 Statement of the Problem

Given the pivotal role psychometric assessment plays in enhancing organizational decision-making, its application in emerging economies remains fraught with significant conceptual, methodological, and practical challenges. A central concern is the widespread reliance on Western-developed psychometric instruments that are often used without adequate cultural adaptation or local norm development (Hambleton &Patsula, 1999; Van de Vijver & Tanzer, 2004). Such instruments are typically grounded in psychological constructs, linguistic frameworks, and socio-cultural assumptions derived from Western populations, which may not accurately reflect the lived realities, values, and behavioral patterns of individuals in emerging economies. As a result, the validity, reliability, and fairness of these assessments become questionable when interpreted within non-Western contexts.

Furthermore, educational disparities, variations in test familiarity, and uneven technological access across emerging economies can negatively influence test outcomes and distort the interpretation of psychometric results (Foxcroft & Roodt, 2018). For

example, individuals with limited exposure to formal testing environments may underperform not because of lower ability, but due to unfamiliarity with standardized testing formats or language barriers. This poses a major threat to the use of psychometrics in high-stakes organizational decisions such as recruitment, promotion, and leadership assessment.

Another problem is the scarcity of locally developed and culturally grounded psychometric instruments. Many countries in Africa, Asia, and Latin America lack robust research infrastructures and specialized expertise needed for test development, norming, and validation (Oppong, 2019). Consequently, organizations often adopt off-the-shelf instruments that do not align with local job requirements, cultural expectations, or organizational practices. This limits the predictive utility of assessment outcomes and undermines the advancement of I-O Psychology as a science and profession in these regions. Additionally, ethical and legal frameworks governing the use of psychometric assessments in emerging economies remain underdeveloped or inconsistently enforced. Issues such as test misuse, inadequate professional training, poor data security, and lack of standardized certification for test administrators exacerbate the risks associated with psychometric testing (Aguinis et al., 2020). These gaps increase the potential for discriminatory practices, breach of confidentiality, and unfair labor decisions, ultimately weakening trust in psychological assessment processes.

Given these challenges, there is a pressing need to critically examine how psychometrics can be contextualized to better serve the unique socio-cultural, economic, and institutional realities of emerging economies. Without such contextualization, psychometric practices risk perpetuating inequalities, generating misleading organizational insights, and stunting the growth of Industrial and Organizational Psychology as a culturally responsive and scientifically grounded discipline. It is on this premise that the present study aims to contribute to the ongoing discourse by examining how contextually relevant psychometric systems can be developed, adapted, and implemented to enhance organizational effectiveness and promote equitable assessment practices in emerging economies.

1.2 Objectives of the Study

The primary objective of this study is to examine how psychometric assessment can be effectively contextualized to enhance its scientific, ethical, and practical relevance within emerging economies. Specifically, the study aims to:

- Analyze the conceptual and theoretical foundations of psychometrics as applied in Industrial and Organizational Psychology.
- Examine the challenges associated with using Western-developed psychometric instruments in emerging economies, including issues of cultural bias, validity, reliability, and fairness.
- Identify the institutional factors that influence the effectiveness and appropriateness of psychometric assessments in emerging economies.
- Evaluate the implications of contextualizing psychometric tools for organizational decision-making, talent management, and evidence-based HR practices.
- Propose strategic pathways for strengthening psychometric practicesincluding policy reforms, capacity building, and indigenous test developmentto support the advancement of Industrial and Organizational Psychology in emerging economies.

2. Conceptual Clarifications

This section provides scholarly definitions of the key concepts and variables that form the foundation of this study. Clarifying these concepts is essential for establishing a shared understanding and ensuring conceptual precision throughout the analysis. The primary variables addressed include Psychometrics, Industrial and Organizational Psychology, and Emerging Economies.

2.1 Psychometrics

Psychometrics refers to the scientific field concerned with the measurement of psychological attributes, such as abilities, personality traits, attitudes, and behavioral tendencies. It encompasses the theories, methods, and statistical techniques used in the design, validation, administration, and interpretation of psychological tests (Anastasi & Urbina, 1997). Central to psychometrics are the principles of *reliability*, *validity*, *standardization*, *norming*, and *measurement invariance*, which ensure that test scores accurately represent the underlying psychological constructs they were designed to assess (Kaplan &Saccuzzo, 2018). Modern psychometrics relies on Classical Test Theory (CTT), Item Response Theory (IRT), and structural equation modeling to evaluate measurement precision and construct validity. Beyond traditional testing, psychometrics now includes computer-adaptive testing, artificial intelligence–enhanced measurement, and culturally responsive assessment frameworks (Embretson & Reise, 2000; Chamorro-Premuzic et al.,

2020). Thus, psychometrics serves as the backbone of evidence-based decision-making in Industrial and Organizational Psychology, enabling objective evaluation of human characteristics relevant to workplace outcomes.

2.2 Industrial and Organizational Psychology

Industrial and Organizational (I-O) Psychology is the branch of psychology that applies scientific principles to the study of human behavior in the workplace. It focuses on understanding, predicting, and managing employee behavior to enhance individual well-being and organizational performance (Spector, 2019). The field is typically divided into two major domains:

- Industrial Psychology, which includes job analysis, personnel selection, training and development, and performance appraisal; and
- Organizational Psychology, encompassing motivation, leadership, job attitudes, organizational culture, team dynamics, and employee well-being (Landy & Conte, 2019).

I-O Psychology is inherently multidisciplinary, drawing from psychometrics, social psychology, cognitive psychology, and organizational behavior. By leveraging scientifically validated assessment tools, the field provides organizations with frameworks for evidence-based decision-making (Cascio &Aguinis, 2019). In emerging economies, I-O Psychology plays a pivotal role in modernizing HR practices, promoting fair assessment mechanisms, and supporting workforce development.

2.3 Emerging Economies

Emerging economies are countries characterized by rapid industrialization, economic transition, and increasing integration into global markets. They typically exhibit expanding labor markets, growing technological capacity, and evolving institutional frameworks but also face structural challenges such as unequal access to education, limited research infrastructure, and fluctuating economic stability (Hoskisson et al., 2013). The World Bank and International Monetary Fund often classify these economies as low- to middle-income nations undergoing significant socio-economic transformation (World Bank, 2023).

From a psychometric and I-O Psychology perspective, emerging economies present unique contextual considerations. Cultural diversity, language variations, technological disparities, and differing organizational practices necessitate localized adaptation of psychological measurement tools to ensure contextual validity, fairness, and predictive accuracy (Oppong, 2019; Van de Vijver & Leung, 2011). Understanding the dynamics of emerging economies is therefore essential for evaluating how psychometric tools and I-O practices can be appropriately contextualized to meet local needs.

3. Literature Review

Psychometrics has evolved into a central scientific tool within Industrial and Organizational (I-O) Psychology, enabling organizations to measure individual differences objectively for purposes such as personnel selection, performance appraisal, training evaluation, and leadership development. Historically, the development of psychometric theory was shaped by pioneers such as Spearman, Thurstone, and Binet, whose work laid the foundations for intelligence and personality measurement (Anastasi & Urbina, 1997). Over time, the adoption of standardized psychological tests helped organizations move from subjective decision-making to more structured, evidence-based approaches, with psychometric assessments now widely recognized for their ability to quantify latent constructs reliably and validly (Kaplan & Saccuzzo, 2018). Instruments measuring cognitive ability, personality dimensions, situational judgment, and integrity have consistently demonstrated strong predictive validity for job performance, teamwork, and leadership effectiveness across multiple occupational domains (Salgado et al., 2003; Barrick, Mount, & Judge, 2001). Recent technological developments, including computer-adaptive testing, digital simulations, and AI-enhanced assessments, have further enhanced the efficiency, accuracy, and scalability of psychometric practice in organizational contexts (Chamorro-Premuzic et al., 2020).

Despite its global advancement, the applicability of psychometric assessments across diverse cultural contexts particularly in emerging economies remains a significant challenge. Researchers emphasize that many Western-developed psychometric instruments may not function equivalently when applied in non-Western cultures due to differences in language, cultural values, and test-taking norms (Van de Vijver & Leung, 2011). The concept of measurement equivalence is crucial; without it, psychological constructs may not be measured in the same way across cultural groups, resulting in biased interpretations (Hambleton & Patsula, 1999). Empirical evidence suggests that linguistic translations alone are insufficient, as cultural nuances often influence how individuals interpret test items, respond to rating scales, or express personality traits (Foxcroft & Roodt, 2018). For instance, constructs

such as assertiveness, independence, or emotional expressiveness commonly assessed in Western instruments may hold different meanings or levels of social desirability in collectivistic cultures, thereby affecting score validity and fairness.

Psychometric practice in emerging economies such as those in Africa, Asia, and Latin America is further complicated by contextual realities that differ markedly from those in Western settings. Many emerging economies experience educational disparities, technological limitations, and varied exposure to standardized testing environments. These factors can influence test performance not because individuals lack ability, but because of unfamiliarity with formal testing, language barriers, or limited access to digital platforms (Foxcroft & Roodt, 2018). Additionally, research indicates that many emerging economies lack locally developed psychometric instruments and therefore rely heavily on imported Western tests that may not align with cultural expectations, job characteristics, or organizational structures (Oppong, 2019). The absence of robust research infrastructure, including expertise in test construction, norming, and validation, also contributes to limited availability of culturally grounded assessments.

Ethical and regulatory considerations present another layer of complexity. In many emerging economies, guidelines governing psychological assessment are inconsistently enforced or underdeveloped. This increases the risk of test misuse, poor data security, inadequate professional training, and unethical assessment practices (Aguinis et al., 2020). Scholars argue that weak regulatory systems can result in discriminatory hiring outcomes, poor interpretation of results, and diminished trust in psychometric tools among organizations and job applicants (Mpofu & Oakland, 2010). These challenges collectively underscore the need for a deliberate shift toward contextualized psychometric practices that reflect local cultures, languages, and socio-economic realities.

The literature increasingly emphasizes the importance of cultural adaptation and indigenous test development as strategies for improving psychometric relevance in emerging economies. Contextualization entails more than linguistic translation; it requires careful adaptation of test content, cultural norms, scoring rubrics, and validation procedures to ensure that assessments measure constructs appropriately in different cultural environments (Hambleton & Zenisky, 2011). Moreover, scholars in indigenous psychology advocate for the creation of assessment tools based on local cultural constructs rather than relying solely on Western models (Oppong, 2019). Developing context-specific personality frameworks, leadership assessments, and work values inventories can substantially improve predictive validity and fairness in organizational decision-making.

Overall, the literature suggests that contextualizing psychometric assessment holds profound implications for the advancement of I-O Psychology in emerging economies. Properly adapted and locally validated assessments enhance fairness in hiring, strengthen leadership identification, improve organizational diagnostics, and promote equitable human resource practices (Cascio &Aguinis, 2019). Conversely, the uncritical use of Western-developed tests risks perpetuating systemic bias, misclassifying talent, and eroding trust in organizational assessment processes. Therefore, scholars agree that advancing psychometric practice in emerging economies requires a collaborative approach involving researchers, practitioners, policymakers, and professional bodies to support culturally valid, scientifically rigorous, and ethically sound assessment systems.

4. Research Methodology

This study used a qualitative, desk-based research design relying entirely on secondary data to examine the contextualization of psychometrics in emerging economies. Secondary data were selected because they provide broad, credible evidence necessary for conceptual and theoretical analysis. A systematic search of academic databases including APA PsycINFO, ScienceDirect, JSTOR, PubMed, Google Scholar, and Emerald Insight was conducted using keywords such as *psychometrics*, *cross-cultural assessment*, *emerging economies*, *test adaptation*, and *measurement invariance*. The review included peer-reviewed articles, books, institutional reports, and global assessment guidelines, with recent studies prioritized. Data selection followed strict inclusion and exclusion criteria, ensuring that only materials relevant to psychometrics, I-O Psychology, and cross-cultural assessment were analyzed. Ethical standards were maintained through proper citation and accurate representation of authors' ideas. The use of secondary data was justified by the richness of existing literature in psychometric research, making it suitable for a theoretical review and allowing synthesis of diverse scholarly perspectives.

5. Theoretical Framework

The theoretical foundation of this study draws on established psychological and measurement theories that explain how psychometric assessment functions,

how psychological constructs are measured, and why contextual adaptation is necessary when applying these tools across diverse cultural and socio-economic environments. The framework integrates Classical Test Theory (CTT), Item Response Theory (IRT), Measurement Invariance and Cross-Cultural Assessment Theory, Validity Generalization Theory, and perspectives from Indigenous and Cultural Psychology. Together, these theories provide a comprehensive basis for evaluating the challenges and implications of applying psychometric instruments in emerging economies.

Central to this foundation is *Classical Test Theory (CTT),* which posits that an observed test score is composed of a true score and an error component. CTT emphasizes the importance of reliability, validity, and standardization, suggesting that tests must consistently and accurately measure psychological constructs within their intended populations (Anastasi & Urbina, 1997). When applied to emerging economies, CTT highlights the risks associated with using Western-developed tests without proper cultural adaptation, as additional sources of measurement error such as linguistic differences and unfamiliar testing formats may distort scores and undermine test accuracy (Kaplan & Saccuzzo, 2018).

Complementing CTT is *Item Response Theory (IRT),* a more advanced measurement model that examines how individual test items function across different levels of ability or trait intensity. IRT allows for precise evaluation of item difficulty, discrimination, and potential bias, making it particularly useful for detecting differential item functioning (DIF) across cultural groups (Embretson & Reise, 2000). In emerging economies, where cultural norms and interpretations may differ from those of Western samples, IRT provides a powerful framework for identifying items that do not operate equivalently and may unfairly advantage or disadvantage certain groups.

The need for cultural fairness is further supported by *Measurement Invariance and Cross-Cultural Assessment Theory,* which argues that psychological constructs must be measured equivalently across diverse populations for meaningful comparisons to be made (Van de Vijver & Leung, 2011). Without evidence of invariance, a test may not assess the same construct across groups, leading to biased interpretations and invalid conclusions. This theoretical perspective is particularly relevant to emerging economies, where cultural differences, response styles, and socio-economic conditions may influence how individuals interpret test items and respond to standardized assessments.

While measurement theories provide insight into test functioning, *Validity Generalization Theory* offers a broader view on the applicability of psychometric tools across contexts. Schmidt and Hunter (1998) argue that certain psychological predictors such as cognitive ability show strong and consistent relationships with job performance across occupations and settings. However, validity generalization also recognizes that contextual moderators, including educational systems, job structures, and cultural characteristics, can influence the strength and applicability of these relationships. This implies that while some Western-developed assessments may retain predictive value in emerging economies, empirical validation is essential to confirm their relevance and fairness within local contexts.

Crucially, the theoretical foundation is enriched by perspectives from *Indigenous and Cultural Psychology,* which challenge the universal applicability of Western psychological constructs and measurement tools. Indigenous psychology emphasizes that psychological phenomena must be understood within their cultural contexts and that local values, belief systems, and behavioral norms shape the expression of psychological traits (Kim, Yang, & Hwang, 2006). Scholars argue that many Western instruments fail to capture culturally specific constructs such as community-centered leadership, collectivism, or interdependence that are central to behavioral functioning in many emerging economies (Oppong, 2019). This perspective underscores the need for developing or adapting psychometric tools that reflect local cultural realities rather than relying exclusively on imported models.

Finally, *Human Capital Theory* provides an organizational lens by asserting that individuals' knowledge, skills, and abilities contribute directly to productivity and economic development (Becker, 1993). Psychometrics plays a key role in identifying and developing this human capital through reliable and valid assessment of individual differences. In emerging economies, this theory highlights the strategic importance of contextually appropriate psychometric tools to support workforce development, improve talent identification, and enhance organizational effectiveness.

Collectively, these theoretical perspectives provide a comprehensive foundation for understanding the challenges and implications of psychometric assessment in emerging economies. They illustrate that accurate and fair psychological measurement

requires both scientific rigor and cultural sensitivity, making contextualization essential for advancing evidence-based practice in Industrial and Organizational Psychology.

5.1 Evolution of Psychometrics in Industrial and Organizational Psychology

The evolution of psychometrics within Industrial and Organizational (I-O) Psychology reflects a progressive shift from basic measurement of individual differences to sophisticated, technology-driven assessment systems that inform critical organizational decisions. Psychometrics emerged in the early 20th century, grounded in the work of pioneers such as Alfred Binet, Charles Spearman, and Louis Thurstone, who developed early intelligence tests and laid the foundation for quantitative measurement of cognitive and personality attributes (Anastasi & Urbina, 1997). These early contributions introduced the concept of standardized testing and the use of statistical methods such as factor analysis to understand latent psychological constructs, marking a significant departure from subjective evaluation methods commonly used in organizational contexts at the time.

The rapid industrialization of the early 1900s created a pressing need for more systematic methods of selecting and placing workers. This demand accelerated the application of psychometrics in occupational settings, particularly with the development of the Army Alpha and Beta tests during World War I. These large-scale intelligence tests demonstrated the feasibility and utility of standardized psychological measurement for selecting individuals suited to high-pressure roles (Cascio & Aguinis, 2019). Following this success, organizations increasingly adopted cognitive ability tests, aptitude measures, and personality inventories to support hiring, promotion, and workforce planning.
Throughout the mid-20th century, psychometrics expanded beyond cognitive testing to incorporate personality assessment, work values, vocational interests, and job attitudes. Landmark developments such as the Minnesota Multiphasic Personality Inventory (MMPI) and later the Big Five personality framework brought new insights into human behavior at work, enabling I-O psychologists to predict job performance, teamwork, leadership potential, and workplace adjustment with greater accuracy (Barrick & Mount, 1991). These advancements elevated the role of psychometrics from simple screening tools to foundational elements of organizational decision-making.

The late 20th century introduced more advanced measurement models, particularly Item Response Theory (IRT) and generalizability theory, which allowed for more precise item-level analysis and improved reliability estimates across varying populations (Embretson & Reise, 2000). These models addressed limitations of Classical Test Theory and promoted more sophisticated test construction, adaptive testing formats, and enhanced validity studies. At the same time, the increasing emphasis on fairness and equal employment opportunity led to greater scrutiny of test bias, measurement invariance, and the cultural sensitivity of psychometric instruments, especially when used in diverse or international contexts (Hambleton & Patsula, 1999; Van de Vijver & Leung, 2011).

The 21st century marks a transformative era in psychometrics with the integration of digital technologies, artificial intelligence, and big data analytics. Computer-adaptive testing (CAT)systems enable real-time item adjustment based on a test-taker's ability, improving measurement precision and reducing test length. Gamified assessments, mobile-based assessments, and simulation-based exercises enhance candidate engagement while capturing behavioral data in more ecologically valid ways (Chamorro-Premuzic et al., 2020). Organizations now use AI-driven algorithms to analyze response patterns, keystroke dynamics, and decision-making behaviors, expanding the scope of psychometrics beyond traditional self-report formats.

In contemporary I-O Psychology, psychometrics has evolved into a central pillar of evidence-based practice. It supports a wide array of functions including selection and placement, leadership development, performance management, organizational climate assessment, and training evaluation. The discipline's progression from rudimentary intelligence tests to advanced digital measurement systems reflects a continuous refinement of scientific rigor, predictive accuracy, and contextual relevance. Yet, as psychometrics becomes increasingly globalized, its evolution also underscores the necessity of cultural adaptation and contextualization particularly in emerging economies where socio-cultural realities differ significantly from those in which many psychometric tools were originally developed.

Overall, the historical and technological evolution of psychometrics demonstrates its enduring significance in I-O Psychology. As organizations navigate complex and rapidly changing work environments, psychometrics remains indispensable for

understanding human behavior, optimizing workforce decisions, and promoting organizational effectiveness.

6. Applications of Psychometrics in Emerging Economies

The application of psychometric assessment in emerging economies has grown significantly in recent decades, driven by the increasing globalization of work, the expansion of multinational organizations, and the growing demand for evidence-based human resource practices. Despite these developments, the use of psychometric tools in regions such as Africa, Asia, Latin America, and parts of the Middle East remains shaped by unique cultural, socio-economic, and institutional realities that differ markedly from those of Western contexts where most psychometric instruments were originally developed. As scholars have observed, emerging economies present both opportunities and profound challenges for the effective and ethical use of psychological assessment in organizational settings (Oppong, 2019; Foxcroft & Roodt, 2018).

A primary challenge concerns the cultural relevance and validity of standardized tests. Many psychometric instruments used in emerging economies are imported directly from Western countries, often without sufficient adaptation or norming for local populations. These tests frequently embody cultural assumptions, linguistic structures, and behavioral expectations that reflect Western values and may not accurately represent indigenous cultural norms or workplace behaviors. For example, constructs such as assertiveness, independence, or emotional expressiveness common in Western personality and leadership assessments may hold different meanings in collectivistic or high power-distance cultures (Hofstede, 2011). As a result, unadapted instruments risk producing biased or invalid interpretations, limiting their predictive utility and fairness in selection and development contexts.

Another factor shaping psychometrics in emerging economies is the variation in educational systems, literacy levels, and test-taking experience. Individuals from under-resourced educational backgrounds may struggle with complex testing formats, abstract language, or technology-based assessments, not due to lack of ability but because of unfamiliarity with standardized testing environments (Foxcroft & Roodt, 2018). These differences can introduce extraneous variance into test scores, reducing reliability and potentially disadvantaging certain demographic groups in high-stakes decisions such as hiring or promotion. Such disparities highlight the importance of culturally grounded test design, simple and clear instructions, and multiple assessment modalities suited to diverse populations.

Technological constraints also influence the adoption of modern psychometric methods. While digital, AI-based, and computer-adaptive assessments are becoming standard in Western contexts, many emerging economies face inconsistent internet connectivity, limited access to computers, or insufficient digital literacy among applicants (Aguinis et al., 2020). These infrastructural limitations can restrict the implementation of technology-enhanced assessments and necessitate the development of hybrid models that accommodate both traditional and digital formats.

Institutional and regulatory factors further complicate psychometric practice in emerging markets. In many of these regions, formal regulatory frameworks governing psychological testing are either underdeveloped or inconsistently enforced. This creates risks related to test misuse, inadequate interpretation by untrained practitioners, breaches of confidentiality, and poor test security (Mpofu & Oakland, 2010). Without strong legislation or professional guidelines, organizations may adopt assessments based on convenience or commercial appeal rather than scientific validity, undermining the credibility of psychometric processes.

Despite these challenges, emerging economies also present significant opportunities for the growth of indigenous psychometrics. Scholars and practitioners increasingly advocate for the development of culturally grounded assessment tools that reflect local values, belief systems, and workplace behaviors (Oppong, 2019). Indigenous constructs such as *Ubuntu* in Africa, *Simpatía* in Latin America, or collectivist leadership norms in Asiaoffer rich psychological dimensions that can inform new measurement models and improve validity in local contexts. The development of region-specific norms, culturally adapted personality inventories, and contextually relevant leadership assessments can significantly enhance the effectiveness and acceptance of psychometric tools.

Additionally, globalization has expanded access to psychometric knowledge, training resources, and collaborative networks, enabling many emerging economies to build local capacity in test development and validation. Universities, professional associations, and research institutions are increasingly investing in measurement science, thereby strengthening the expertise required to design culturally relevant assessments and conduct local validation studies.

Overall, psychometrics in emerging economies exists at the intersection of global scientific standards and local contextual realities. The successful integration of psychometric tools in these regions requires careful attention to cultural adaptation, ethical practice, technological access, and capacity building. When these factors are addressed, psychometrics has the potential to greatly enhance talent management, leadership development, organizational diagnostics, and overall workforce effectiveness within emerging economies.

6.1 Challenges and Limitations of Psychometrics in Emerging Economies

Psychometric assessment in emerging economies faces significant challenges that limit its accuracy, fairness, and usefulness in organizational settings. A major issue is that most psychometric tools are developed in Western contexts and do not adequately reflect the cultural norms, values, and behavioral expressions of non-Western populations. This leads to problems of construct non-equivalence and cultural bias, reducing the validity of test interpretations. Linguistic and semantic differences further complicate test adaptation, as translations often fail to capture cultural nuances embedded in test items. Educational disparities also influence test performance. In many emerging economies, variations in literacy levels and limited exposure to standardized testing introduce extraneous variance into scores, disadvantaging individuals from less resourced backgrounds. Technological constraints such as poor internet connectivity and low digital literacy restrict the adoption of modern computer-based and AI-enhanced assessments. Another limitation is the scarcity of locally developed and validated instruments. A lack of psychometric expertise and research infrastructure results in heavy reliance on imported tools without appropriate local norms. Weak regulatory and ethical frameworks further increase risks related to test misuse, poor data handling, and unqualified administration. Economic constraints often prevent organizations from investing in high-quality tools or proper training. Finally, social attitudes and organizational cultures may contribute to mistrust or misuse of psychometric assessments. Combined with the diversity and rapid transformation of emerging economies, these challenges underscore the need for culturally grounded, locally validated, and ethically administered psychometric systems.

Implications for Industrial and Organizational Psychology

Contextualizing psychometric assessment has several important implications for Industrial and Organizational Psychology in emerging economies. First, it enhances fairness and validity in personnel selection, ensuring that assessments reflect local cultural and linguistic realities rather than relying on Western norms that may misclassify applicants. This leads to more equitable and accurate hiring and promotion decisions. Second, contextualization improves leadership assessment and development, as culturally grounded tools better capture local leadership styles and values, which may emphasize community, hierarchy, or relational harmony rather than Western individualistic traits. It also strengthens organizational diagnostics, allowing assessments of job satisfaction, engagement, and well-being to reflect culturally specific workplace experiences. Third, contextualized psychometrics increases the scientific relevance and legitimacy of I-O Psychology within emerging economies, building trust among practitioners, policymakers, and organizations. It also promotes ethical practice, reducing risks of bias, misuse, or misinterpretation of assessments. Additionally, adapting psychometrics to local contexts contributes to capacity building, encouraging the development of local expertise in test construction, validation, and research. Finally, these improvements support broader organizational and economic outcomes by helping organizations allocate human capital effectively and strengthening their overall productivity and competitiveness. Overall, contextualizing psychometric tools ensures that I-O Psychology operates with cultural sensitivity, scientific rigor, and practical effectiveness in emerging economies.

7. Conclusion

This study examined the contextualization of psychometric assessment and its implications for Industrial and Organizational Psychology in emerging economies. The review demonstrates that while psychometrics provides essential tools for measuring human attributes and supporting evidence-based organizational decision-making, its effectiveness is strongly influenced by cultural, socio-economic, and institutional contexts. Western-developed psychometric instruments, though scientifically robust, often lack cultural relevance when applied in non-Western environments, resulting in challenges related to measurement validity, fairness, and predictive accuracy. These limitations stem from differences in language, educational exposure, response styles, and locally meaningful constructs that may not be adequately captured in imported tools. The analysis highlights that contextualization is not merely

an academic preference but a scientific and ethical necessity. It ensures that psychometric assessments accurately reflect the lived experiences, values, and behavioral tendencies of individuals within emerging economies. Moreover, contextualization strengthens the legitimacy and relevance of Industrial and Organizational Psychology, enabling it to contribute effectively to workforce development, leadership identification, organizational diagnostics, and national socio-economic advancement. Ultimately, the future of psychometric practice in emerging economies depends on the integration of rigorous measurement principles with a deep understanding of cultural and contextual realities. Through collaborative research, capacity building, indigenous test development, and adherence to ethical standards, psychometrics can evolve into a more inclusive and globally responsive discipline.

8. Recommendations

Based on the findings of this study, the following recommendations are proposed to enhance the contextual relevance, scientific integrity, and practical utility of psychometric assessment in emerging economies:

- Local researchers and practitioners should prioritize the creation of assessment tools that reflect indigenous psychological constructs, cultural norms, and linguistic contexts. This will improve measurement validity and reduce reliance on imported Western instruments.
- Assessments used in emerging economies must undergo rigorous psychometric evaluation, including reliability analysis, item response analysis, measurement invariance testing, and development of local norms to ensure fairness and accuracy.
- Universities, psychological associations, and HR institutions should invest in training programs on test development, cultural adaptation, validation methods, and ethical assessment practices to build local expertise.
- Governments and professional bodies should develop clear guidelines governing the use of psychological assessments, addressing issues such as informed consent, data privacy, test security, and minimum qualifications for test administrators.
- Cross-national and interdisciplinary collaborations can enhance resource sharing, facilitate comparative studies, and support the development of psychometric tools relevant to similar cultural and regional contexts.
- Digital and AI-based assessment systems should be adapted to local technological realities, ensuring accessibility for candidates with varying levels of digital literacy and infrastructure.
- Organizations should be encouraged to adopt scientifically validated and contextually appropriate assessments to improve talent management, reduce bias, and strengthen organizational performance.

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The Politicization of Establishment of Universities in Nigeria and the Federal Government's Imposition of a Seven-Year Moratorium: An Overview

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Abstract. The proliferation of universities in Nigeria has been largely driven by political considerations rather than educational needs or national development goals. This trend has resulted in the establishment of new institutions amidst chronic underfunding, infrastructural decay, poor staff welfare, and frequent industrial unrest in existing universities. Despite the critical role of universities in national development—through teaching, research, and community service—the Nigerian higher education sector struggles with overstretched resources, inadequate facilities, brain drain, and declining academic standards. Between 2020 and 2025 alone, 137 new universities were established, pushing the total to 307, many of which were created without proper planning or funding. The Federal Government's recent imposition of a seven-year moratorium on the establishment of new tertiary institutions is thus a welcome corrective measure. This paper examines the historical evolution of universities in Nigeria, highlights the consequences of unchecked expansion, and situates the moratorium within the broader context of university education and national development. It argues that meaningful reform must focus on consolidating and strengthening existing institutions through improved funding, infrastructural development, staff welfare, and rigorous regulatory oversight. The paper concludes that without addressing the systemic issues of underfunding and mismanagement, further expansion will continue to undermine the quality, relevance, and carrying capacity of Nigerian universities.

1. Introduction

Over the years, the establishment of universities in Nigeria has been driven by political, rather than educational and national developmental considerations. The political consideration has led to unnecessary proliferation of universities amidst poor funding of the existing ones. It is difficult to explain why more universities are established by the government whereas the existing public universities are grossly underfunded, poorly equipped and understaffed. In a bid to check the unnecessary proliferation of universities, the Federal Government recently - in year 2025 -decided to impose a seven-year moratorium on the establishment of tertiary institutions in Nigeria. This paper discusses the issues bedeviling the universities and the seven years moratorium of the government.

1.1 University Education and National Development

According to the National Policy on Education, university education shall make optimum contribution to national development by: (a) intensifying and diversifying its programme for the development of high level manpower within the context of the needs of the nation; ,(b)making professional course contents to reflect our national requirements; (c)making all students, as part of a general programme of all-round improvement in university education, to offer general study courses such as history of ideas, philosophy of knowledge and nationalism (FRN, 2004). Universities have three-pronged objectives, which are teaching, research and community development services.

Teaching and learning based on the curriculum are to develop the skills and knowledge of the learners towards the production of high skilled graduates. According to the policy, university teaching shall seek to inculcate community spirit in the students through projects and action research workforce. In terms of research, the National Policy on Education declares that university research shall be relevant to the developmental goals. Hence, universities shall be encouraged to disseminate their results to both government and industries. Voluntary agencies, individuals and groups shall be allowed to establish universities provided they comply with minimum standards laid down by the Federal Government.

The university system in Nigeria has not had a very smooth sail from inception; it has witnessed many successes and challenges (Otonko, 2012). The benefits that Nigeria derives from university education is very clear by considering the five national goals through which Nigeria's philosophy of education draws its strength, namely, to create a democratic and free society, a just and egalitarian society, a united, strong and self-reliant nation, a great and dynamic economy and a land full of bright opportunities for all citizens (FRN, 2004).

University education, globally, is society's means of producing its high skilled labour. It is a critical component of human development. It provides not only the high-skills necessary for every labor market but also the training essential for teachers, doctors, nurses, civil servants, engineers, humanists, entrepreneurs, scientists, social scientists, and a myriad of other personnel (Otonko, 2012). It is these trained individuals who develop the capacity and analytical skills that drive local economies, support civil society, teach children, lead effective governments, and make important decisions which affect entire societies. This function of education can be seen vividly in action in Nigeria. Therefore, according to the provisions of the policy, the goals of tertiary education shall contribute to national development through high skilled labour.

Furthermore, university education in Nigeria has helped to develop many Nigerians into sound and effective citizens. Here, university education, more than any other, has led to higher self-awareness and self-realization of individuals at various tasks, enhanced better human relationships and national consciousness.

Also, the university education system has enhanced social, cultural, economic, political, scientific and technological progress in Nigeria. The country is more blessed now with specialists at various fields of endeavour: medicine, law, engineering, philosophy, education, etc. And due to this development, the nation is becoming more and more dynamic and self-reliant as the days go by. This has been made possible because of the university education.

1.2 History of University Education in Nigeria

The history of university education in Nigeria is traced to the Elliot Commission of 1943, which gave birth to the establishment of the University College Ibadan (UCI) in 1948. UCI was an affiliate of the University of London (Ike, 1976). As the university operations soared, the UCI was faced with a number of challenges which include; rigid constitutional provisions, poor staffing, and low enrolment to high dropout rate (Ibukun, 1997).

In April 1959, the Federal Government commissioned an inquiry (the Ashby Commission) to advise it on the higher education needs of the country for its first two decades. Before the submission of the report, in 1960, the Eastern Region Government established its own university which is the University of Nigeria, Nsukka. The implementation of the Ashby Report led to the establishment of regional universities. These includes; University of Ife (now Obafemi Awolowo University, Ile-Ife) in 1962 by the Western Region, Ahmadu Bello University, Zaria in 1962 by the Northern Region and University of Lagos (1962) by the Federal Government. By 1962, University College, Ibadan became a full-fledged university (Babalola, Jaiyeoba & Okediran, 2007). At this time, the Universities of Ibadan and Lagos became the first two federal universities in Nigeria. In 1970, the newly created Midwestern Region opted for a university known as University of Benin. The six universities established during this period 1960-1970 are still referred to as first generation universities. Babalola et al (2007) remarked that during this period, universities in Nigeria were under the close surveillance of the government. Appointments of principal officers, the Vice-Chancellor and members of the council, were politically motivated.

In 1975 to 1980, Nigeria commenced a third National Development Plan (NDP) which is to create four more universities. However, in 1975, instead of four, seven universities were established and government also took over the four regional universities. The seven universities were Universities of Calabar, Ilorin, Jos, Sokoto, Maiduguri, Port Harcourt and Ado Bayero University, Kano. These are referred to as second generation universities. During the period, all universities established between 1980 and early 1990 were referred to as third generation universities. They are: the Federal Universities of Technology in Owerri

(FUTO), Makurdi, Yola, Akure and Bauchi. Others include state universities in Imo, Ondo, Lagos, Akwa-Ibom, Oyo and Cross-River States (Nwagwu, 2003). The fourth-generation universities are those established between 1991 and still counting up till date. They include more state universities, National Open University and private universities.

As at the year 2025, according to the National University Commission (NUC), there are 307. Out of this number, 73 (23.5%) are federal universities, 67 (21.8%) are state universities while 168 (54.7%) are privately owned universities.

Below is the list of the public universities and their dates of establishment.

List of Federal Universities in Nigeria

S/N	Name of University	Year of Establishment
1.	Abubakar Tafawa Balewa University, Bauchi	1988
2.	Ahmadu Bello University, Zaria	1962
3.	Bayero University, Kano	1975
4.	Federal University Gashua, Yobe	2013
5.	Federal University of Petroleum Resources, Effurun	2007
6.	Federal University of Technology, Akure	1981
7.	Federal University of Technology, Minna	1982
8.	Federal University of Technology, Owerri	1980
9.	Federal University, Dutse, Jigawa State	2011
10.	Federal University, Dutsin-Ma, Katsina	2011
11.	Federal University, Kashere, Gombe State	2011
12.	Federal University, Lafia, Nasarawa State	2011
13.	Federal University, Lokoja, Kogi State	2011
14.	Alex Ekwueme University, Ndufu-Alike, Ebonyi State	2011
15.	Federal University, Otuoke, Bayelsa	2011
16.	Federal University, Oye-Ekiti, Ekiti State	2011
17.	Federal University, Wukari, Taraba State	2011
18.	Federal University, Birnin Kebbi	2013
19.	Federal University, Gusau Zamfara	2013
20.	Michael Okpara University of Agricultural Umudike	1992
21.	Modibbo Adama University of Technology, Yola	1981
22.	National Open University of Nigeria, Abuja	2002
23.	Nigeria Police Academy Wudil	2013
24.	Nigerian Defence Academy Kaduna	1985
25.	Nnamdi Azikiwe University, Awka	1992
26.	Obafemi Awolowo University,Ile-Ife	1962
27.	University of Abuja, Gwagwalada	1988
28.	Federal University of Agriculture, Abeokuta	1988
29.	Joseph Sarwuan Tarka University, Makurdi	1988
30.	University of Benin	1970
31.	University of Calabar	1975
32.	University of Ibadan	1948
33.	University of Ilorin	1975
34.	University of Jos	1975
35.	University of Lagos	1962
36.	University of Maiduguri	1975
37.	University of Nigeria, Nsukka	1960
38.	University of Port-Harcourt	1975
39.	University of Uyo	1991
40.	Usumanu Danfodiyo University	1975
41.	Nigerian Maritime University Okerenkoko, Delta State	2018
42.	Air Force Institute of Technology, Kaduna	2018
43.	Nigerian Army University Biu	2018
44.	Federal University of Health Sciences, Otukpo, Benue State	2020
45.	Federal University of Agriculture, Zuru, Kebbi State	2020
46.	Federal University of Technology, Babura, Jigawa State	2021
47.	Federal University of Technology, Ikot Abasi, Akwa Ibom State	2021
48.	Federal University of Health Sciences, Azare, Bauchi State	2021
49.	Federal University of Health Sciences, Ila Orangun, Osun State	2021
50.	David Nweze Umahi Federal University of Medical Sciences, Uburu	2022
51.	Admiralty University Ibusa, Delta State	2023

52.	Federal University of Transportation Daura, Katsina	2022
53.	African Aviation and Aerospace University	2023
54.	National University of Science and Technology, Abuja	2023
55.	Federal University of Agriculture Bassam-Biri, Bayelsa	2023
56.	Federal University of Health Sciences Kwale, Delta State	2023
57.	Federal University of Health Sciences, Katsina	2023
58.	Federal University of Agriculture, Mubi	2023
59.	Federal University of Education, Zaria, Kaduna State	2023
60.	Alvan Ikoku Federal University of Education, Owerri, Imo State	2023
61.	Yusuf Maitama Sule Federal University of Education, Kano	2023
62.	Adeyemi Federal University of Education, Ondo	2023
63.	Federal University of Allied Health Sciences, Enugu	2024
64.	Federal University of Medicine and Medical Sciences, Abeokuta	2023
65.	Federal University of Education Pankshin, Plateau State	2023
66.	Federal University of Education Kontagora, Niger State	2023
67.	University of Maritime Studies, Oron, Akwa Ibom State	2024
68.	Federal University of Environment and Technology, Tai Town, Ogoniland, Rivers State	2025
69.	Federal University of Applied Sciences, Kachia, Kaduna State	2025
70.	Tai Solarin Federal University of Education, Ijagun, Ijebu Ode	2025
71.	Federal University of Agriculture and Developmental Studies, Iragbuji, Osun State	2025
72.	Federal University of Technology and Environmental Studies, Iyin-Ekiti, Ekiti State.	2025

Source: *National Universities Commission*

List of State Universities in Nigeria

S/N	Name of University	Year of Establishment
1.	Rivers State University	1979
2.	Ambrose Alli University, Ekpoma	1980
3.	Abia State University, Uturu	1981
4.	Ekiti State University	1982
5.	Enugu State University of Science and Technology, Enugu	1982
6.	Olabisi Onabanjo University, Ago Iwoye	1982
7.	Lagos State University, Ojo	1983
8.	Ladoke Akintola University of Technology, Ogbomoso	1990
9.	Benue State University, Makurdi	1992
10.	Delta State University Abraka	1992
11.	Imo State University, Owerri	1992
12.	Adekunle Ajasin University, Akungba	1999
13.	Prince Abubakar Audu University Anyigba	1999
14.	Chukwuemeka Odumegwu Ojukwu University, Uli	2000
15.	Ebonyi State University, Abakaliki	2000
16.	Aliko Dangote university of Science & Technology, Wudil	2000
17.	Niger Delta University Yenagoa	2000
18.	Adamawa State University Mubi	2002
19.	Nasarawa State University Keffi	2002
20.	University of Cross River State, Calabar	2004
21.	Gombe State Univeristy, Gombe	2004
22.	Kaduna State University, Kaduna	2004
23.	Ibrahim Badamasi Babangida University, Lapai	2005
24.	Plateau State University Bokkos	2005
25.	Yobe State University, Damaturu	2006
26.	Kebbi State University of Science and Technology, Aliero	2006
27.	Umar Musa Yar' Adua University Katsina	2006
28.	Osun State University Osogbo	2006
29.	Olusegun Agagu University of Sc. & Tech., Okitipupa, Ondo	2008
30.	Taraba State University, Jalingo	2008
31.	Kwara State University, Ilorin	2009
32.	Sokoto State University	2009
33.	Akwa Ibom State University, Ikot Akpaden	2010
34.	Ignatius Ajuru University of Education,Rumuolumeni	2010
35.	Bauchi State University, Gadau	2011
36.	Yusuf Maitama Sule University Kano	2012
37.	First Technical University Ibadan	2012
38.	Sule Lamido University, Kafin Hausa, Jigawa	2013
39.	University of Medical Sciences, Ondo City, Ondo State	2015
40.	Edo State University Uzairue	2016

41.	Kingsley Ozumba Mbadiwe University Ogboko, Imo State	2016
42.	University of Africa Toru Orua, Bayelsa State	2016
43.	Bornu State University, Maiduguri	2016
44.	Moshood Abiola University of Science and Technology Abeokuta	2017
45.	Gombe State University of Science and Technology	2017
46.	Zamfara State University	2018
47.	Bayelsa Medical University	2019
48.	University of Agriculture and Environmental Sciences Umuagwo, Imo State	2019
49.	Confluence University of Science and Technology Osara, Kogi	2020
50.	Bamidele Olumilua University of Science and Technology Ikere, Ekiti State	2020
51.	University of Delta, Agbor	2021
52.	Delta University of Science and Technology, Ozoro	2021
53.	Dennis Osadebe University, Asaba	2021
54.	Lagos State University of Education, Ijanikin	2021
55.	Lagos State University of Science and Technology Ikorodu	2022
56.	Shehu Shagari University of Education, Sokoto	2022
57.	State University of Medical and Applied Sciences, Igbo-Eno, Enugu	2022
58.	University of Ilesa, Osun State	2022
59	Emanuel Alayande University of Education Oyo	2022
60	Kogi State University, Kabba	2023
61.	AbdulKadir Kure University, Minna Niger State	2023
62.	Kwara State University of Education, Ilorin, Kwara State	2024
63.	Abdulsalam Abubakar University of Agriculture and Climate Action, Mokwa, Niger State	2025
64.	Ebonyi State University of ICT, Science and Technology, Oferekpe, Ebonyi State	2025
65.	Cross River University of Education and Entrepeneurship, Akampa, Cross River State	2025
66.	Benue State University of Agriculture Science and Technology, Ihugh.	2025
67.	University of Aeronautics and Aerospace Engineering Ezza, Ebonyi State	2025

Source: *National Universities Commission*

Trends in Number of Universities 1948 – 2019 (Ten Years Interval)

	1948 -1970	1971 -1980	1981 -1990	1991 -2000	2001-2010	2011-2020	Total as at 2019
Federal	6	8	8	3	2	16	43
State	0	1	7	9	19	12	48
Private	0	0	0	3	37	39	79

Source: *National Universities Commission*

As at the year 2019, the number of universities was 170. This has moved to a whopping 307 as at year 2025 – meaning that a total of 137 new universities were established in 6 years (from 2020 to 2025). This phenomenon has apparently contributed to the dwindling quality of university education as currently witnessed in Nigeria. Some of these universities were established, not based on demand but based on political considerations. For example, in Edo State, there is Ambrose Ali University, Ekpoma owned by Edo State Government. The university has all the indices of a poorly funding, yet the government at a time left it and established another university called Edo University, Iyamo. That was not enough, the Edo State Government - in its drive for proliferation of universities in the state - upgraded Ekiadolor College of Education to a university without putting in place necessary facilities and structures. This brought the total of state-owned universities in the state to 3. After the administration that upgraded Ekiadolor College of Education to a university left office, the new administration could not fund the take-off of the new university and the system was paralysed. It could not take off as a university and it could not remain a college of education. That is, on paper, it was a university, but in terms of physical structures and characteristics, it was a college of education. So, it was like a bat among universities.

2. Evidence of Poor Funding of University Education in Nigeria

Infrastructural Deficit – Infrastructural facilities include; libraries, laboratories, halls, offices, administrative blocks, hostels, roads facilities, water, electricity and internet. Personal observations and research reports have shown that infrastructural facilities in many public universities in Nigeria are in the state of disrepair. Overcrowded classrooms and office spaces, and poorly maintained hostels are common sights in these institutions due to the problem of poor funding. Okolo and Gregory (2021) observed that the lack of adequate infrastructure in our higher education has posed serious setback in the achievement of higher education goals. In institution where there are no adequate classrooms, resource rooms, staff rooms, lack of laboratory facilities, computers and the like, proper teaching and learning cannot be effective and efficient in the system. This problem of infrastructural deficit has been part of

ASUU's concern over the years. In a bid to confront the challenge of underfunding by increasing internally generated revenue, some universities admit more students than their carrying capacities further straining already inadequate facilities. Some introduce all sorts of levies and charges which overburden students.

Brain Drain: Poor remuneration and lack of research support drive many qualified academics to seek better opportunities abroad, depleting the system of skilled human capital. Just recently, the immediate past Vice-Chancellor of UNILAG, Prof. Oluwatoyin Ogundipe disclosed that no fewer than 239 first-class graduates of the University of Lagos, employed as lecturers, left the institution within seven years (The Punch, 27th August, 2025). Prof. Oluwatoyin Ogundipe made this disclosure while speaking as guest lecturer at *The PUNCH* Forum, themed: "Innovative Funding of Functional Education in the Digital Age," held at The PUNCH Place, Lagos-Ibadan Expressway. According to him, UNILAG retained 256 first-class graduates as lecturers between 2015 and 2022, but only 17 remained in the institution as of October 2023. He attributed the mass exodus to poor remuneration, unconducive working conditions, and low motivation among lecturers. Giving further details, Prof. Ogundipe noted thus: "In 2015, 86 were employed; in 2016, 82; during my time, that is, 2017 to 2022, 88 were employed. As of October 2023, only 17 were on ground. They have gone. Very soon, in the next 10 years, you will have only females in the universities if something is not done." He noted that unless the government adequately funds the sector, universities would, in the next decade, be dominated by women, while poorly prepared candidates would gain entry into postgraduate programmes. He lamented chronic underfunding of the education sector, noting that both federal and state allocations had consistently remained below 10 per cent, far short of UNESCO's recommended 15 to 26 per cent.

Industrial Unrest: A recurrent issue in most industrial disputes in Nigerian universities is the issue of funding. The chronic underfunding of university education in Nigeria fuels frequent strikes by academic and non-academic staff unions, disrupting academic calendars and delaying students' graduation. The table below shows the frequency of strike actions by one of the unions in the Nigerian university system, which is the Academic Staff Union of Universities (ASUU) (Osagiobare, Ibe, Obozokhae, & Ekwukoma, 2019).

Table 2: ASUU strike in Nigeria from the Inception of the Union in 1978

Years	Duration
1988/89/90	2 months
1992	3 months
1993	4 months
1996	6 months
1999	5 months strike
2001	3 months strike
2002	2 weeks strike
2003/2004	6 months strike
2005	3 days strike
2006	3 days strike
2007	3 months strike
2008	1 week strike
2009	4 months strike
2010	5 months, 14days
2011/2012	3 months strike
2013	5 months 9days
2017	3 weeks strike
2018/2019	2 Months 3days
2020	9 months (23rd of March, 2020 - 23rd of December, 2020)
2022	8 months (14th February, 2022 to 14th October, 2022)

Source: *Osagiobare, Ibe, Obozokhae, & Ekwukoma (2019)*

From the table above, it is clear that ASUU strike is a recurrent decimal in the Nigerian university education system. Most of the strikes, as earlier stated, were caused by funding issues. It is, therefore, difficult to explain why the government that cannot fund the existing universities will continue to establish more. The poor funding of the existing universities has negative impact on their quality and carrying capacities. The 2013 Needs Assessment of Nigeria's Public Universities conducted by the Mahmood Yakubu-led committee reported that the lecturer-student ratio is 1:100. This is in contrast to the 1:42 ratio in South Africa's public universities. According to the report, public universities are "grossly understaffed, physical facilities for teaching and learning in the public universities are inadequate,

dilapidated, over-stretched and improvised." (Punch, 18th August, 2025). According to the Committee of Vice Chancellors of Nigerian Universities (2023), the challenges bedeviling Nigerian universities include:

- Shrinking government funding on education (in real terms)
- Infrastructural decay and deficit
- Inadequate funding of research initiatives
- Relatively poor remuneration of university workers.
- Demoralised workers (teaching and non-teaching) - with consequences on student outcomes and experiences
- Curriculum inadequacies leading to students abandoning their programme, and others look for an alternative.
- Frustration and migration of students at UG and PG Levels
- Academic Silos

At the heart of the challenges listed by the Committee of Vice Chancellors of Nigerian Universities is poor funding. Most universities in Nigeria—particularly the federal and state-owned ones—rely heavily on government subventions. However, the budgetary allocations to education generally, and universities in particular, have consistently fallen short of global standards.

3. Placing the Cart before the Horse in Expanding Carrying Capacity of Nigerian Universities

The concept of *carrying capacity* in higher education refers to the maximum number of students a university can admit, train, and graduate efficiently without overstretching its available human, physical, and financial resources. In Nigeria, carrying capacity has become a central issue in the management of universities due to the rising demand for tertiary education, limited infrastructure, and inadequate funding. The table below shows the carrying capacity of Nigerian universities from 2010 - 2020.

Table 3: Number of University, Applicants and Carrying capacity

Year	*University Cumulative*	*Applicant*	*No. of admission*	*No. not admitted*	*Carrying Capacity*	*Capacity Applicant*
2010/11	112	1,493,611	423,531	1,070,080	450,000	30.13%
2011/12	117	1,503,933	417,341	1,086,592	500,000	33.25%
2012/13	128	1,735,729	447,176	1,288,553	520,000	29.96%
2013/14	128	1,644,110	463,395	1,180,715	520,000	31.63%
2014/15	139	1,785,608	437,704	1,347,904	415,500	23.27%
2015/16	151	1,428,379	485,338	943,041	389,631	27.28%
2016/17	152	1,579,027	506,837	1,072,190	500,000	31.69%
2017/18	164	1,736,571	566,719	1,169,852	506,837	29.18%
2018/19	169	1,662,762	586,498	1,076,264	586,962	35.30%
2019/20	171	1,177,977	612,557	545,420	510,957	44.12%

Source: *National Universities Commission (2020) cited in Ebura, Edet & Okpa (2020)*

Table 3 above reveals that: the number of students that applied to enter Nigerian universities in 2010 was approximately 1.4 million while only 423,531 were admitted; in 2011/12 session, approximately 1.5 million applied while only 417, 341 were admitted; in 2012/13 session, approximately 1.7 million applied while only 447,176 were admitted; in 2013/14 session, approximately 1.6 million applied while only 463, 395 were admitted; in 2014/15 session, approximately 1.7 million applied while only 437, 704 were admitted; in 2015/16 session, approximately 1.4 million applied while only 485, 338 were admitted; in 2016/17 session, approximately 1.5 million applied while only 506, 837 were admitted; in 2017/18 session, approximately 1.7 million applied while only 566, 719 were admitted; in 2018/19 session, approximately 1.6 million applied while only 586, 498 were admitted; and in 2019/20 session, approximately 1.7 million applied while only 612, 557 were admitted. In the same vein, according to a presentation by the Committee of Vice Chancellors of Nigerian Universities in 2023, the number of students that applied to enter Nigerian universities in 2023, was is approximately 1.7 million and about 700,000 were admitted.

The significance of this is that while the carrying capacity of Nigerian universities is low, the government thinks that the best way to increase it is through the establishment of more universities. This is obvious from the statement accredited to the former Supervising Minister of Education, Barr. Nyesom Wike in Vanguard newspaper (July 4, 2014) which reads thus: 'The carrying capacity of Nigerian universities that stood at 600, 000 was increased to 1 million over a period of three years, through establishment of 14 new federal universities, up grading of Nigeria Police Academy, Wudil to a degree

awarding status, establishment of the National Maritime University, Okerenkoko and increase in the number of federal universities from 28 to 41' This position, unarguably, is a wrong approach to increasing carrying capacity. Instead of abolishmentent of more universities, the existing ones can be expanded in terms of staffing, infrastructure and other variables to admit more students. The proliferation of underperforming universities to increase carrying capacity is not helping the nation! This perhaps explains why no Nigerian public university made it into the top 1,000 in the 2025 Times Higher Education world university rankings.

4. The Seven-Year Moratorium on Establishing Tertiary Institutions – A Welcome Development

The Federal Government's decision to impose a seven-year moratorium on establishing tertiary institutions is in line with the position of this paper. It is, therefore, a welcome development. It acknowledges the harsh realities facing Nigeria's higher education sector. After years of unchecked proliferation of universities, polytechnics, and colleges of education, it is encouraging to see the government heed calls for a more rational and sustainable approach. This move aims to make Nigeria's tertiary education system more meaningful and globally competitive. According to the Education Minister, Tunji Alausa, the moratorium will help curb the unchecked spread of institutions, better manage overstretched resources, tackle poor and uncompetitive academic standards, and allow the government to refocus resources on improving existing institutions by upgrading facilities, recruiting qualified staff, and expanding their carrying capacity. Alausa observed, 'Several federal universities operate far below capacity, with some having fewer than 2,000 students. In one northern university, there are 1,200 staff serving fewer than 800 students. This is a waste of government resources." Nigeria has 72 federal universities, 67 state universities, 42 polytechnics, and 28 CoE. Many of them struggle with poor enrolment. Last year, 199 universities attracted fewer than 100 applicants through JAMB, while 34 had zero applicants! Many polytechnics and CoE face similar issues; 64 colleges reported no applicants.'

5. Conclusion

This paper examined the unnecessary proliferation of universities in Nigeria which the Federal Government recently made an effort to check by imposing a seven-year moratorium on the establishment of new universities. The paper submitted that the existing tertiary institutions in Nigeria grapple with chronic underfunding, inadequate infrastructure, meagre budgetary allocations, poor staff welfare, frequent strikes, theoretical curricula, and ill-equipped libraries and laboratories. Therefore, establishing more universities without adequate funding and proper infrastructure does not only undermine the existential essence of universities, but also turns university education in Nigeria into a mockery. The paper, therefore, sees the seven-year moratorium as a welcome development in Nigeria.

6. Recommendations

Based on the discussions in this paper, the following were recommended:

- The Federal Government should demonstrate political will in implementing the moratorium sustainably. The FG should discourage federal legislators who treat setting up tertiary institutions as constituency projects.
- The National Universities Commission and other governing bodies should act strictly within their mandates. It should scrutinise the establishment of public tertiary institutions with the same rigour applied to private ones. Automatic approvals for public universities undermine their responsibilities to the country.
- Tertiary institutions need adequate funding. Therefore, budgetary support across tertiary sub-sectors must be significantly increased. Additionally, the Federal Government should fulfil the 2009 Memorandum of Understanding signed with ASUU, which pledged N1.2 trillion to fund universities, an essential step towards advancing education.
- The dilapidated facilities in tertiary institutions should be urgent revived. Universities must have well-equipped libraries, and staff welfare needs prioritisation to achieve optimal results.
- A comprehensive audit of tertiary institutions is necessary to identify those that could be merged.
- The low student numbers in northern universities, as observed by the Honourable Minister of Education, partly reflect the broader issue of youth not attending school. The government must implement policies to bring these young people into classrooms.

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Socioeconomic Evaluation of Non-Farm and Farm Income of Smallholder Farmers in Kaduna State, Nigeria

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Abstract. Farmers' income from non-farm and farm activities plays a significant role in rural livelihood. It can address income inequality and contribute to economic growth among rural households. However, some specific factors appear to be push factors driving the income-generating sources. This study identified the drivers of income generated from farmers' activities aside farming and those derived from farm activities in Kaduna State of Nigeria. Survey data were derived from 249 farmers that were sampled using multi-stage sampling method. The information was derived using questionnaires. Descriptive statistics and an ordinary least square regression technique were employed to process the data. The estimated average age obtained for the farmers was 45 years. The respondents were small-scale farmers cultivating on 1.9 hectares of land on the average with 7 years of farming experience. An average household earns ₦1911038.15 and ₦197024.90 annually from farm and non-farm activities respectively Farmers specific factors driving farm income were age, assess to extension services, farming experience, marital status and education. Furthermore, the variation in non-farm income could be explained by changes in age, household size, contact with extension services, marital status and education. The study concludes that policies and programs targeting increasing rural household income must focus on both farm and nonfarm income sources with the inclusion of training and improved agricultural extension delivery.

Keywords: Farm income, non-farm income, smallholder farmers

1. Introduction

In many countries, smallholder farmers play a significant role in the agricultural sector. In Nigeria small scale farmers make up to 80% of the total farmers. They are found producing different food crops and livestock contributing to national food security and general economic growth (Mgbenka and Mbah, 2016). It has been established that most food consume in low-income countries are produced by smallholder farmers and they are backbone of food supply (Chiaka *et al*., 2022). It is therefore sufficed to say that Nigeria population relies on smallholder farmers for food production. The role of small-scale farmers to ensure food security and poverty alleviation are vital and cannot be over looked.

Considering the roles of smallholder farmers in economic growth of many developing countries, level of income is a major determinant and indicator of livelihood as well as a measure of poverty and hunger (Ryś-jurek, 2019). Income diversification is one of the major strategies to boost rural livelihood standard and to achieve growth and development among rural households (Mukaila *et al.*, (2021). The level of economic growth and welfare could be influenced by income level. Furthermore, incidence of poverty and food security could be determined by income level particularly where the majority of household relies on farm activities as their main source of sustenance.

There is a problem of low productivity among farmers in sub–Saharan African (Oluwasola *et al.,* 2012). This could be attributed to the fact that very little is available to invest to increase farm capital stock. The problem is caused by poor income among farmers. Capitalization of farmers' income will continue to be affected except there is increase in farmers' income. Investment is a function of saving and saving is the difference between income and expenditure. This shows the role income plays in farm business. Farm investment is essential and it promotes technology adoption and stimulates input use. Investment is the change in fixed inputs used in production process.

Investment in agricultural activities covers storage, processing and marketing of agricultural products. Sustained investment in technological innovations is capable of ensuring improvement in the quality of physical and human resources base to raise farm-level output is critical to transforming small holder farming system. Increased asset value can improve the equity position of farmers and decision of farmers with respect to investment could be attributed to agricultural development. This can be used to gauge sustainable agricultural production.

It is important to understand and study the factors contributing to the variations in farmers' income because it implications for the reduction of farmers challenges who constantly faced with incidence of poverty, food and nutrition insecurity (W/kidan and Tafesse, 2023). Evaluating farmers' non-farm income will provide useful information to gauge the livelihood status. Small holder farmers are faced with limited land availability. Most small holder farmers cultivate between one and two hectares of land (Lowder *et al*., 2016; W/kidan and Tafesse, 2023) and there is need to increase their farm income to meet up with their consumption level. This therefore exposes farmers to chronic poverty. Hence, diversifying income sources will enhance food security and alleviate poverty. This implied that farmers' income from different sources is important in any development action targeting at improving farmers level of living. This study therefore, considered the factors of farmers' income in the study area. This will assist in any policy formulation that is targeting at improving the level of living among the farmers.

1. Analyzing the factors that influence farm and non-farm income at the farmer level is essential.
2. Understanding the determinants of income for farmers, both on and off the farm, is crucial.
3. Examining the factors affecting farm and non-farm income among farmers is vital.

2. Research Methodology

2.1 Study area

Kaduna State of Nigeria was the study area. The State is geographically located between Latitude 8º59ˆN and 11º 30ˆN of the Equator and Longitude 6º05ˆE and 8º43'E of the Greenwich Meridian. The State has boundaries with five States. These are Katsina, Kano, Plateau, Zamfara, and Nasarawa. The estimated area is 68,000 square kilometers. This could be translated to 7% of Nigeria total land mass. The total land area is about 4.5 million hectares which consist of about 2.2 million hectares. This is made of 1.94 million hectares of upland and 0.08 million hectares of lowland. In terms of climatic condition, the area usually experience between 1524mm and 635 average yearly rainfall with two different seasons (rainy and dry season). The relative humidity is usually below 40 degrees. The dry season often start from October and last between 5-7 months. Agriculture is the main livelihood option among the people because of the suitable arable land that support the production of crops such as maize, millet, cowpea, sorghum and yam. The people of the State live mostly in organized towns and cities (Ike and Idoge, 2006). A large variety of non-farm occupations also exist in the area.

2.1 Sampling procedure and sample size

The study adopted multi - stage sampling techniques in the selection of the respondents. The first stage involves random selection of five (5) Local Government Areas (LGAs). The second involves selection of 15 villages. These were selected across the selected five Government Areas. The population of farmers were obtained from Kaduna State Agricultural Development Agency (KADA) to form the sampling frame out of which 36% of the farmers were selected after the sample size was determined following Yamane, (1967) sample size determination as indicated below:

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

Where n= is a sample size, N= is a sample frame (population sample), α^2= expected margin $(0.05)^2$. A total of 249 respondents were used for the study.

2.2. Data collection and analysis

The use of primary data was involved. Data were collected with the use of structured questionnaire which was administered to the respondents. The collected data were analysed using descriptive statistics and multiple regression analysis. The model was specified as follows:

$$Y = \alpha + \beta X_i + e$$

Where,
Y is the dependent variable (farm and non-farm income), α is the constant term, β is the coefficient, X_i arindependent variables and e is the error term.

3. Results and Discussion

3.1 Socio-demographic status of the respondents

The result in Table 1 showed the socioeconomic profile of the respondents. It was revealed that more than half (57 percent) are below 51 years of age. Only 10.4 percent were greater than 60 years. The estimated

average age was 45 years. This also indicates that the respondents interviewed are still young and are within the active age. This has a good implication in the study area because agriculture is one of the major occupations in most rural community, though older people are always found engaging in agriculture as an income generating activity despite their physical nature they are always found in growing crops and rearing of livestock (Nzabona *et al*., 2013). Majority (89.2) of the respondents were males while only 10.8 were females. This is contrary to the report of Nzabona *et al*. (2013) where majority of their respondents were females because of higher female life expectancy in their study on what influences older persons' engagement in income-generating activities in Uganda. Low participation of women in income generating activities could be linked to inadequate productive resources available to them (Fawhinmi and Adeniyi, 2014). Those that are married among the respondents constitute 97.9 percent. Only 2.1 percent are still single. The implication of marital status is that it will invariable contributed to increase in household size (Torimiro, 2005). Marital status is very important among rural household because it is associated and could be one of the drivers of farm business and livelihood activities because of its role in terms of agriculture labour supply. Household head who is married would have more access to family labour (Amaza *et al*., 2009). Majority (53 percent) of the respondents had household size ranged between 6-10 members per household. The average size of household was 7 members. This indicates that the household size was relatively large. Large household size has been reported to be a proxy to labour availability for income generating activities (Onubuogu *et al*., 2013; Esiobu *et al*., 2014). The respondents had one form of education or the other with majority (96 percent) belonging to social organization. Access to agricultural extension services was poor. Only 10.8 percent had contact with extension agent. This is not a good indication for agricultural production as this will affect adoption and diffusion of innovation. The average farming experience was 6 years. Farming experience is an important factor in farm business as this could influence the level of farm output and productivity. Farming experience could have both negative and positive effect on farm activities. It may be that for a certain period there would be positive effect on production after which the effect may become negative as a result of advancement in farmer's age or in ability to change from old method of farm techniques and practices (Amaza *et al.,* 2009).

Table 1: Socioeconomic profile of the respondents

Variables	Frequency	Percentage
Age (years)		
>31	8	3.2
31-40	60	20.1
41-50	84	33.7
51-60	71	28.5
>60	26	10.4
Average	45	
Gender		
Male	222	89.2
Female	27	10.8
Marital Status		
Married	244	97.9
Single	5	2.1
Household size		
1-5	110	44.1
6-10	132	53.0
>10	7	2.8
Average	7	
Education		
No formal education	76	30.5
Primary	99	39.8
Secondary	58	23.3
Tertiary	16	16.4
Membership of Association		
Yes	239	96.0
No	10	4.0
Extension Contact		
Yes	27	10.8

No	222	89.2
Farming experience (years)		
>11 years	229	92.0
11-20	13	5.2
21-30	5	1.0
>30	7	2.8
Average	6	
Total	249	100.0

3.2 Estimated farm and non-farm income among the respondents

As shown in Table 2, the structure of income among the respondents. The estimated average farm and non-farm incomes per annum by a household are ₦1911038.15 and ₦197024.90 respectively. This implied that an average household earn ₦159,253.20 from farm activities in a month with additional income of ₦16.42. This is a good indication of better level of living among the household in the area. The value of what household earn is greater that minimum monthly living wage of ₦30,000. This could be due to the fact that most farmers are land owners. The implication of this is that smallholder farmers who cultivate their land with access to non-farm income could earn more that wage workers. Also achieving agricultural growth through the adoption of new technologies will enhance rural household living standard.

Table 2: Descriptive statistics of household annual farm and non farm income

Estimates	FI (₦)	NFI (₦)
Mean	1911038.15	197024.90
Standard deviation	254954.28	62660.48
Minimum	1086000.00	116400.00
Maximum	2616000.00	648000.00

FI= Farm Income; NFI =Non Farm Income

3.3 Factors influencing farm and non-farm income

The result of factors influencing farm and non-farm income is presented in Table 3. The coefficient estimated for age was significant and positively related to both farm and non-farm income. This implied that as the age increase, the farm income increases. The implication is that the older respondents earn more from farm activities compared to the young respondents. The estimate obtained for household size was negative and significant at 1 percent level of probability for non-farm income. This implied that as household size income, the income derived from non-farm activities also decreases. This is not surprising because household size is associated with availability of labour. A large household will have access to family labour and participate more in farming than non-farm activities. Contact with extension was positive and significant for both farm and non-farm income. This significant of this variable indicates that it is important in income generating activities among the farmers. This result is in agreement with the report of Mukaila *et al.* (2021) in their study. They found contact with extension as one the drivers of income generation among farm household. They attributed the reason to the dissemination of useful information on best farming practices by the fact that extension agents and the introduction of new techniques to the farmers. Farmers' productivity and income from agricultural activities can be significantly enhanced through access to useful information and the adoption of innovative technologies. Marital status exert positive and significant influence on farm and non-farm income generation among the farmers. This indicates that there is possibility of the married household head to have more income from farm and non-farm activities. This could be linked to the size of the household as married household head tends to have large household size compared to non-married household ahead. The estimated coefficient for education was significant at 5 percent and 1 percent level of probability for farm and non-farm income respectively. This variable exerts positive relationship with farm and non-farm income. This showed that the more educated the respondent is the more the level of farm and non-farm income. Tran et al (2023) stated that education is positively related to agricultural income which could be obtained from crops and livestock. Idowu *et al* (2018) reported that education has significant role on farm household engaging in non-farm activities compared with household who has no formal education.

Table 3: Determinants of farm income

Variables	FI			NFI		
Variables	Coefficient	St. Error	t-value	Coefficient	St. Error	t-value
Age	10123.85 ***	2827.809	3.58	2733.8***	507.5	5.39
Household size	-13397.62	13421.35	-1.00	-8856.6***	2408.8	-3.68
Extension contact	100997.2**	41435.36	2.44	56866.1***	7436.7	7.65
Farming experience	-9217.73**	3763.36	-2.45	-811.1	675.4	-1.20
Gender	119877.1	91011.24	1.32	-7353.2	16334.4	-0.45
Marital status	329382.5**	139891.6	2.35	81206.7***	25107.4	3.23
Education	10055.96**	3889.672	2.59	2080.3***	698.1	2.98
Farm size	29045.79	34919.61	0.83	907.4	6267.2	0.14
Diagnostic statistics						
R-square	0.97			0.93		
F-value	1125.33***			384.5***		

**P<0.05 ***P<0.01 FI=Farm Income NFI=Non-Farm Income

4. Conclusion

The findings of this study revealed that the respondents are within the active age group. More than three quarter are males and married with relatively large household size. The value of what household earn is greater that minimum monthly living wage which could be translated to improved level of living. Some socioeconomic profile such as age, household size, extension contact and education were found associated with farm and non-farm income. This study recommended that all policies targeting at improving the rural people must capture both farm and non-farm activities with attention on farm specific socioeconomic characteristics.

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Digital Socialization and Youth Identity Formation: Towards Addressing Banditry and Kidnapping in Nigeria

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Abstract. This study examines the complex relationship between digital socialization and youth identity formation within the context of rising banditry and kidnapping in Nigeria. As young people increasingly rely on digital platforms for communication, learning, and self-expression, these spaces have become significant agents of social influence—sometimes reinforcing pro-social values, but also exposing youth to narratives that legitimize violence, criminality, and anti-state sentiments. Using a qualitative, interpretive approach, the study analyses how social media interactions, online communities, algorithmic content exposure, and virtual peer networks shape identity construction among Nigerian youth in high-risk environments. Findings highlight that weak digital literacy, online anonymity, economic marginalization, and the glamorization of criminal lifestyles contribute to identity shifts that may predispose vulnerable youth toward banditry and kidnapping. The study argues for a strategic national framework that integrates digital citizenship education, community-driven online counter-narratives, strengthened parental and institutional digital supervision, and socio-economic empowerment initiatives. By addressing how identity is negotiated and contested in digital spaces, the study provides insights into leveraging digital ecosystems for positive youth development, conflict prevention, and long-term national security in Nigeria.

Keywords: Digital socialization; Youth identity building; Banditry; Kidnapping; Online networks; Digital citizenship; Social media influence and Security.

1. Introduction

The rapid expansion of digital technologies has transformed the ways young people interact, learn, and develop their identities in contemporary societies. In Nigeria, widespread access to smartphones, social media platforms, and online communities has created new avenues for youth socialization beyond traditional family and community structures. This form of digital socialization significantly shapes young people's value orientation, behavioural patterns, and aspirations (Adeboye & Olorunfemi, 2022). While digital platforms enable creativity, political participation, and global connectivity, they also expose youth to harmful digital subcultures, misinformation, violence-glorifying content, and deviant peer groups that may influence identity development negatively (Ojebode & Aremu, 2023b).

Nigeria continues to grapple with the alarming rise of banditry, kidnapping, and related violent crimes, especially in the northern regions. Existing studies often attribute these crimes to poverty, unemployment, weak governance, environmental pressures, and proliferation of small arms (Okoli & Ugwu, 2021a). However, there is growing evidence that digital environments—through their anonymity, algorithm-driven content, and peer validation mechanisms—play an increasingly important role in shaping youth worldviews and potentially reinforcing narratives that legitimize violence or criminality (Hassan, 2023). Online platforms have sometimes glamorized criminal lifestyles, disseminated anti-state ideologies, and enabled networks that facilitate violent activities. Yet, the socio-psychological processes through which digital interactions shape youth identity in ways that may connect to banditry and kidnapping remain insufficiently explored.

The motivation for this study stems from the urgent need to understand how digital experiences intersect with identity formation among Nigerian youth at a time of growing national insecurity. Policymakers, community leaders, educators, and security agencies require nuanced insights into how digital socialization contributes to either pro-social or anti-social identity outcomes among young people. Such insights are crucial for developing preventive interventions, digital citizenship frameworks, and counter-narratives that address the root causes of youth involvement in criminal networks rather than merely responding to the consequences.

Despite increasing scholarly attention to cybercrime, online radicalization, and youth violence, a major gap persists in the literature. Few studies have specifically examined the link between digital socialization, identity formation, and the emergence of banditry and kidnapping in Nigeria (Usman & Ibrahim, 2022a). Existing research tends to focus on structural drivers or operational aspects of criminality while overlooking the ways digital interactions shape identity trajectories that may predispose vulnerable youth to deviant behaviour. This gap highlights the need for a deeper exploration of the psychological, cultural, and digital mechanisms underlying youth involvement in violent criminal activities.

The novelty of this study lies in its interdisciplinary approach, integrating digital sociology with peace and security studies to provide a comprehensive understanding of youth criminality. It goes beyond behavioural explanations by focusing on identity formation as a critical dimension of the problem. Additionally, the study adopts a context-specific lens that situates digital identity transformations within Nigeria's socio-political realities, particularly in regions severely affected by insecurity. It also contributes new insights into how digital citizenship education and online counter-narratives can be used strategically to prevent youth recruitment into banditry and kidnapping networks.

2. Literature Review

2.1 Theoretical Framework

Social Identity Theory, as formulated by Tajfel and Turner in 1979, suggests that people obtain part of their self-concept from the social groups they belong to. Identity is determined by three major cognitive processes: social categorization (by which persons categorize themselves and others as members of groups); social identification or the process whereby persons adopt norms, values, and behaviours that characterize their groups; and social comparison, which refers to groups evaluating themselves in relation to others for the purpose of enhanced collective self-esteem. These processes influence how individuals perceive themselves and others and, thereby, influence behavior at both a personal and a collective level.

These identity processes are increasingly operating within digital environments in the digital era. Youth interact, communicate, and construct meaning within these environments. Digital platforms like TikTok, Instagram, WhatsApp, Telegram, and X have become powerful spaces for negotiating identity and maintaining group boundaries more rapidly than in traditional offline arenas. Research evidence indicates that online spaces amplify identity salience by making group symbols, narratives, and norms more visible and accessible (Nweke, 2024). The algorithmic exposure and peer validation mechanisms, like likes and comments, mean that young people are constantly comparing themselves along group lines that continuously shape their digital and offline identities (Sherpa Research, 2016).

SIT is particularly applicable for explaining why the youth in Nigeria would be attracted to either deviant online communities or any other criminal subcultures. Digital platforms facilitate groups that legitimize or glorify violence, materialism, and rebellion; these groups create alternative identities promising belonging, status, and power. Youth who suffer from economic hardship, social exclusion, or weak institutional support may find these groups alluring and adopt their norms and behavioral scripts through continuous digital engagement and exposure (Yusof et al., 2021). A young person, after identifying with such a group, starts to internalize group norms, including justifications of violence or criminality, as SIT would predict.

In contexts of insecurity, like the phenomenon of banditry and kidnapping in Nigeria, the influence of social identity processes becomes all the more salient. Often, criminal networks manifest as highly cohesive groups, replete with symbols, narratives, and moral codes that ensure loyalty and solidarity. Online communication networks-closed WhatsApp groups, Telegram channels, or social media pages-serve as spaces where group identity is narrated, celebrated, and defended. These digital groups often legitimise banditry as an economic or social pathway, framing victims or state actors as outgroups-a fact that has been asserted by SIT in light of ingroup-outgroup distinctions shaping hostile behaviour (UNIDIR, 2024).

It is also the case that the digital environment hastens the diffusion of criminal norms due to peer influence and group reinforcement. Tales of successful kidnappings, shows of firearms, and stories of illicitly acquired wealth spread within groups and foster pride and a sense of superiority among members. This is in line with what SIT theorizes-that people try to maintain a positive group identity and will sometimes adopt behaviors viewed as improving perceived group status, even if those behaviors are harmful (Tajfel & Turner, 1979). Digital socialization, therefore, fortifies an identity foundation on which banditry and kidnapping networks recruit and retain members.

Situating SIT within the context of digital socialization thus provides gainful insights into how to design preventive and rehabilitative interventions. Online counter-narratives, identity-based digital campaigns, and the creation of prosocial youth communities are some strategies that could potentially weaken the appeal of the deviant identities. There is evidence that replacing criminal group identities with alternative positive group memberships, like entrepreneurial networks, educational communities, or civic engagement, reduces vulnerability to criminal recruitment. Nweke, 2024 thus places SIT as a powerful lens through which to examine how digital environments are shaping youth identity and a theoretical foundation from which to address the growing challenges of banditry and kidnapping in Nigeria.

3. Conceptual Framework

3.1 Concept of Digital Socialization

Digital socialization refers to the process through which individuals, especially young people, acquire norms, values, skills, and behavioural patterns through interactions within digital environments. Unlike traditional socialization agents such as family, school, and religious institutions, digital platforms operate as pervasive and continuous spaces where learning occurs experientially and informally. As technology becomes more embedded in everyday life, young people increasingly turn to online environments for information, connection, and identity validation (Livingstone & Third, 2020). This shift has redefined the landscape of social learning, making digital platforms key influencers in youth development.

The widespread adoption of smartphones and social media in Nigeria has intensified this transformation. Digital spaces such as Facebook, TikTok, WhatsApp, and Instagram have become primary communication channels for youth, influencing how they relate with peers, consume information, and express themselves (Adeboye & Olorunfemi, 2022). These platforms foster virtual communities where cultural norms, language patterns, and social expectations are transmitted and reinforced. Consequently, digital socialization shapes how Nigerian youth interpret societal trends, engage with public issues, and perceive their roles in society.

Moreover, digital environments function as powerful socializing agents because they offer interactivity, immediacy, and anonymity. These features provide young people with the flexibility to explore different viewpoints and identities without the constraints associated with face-to-face interactions. Scholars argue that these affordances allow digital platforms to socialize youth more intensely than traditional institutions, given their 24-hour accessibility and global reach (Katz & Crocker, 2021a). Such environments expose users to diverse influences—from peer-generated content to global pop culture—thereby broadening the spectrum of social learning.

Digital socialization produces a mix of positive and negative developmental outcomes. On one hand, it encourages innovation, creativity, digital entrepreneurship, and civic engagement by providing access to educational content and global networks (Katz & Crocker, 2021b; Yahaya, 2023a). Many Nigerian youths have leveraged social media for learning new skills, building online businesses, and participating in social activism. Thus, digital platforms can enhance socioeconomic mobility and promote inclusive knowledge sharing. On the other hand, digital socialization also exposes young people to risks such as misinformation, cyberbullying, online fraud, hate speech, and harmful subcultures. Algorithmic systems curate content that may glamorize risky behaviours, including violence and criminal lifestyles (Katz & Crocker, 2021b; Afolabi & Shadare, 2022). These negative influences can distort perceptions of reality and increase susceptibility to harmful behaviours. In fragile contexts like Nigeria—where economic inequality and weak social structures persist—the adverse effects of digital socialization can be particularly pronounced, making it a double-edged phenomenon.

3.2 Youth Identity Formation in the Digital Age

Identity formation is a critical developmental task during adolescence and young adulthood, involving the exploration and internalization of values, beliefs, and roles. Digital technologies have transformed this process by providing new spaces where identities can be explored, constructed, and displayed. Social media

platforms allow youth to curate aspects of their lives, experiment with multiple personas, and engage with diverse audiences who influence their sense of self (Boyd, 2014). As a result, identity formation in the digital age has become increasingly dynamic and externally oriented.

Drawing from Eriksonian theory, identity formation involves periods of exploration followed by commitment to certain roles and values. Social media accelerates this cycle by providing instant feedback mechanisms—such as likes, comments, and shares—that signal peer acceptance or rejection (Buckingham, 2021a). These social cues influence how young people evaluate their self-worth, aspirations, and social belonging. Digital environments also expose youth to global cultural flows, including fashions, ideologies, and lifestyles, which they integrate into their evolving personal identities.

In Nigeria, digital content plays an especially influential role in shaping youth aspirations and worldview. Weak traditional socialization structures—such as limited mentorship, unstable family systems, and overburdened educational institutions—often leave young people dependent on digital platforms for guidance and identity affirmation (Hassan, 2023). As such, Nigerian youth turn to online communities to define what success, beauty, morality, and modernity mean. This reliance makes digital culture a powerful determinant of identity development.

Where digital platforms foster such positive identity outcomes as empowerment, self-expression, and cultural pride, they equally influence more troubling identity shifts. Social media shapes body image concerns, consumerist behaviors, political polarization, and even religious reorientation among Nigerian youth, studies show (Buckingham, 2021b). These influences thus bring up the complex interplay between digital exposure and social development.

Additionally, the rise of deviant digital identities poses significant societal concerns. Online visibility and peer validation have contributed to the glorification of criminal personas, such as “Yahoo boys,” gang members, and violent subcultures. These identities are often reinforced through music videos, online bragging, and digital peer groups that normalize fraud, violence, and materialism (Ojebode & Aremu, 2023a). When youth perceive such identities as pathways to recognition or economic advancement, they may adopt behaviours that predispose them to anti-social and criminal activities.

3.3 Digital Exposure and Links to Violent Behaviour

Digital socialization can escalate into a risk factor for violence when young people are exposed to harmful ideologies, narratives, and networks online. Scholars argue that social media environments often contain content promoting aggression, fraud, drug use, and hostility toward authority figures (Ojedokun & Idowu, 2021). Continuous exposure to such material may desensitize youth to violence and normalize harmful behaviours. For vulnerable individuals, these online influences can erode moral boundaries and reshape attitudes toward violence.

A key driver of this risk is the algorithmic architecture of digital platforms. Social media algorithms prioritize content that elicits strong emotional reactions, such as anger or excitement, thereby amplifying sensational or harmful materials (Tufekci, 2015). Once a user engages with content related to violence or deviance, the algorithm frequently recommends similar content, creating echo chambers that reinforce violent norms. These digital bubbles can intensify radicalization and encourage identification with deviant subcultures.

In Northern Nigeria, where socio-economic challenges and insecurity are prevalent, the effects of digital exposure can be particularly severe. Studies indicate that some online communities circulate videos of kidnapping operations, armed confrontations, extremist preaching, and celebratory gun displays (Hassan, 2023). Such content may glamorize violent lifestyles or portray criminals as role models. For marginalized youth seeking belonging or economic survival, these online narratives can appear attractive and aspirational.

Furthermore, digital platforms can serve as recruitment infrastructures for criminal and extremist groups. Violent networks exploit social media to disseminate propaganda, recruit members, coordinate activities, and maintain communication. For unemployed or socially alienated youth, these groups may provide a sense of identity, purpose, and community that they lack offline. Exposure to such recruitment strategies increases the likelihood of involvement in violence and organized crime.

The cumulative effect of exposure to violent content, interaction within deviant digital communities, and reinforcement by algorithms can significantly alter youth behaviour and worldview. In contexts where traditional institutions provide limited guidance, digital platforms may shape youths’ perceptions of power, masculinity, and survival. As a result, digital exposure becomes not just a passive influence but an

active contributor to the sociocultural normalization of violence.

3.4 Banditry and Kidnapping in Nigeria: Drivers and Dynamics

Banditry and kidnapping have evolved into major security threats in Nigeria, particularly affecting the North-West and North-Central regions. These crimes have shifted from isolated incidents to systemic forms of violence that disrupt social order, weaken economic activities, and erode community resilience. Scholars emphasize that the rise of banditry is linked to deep structural issues embedded within Nigeria's socio-economic and political landscape, such as persistent poverty, unemployment, and limited state presence in rural areas (Okoli & Ugwu, 2021b). As a result, banditry has increasingly become an alternative economic pathway for marginalized groups who lack access to legitimate livelihoods.

Weak governance and institutional failures further compound the insecurity crisis. Many rural communities suffer from inadequate policing, corruption within security agencies, and slow judicial processes that create impunity for criminal actors (Adewale, 2022a). The absence of effective state enforcement allows bandit groups to exert territorial influence, extort local populations, and establish governance structures parallel to formal authorities. This governance vacuum contributes to the entrenchment of criminal networks and complicates efforts to dismantle them.

Environmental pressures, particularly climate change and resource depletion, have also intensified conflicts that feed into banditry. Desertification, shrinking farmlands, and competition over water sources have escalated farmer-herder clashes, providing fertile ground for violence and criminality (Okoli & Ugwu, 2021a). Many displaced individuals, especially youth from pastoral communities, become vulnerable to recruitment by bandit groups that promise protection, income, or social belonging. Thus, environmental degradation intersects with socio-economic marginalization to fuel the crisis.

Arms proliferation represents another significant driver, enabling bandit groups to operate with heightened sophistication and destructive capacity. Weapons flow across porous borders from the Sahel region, allowing criminal networks to access high-grade rifles, ammunition, and military-style equipment (Adewale, 2022b). These armaments enhance not only the defensive capabilities of bandit groups but also their ability to stage large-scale attacks, kidnap en masse, or resist security interventions. The criminal ecosystem is further supported by informants, intermediaries, and local collaborators who facilitate logistics and provide intelligence.

Recent studies highlight a growing digital dimension to banditry, marking a shift in the operational dynamics of these criminal enterprises. Mobile phones and digital communication tools are now commonly used for ransom negotiation, surveillance, and coordination of attacks (Alubankudi, 2023a). Additionally, videos of attacks or armed displays often circulate online, amplifying public fear and contributing to the mythologization of bandit groups. Despite this evolution, there is limited scholarship exploring how digital identity formation influences youth participation or recruitment into banditry, leaving a critical gap that this study intends to address.

3.5 Intersection of Digital Socialization and Violent Identity Formation

Digital socialization increasingly interacts with the formation of violent identities, particularly among youth who face socio-economic exclusion, limited opportunities, and weak social support systems. Online platforms create alternative spaces where marginalized individuals seek belonging, validation, and recognition that they may not receive in their offline environments (Boyd, 2014). When these digital spaces promote or normalize deviant behaviour, they can shape identity trajectories toward violence or criminality. For example, sensationalized portrayals of armed bandits or criminals on TikTok and Facebook may create fascination or admiration among vulnerable youth (Hassan, 2023).

One of the mechanisms through which this occurs is the symbolic reward system embedded in digital platforms. Likes, comments, shares, and followers create social hierarchies that can elevate criminal personas to celebrity status. This digital visibility encourages imitation, as young people may perceive criminal behaviour as a pathway to recognition or influence. Over time, such exposure rewires social aspirations, making violent or deviant lifestyles appear legitimate or desirable within certain online communities.

Digital anonymity also plays a powerful role in shaping violent identities. Youth can interact with criminal elements, view extremist content, or participate in deviant online forums without facing immediate social or legal consequences (Usman & Ibrahim, 2022b). This reduces inhibitions, accelerates radicalization, and allows individuals to experiment

with violent narratives or behaviours. The anonymity provided by encrypted messaging apps further facilitates connections with criminal networks, enhancing the risk of recruitment into offline violent activities (Alubankudi, 2023b).

Social learning theory provides a useful lens for understanding these processes. The theory posits that individuals learn behaviours through observation, imitation, and reinforcement. Within digital environments, youth repeatedly observe violent acts, narratives, and symbols that are rewarded with attention or praise. Consistent exposure reinforces cognitive scripts that rationalize violence, eventually influencing offline behaviour (Boyd, 2014). As such, digital socialization does not merely reflect youth identities—it actively produces and shapes them.

These dynamics demonstrate that digital platforms serve as both mirrors and architects of violent identity formation. When combined with poverty, unemployment, or weak family structures, digital influences can become decisive factors in pushing youth toward criminal networks, including banditry. Understanding this intersection is therefore essential for developing holistic interventions that address both digital and offline drivers of youth violence.

3.6 Digital Citizenship, Online Safety, and Prevention Strategies

Digital citizenship refers to the responsible, ethical, and safe use of digital technologies, encompassing skills such as critical thinking, empathy, online etiquette, and awareness of digital rights and risks. Scholars argue that enhancing digital citizenship among youth can mitigate online harms by equipping them to navigate misinformation, harmful content, and digital manipulation (Ribble, 2021). However, in many developing countries, including Nigeria, digital citizenship remains an underdeveloped concept. Most young people engage with social media without adequate guidance on ethical digital behaviour or online risk management (Yahaya, 2023b).

Digital literacy levels in Nigeria are generally low, especially in rural and low-income communities. This gap contributes to vulnerabilities such as exposure to cyberbullying, online fraud, and recruitment into deviant groups. Without basic skills in evaluating online information, youth may internalize harmful narratives or fall prey to digital traps created by criminal actors. The absence of structured digital citizenship curricula in schools and communities exacerbates these challenges, leaving young people to learn digital behaviours informally and inconsistently.

Scholars advocate for several preventive strategies to counter the negative impacts of digital socialization. One key intervention is the development of counter-narratives that challenge the glamorization of violence or criminal lifestyles online. These counter-narratives can promote positive role models, emphasize the consequences of criminal behaviour, and provide alternative aspirations for at-risk youth (Adewale, 2022a). When disseminated strategically, they can influence the digital ecosystem in ways that discourage violent identity formation.

Strengthening parental and community digital supervision is another important strategy. Many parents lack the digital skills needed to guide their children online, leading to unsupervised and risky digital engagement. Community-based digital literacy campaigns can bridge this gap by equipping both youth and caregivers with knowledge about online safety, cyber ethics, and responsible digital participation. Such programs have the potential to reduce exposure to harmful content and enhance resilience against digital manipulation.

Integrating digital citizenship into national security strategies represents a promising frontier for policy innovation. Given the role of digital platforms in facilitating criminality and radicalization, preventive measures must be embedded within broader security frameworks. This includes collaboration between government agencies, educational institutions, civil society, and technology companies to promote safe digital environments. Although such approaches are still emerging in Nigeria, they hold significant potential for reducing youth involvement in violence and strengthening digital resilience.

In summary, the literature highlights the profound influence of digital socialization on youth identity formation, particularly in contexts of socio-economic vulnerability. However, existing research largely fails to connect these digital identity processes to the rise of banditry and kidnapping in Nigeria. This study fills that gap by exploring how digital environments shape identity trajectories that may predispose youth to or protect them from involvement in violent criminal activities. It also contributes novel insights into the potential of digital citizenship frameworks as preventive tools against insecurity.

4. Method and Materials

This study employs a qualitative research design grounded in an interpretive paradigm to explore how digital socialization influences youth identity

formation within the context of banditry and kidnapping in Nigeria. Qualitative inquiry is considered appropriate because processes such as identity development, digital behaviour, and socio-cultural interpretations require depth, meaning-making, and contextual analysis rather than numerical measurement (Creswell & Poth, 2018). This design allows for a nuanced exploration of the narratives, online experiences, and symbolic interactions that shape youth motivations, vulnerabilities, and behavioural patterns.

The study is based entirely on secondary data, drawing from peer-reviewed journal articles, policy documents, security reports, digital behaviour studies, and books on youth identity and digital sociology. Secondary data enables broad engagement with interdisciplinary scholarship across digital sociology, criminology, psychology, and peace and conflict studies (Bowen, 2009). Documentary materials reviewed include studies on digital socialization in Africa, youth identity development, online risks and cyber behaviours, and reports on banditry and kidnapping in Nigeria, as well as policy frameworks from national and international security institutions. Sources were accessed through academic databases such as Google Scholar, JSTOR, ResearchGate, and institutional repositories.

Data collection followed a systematic documentary review approach. Keywords such as digital socialization, youth identity, banditry, kidnapping, digital citizenship, online deviance, and youth radicalization guided the search process, which aligned with the PRISMA guidelines adapted for qualitative studies (Moher et al., 2015). Selected documents were subjected to repeated readings to extract relevant concepts, patterns, and relationships. Data analysis was conducted using qualitative content analysis, incorporating both inductive and deductive coding strategies. Inductive coding allowed new themes to emerge from the literature, while deductive coding drew on predefined concepts such as identity formation, digital exposure, and drivers of insecurity (Schreier, 2012). Analysis proceeded through open coding, axial coding, and selective coding, ultimately developing integrated patterns that explain how digital experiences shape identity trajectories linked to violent behaviour.

To maintain methodological rigour, inclusion and exclusion criteria were applied during document selection. Included materials were published between 2010 and 2024; written in English; peer-reviewed or institutionally credible; and focused on digital socialization, youth identity, online deviance, violent crimes in Nigeria, or digital citizenship. Excluded materials consisted of publications before 2010, unverified blogs or opinion pieces, low-credibility sources, and studies unrelated to youth, digital behaviour, or insecurity. Ethical considerations centred on accurate and objective representation of authors' viewpoints, proper citation practices, and cautious handling of sensitive security information, especially regarding operational details or identities of victims and perpetrators (Creswell & Poth, 2018).

5. Results and Discussion of Findings

The analysis of secondary data generated four major themes that illuminate the relationship between digital socialization, youth identity formation, and the rise of banditry and kidnapping in Nigeria. The themes are follows: (1) Digital Environments as New Socializing Agents, (2) Digital Identity Shifts and Youth Vulnerability, (3) Online Glorification of Violence and Criminal Subcultures, and (4) Weak Digital Citizenship and Limited Protective Structures. Each of the aforementioned is elaborated in the subsequent paragraphs.

First, digital environments have evolved into powerful socializing agents for Nigerian youth, functioning in ways that rival or even surpass traditional institutions such as the family, school, and religious organizations. With the ubiquity of smartphones and cheap data access, young people spend a significant portion of their time interacting with digital platforms, making these spaces central to their learning and behavioural conditioning (Adeboye & Olorunfemi, 2022). TikTok, Instagram, WhatsApp, and other platforms increasingly define what young people consider acceptable behaviour, desirable lifestyles, and modern values. The algorithmic design of these platforms ensures constant exposure to peer-driven norms, further reinforcing their role as primary sources of socialization.

The exposure to global cultures, languages, and ideologies through digital media broadens youth perspectives but simultaneously complicates their developmental trajectories. Nigerian youth encounter diverse content—ranging from entertainment to political activism—that shapes their understanding of identity, success, and social belonging. As Livingstone and Third (2020) argue, digital environments introduce complex layers of mediated experiences that influence young people's sense of self far beyond what local social institutions traditionally provided. This global exposure creates hybrid identities that blend local realities with aspirational digital cultures.

Digital platforms also shape interpersonal relationships by defining how young people communicate, negotiate friendships, and build social networks. Many youths learn communication norms online, adopting humour styles, slang, emotional expressions, and relationship expectations modeled by digital influencers and social media communities (Ojedokun & Idowu, 2021). The preference for online communication over face-to-face interaction further cements digital platforms as the centre of contemporary youth socialization. Consequently, the shift from traditional to digital socialization affects emotional development, conflict resolution skills, and the value placed on community life.

Peer validation remains a dominant force behind digital behaviour, with likes, shares, and comments functioning as modern tools of social approval. Nigerian youth increasingly equate digital engagement with personal worth, leading to behaviours aimed at maintaining online popularity or relevance (Livingstone & Third, 2020). For youth living in economically fragile environments, this validation often replaces traditional support systems weakened by poverty, displacement, or institutional failures. This dynamic amplifies the influence of digital norms over offline expectations.

The implications of this shift are profound, particularly in regions of northern Nigeria where structural vulnerabilities heighten dependence on digital spaces for identity construction and social learning. Weak educational systems, family instability, and limited recreational opportunities make digital platforms the default source of information and guidance for many young people. As Ojedokun and Idowu (2021) observe, when traditional socializing structures weaken, youth gravitate toward digital environments as alternative communities. This transformation signals the need for policy and social interventions that recognize the centrality of digital platforms in shaping youth behaviour, aspirations, and worldviews.

Second, digital identity shifts and youth vulnerability is an important theme of this study. Digital platforms have become critical sites for identity formation among Nigerian youth, enabling constant experimentation with personas, styles, and affiliations. Online spaces provide young people with opportunities to construct and showcase identities that may differ significantly from their offline realities. According to Boyd (2014), the digital environment facilitates identity rehearsal, where youth try out ideas, behaviours, and self-presentations in search of belonging. This process allows for creativity but also exposes youth to the influence of online communities with questionable norms.

The formation of digital identities is increasingly driven by trends, viral content, and influencer lifestyles that shape what young people perceive as desirable or aspirational. For many Nigerian youths, aligning with online cultures such as activism, fashion, music, or cyber subcultures becomes a way to gain digital recognition and emotional validation (Okoro & Musa, 2022a). These identities, however, may conflict with societal expectations or embed values that normalize deviance. Youth adopt online personas not merely for entertainment but as survival strategies in environments marked by exclusion and socio-economic uncertainty.

A growing concern is the absorption of harmful narratives circulated within digital communities that promote rebellion, hostility toward the state, or engagement with criminal lifestyles. Usman and Ibrahim (2022a) note that vulnerable youth—particularly those facing unemployment or marginalization—are most likely to internalize narratives presenting violence or criminality as legitimate pathways to survival. This trend is exacerbated by algorithms that amplify content similar to what users already engage with, creating echo chambers that reinforce deviant identity formations.

Youth vulnerability intensifies when offline anchors such as family guidance, school engagement, or community mentorship are weak or absent. Without stable offline identity frameworks, young people depend heavily on digital cues to navigate social expectations and self-perception (Boyd, 2014). In such contexts, extremist, hyper-sexualized, or violent digital identities become appealing because they offer pathways to recognition, empowerment, or imagined success. The digital environment thus becomes both a refuge and a risk factor for youths navigating uncertain futures.

The findings underscore the need for structured interventions that strengthen offline support systems, thereby reducing the reliance on digital identity formation. Community engagement programs, mentorship initiatives, and digital literacy education can help youth critically assess online influences and construct healthier identities. As Okoro and Musa (2022b) emphasize, empowering youth with critical awareness reduces susceptibility to harmful online narratives. Addressing digital identity vulnerability is therefore essential for broader efforts to prevent youth involvement in crime, extremism, and anti-social behaviour.

Third, online glorification of violence and criminal subcultures is an essential part of the digital sphere which has become a fertile ground for the glorification of violence, particularly through content portraying bandits, militants, and cybercriminals as powerful and successful. Viral videos and images frequently showcase bandits celebrating after raids, brandishing weapons, or flaunting ransom proceeds, which circulate without adequate monitoring or removal (Hassan, 2023). These portrayals transform criminality into a spectacle that attracts the attention of impressionable youth seeking empowerment, recognition, or economic opportunity.

The normalization of violence online contributes to the social construction of criminal subcultures that appear glamorous or heroic. As Adewale (2022a) argues, criminal groups strategically use digital channels to project attractive narratives that frame illegal activities as legitimate responses to injustice or poverty. This framing resonates deeply with young people who feel disillusioned with societal inequalities or who perceive limited opportunities for upward mobility. The visibility of criminal lifestyles online further blurs the lines between entertainment and real-world violence.

Moreover, digital platforms serve as recruitment channels for criminal groups seeking to exploit vulnerable youth. Recruiters leverage messaging apps, social media posts, and encrypted channels to target individuals with promises of wealth, respect, and protection (Adewale, 2022b). Once youth engage with such content, platform algorithms reinforce their exposure by recommending similar posts and videos, deepening their immersion in violent digital ecosystems (Tufekci, 2015). This cyclical reinforcement accelerates normalization and potential adoption of criminal ideologies.

The glamorization of banditry and violent subcultures simultaneously reshapes youth perceptions of success and social mobility. In regions plagued by poverty, unemployment, and insecurity, many young people interpret the digital celebration of bandits as evidence that criminality is rewarded more than legitimate labour. This perception encourages imitation and admiration of violent actors, positioning them as role models in the absence of accessible positive alternatives (Hassan, 2023). The symbolic power attached to violence thus becomes a form of social capital.

Addressing the digital glorification of violence requires a multi-layered approach involving stronger content regulation, counter-narrative campaigns, and community sensitization. Governments, tech companies, and civil society must collaborate to ensure the removal of violent content and the promotion of alternative narratives that emphasize peace, resilience, and legitimate pathways to success. As Tufekci (2015) notes, algorithmic systems must be designed with safety considerations to prevent harmful content amplification. Without proactive interventions, digital platforms will continue reinforcing criminal subcultures among vulnerable youth.

Fourth, poor digital citizenship and few protective structures is found in this study as a crucial factor. The findings demonstrate that many Nigerian youths lack adequate digital literacy, leaving them vulnerable to misinformation, manipulation, and risky online behaviours. Digital citizenship is defined as the responsible and ethical use of digital technologies—remains poorly understood across many communities (Ribble, 2021). Schools rarely include digital literacy education in their curricula, leaving students unprepared to navigate the complexities of online environments. This deficiency is particularly concerning given the rapid expansion of digital access across Nigeria.

Parents and guardians also face significant challenges in providing digital supervision due to limited digital skills or lack of awareness about online risks (Afolabi & Shadare, 2022). Many adults cannot differentiate between credible and harmful content, making it difficult to guide youth or establish protective boundaries. This weak intergenerational digital awareness creates a gap in support structures, allowing youth to explore digital spaces without critical oversight. Such unsupervised consumption increases susceptibility to harmful ideologies, scams, and predatory recruitment.

The absence of national or institutional digital citizenship frameworks further deepens youth vulnerability. In Nigeria, there are few coordinated initiatives that promote responsible online behaviour, data privacy awareness, or cyber safety protocols for young people (Yahaya, 2023c). Most digital education programs are donor-driven or limited to urban centres, leaving rural and low-income youth particularly exposed. These disparities create uneven digital competencies across socio-economic groups, reinforcing existing inequalities.

Weak digital citizenship also contributes to identity distortion, misinformation spread, and participation in harmful online trends. Without skills in critical

thinking and content verification, many youths accept online narratives uncritically, regardless of their potential harm (Ribble, 2021). This vulnerability is exploited by criminal groups, political actors, and extremist networks that use digital platforms to manipulate emotions, recruit followers, or incite violence. Youth unprepared to question online messages become easy targets in these dynamics.

Strengthening digital citizenship emerges as a critical pathway for safeguarding youth from online risks and reducing their likelihood of engaging in banditry, cybercrime, or extremist activities. Integrating digital ethics, cyber safety, and critical thinking into school curricula and community programs is essential for building resilience. As Ribble (2021) argues, digital citizenship should be treated as a societal priority in the digital age. Empowering youth with these competencies not only protects them but also contributes to national security and social stability.

In a nutshell, the results collectively show that digital socialization influences youth identity formation in complex ways, shaping both prosocial and antisocial trajectories. When combined with Nigeria's socio-economic vulnerabilities, weak governance, and security challenges, digital influences can facilitate pathways into banditry and kidnapping. The discussion demonstrates the need for holistic interventions involving digital literacy, youth engagement, online regulation, and targeted counter-narratives to mitigate emerging risks.

6. Implications of the Study

The findings of this study carry several significant implications for policy, practice, and future research.

First, they underscore the urgent need for the Nigerian government to integrate digital citizenship and online safety education into school curricula. As digital socialization increasingly shapes youth identity, empowering students with skills for critical engagement, responsible participation, and ethical online behavior becomes essential for preventing vulnerability to criminal influences.

Second, the study emphasizes the role of families and communities in the monitoring and guidance of youths' online experiences. Building on more rigorous parent–youth communication, enhanced digital parenting literacy, and setting up community-based mentorship structures would have an indirect impact on mitigating the impact of hazardous online messages.

Third, the study reveals an important implication for security agencies and policymakers. Since online platforms influence the recruitment, radicalization, and coordination strategies of individuals involved in banditry and kidnapping, there is a need for a multidimensional security response that incorporates digital surveillance, early-warning indicators, and youth-centered online counter-narratives. These strategies should be implemented ethically, ensuring respect for privacy rights while prioritizing national security.

Fourth, the study contributes to the practice of social work and youth development by emphasizing the role of psychosocial interventions. Practitioners must be equipped to address identity crises, digital peer pressure, and emotional vulnerabilities that may draw youth toward criminal subcultures. Interventions should be rooted in digital-era realities, integrating offline and online behavioral support systems.

Fifth, the findings imply that civil society organizations and tech companies have important roles to play. Partnerships should be developed to promote content moderation, reduce the visibility of criminally glamorized material, and amplify positive youth development stories. Technology companies can contribute by strengthening algorithmic transparency and providing tools that help youths control their digital experiences.

Finally, the study has implications for future research, suggesting the need for interdisciplinary exploration of digital socialization, youth psychology, and criminology. Researchers may examine comparative contexts, longitudinal changes in digital identity formation, and the impact of emerging technologies such as AI-driven content generation and virtual communities. Overall, the implications point toward a comprehensive and collaborative approach to addressing youth involvement in banditry and kidnapping in Nigeria through an informed understanding of digital socialization processes.

7. Conclusion and Recommendations

This study highlights the pivotal role of digital socialization in shaping youth identity formation and its implications for banditry and kidnapping in Nigeria. Findings indicate that online platforms serve as powerful socializing agents, influencing youths' perceptions, behaviours, and affiliations. Exposure to harmful content, glorification of criminal subcultures, and weak digital literacy contribute to identity shifts that increase vulnerability to involvement in violent criminal activities. Conversely, digital spaces also

offer opportunities for positive socialization, skill acquisition, and civic engagement if properly guided. Addressing these dynamics requires an integrated approach that combines digital literacy, community engagement, policy interventions, and preventive security strategies. By understanding the interplay between digital environments and youth identity, stakeholders can design effective interventions to curb youth participation in banditry and kidnapping while promoting positive development and social resilience. Based on the overall findings of the study, the following recommendations are made:

Schools, communities, and educational authorities should integrate digital literacy and citizenship education into curricula to equip youths with skills for critical evaluation of online content, responsible participation, and ethical digital behaviour.

Parents, guardians, and community leaders should actively monitor and guide youths' online activities, fostering open communication, mentorship, and supervision to counter negative digital influences.

Security agencies, civil society organizations, and media platforms should create and promote online content that challenges the glorification of violence and criminal lifestyles, offering positive role models and narratives that encourage lawful and pro-social behaviour.

Policymakers should adopt multidimensional strategies that combine traditional security measures with digital monitoring, early-warning systems, and collaboration with tech companies to address online recruitment and radicalization ethically and effectively.

Government and non-governmental organizations should provide socio-economic opportunities, vocational training, and psychosocial support to vulnerable youth, reducing the allure of criminal networks by offering alternative pathways for recognition, income, and social belonging.

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Oil-Derived Polycyclic Aromatic Hydrocarbons and Total Petroleum Hydrocarbons in Surface Water of Okpare Olomu River, Niger Delta: Contamination Levels and Risk Evaluation.

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Abstract. This study investigates the contamination of surface water in the Okpare Olomu River, an oil-producing region in the Niger Delta, Nigeria, focusing on polycyclic aromatic hydrocarbons (PAHs) and total petroleum hydrocarbons (TPHs). Surface water samples from four stations were analyzed using gas chromatography. Sixteen priority PAHs were detected, with total concentrations ranging from 1006.19 µg/L at Station 1 to 2022.26 µg/L at Station 3, indicating a predominantly petrogenic origin. Twenty-eight TPH compounds were identified, with total concentrations ranging from 1914.31 to 5621.50 µg/L. Station 4 exhibited the highest TPH levels, followed by Stations 2, 1, and 3. Concentrations exceeded Nigerian and international guideline limits by several orders of magnitude, with WHO's 10 µg/L guideline for drinking water surpassed by over 500-fold at some stations. Diagnostic ratios and the presence of low molecular weight hydrocarbons suggested crude oil–related inputs alongside evidence of weathering and partial biodegradation. Statistical analyses, including ANOVA and multivariate methods, confirmed significant spatial variation and a strong positive association between PAHs and TPHs, reflecting common pollutant sources. The contamination levels pose serious ecological risks to aquatic biota and potential human health hazards through water and food chain exposure. These findings align with earlier reports of petroleum hydrocarbon pollution in the Niger Delta but highlight even higher contamination levels in this locality. The study underscores the urgent need for remediation, continuous monitoring, and stricter enforcement of environmental regulations to protect the ecosystem and dependent communities

Keywords: Total Petroleum Hydrocarbons (TPH), Polycyclic Aromatic Hydrocarbons (PAHs), Oil Pollution, Okpare Olomu River, Ecological Risk Assessment, Niger Delta

1. Introduction

Rivers and streams are essential natural resources that support domestic, agricultural, and industrial activities. However, they are increasingly exposed to pressures from both natural processes and human activities. When contaminant levels surpass the natural self-purification capacity of aquatic systems, the quality of water deteriorates, threatening aquatic organisms and human health (Boyd, 2020). In regions where crude oil production dominates, hydrocarbon pollution is a major concern because of its persistence, toxicity, and long-term ecological impacts.

Among petroleum-related pollutants, polycyclic aromatic hydrocarbons (PAHs) and total petroleum hydrocarbons (TPHs) are of particular interest due to their widespread occurrence and health significance. PAHs are a group of hydrophobic organic molecules that enter aquatic environments primarily through oil spills, petroleum discharges, atmospheric fallout, and incomplete combustion of fossil fuels. They are resistant to degradation, tend to accumulate in sediments and living organisms, and several congeners are classified as carcinogenic and mutagenic, making them priority pollutants under USEPA regulations (Nasr *et al.,* 2012; Leon *et al.,* 2014; Dong *et al.,* 2021). TPHs, on the other hand, represent a complex mixture of aliphatic and aromatic hydrocarbons and are often measured collectively as an indicator of petroleum contamination. Elevated concentrations of TPHs in aquatic systems can lower dissolved oxygen, disrupt aquatic balance, and pose chronic health threats when humans consume contaminated water or

aquatic species (ATSDR, 1999; Pampanin and Sydnes, 2010; Inyang *et al.,* 2018).

The sources of hydrocarbon contamination in surface waters are diverse, ranging from crude oil extraction and pipeline failures to artisanal refining, industrial effluents, and surface runoff (Chikere *et al.,* 2009; Anyanwu *et al.,* 2021). In the Niger Delta, decades of intensive petroleum exploitation have resulted in extensive environmental degradation. Numerous studies have linked these activities to the contamination of rivers, creeks, and wetlands, with serious implications for biodiversity, fisheries, and human well-being (Eguvbe *et al.,* 2015; Anyanwu *et al.,* 2021). Hydrocarbon presence in water alters chemical and physical properties, reduces water quality, and adversely affects aquatic biodiversity and ecological services (Boyd, 2020; Tundu *et al.,* 2018; Wen *et al.,* 2007). The Okpare Olomu River, located in Ughelli South, Delta State, is a water body of both ecological and socio-economic significance. It provides drinking water, supports fishing and farming, and sustains numerous domestic uses for local communities. Despite this importance, comprehensive investigations of hydrocarbon levels in the river remain scarce. Preliminary reports indicate the occurrence of petroleum hydrocarbons and related ecological risks (Diejomaoh and Okoro, 2024). However, detailed assessments are lacking, and this knowledge gap limits the effectiveness of monitoring and management efforts. In view of this, the present study examines the concentrations and patterns of PAHs and TPHs in the Okpare Olomu River and evaluates their potential ecological and human health implications.

1.1 Climatic Conditions

The climate of the region is typically equatorial**,** with two dominant seasons a humid rainy season and a relatively dry season. Annual rainfall is heavy, averaging around 3,000 mm, and is most intense between April and September, while a shorter dry season occurs between November and March (Agbaire and Emoyan, 2012; Okumagba and Ozabor, 2014). Humidity levels are generally high in the wet months, while the dry season is marked by increased temperatures. Mean annual temperature is approximately 30°C**,** with average daily maximum values between 28°C and 33°C and minimum values between 22°C and 26°C ([19] Okumagba and Ozabor, 2014).

2. Materials and Methods: Study Area

This investigation was carried out in Okpare Olomu, situated within Ughelli South Local Government Area **of** Delta State, Nigeria, at approximately Latitude 5°30′N and Longitude 6°00′E**.** The sampling points were carefully selected based on the level of human activity in the vicinity and documented cases of oil spill incidents. Delta State occupies a landmass of about 16,842 km² (Ebewore, 2020) and lies in the tropical rainforest ecological zone of southern Nigeria. The area is ecologically diverse, supporting numerous terrestrial and aquatic organisms, but is also highly vulnerable to oil exploration–related disturbances (NDES, 1997; Uyigue and Agho, 2007; Ekpo *et al.,* 2018).

2.1 Sampling Design and Locations

Surface water samples were collected from four monitoring stations along the Okpare Olomu River to capture spatial variations in hydrocarbon contamination. The GPS coordinates for each location are:

Station 1 / Ejeba Okpare	N 05º 27. 795’	E 005º 54. 409’
Station 2 / Uhrovwodo Okpare	N 05º 27. 600’	E 005º 53. 980’
Station 3 / Ogbe Okpare	N 05º 27. 115’	E 005º 53. 742’
Station 4 / Arovie Okpare	N 05º 25. 859’	E 005º 53. 569’

Sampling campaigns were conducted monthly over a 12-month period (January–December 2020) to encompass both wet and dry seasonal dynamics. A map illustrating the study area and sampling sites is presented in Figure 1**.**

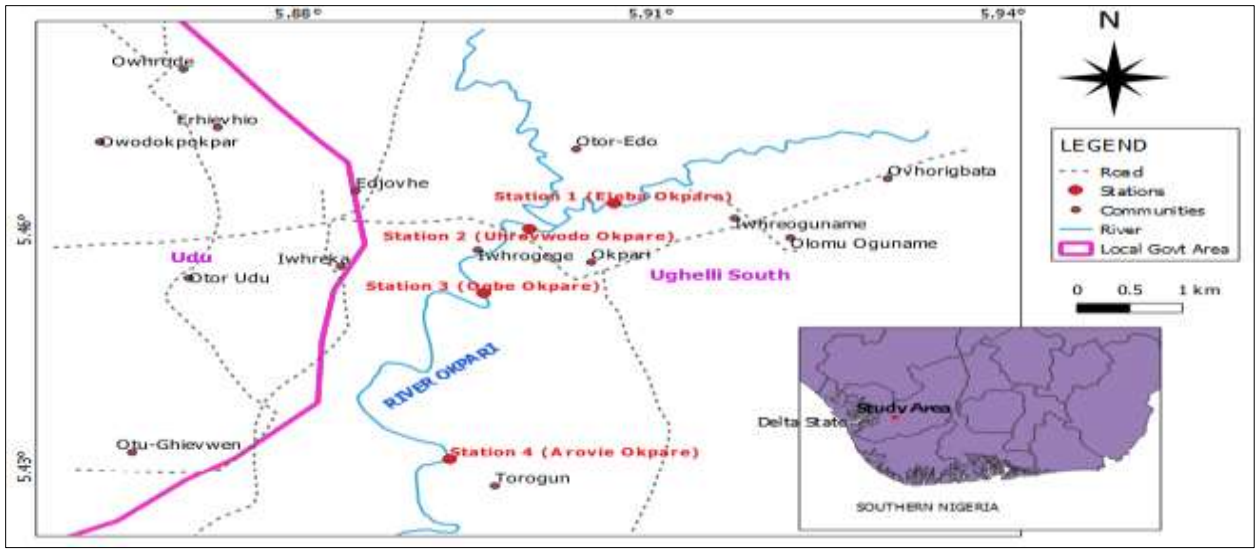

Figure 1: Map of Ughelli South showing water and sediment sampling stations
Source: ArcGIS Map

2.2 Sampling Periodicity

The four sampling stations were monitored quarterly over a one-year period, resulting in five separate field campaigns**.** During each campaign, five replicate samples were collected from each station to ensure reliability and representativeness of the data. Field sampling activities were typically carried out between 07:00 and 11:00 hours (Nigerian time) to minimize diurnal variations in water quality parameters. Sampling commenced at Station 1 (upstream) and proceeded sequentially to Station 4 (downstream)**.** At each location, surface water samples were collected simultaneously for the analysis of all targeted parameters, including hydrocarbons. Prior to each field trip, all sampling equipment and analytical devices were inspected and calibrated according to the manufacturer's specifications to ensure accuracy and data integrity.

2.3 Methods for Polycyclic Aromatic Hydrocarbons (PAHs) and Total Petroleum Hydrocarbons (TPHs) Analysis:

2.3.1 Sample Extraction and Cleanup

The determination of PAHs and TPHs in water samples was performed using a modified USEPA ([2002) method for the gas chromatographic analysis of diesel-range organics (DRO). Soxhlet extraction was employed for hydrocarbon recovery. A 10 mL aliquot of each water sample was digested using an aluminum block digester (BD 110) after adding 4 mL perchloric acid, 20 mL concentrated nitric acid, and 2 mL concentrated sulfuric acid**.** The mixture was heated until the appearance of white fumes and a clear solution was obtained. The extract was evaporated to near dryness using a rotary vacuum evaporator maintained at 40 °C.

For sample cleanup, the residue was reconstituted with n-hexane and transferred onto a 5 mL Florisil column. Florisil (magnesium silicate, 60–100 mesh) was pre-activated by oven-heating at 130 °C for 15 h and stored in a desiccator until use. A mixture of 1 g Florisil and 0.5 g anhydrous sodium sulfate (Na_2SO_4) was packed into an 8 mL glass column plugged with glass wool. The column was conditioned with 5 mL n-hexane before loading the extract. After sample loading with a disposable Pasteur pipette, each evaporating flask was rinsed twice with 1 mL n-hexane and added to the column. The eluate was collected, rotary-evaporated to dryness, and finally re-dissolved in 1 mL n-hexane for subsequent chromatographic analysis.

2.3.2 Polycyclic aromatic hydrocarbon analysis

Polycyclic aromatic hydrocarbons (PAHs) were quantified using an HP 5890 PLUS II gas chromatograph (Hewlett-Packard, USA) equipped with a Flame Ionization Detector (FID) and an HP 7353 auto-sampler. The system was fitted with an HP-5 capillary column (30 m × 0.32 mm internal diameter × 0.5 µm film thickness). Nitrogen served as the carrier gas, and the injection port was operated at a temperature of 250 °C. The detector temperature was maintained at 350 °C to prevent analyte condensation. One microlitre of each sample extract was injected into the column in split mode. The oven temperature was initially set at 100 °C and held for one minute,

then ramped at a rate of 4 °C per minute to 200 °C, held for one minute, and subsequently increased at 5 °C per minute to 320 °C, giving a total run time of approximately 51 minutes. Data acquisition and processing were carried out using Agilent ChemStation software.

2.3.4 Total Petroleum Hydrocarbon Analysis

Similarly, total petroleum hydrocarbons (TPHs) were analyzed using the same HP 5890 PLUS II GC-FID system with identical column and auto-sampler specifications. The carrier gas was nitrogen, while hydrogen and compressed air served as auxiliary gases. The injection port and detector were maintained at 250 °C and 350 °C, respectively, and an injection volume of 1 µL was used. The oven temperature program for TPH analysis differed slightly, with an initial setting of 50 °C, followed by a ramp of 5 °C per minute to 280 °C, which was held for six minutes, resulting in a total run time of approximately 52 minutes. All gas flows, split ratios, injection and detector temperatures were optimized and verified prior to analysis, and the GC system was calibrated with appropriate hydrocarbon standards to ensure accurate and reliable quantification.

2.4 Instrument Calibration and Quality Control

All gas flow rates, split ratios, injection, and detector temperatures were optimized and verified before analysis to ensure data reliability. The GC system was checked for leaks and calibrated using appropriate hydrocarbon standards prior to sample runs. Detector temperatures were maintained at the upper end of the oven range to minimize analyte condensation or precipitation.

2.5 Statistical Analysis

Statistical analyses were performed using Microsoft Excel, SPSS version 20.0 and PAST4. Descriptive statistics summarized the data, while one-way ANOVA assessed differences in PAH and TPH concentrations among stations; significant results ($p < 0.05$) were further examined using Duncan's Multiple Range test. Multivariate analyses, including cluster analysis (PAST4) and principal component analysis with varimax rotation (R), were applied to explore patterns among variables, and Pearson correlation was used to evaluate relationships between parameters.

3. Results

The concentrations of polycyclic aromatic hydrocarbons (PAHs) detected in water samples from the Okpare Olomu River are summarized in Table 1. Of the sixteen (16) PAH compounds regulated by the United States Environmental Protection Agency (USEPA[20]) due to their potential human and ecological health effects, twelve (12) were detected across the sampling stations. These included naphthalene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, chrysene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene and benzo(g,h,i)perylene. The detected PAHs were classified into low molecular weight (LMW) PAHs (2–4 fused aromatic rings) and high molecular weight (HMW) PAHs (5–6 fused aromatic rings). The LMW PAHs comprised naphthalene, acenaphthene, fluorene, phenanthrene, anthracene, and fluoranthene, whereas the HMW PAHs included pyrene, chrysene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene. Four PAHs fluoranthene, benzo(a)anthracene, benzo(b)fluoranthene and benzo(k)fluoranthene were not detected in any of the water samples. Statistical analysis revealed no significant variation ($p > 0.05$) in PAH concentrations among the four sampling stations.

Table 1: Polycyclic Aromatic Hydrocarbons (PAHs) content of surface water samples at four sampled stations
x ± SD = average mean generated from values across the months per station, ± standard deviation; min–max = minimum and maximum values for each parameter per station; post hoc = values with different superscripts (a > b > c > d) are significantly different ($p < 0.05$ or 0.01) while values with same superscript are not significantly different ($p > 0.05$).
*$p < 0.05$ (significant difference)
**$p < 0.01$ (highly significant difference)

	Station 1 $\bar{x}$±SD (Min-Max)	**Station 2** $\bar{x}$±SD (Min-Max)	**Station 3** $\bar{x}$±SD (Min-Max)	**Station 4** $\bar{x}$±SD (Min-Max)	p-Value
Naphthalene	44.311±88.602 (0.010-177.213)	71.043±142.067 (0.010-284.143)	602.133±1204.247 (0.010-2408.503)	208.197±416.374 (0.010-832.757)	p>0.05
Acenaphthylene	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	p>0.05
Acenaphthene	735.376±864.687 (0.010-1670.741)	1004.250±1159.741 (0.010-2030.989)	1071.176±1239.568 (0.010-2242.342)	965.824±1121.931 (0.010-2081.638)	p>0.05
Fluorene	36.207±72.393 (0.010-144.797)	3.793±7.565 (0.010-15.140)	11.552±23.084 (0.010-46.178)	14.155±28.290 (0.010-56.590)	p>0.05
Phenanthrene	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	41.724±83.428 (0.010-166.867)	26.259±52.497 (0.010-105.004)	p>0.05
Anthracene	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	24.365±48.710 (0.010-97.429)	29.920±59.821 (0.010-119.652)	p>0.05
Fluoranthene	10.495±20.970 (0.010-41.951)	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	p>0.05
Pyrene	171.908±202.645 (0.010-393.805)	238.021±319.686 (0.010-676.032)	271.343±285.748 (0.010-607.166)	297.151±352.690 (0.010-694.291)	p>0.05
Chrysene	7.940±15.860 (0.010-31.730)	9.309±18.598 (0.010-37.206)	0.010±0.000 (0.010-0.010)	5.397±10.774 (0.010-21.557)	p>0.05
Benzo(a)anthracene	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	p>0.05
Benzo(b)fluoranthene	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	p>0.05
Benzo(k)fluoranthene	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	p>0.05
Benzo(a)pyrene	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	34.282±39.574 (0.010-68.556)	P>0.05
Indeno(1,2,3-cd) pyrene	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	12.609±14.548 (0.010-25.209)	P>0.05
Dibenz(a,h)anthracene	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	255.250±294.754 (0.010-515.490)	P>0.05
Benzo(g,h,i)perylene	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	13.244±15.368 (0.010-28.478)	P>0.05
∑PAH	1006.198±969.018 (0.010-2064.546)	1326.385±1356.556 (0.010-2707.021)	2022.258±1359.636 (0.010-2849.508)	1862.221±1578.934 (0.010-3413.662)	p>0.05

Across the study area, LMW PAHs accounted for a higher proportion of the detected compounds compared to HMW PAHs. The distribution of LMW PAHs followed the order: Station 3 (1750.95 µg/L) > Station 4 (1244.36 µg/L) > Station 2 (1079.09 µg/L) > Station 1 (826.39 µg/L). In contrast, HMW PAHs were detected at lower concentrations and followed the trend: Station 4 (617.93 µg/L) > Station 3 (271.34 µg/L) > Station 2 (247.33 µg/L) > Station 1 (179.85 µg/L). The total PAH concentrations across the river showed contamination at varying levels, with the overall distribution pattern: Station 3 (2022.26 µg/L) > Station 4 (1862.29 µg/L) > Station 2 (1326.42 µg/L) > Station 1 (1006.24 µg/L). These findings are consistent with previous studies reporting PAHs in aquatic ecosystems at levels that raise concerns regarding persistence and potential bioaccumulation.

At the individual station level, notable variations were observed in the composition of PAHs across the study area. In Station 1, six compounds accounted for the highest contributions, with acenaphthene (735.38 µg/L) being most abundant, followed by pyrene (171.91 µg/L), naphthalene (44.31 µg/L), fluorene (36.21 µg/L), fluoranthene (10.50 µg/L), and chrysene (7.94 µg/L). The distribution pattern in this station varied considerably across sampling months, reflecting uneven temporal occurrence. In Station 2, five dominant PAHs were recorded, led by acenaphthene (1004.25 µg/L), then pyrene (238.02 µg/L), naphthalene (71.04 µg/L), chrysene (9.31 µg/L), and fluorene (3.79 µg/L); their concentrations fluctuated monthly, further indicating temporal variation. Station 3 similarly exhibited six key PAHs, where acenaphthene (1071.18 µg/L) had the highest concentration, followed by naphthalene (602.13 µg/L), pyrene (271.34 µg/L), phenanthrene (41.72 µg/L), anthracene (24.37 µg/L), and fluorene (11.52 µg/L); unlike Stations 1 and 2, PAH concentrations at this site were more evenly distributed throughout the sampling period. In Station 4, eleven

PAHs were detected, with acenaphthene (965.82 µg/L) dominating, followed by pyrene (297.15 µg/L), dibenz(a,h)anthracene (255.25 µg/L), naphthalene (208.20 µg/L), benzo(a)pyrene (34.28 µg/L), anthracene (29.92 µg/L), phenanthrene (26.26 µg/L), fluorene (14.16 µg/L), benzo(g,h,i)perylene (13.24 µg/L), indeno(1,2,3-cd)pyrene (12.61 µg/L), and chrysene (5.40 µg/L); compared to the other stations, monthly concentrations here showed relatively even distribution. Overall, these spatial trends confirm that PAH contamination was widespread throughout the Okpare Olomu River, with the lower molecular weight fractions dominating the overall profile. Figure 2 shows the spatial and temporal variation in PAH compounds in at the sampled stations during sampling months.

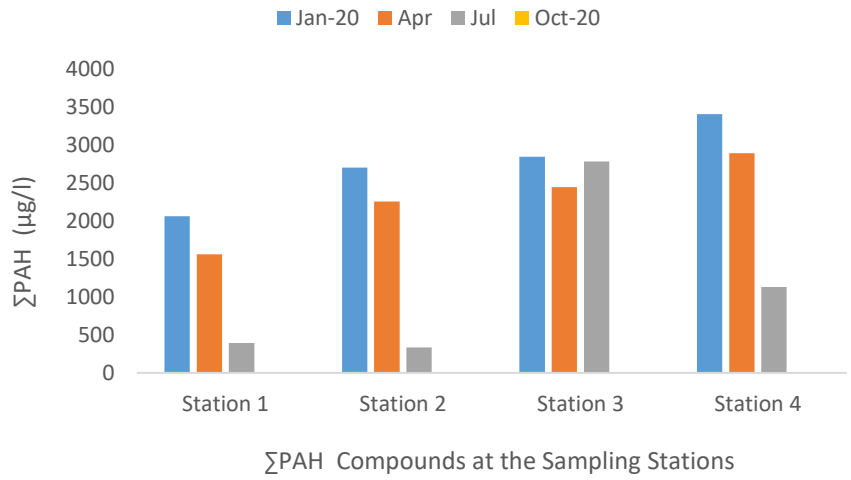

Figure 2 shows the spatio-temporal variation in ∑PAH compounds at the sampled stations during sampling months.

Cluster Analysis for PAHs in Surface Water from Okpare Olomu River

The Euclidean similarity and distance indices for polycyclic aromatic hydrocarbons (PAHs) in surface water from the Okpare Olomu River are presented in Table 2, while Figure 3 illustrates the dendrogram generated from the cluster analysis. The analysis was based on the total PAH concentrations obtained from the four sampling stations: Station 1 (Ejeba Okpare), Station 2 (Uhrovwodo Okpare), Station 3 (Ogbe Okpare), and Station 4 (Arovie Okpare). The Euclidean dissimilarity and distance indices revealed distinct variations among the stations, with values of 0.000 between identical stations, 425.513 between Stations 1 and 2, 1212.150 between Stations 1 and 3, and 947.243 between Stations 1 and 4. Additional dissimilarities were observed between Stations 2 and 3 (879.980), Stations 2 and 4 (615.846), and Stations 3 and 4 (509.435) (Table 2).

The dendrogram indicated that the prevailing conditions at Station 1 during sampling were markedly different from those at Stations 3 and 4, though closely related to Station 2. Similarly, the conditions observed at Station 3 differed from those at Stations 1 and 2, but were more similar to Station 4. Overall, the cluster analysis demonstrated that PAH profiles varied across all stations, with no two sites showing identical conditions at the time of sampling. This variation was defined by Euclidean distance metrics and cluster grouping using Ward's method. These findings suggest that the total PAH concentrations in surface water from Okpare Olomu River exhibit spatially distinct patterns influenced by localized factors.

Table 2: Similarity or Distance Index (Euclidean)

	Station 1	Station 2	Station 3	Station 4
Station 1	0.000			
Station 2	425.513	0.000		
Station 3	1212.150	879.980	0.000	
Station 4	947.243	615.846	509.435	0.000

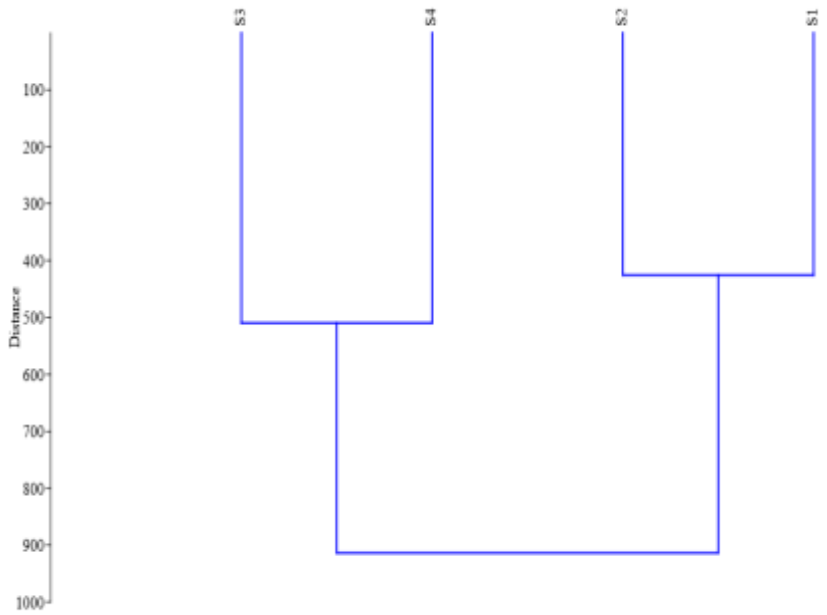

Figure 3: Dendrogram showing cluster analysis of PAH concentrations in surface water from Okpare Olomu River. Dissimilarity was determined using Euclidean distance and Ward's method.

Total Petroleum Hydrocarbon (TPH) in Surface Water from Okpare Olomu River

The results of TPHs in water samples from Okpare Olomu River are presented in Table 3. A total of twenty-eight (28) TPH compounds were analyzed in water samples from the four sampled stations, and all twenty-eight compounds were detected across the study area with varying concentrations. The TPH compounds detected include n-octane, n-nonane, n-decane, n-undecane, n-dodecane, n-tridecane, n-tetradecane, n-pentadecane, n-hexadecane, n-heptadecane, pristane, n-octadecane, phytane, n-nonadecane, n-eicosane, n-heneicosane, n-docasane, n-tricosane, n-tetracosane, n-pentacosane, n-hexacosane, n-heptacosane, n-octacosane, n-nonacosane, n-tricontane, n-hentriacontane, n-dotriacontane, and n-tritriacontane.

Total petroleum hydrocarbon (TPH) refers to a family of chemical compounds that originate from crude oil. Because crude oil and other petroleum products contain numerous chemicals, it is impractical to measure each separately. Instead, measuring the total amount of TPH provides useful insight into overall hydrocarbon contamination in the study area. Anthropogenic activities occurring around the sampled stations exerted similar influences on TPH concentrations in the Okpare Olomu River. TPHs are hydrocarbons because they consist of hydrogen and carbon (ATSDR[5]). As presented in Table 3, the following TPH compounds—n-octane, n-nonane, n-decane, n-undecane, n-dodecane, n-tetradecane, n-pentadecane, n-hexadecane, n-heptadecane, pristane, n-octadecane, phytane, n-nonadecane, n-eicosane, n-tricosane, n-heptacosane, n-hentriacontane, and n-tritriacontane—showed no significant difference ($p > 0.05$) among the sampled stations. However, n-tridecane, n-heneicosane, n-docasane, n-tetracosane, n-pentacosane, n-hexacosane, n-octacosane, n-nonacosane, n-tricontane, and n-dotriacontane exhibited significant differences ($p < 0.05$) between intraspecific variations among the sampled stations. It is evident that the water samples from all four stations were contaminated with TPHs at varying concentrations, with the distribution following the order: Station 4 (5621.503 µg/L) > Station 2 (2516.052 µg/L) > Station 1 (2297.733 µg/L) > Station 3 (1914.306 µg/L). For Station 1, ten (10) TPH compounds contributed to the largest group of chemical compounds (values greater than 15 µg/L were used as the benchmark). The distribution order was: n-dotriacontane (953.553 µg/L) > n-pentadecane (729.526 µg/L) > n-hentriacontane (206.975 µg/L) > n-nonane (109.800 µg/L) > pristane (59.091 µg/L) > n-undecane (50.567 µg/L) > n-decane (40.240 µg/L) > n-octadecane (24.368 µg/L) > n-hexadecane (20.605 µg/L) > phytane (18.906 µg/L).

Table 3: TPH content of surface water samples at different sample stations

	Station 1 $\bar{x}$±SD (Min-Max)	**Station 2** $\bar{x}$±SD (Min-Max)	**Station 3** $\bar{x}$±SD (Min-Max)	**Station 4** $\bar{x}$±SD (Min-Max)	p-Value-
n-octane (µg/L)	0.010±0.000 (0.010-0.010)	0.010±0.000 (0.010-0.010)	4.490±8.961 (0.010-17.932)	0.197±0.374 (0.010-0.758)	p>0.05
n-nonane (µg/L)	109.800±160.317 (10.603-349.400)	3.214±6.408 (0.010-12.827)	42.155±32.600 (11.132-70.314)	143.139±171.558 (8.072-394.676)	p>0.05
n-decane (µg/L)	40.240±23.640 (6.656-62.162)	69.961±102.949 (8.330-223.998)	92.538±109.911 (0.469-252.169)	46.290±20.937 (16.735-66.155)	p>0.05
n-undecane (µg/L)	50.567±43.578 (0.480-87.062)	50.227±40.949 (0.630-100.922)	84.962±47.758 (16.455-127.547)	63.896±35.580 (16.699-91.373)	p>0.05
n-dodecane (µg/L)	13.762±13.484 (1.738-25.437)	22.930±23.319 (2.281-43.122)	28.030±20.468 (1.970-44.368)	36.570±14.614 (14.967-45.525)	p>0.05
n-tridecane (µg/L)	4.662 ^{c} ±2.846 (1.772-7.106)	6.705 ^{b} ±4.432 (0.234-9.580)	6.004 ^{b} ±3.988 (0.121-8.476)	15.589 ^{a} ±10.258 (0.205-21.017)	P<0.05
n-tetradecane (µg/L)	7.333±2.841 (3.456-10.293)	2.445±2.606 (0.044-4.699)	11.620±10.630 (5.575-27.484)	5.457±3.867 (0.234-9.576)	p>0.05
n-pentadecane (µg/L)	729.526±149.506 (654.035-953.780)	752.913±495.466 (9.942-1017.888)	710.148±450.748 (40.442-977.189)	638.672±106.800 (528.635-730.237)	p>0.05
n-hexadecane (µg/L)	20.605±8.826 (13.573-31.873)	101.165±89.525 (5.728-177.512)	88.244±79.114 (13.141-156.592)	81.051±73.464 (7.500-144.249)	p>0.05
n-heptadecane (µg/L)	14.186±6.907 (10.039-24.429)	31.374±23.246 (1.679-49.889)	27.504±9.203 (17.839-35.373)	23.778±10.207 (14.647-32.615)	p>0.05
Pristine (µg/L)	59.091±22.369 (34.792-78.098)	82.690±55.714 (10.406-126.557)	68.022±42.222 (30.178-104.577)	69.583±37.379 (36.678-101.952)	p>0.05
n-octadecane (µg/L)	24.368±13.206 (10.379-35.643)	51.654±50.356 (0.695-94.923)	61.223±22.635 (33.028-79.538)	29.364±10.402 (14.018-37.140)	p>0.05
Phytane (µg/L)	18.906±5.267 (12.719-23.284)	29.340±20.953 (4.327-46.649)	23.517±17.490 (5.451-38.506)	11.757±8.160 (2.497-22.389)	p>0.05
n-nonadecane (µg/L)	5.749±6.068 (1.024-13.726)	5.164±3.488 (0.264-8.526)	12.627±7.048 (2.279-18.113)	7.665±1.235 (6.287-9.291)	p>0.05
n-eicosane (µg/L)	2.891±1.768 (0.958-4.392)	7.268±9.186 (1.029-20.932)	8.681±10.890 (2.546-24.946)	17.594±15.548 (0.850-30.829)	p>0.05
n-heneicosane (µg/L)	1.857 ^{b} ±0.384 (1.451-2.185)-	0.368 ^{b} ±0.250 (0.215-0.738)-	2.082 ^{b} ±1.399 (1.342-4.179)-	21.075 ^{a} ±20.170 (0.586-38.399)	p<0.05
n-docasane (µg/L)	3.084 ^{c} ±2.466 (0.010-5.078)	0.662 ^{d} ±0.415 (0.067-1.033)	7.237 ^{b} ±6.441 (2.799-16.453)	77.176 ^{a} ±83.468 (0.054-149.377)	P<0.05
n-tricosane (µg/L)	5.853±3.867 (0.129-8.201)	8.393±4.666 (1.929-13.076)	18.740±18.804 (5.275-46.595)	10.691±5.664 (3.509-15.224)	p>0.05
n – tetracosane (µg/L)	4.868 ^{c} ±3.137 (1.439-7.530)	5.106 ^{c} ±1.928 (2.214-6.074)	15.095 ^{b} ±5.940 (6.447-19.998)	218.608 ^{a} ±249.904 (1.859-435.031)	P<0.05
n-pentacosane (µg/L)	0.124 ^{b} ±0.105 (0.010-0.213)	0.067 ^{c} ±0.054 (0.010-0.113)	0.103 ^{b} ±0.084 (0.010-0.174)	0.418 ^{a} ±0.399 (0.049-0.763)	P<0.05
n-hexacosane (µg/L)	0.138 ^{b} ±0.135 (0.010-0.255)	0.055 ^{c} ±0.038 (0.015-0.107)	0.140 ^{b} ±0.123 (0.025-0.314)	0.628 ^{a} ±0.640 (0.010-1.180)	P<0.05
n-heptacosane (µg/L)	1.267±1.988 (0.188-4.247)	1.319±0.900 (0.010-1.911)	2.105±3.504 (0.251-7.356)	1.096±0.909 (0.010-1.846)	p>0.05
n-octacosane (µg/L)	0.165 ^{b} ±0.178 (0.010-0.319)	0.010 ^{c} ±0.000 (0.010-0.010)	2.413 ^{a} ±2.138 (0.010-5.217)	2.539 ^{a} ±1.720 (0.010-3.860)	P<0.05
n-nonacosane (µg/L)	7.481 ^{b} ±8.627 (0.010-14.953)	0.010 ^{c} ±0.000 (0.010-0.010)	9.709 ^{b} ±6.779 (0.010-14.382)	198.267 ^{a} ±228.392 (0.010-396.060)	P<0.05
n-tricontane (µg/L)	2.351 ^{b} ±2.604 (0.010-4.605)	0.010 ^{c} ±0.000 (0.010-0.010)	4.302 ^{b} ±2.862 (0.010-5.796)	320.829 ^{a} ±370.450 (0.010-641.648)	P<0.05
n-hentriacontane (µg/L)	206.975 ±211.968 (0.010-503.529)	0.010±0.000 (0.010-0.010)	110.326±125.944 (0.010-219.393)	130.059±225.554 (0.010-467.884)	p>0.05
n-dotriacontane (µg/L)	953.553 ^{b} ±508.444 (196.431-1292.468)	1276.449 ^{b} ±288.253 (1064.727-1675.207)	427.261 ^{c} ±728.679 (21.794-1516.579)	2966.654 ^{a} ±2531.855 (331.624-5134.249)	P<0.05
n-tritriacontane (µg/L)	8.976±11.142 (3.386-25.689)	7.859±4.386 (4.797-14.099)	44.790±83.024 (0.010-169.125)	124.002±133.764 (7.982-239.845)	p>0.05
∑TPH (µg/L)	2297.733 ^{b} ±138.037 (2115.899-2405.031)	2516.052 ^{b} ±569.432 (1678.700-2954.085)	1914.306 ^{b} ±911.332 (726.348-2947.955)	5261.503 ^{a} ±3709.631 (2023.669-8474.088)	P<0.05

x ± SD = average mean generated from values across the months per station, ± standard deviation; min–max = minimum and maximum values for each parameter per station; post hoc = values with different superscripts (a > b > c > d) are significantly different (p < 0.05 or 0.01) while values with same superscript are not significantly different (p > 0.05).

*p < 0.05 (significant difference)
**p < 0.01 (highly significant difference)

For Station 2, ten (10) TPH compounds also contributed to the largest group. The distribution order was: n-dotriacontane (1276.449 µg/L) > n-pentadecane (752.913 µg/L) > n-hexadecane (101.165 µg/L) > pristane (82.690 µg/L) > n-decane (69.961 µg/L) > n-octadecane (51.654 µg/L) > n-undecane (50.227 µg/L) > n-heptadecane (31.374 µg/L) > phytane (29.340 µg/L) > n-dodecane (22.930 µg/L). Figure 4.shows the spatial and temporal variation in ∑TPH compounds at the sampled stations during sampling months.

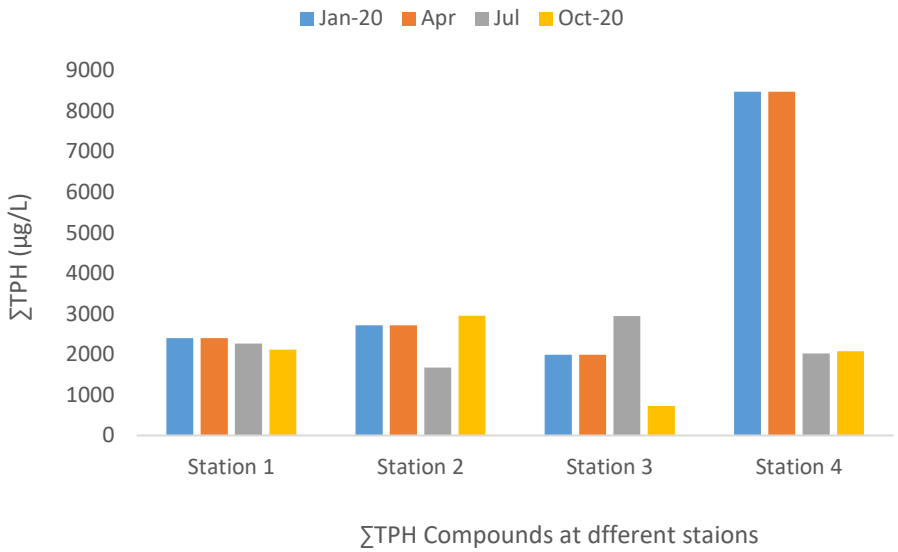

Figure 4 shows the spatial and temporal variation in ∑TPH compounds at the sampled stations during sampling months.

The TPH compounds contributing to the largest group in Station 2 were evenly distributed throughout the sampling months. For Station 3, fifteen (15) TPH compounds contributed to the largest group. The distribution order was: n-pentadecane (710.148 µg/L) > n-dotriacontane (427.261 µg/L) > n-hentriacontane (110.326 µg/L) > n-decane (92.538 µg/L) > n-hexadecane (88.244 µg/L) > n-undecane (84.962 µg/L) > pristane (68.022 µg/L) > n-octadecane (61.223 µg/L) > n-tritriacontane (44.790 µg/L) > n-nonane (42.155 µg/L) > n-dodecane (28.030 µg/L) > n-heptadecane (27.504 µg/L) > phytane (23.517 µg/L) > n-tricosane (18.740 µg/L) > n-tetracosane (15.095 µg/L). For Station 4, seventeen (17) TPH compounds contributed to the largest group. The distribution order was: n-dotriacontane (2966.654 µg/L) > n-pentadecane (638.672 µg/L) > n-tricontane (320.829 µg/L) > n-tetracosane (218.608 µg/L) > n-nonacosane (198.267 µg/L) > n-nonane (143.139 µg/L) > n-hentriacontane (130.059 µg/L) > n-tritriacontane (124.002 µg/L) > n-hexadecane (81.051 µg/L) > n-docasane (77.176 µg/L) > pristane (69.583 µg/L) > n-undecane (63.896 µg/L) > n-decane (46.290 µg/L) > n-dodecane (36.570 µg/L) > n-octadecane (29.364 µg/L) > n-heptadecane (23.778 µg/L) > n-heneicosane (21.075 µg/L) > n-eicosane (17.594 µg/L). The TPH compounds contributing to the largest group in Station 4 were also evenly distributed across the sampling months.

Cluster Analysis for TPH in Surface Water from Okpare Olomu River

Table 4 presents the Euclidean similarity and distance indices for total petroleum hydrocarbons (TPHs) in surface water samples obtained from the four sampled stations, while Figure 5 illustrates the dendrogram generated from the cluster analysis. The analysis was based on the TPH concentrations measured in water samples from Okpare Olomu River in Ughelli South, Delta State. The study locations include Station 1 (Ejeba Okpare), Station 2 (Uhrovwodo Okpare), Station 3 (Ogbe Okpare), and Station 4 (Arovie Okpare).

The Euclidean dissimilarity and distance indices showed varying degrees of differences among the sampled stations, with calculated values of 0.000, 253.039, 158.270, and 457.921, respectively. According to the dendrogram clustering, the prevailing conditions at Station 1 during sampling were distinct from those observed at Stations 2, 3, and 4. Similarly, the conditions at Station 2 were comparable to those at Station 3 but differed from those at Stations 1 and

4. The prevailing conditions at Station 3 were also similar to Station 2 but different from Stations 1 and 4. However, the combined conditions at Stations 2 and 3 were closer to those of Station 1 but still differed significantly from Station 4. Overall, the prevailing environmental conditions during sampling revealed dissimilarities across all stations. These differences were defined by Euclidean distance metrics and hierarchical cluster analysis using Ward's method (PAST3, 2018). The clustering pattern clearly indicates variations in total petroleum hydrocarbon levels among the sampled stations of Okpare Olomu River.

Table 4: Similarity or Distance Index (Euclidean)

	S1	S2	S3	S4
S1	0.000			
S2	253.039	0.000		
S3	158.270	135.329	0.000	
S4	457.921	496.211	449.782	0.000

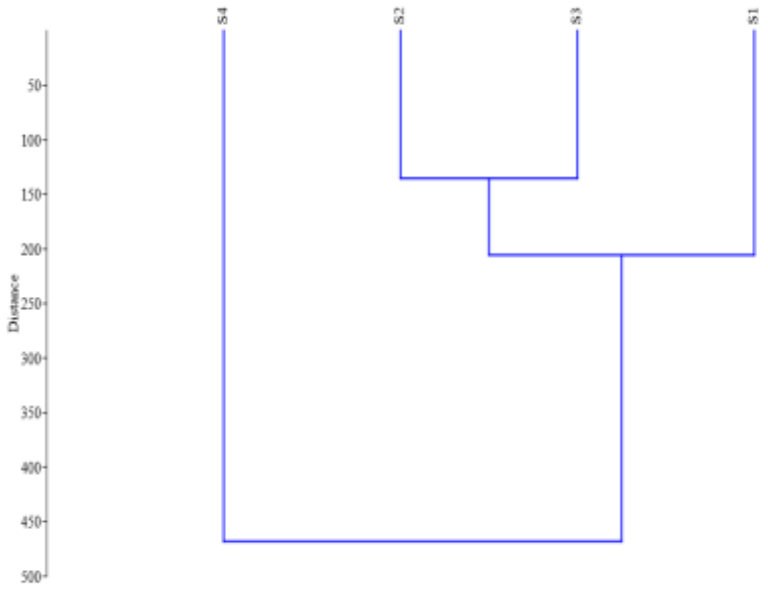

Figure 5: Dendrogram for cluster analysis based on TPH concentrations in surface water samples from Okpare Olomu River. Dissimilarity is defined by Euclidean distance, and clustering is based on Ward's method.

4. Discussion

PAHs in Surface Water Samples from Okpare Olomu River

Surface water bodies in the Niger Delta region of Nigeria are exposed to significant anthropogenic pressures, largely driven by municipal effluents, transportation activities, and petroleum exploration (Bastami *et al.,* 2013). Findings from this study indicate that twelve (12) PAH compounds were detected in water samples from Okpare Olomu River. Among these, low molecular weight (LMW) PAHs constituted the predominant group compared to high molecular weight (HMW) PAHs across the sampled stations. Notably, fluoranthene, benzo(a)anthracene, benzo(b)fluoranthene, and benzo(k)fluoranthene were not detected in any of the water samples analyzed. The total PAH concentrations revealed contamination at varying levels among the stations, following the order: station 3 (2022.258 µg/L) > station 4 (1862.288 µg/L) > station 2 (1326.416 µg/L) > station 1 (1006.237 µg/L). This spatial pattern indicates that PAH contamination is most pronounced downstream around station 3 and least at station 1. In terms of the number of compounds, station 1 contained three (3) detectable PAHs**,** station 2 contained five (5)**,** station 3 contained six (6)**,** and station 4 contained eleven (11)**.** This variation suggests differences in the degree and possibly the sources of hydrocarbon inputs at each station.

The detection of these PAHs is consistent with other environmental studies where PAHs have been found in both aquatic and terrestrial ecosystems at levels sufficient to raise concerns about bioaccumulation and toxicity. Of particular importance are HMW PAHs, which are more persistent and recalcitrant in the environment and are associated with adverse effects such as carcinogenicity, genotoxicity, and mutagenicity (Xue and Warshawsky, 2005). In comparison, Bastami *et al.* (2013) reported lower concentrations of PAHs (3.12–5.88 µg/L) in coastal waters from the northern part of the Hormuz Strait (Persian Gulf), with 8 and 7 PAH compounds detected at their study locations. This highlights that PAH levels in Okpare Olomu River are relatively higher, reflecting greater hydrocarbon inputs in this oil-producing region.

When compared against the United States Environmental Protection Agency (USEPA) water quality standards for protection of human health (carcinogenic effects)**,** none of the PAH concentrations measured in this study exceeded the recommended criteria ([USEPA, 1980). These standards specify threshold values such as: benzo(a)anthracene (100 µg/L); benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene (200 µg/L); chrysene and dibenzo(a,h)anthracene (300 µg/L); indeno(1,2,3-cd)pyrene (400 µg/L)**.** Thus, although PAHs are present at varying levels across the stations, their concentrations remain below the carcinogenic risk thresholds set by USEPA.

TPH in Surface Water Samples from Okpare Olomu River

A total of twenty-eight total petroleum hydrocarbon (TPH) compounds were analyzed in the surface water samples collected from four stations along the Okpare Olomu River, and all twenty-eight compounds were detected with varying concentrations across the study area. The total TPH concentrations clearly indicate that the river is contaminated, and the distribution pattern followed the order: Station 4 (5621.503 µg/L) > Station 2 (2516.052 µg/L) > Station 1 (2297.733 µg/L) > Station 3 (1914.306 µg/L). Using a benchmark of values greater than 15 µg/L for selecting significant TPH compounds, the results showed that ten compounds in Station 1 and Station 2, fifteen compounds in Station 3, and seventeen compounds in Station 4 contributed to the largest group of TPHs detected in the study area. This distribution highlights that Station 4 recorded the highest contamination, whereas Station 3 had the lowest levels.

The concentrations observed in this study are of significant environmental concern. According to the National Research Council (2003), TPH concentrations of several hundred micrograms per liter in rivers and creeks adversely affect sensitive aquatic organisms, while concentrations in the several thousand micrograms per liter range can eliminate even highly tolerant species. The findings of this study fall within this alarming range. Earlier reports have shown similar or lower TPH values in the Niger Delta and other regions. Moffat and Linden (1995) recorded comparable concentrations of dissolved petroleum hydrocarbons in Niger Delta surface waters in the 1990s, while Ibiebele (1986) reported much higher levels ranging from 53,000 to 62,700 µg/L in refinery wastewater. Adewuyi and Olowu (2012) reported lower TPH concentrations between 59.74 and 67.35 µg/L in surface waters, while Eitchie *et al.* (2011) documented 250–380 µg/L in the same environmental medium. The results of this present study are therefore several-fold higher, with values approximately ten times greater than those reported by Adewuyi and Olowu (2012).

When compared to other global regions, the Okpare Olomu River also reflects high levels of contamination. Alinnor *et al.* (2014) reported TPH concentrations of 1352–12,110 µg/L in groundwater from Niger Delta communities, while Adewuyi *et al.* (2011) documented even higher levels of 73,500 µg/L in surface water from Ubeji, Warri. In other regions, Suratman (2013) reported TPH concentrations of 25–2,795 µg/L in the Strait of Johor, Malaysia, and Sammarco *et al.* (2013) documented levels between 60,000 and 260,000 µg/L in the Gulf of Mexico following the Deepwater Horizon oil spill. In contrast, much lower TPH concentrations have been reported elsewhere, including 12–41 µg/L in the Dungun River Basin, Malaysia (Suratman, 2013) and 19–88 µg/L along the Levantine Basin of the Israeli coastline (SOGRLI, 2014). Inyang *et al.* (2018) also observed comparatively lower TPH values in the surface water and sediments of the Qua-Iboe River in Ibeno, Akwa Ibom State.

From a human health perspective, the observed TPH concentrations are alarming. Even low levels of propane, a component of TPH, can result in swelling, itching, and skin inflammation, while higher levels may lead to eczema and acute pulmonary edema (NRC, 2003; UNEP, 2011). The mean concentrations of TPH in this study far exceed internationally accepted standards. The European Union Environmental Protection Agency (EUEPA, 2009) and the Nigerian drinking water standard (DPR, 2002) specify 3 µg/L as the maximum acceptable limit for

petroleum hydrocarbons in river and basin water, while the World Health Organization (WHO, 2003) guideline for TPHs in drinking water is 10 µg/L. The results from this study are therefore several orders of magnitude higher, with concentrations approximately 521 times greater at Station 4, 251 times greater at Station 2, 229 times greater at Station 1, and 191 times greater at Station 3 when compared to the WHO guideline.

These findings demonstrate that the surface water of Okpare Olomu River is grossly contaminated with petroleum hydrocarbons, rendering it unfit for human consumption and posing serious ecological and public health risks. The elevated concentrations of known carcinogenic TPHs underscore the urgent need for effective environmental monitoring, remediation, and enforcement
of pollution control measures in the region.

Degradation Indicators and Risk Evaluation

The detection of lighter hydrocarbon fractions such as n-octane and n-decane at comparatively lower concentrations suggests that some degree of weathering and biodegradation is occurring within the Okpare Olomu River system. This natural attenuation process may have partially reduced the levels of more volatile compounds; however, the overwhelming total petroleum hydrocarbon (TPH) burden recorded in the study area continues to pose substantial ecological and human health risks. According to the National Research Council (2003), TPH concentrations above 100 µg/L can impair sensitive aquatic organisms, while concentrations exceeding 1000 µg/L as observed in Station 4 and other sampling locations are likely to have severe toxic effects even on tolerant species.

The ecological risks are compounded by the potential for bioaccumulation and biomagnification through aquatic food chains, which increases the likelihood of human exposure through the consumption of contaminated fish and other aquatic organisms. Chronic exposure to elevated TPH levels has been associated with multiple adverse health effects, including liver dysfunction, immune system suppression, and an increased risk of cancer (ATSDR, 1999; Diejomaoh and Okoro, 2024). These findings underscore the urgent need for targeted remediation strategies and strict regulatory interventions to prevent further environmental degradation and reduce public health hazards in communities dependent on this river system.

Relationship between PAHs and TPH in this Study

The occurrence of both polycyclic aromatic hydrocarbons (PAHs) and total petroleum hydrocarbons (TPHs) in surface water samples from Okpare Olomu River reflects their common origin from petroleum-related activities, including oil exploration, transportation, and municipal discharges. Both contaminant groups were detected across all sampling stations, though at varying concentrations, indicating widespread hydrocarbon pollution within the study area. PAHs constitute the aromatic fraction of petroleum hydrocarbons, while TPHs represent the total mixture of aliphatic and aromatic hydrocarbons. The higher abundance of TPHs compared to PAHs in all stations suggests that the bulk of hydrocarbon contamination originates from crude oil and refined petroleum products rather than incomplete combustion alone. The presence of low molecular weight (LMW) PAHs and lighter TPH fractions also points to recent petroleum inputs, while the detection of some high molecular weight (HMW) PAHs suggests a contribution from more persistent and aged residues.

A positive association can be inferred between the distribution trends of TPH and PAH concentrations. Stations with elevated TPH levels (particularly Stations 4 and 2) also showed higher diversity and concentrations of PAHs. This pattern indicates that petroleum-derived hydrocarbons are likely the primary source of PAHs in the river, and both contaminants share similar transport and deposition mechanisms within the aquatic environment. The co-occurrence of PAHs and TPHs raises significant ecological and human health concerns due to their toxic, mutagenic, and carcinogenic properties. Their combined presence increases the risk of bioaccumulation and chronic exposure for aquatic organisms and nearby communities relying on the river for domestic and fishing activities. These findings underscore the need for integrated management strategies that simultaneously address both contaminant groups to mitigate environmental and public health risks.

5. Conclusion

The findings of this study demonstrate that surface waters of the Okpare Olomu River are heavily impacted by petroleum-derived hydrocarbons, with both PAHs and TPHs detected across all sampled stations. The contaminant profile indicates predominantly petrogenic inputs, reflecting ongoing oil exploration and related anthropogenic activities within the region. Importantly, the measured TPH concentrations exceeded national and international guideline values by several orders of magnitude, underscoring a significant risk to aquatic ecosystems

and human populations dependent on the river for domestic and subsistence activities. These results align with previous research conducted in oil-impacted ecosystems of the Niger Delta and comparable global regions, further highlighting the persistence and scale of hydrocarbon pollution in petroleum-producing areas. The documented contamination emphasizes the urgent need for comprehensive mitigation strategies, including strict enforcement of environmental regulations, remediation of affected sites, and sustained monitoring programs. Without these interventions, the ecological integrity of the river and public health of nearby communities will remain under severe threat.

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Assessment of Knowledge of Microplastic Pollution and its Environmental Effects among Rural Dwellers in the Idanre Forest Zones, Ondo State, Nigeria

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Abstract. This study assessed the knowledge of microplastic pollution and its environmental effects among rural dwellers in the Idanre forest zones of Ondo State, Nigeria. A multistage sampling technique was used to select 180 respondents from three forest-fringe communities: Omifunfun, Ofusu, and Modaredele. Primary data were collected using structured questionnaires and analyzed using descriptive statistics and inferential models including logit regression, probit regression, and linear regression. The descriptive analysis revealed that the mean age of respondents was 2.20, indicating that most respondents fell within the 21–26 year age category. The mean value for gender was 1.34, suggesting that the majority of respondents were male. Educational attainment recorded a mean value of 2.50, showing that most respondents had at least secondary education. Household size had a mean value of 1.89, indicating that most households consisted of four to six members. The mean value for occupation was 1.86, suggesting that trading was the dominant occupation, while the mean income value of 1.89 indicated that most respondents earned between ₦1 and ₦30,000 monthly. The logit regression results showed that age ($\beta = 0.031$, $p < 0.05$), gender ($\beta = 0.462$, $p < 0.05$), education ($\beta = 0.518$, $p < 0.01$), income ($\beta = 0.417$, $p < 0.05$), and farming experience ($\beta = 0.028$, $p < 0.05$) significantly influenced awareness of microplastic pollution. Similarly, the probit regression results revealed that education ($\beta = 0.492$, $p < 0.01$), age ($\beta = 0.024$, $p < 0.05$), gender ($\beta = 0.381$, $p < 0.05$), and farming experience ($\beta = 0.022$, $p < 0.05$) significantly influenced respondents' knowledge of microplastic pollution. The linear regression results further indicated that education, income, household size, age, and farming experience significantly influenced respondents' perception of the environmental effects of microplastic pollution. The study concluded that socio-economic characteristics significantly influenced rural dwellers' awareness, knowledge, and perception of microplastic pollution in the study area.

Keywords: Microplastic pollution, Environmental awareness, Rural communities, Forest ecosystems, Environmental education.

1. Introduction

Microplastic pollution had increasingly emerged as a critical environmental challenge across the globe due to its persistence, mobility, and potential ecological and human health implications. Microplastics are generally defined as plastic particles smaller than 5 mm in diameter that originate either from the fragmentation of larger plastic materials or from primary micro-sized plastics intentionally produced for industrial and domestic uses such as cosmetics, synthetic textiles, and cleaning products (Thompson *et al.,* 2004; GESAMP, 2015). Over the past several decades, global plastic production had expanded rapidly following industrial growth and increasing consumer demand, leading to significant accumulation of plastic waste in both terrestrial and aquatic environments. Consequently, microplastic contamination had become an emerging environmental concern affecting soil ecosystems, freshwater systems, marine environments, wildlife, and human populations (Andrady, 2017; Barnes *et al.,* 2009). Globally, the magnitude of plastic pollution had reached alarming levels. Reports indicated that approximately 11 million metric tons of plastic waste entered aquatic environments each year, and projections suggested that this figure could increase significantly if effective waste management strategies were not implemented (Jambeck *et al.,* 2015; UNEP, 2021). As plastics degrade through exposure to

ultraviolet radiation, mechanical abrasion, and environmental weathering, they break down into smaller particles that persist in the environment for extended periods. These microplastic particles can easily be transported by wind, water, and soil processes, thereby contaminating diverse ecosystems far from their original sources (Cole *et al.,* 2011). In recognition of the growing environmental threat posed by plastic pollution, the United Nations Environment Assembly adopted a global resolution aimed at addressing plastic waste and promoting sustainable production and consumption patterns (UNEA, 2022).

While earlier research focused predominantly on marine pollution, more recent studies had demonstrated that terrestrial ecosystems, including forest landscapes, were also important sinks and pathways for microplastic contamination. Forest zones often serve as ecological buffers that regulate climate, protect biodiversity, and support local livelihoods; however, they had increasingly been exposed to anthropogenic pollution pressures, including plastic waste accumulation (Rillig, 2012). Plastics discarded within forest environments can undergo physical and chemical degradation, producing microplastic particles that accumulate in forest soils, streams, and vegetation. These particles may interfere with soil microbial communities, nutrient cycling, and plant growth, thereby altering ecosystem functioning (de Souza Machado *et al*., 2018; Horton *et al.,* 2017). Forest ecosystems located near human settlements are particularly vulnerable to plastic contamination because of increased tourism, agricultural activities, fuelwood collection, and domestic waste disposal practices. In many developing countries, waste management infrastructure remains inadequate, resulting in open dumping and uncontrolled disposal of plastic materials in natural environments (Lebreton and Andrady, 2019). Such practices often lead to the gradual fragmentation of plastic debris into microplastics that can be transported through soil erosion, rainfall runoff, and wind movement into surrounding ecological systems.

The Idanre forest zones in Ondo State represent one of the ecologically important forest regions in southwestern Nigeria. These forest landscapes support rich biodiversity and provide multiple ecosystem services such as climate regulation, watershed protection, and livelihood resources for surrounding rural communities. Rural dwellers within these forest zones depend heavily on forest resources for agriculture, hunting, fuelwood collection, and other subsistence activities. However, increasing human population pressure and expanding rural settlements around the forest had intensified environmental challenges, including improper waste disposal and plastic pollution. Plastics used for food packaging, agricultural inputs, and household goods were frequently discarded in open spaces or forest margins where they gradually degraded into smaller fragments and microplastic particles. Understanding the level of knowledge among rural dwellers regarding microplastic pollution was therefore crucial for effective environmental management and conservation. Environmental knowledge has long been recognized as a key determinant of community attitudes and behaviors toward pollution control and natural resource management. According to Ajzen (1991), individuals' environmental behavior is strongly influenced by their knowledge, perceptions, and attitudes toward environmental problems. Similarly, Schultz (2002) emphasized that awareness of environmental issues plays a fundamental role in shaping responsible environmental practices among communities.

Despite the growing global concern regarding microplastic contamination, studies investigating community knowledge and awareness of microplastic pollution remained limited, particularly within rural communities in developing countries. Most existing research had focused primarily on marine ecosystems, urban waste management systems, or scientific monitoring of environmental contamination, leaving a significant knowledge gap regarding rural populations' understanding of microplastic pollution (Horton *et al.,* 2017; Rillig and Lehmann, 2020). Given that rural communities living around forest zones often interact closely with the natural environment through farming, hunting, and forest resource harvesting, their knowledge and perceptions of environmental pollution could significantly influence waste disposal behaviors and conservation practices.

Therefore, assessing the knowledge of rural dwellers regarding the environmental effects of microplastic pollution within the Idanre forest zones of Ondo State was considered important. Such an assessment provided insights into the level of environmental awareness among communities that depend directly on forest ecosystems for their livelihoods. Furthermore, identifying knowledge gaps could assist policymakers, environmental managers, and extension agencies in designing targeted environmental education programs and community-based waste management strategies aimed at reducing plastic pollution and protecting forest ecosystems. Ultimately, improving community awareness and promoting sustainable waste management practices would contribute to safeguarding biodiversity, enhancing environmental

quality, and ensuring the long-term sustainability of forest landscapes in southwestern Nigeria.

2. Research Methodology

2.1 The Study Area

The Idanre Forest Reserve was a significant protected woodland area situated in the Idanre Local Government Area of Ondo State in southwestern Nigeria. It was mapped at approximately latitude 6°51′28″ N and longitude 5°06′20″ E (decimals ~6.8577° N, 5.1056° E), resting at an elevation of about 148 meters above sea level. Protected Planet (2011). The forest reserve itself had covered several hundred square kilometers of dense vegetation, interspersed with rivers, ridges, and patches of primary and secondary forest that supported a range of wildlife and timber species. It was bounded by natural features such as the river Ofusu to one side and sat near historic landmarks like the famed Idanre Hills that rose dramatically beyond its western fringe. (Oguntimehin and Onyekwelu, 2019). Around this forest, there were a number of small settlements and villages where people lived and farmed, the major occupation of the people is farming, many of them within just a few kilometers of the reserve boundary.

2.3 Target Population

The target population of the study was household head or representative around the communities in Idanre forest reserves

2.4 Sampling Procedures and Sampling size

A reconnaissance survey was initially conducted to identify settlement surrounding the Idanre Forest Reserve. Five settlements were identified within an 15 km radius. Of these, three settlements Omifunfun to the East, Modaredele to the north, and Ofusu to the south were systematically selected for the study. The remaining communities, including Owobamibo and Onipako are located along the same southern axis as Ofusu, were not considered. The selected settlements purposively chosen based on presence of mircoplastic and their substantial population within the study area. Base line survey and household counting was carried out to obtain a population in each selected community using Participatory rural appraisal (PRA) techniques. 1550 household were identified in Omifunfun, in Ofusu 1100 and 1000 in Modaredele through. 5 percent of the household heads or representatives who were participating in homegrown farming were selected. In Omifunfun, 75 heads were selected Ofusu, 55 heads and 50 from Modaredele. The total respondents for the study were 180.

2.5 Data Analysis

Data were analyzed with both descriptive statistics such as frequency count and percentages and inferential analysis (logit regression, probit regression and linear regression).

2.6 Measurement of Variables

2.61 Socio-Economic Variables and their Measurement

To understand the relationship between the surrounding communities and the forest reserve, several socio-economic variables were typically measured in research studies. These included:

Age of Respondents: measured in years, often categorized into age groups (e.g., 18–30, 31–45, 46–60, and above 60).

Gender: measured as a categorical variable (male or female).
Household Size: measured as the number of persons living in a household.
Educational Level: measured according to the highest level of formal education attained (no formal education, primary, secondary, tertiary).

Primary Occupation – measured as a categorical variable (farming, trading, civil service, artisan work, etc.).
Farm Size – measured in hectares (ha) to indicate the scale of agricultural production.
Annual Income – measured in Nigerian Naira (₦) per year, often grouped into income ranges.

2.7 Regression Measurements

Several socio-economic variables were converted into dummy variables in order to capture category-specific effects. Gender was coded as a dummy variable where male respondents were assigned a value of 1 while female respondents were coded as 0. Marital status was also represented as a dummy variable where married respondents were coded as 1 and unmarried respondents were coded as 0. Furthermore, household size was categorized into four groups: 1–3 persons, 4–6 persons, 7–10 persons, and 11–13 persons. The smallest household size group (1–3 persons) served as the reference category, while three dummy variables represented the remaining categories. Estimated monthly income was categorized into ₦1–30,000,

₦30,001–60,000, and ₦60,001–90,000. The lowest income group served as the reference category, while two dummy variables represented the other income groups. Also, primary occupation was categorized into trading, farming, and artisan activities. Trading was used as the reference category, while dummy variables represented farming and artisan occupations. Lastly, age and farming experience were retained as continuous variables measured in years.

2.8 Model Specification

The logit model used to estimate awareness of microplastic pollution was specified as:

Logit $(\mathrm{Pi}) = \beta 0 + \beta 1\mathrm{age} + \beta 2\mathrm{gender} + \beta 3\mathrm{educ} + \beta 4\mathrm{marital} + \beta 5\mathrm{hh4_6} + \beta 6\mathrm{hh7_10}$

Where:

Pi= probability that respondent iii was aware of microplastic pollution.

The probit model estimating knowledge of microplastic pollution was expressed as:

$P(Y=1)=\varphi(\beta 0+\beta 1age+\beta 2gender+\beta 3educ+\beta 4 marital+\beta 5hh4_6+\beta 6hh7_10+\beta 7hh11_13+\beta 8 inc30_60+\beta 9inc60_90+\beta 10farm+\beta 11artisan+\beta 12 exp+\varepsilon)$

Where:

Φ represents the cumulative normal distribution function.

Linear Regression Model (Perceived Effects)

The model estimating perceived environmental effects was specified as:

$Yi=\beta 0+\beta 1age+\beta 2gender+\beta 3educ+\beta 4marital+\beta 5 hh4_6+\beta 6hh7_10+\beta 7hh11_13+\beta 8inc30_60+\beta 9 inc60_90+\beta 10farm+\beta 11artisan+\beta 12exp+\varepsilon$

Yi= perceived effect index of microplastic pollution.

3. Result and Discussion

Table 1 presented the socio-economic characteristics of the respondents in the study area, with emphasis on the mean values of the variables to explain the dominant patterns among respondents. The mean age of the respondents was 2.20, which indicated that the majority of respondents fell within the 21–26 years age category. This result suggested that most of the respondents were relatively young adults who were likely to be within their active and productive years. Individuals within this age group often possess higher cognitive capacity and exposure to educational activities that enhance environmental awareness and understanding of emerging environmental problems such as microplastic pollution. This finding supported the observation of Adeogun *et al.* (2022), who reported that individuals within this age range tend to demonstrate greater environmental awareness and responsiveness to sustainability education. The gender distribution of respondents produced a mean value of 1.34, indicating that the study population was predominantly male. This result suggested that male respondents constituted a larger proportion of participants involved in environmental and agricultural activities within the study area. The dominance of male respondents could be attributed to socio-cultural and occupational structures in rural communities where men are often more involved in activities such as farming, forest resource extraction, and environmental decision-making. Similar gender patterns have been reported in previous studies, where male participation in agriculture and environmental resource management was found to be higher than female participation due to socio-economic and cultural factors (Okorie *et al.,* 2022). The mean value for religious affiliation was 1.56, indicating that the respondents were largely distributed between Islam and Christianity. This finding suggested a relatively balanced representation of the two major religions within the study area. Religion plays an important role in shaping individuals' ethical values and environmental attitudes in many African societies. Both religious traditions emphasize stewardship and responsible management of natural resources, which may influence community perceptions of environmental protection and sustainability. Previous research has shown that religious teachings can positively influence pro-environmental behavior and strengthen community commitment toward environmental conservation (Adeyemi and Ojo, 2021).The analysis of marital status yielded a mean value of 1.07, indicating that most respondents were single. This result reflected the demographic structure of the respondents, where the majority were likely to be young adults with limited family responsibilities. The predominance of single individuals suggested that respondents might have greater flexibility to participate in educational activities and environmental awareness programs. This observation was consistent with the findings of Ogunbanjo and Adeola (2022), who reported that single individuals, particularly young adults, often demonstrated higher engagement in environmental awareness and sustainability-related activities. Educational attainment recorded a mean value of 2.50, which indicated that the majority of respondents had at least secondary education. This result suggested that the respondents possessed a moderate level of literacy and educational exposure that could facilitate understanding of environmental issues such as plastic pollution and environmental degradation. Higher levels of education are generally associated with improved environmental literacy, better access to environmental information, and stronger adoption of environmentally responsible

behaviors. Household size recorded a mean value of 1.89, suggesting that most respondents belonged to households consisting of approximately 4–6 members. This moderate household size indicated relatively stable family structures within the study area. Household size may influence consumption patterns, waste generation, and domestic resource management practices. Larger households may generate more plastic waste through daily consumption activities, thereby contributing to environmental pollution if waste management practices are inadequate. The distribution of respondents by occupation showed a mean value of 1.86, indicating that trading was the dominant livelihood activity among the respondents. Trading activities are common within rural communities and often involve the use of packaging materials such as plastic bags, bottles, and containers. The predominance of trading suggested that respondents were frequently exposed to plastic materials through market activities, which may contribute to the accumulation of plastic waste within local environments. Finally, the estimated monthly income of respondents recorded a mean value of 1.89, indicating that the majority of respondents earned between ₦1 and ₦30,000 per month. This result suggested that most households in the study area belonged to the low-income category, which is typical of rural communities in developing countries. Income level can significantly influence access to environmental information, educational opportunities, and the adoption of environmentally sustainable practices. Households with limited income may prioritize basic livelihood needs over environmental management practices.

Table 1: Socio-Economic Characteristics of the Respondents in the study area

Variables	Categories	Mean	Interpretation
Age	10–20, 21–26, 27–30	2.20	Majority of respondents were between 21–26 years, indicating a relatively young and active population.
Gender	Male, Female	1.34	Respondents were predominantly male.
Religion	Christianity, Islam, Traditional	1.56	Majority of respondents practiced either Islam or Christianity.
Marital Status	Single, Married	1.07	Most respondents were single.
Educational Level	No formal education, Primary, Secondary, Tertiary	2.50	Majority had at least secondary education.
Household Size	1–3, 4–6, 7–10, 11–13 persons	1.89	Most households consisted of about 4–6 members.
Occupation	Trading, Farming, Artisan	1.86	Trading was the dominant occupation among respondents.
Monthly Income (₦)	1–30,000; 30,001–60,000; 60,001–90,000	1.89	Majority of respondents belonged to the low-income category (₦1–30,000).

The logit regression results in Table 2 examined the socio-economic determinants of awareness of microplastic pollution among rural dwellers in the Idanre forest zones. The findings indicated that age had a positive and statistically significant influence on awareness ($\beta = 0.031$, $p < 0.05$), suggesting that older respondents were more likely to be aware of microplastic pollution than younger individuals. Education also exhibited a strong positive and highly significant effect on awareness ($\beta = 0.518$, $p < 0.01$), indicating that respondents with higher levels of education demonstrated greater awareness of microplastic pollution. Gender showed a positive and significant relationship with awareness ($\beta = 0.462$, $p < 0.05$), implying that male respondents were slightly more likely to be aware of microplastic pollution compared to female respondents. Income level within the highest category also had a positive and significant effect ($\beta = 0.417$, $p < 0.05$), suggesting that respondents with higher income were more likely to be aware of environmental pollution issues. Additionally, farming experience showed a positive and significant influence on awareness ($\beta = 0.028$, $p < 0.05$), indicating that respondents with longer experience in farming activities were more likely to recognize environmental pollution problems. These findings suggested that education, age, income, gender, and farming experience were the major determinants of awareness of microplastic pollution in the study area. Similar findings have been reported by Kollmuss and Agyeman (2002), who noted that socio-economic factors such as education and experience significantly influence environmental awareness.

Table 2: Logit Regression Estimates for Awareness of Microplastic Pollution (n = 180)

Variable	Coefficient	Std. Error	z-value	p-value
Age	0.031	0.014	2.21	0.027
Gender	0.462	0.211	2.19	0.028
Education	0.518	0.132	3.92	0.000
Marital status	0.207	0.188	1.10	0.271
HH (4–6)	0.331	0.174	1.90	0.058

Variable	Coefficient	Std. Error	z-value	p-value
HH (7–10)	0.289	0.183	1.58	0.114
HH (11–13)	−0.142	0.221	−0.64	0.523
Income (30–60k)	0.296	0.168	1.76	0.079
Income (60–90k)	0.417	0.194	2.15	0.031
Farming	−0.118	0.182	−0.65	0.516
Artisan	−0.236	0.205	−1.15	0.249
Experience	0.028	0.013	2.15	0.032

Significant at 5%

Table 3 presented the probit regression results examining the determinants of respondents' knowledge of microplastic pollution and its environmental implications. The findings revealed that age had a positive and statistically significant effect on knowledge (β = 0.024, p = 0.042), indicating that older respondents were more likely to possess knowledge about microplastic pollution. This may be attributed to accumulated environmental experience and longer exposure to environmental changes over time. Education again emerged as a strong determinant of knowledge (β = 0.492, p < 0.001), demonstrating that respondents with higher levels of education possessed greater knowledge of microplastic pollution and its environmental effects. Education improves individuals' environmental literacy and capacity to understand complex environmental issues (Stern, 2000). Gender also showed a positive and significant relationship with knowledge (β = 0.381, p = 0.049), suggesting that male respondents had slightly higher knowledge levels compared with female respondents. Income level displayed a positive influence on knowledge, particularly among respondents earning between ₦60,001 and ₦90,000 (β = 0.348, p = 0.054), although the significance level was marginal. Higher income groups may have better access to information sources such as media, educational programs, and environmental campaigns. Farming experience also had a positive and statistically significant influence on knowledge (β = 0.022, p = 0.046), indicating that individuals with longer engagement in farming activities were more likely to understand environmental pollution issues affecting agricultural ecosystems. Overall, the results suggested that education, age, gender, and farming experience were important determinants of respondents' knowledge of microplastic pollution in the study area.

Table 3: Probit Regression Estimates for Knowledge of Microplastic Pollution

Variable	**Coefficient**	**Std Error**	**z-value**	**p-value**
Age	0.024	0.012	2.03	0.042
Gender	0.381	0.194	1.96	0.049
Education	0.492	0.121	4.06	0.000
Marital	0.176	0.167	1.05	0.294
HH (4–6)	0.298	0.160	1.86	0.063
HH (7–10)	0.221	0.172	1.28	0.201
HH (11–13)	−0.163	0.207	−0.79	0.431
Income (30–60k)	0.262	0.152	1.72	0.086
Income (60–90k)	0.348	0.181	1.92	0.054
Farming	−0.094	0.165	−0.57	0.567
Artisan	−0.203	0.187	−1.09	0.276
Experience	0.022	0.011	2.00	0.046

Significant at 5%

The multiple linear regression results presented in Table 4 examined the socio-economic factors influencing respondents' perception of the environmental effects of microplastic pollution. The results indicated that age had a positive and statistically significant effect on perceived environmental effects (β = 0.043, p = 0.018), suggesting that older respondents were more likely to perceive microplastic pollution as a serious environmental issue. Increased environmental exposure over time may enable individuals to better recognize environmental degradation. Education showed the strongest positive and highly significant effect on perception of environmental effects (β = 0.561, p < 0.001), indicating that respondents with higher levels of education demonstrated stronger perceptions of the environmental consequences of microplastic pollution. Education improves environmental awareness and risk perception, enabling individuals to better understand environmental threats (Kollmuss & Agyeman, 2002).

Gender also had a positive and statistically significant influence on perceived environmental effects (β = 0.316, p = 0.028), indicating that male respondents were more likely to perceive microplastic pollution as a serious environmental concern. Household size within the 4–6 member category also showed a positive and significant effect (β = 0.284, p = 0.020), suggesting that households of moderate size may experience greater exposure to plastic waste generation and environmental pollution. Income level further demonstrated a positive and significant influence on perception of environmental effects, particularly among respondents earning between ₦60,001 and ₦90,000 (β = 0.341, p = 0.009). Higher income levels may enhance access to environmental information and awareness programs. Farming experience also showed a positive and statistically significant effect (β = 0.036, p = 0.017), indicating that respondents with longer agricultural experience were more likely to recognize the environmental impacts of microplastic pollution. Overall, the findings revealed that education, income, age, household size, and farming experience significantly influenced respondents' perception of the environmental effects of microplastic pollution.

Table 4: OLS Regression Estimates for Perceived Effects of Microplastic Pollution

Variable	Coefficient	Std Error	t-value	p-value
Age	0.043	0.018	2.39	0.018
Gender	0.316	0.142	2.22	0.028
Education	0.561	0.117	4.79	0.000
Marital	0.151	0.136	1.11	0.269
HH (4–6)	0.284	0.121	2.35	0.020
HH (7–10)	0.217	0.134	1.62	0.106
HH (11–13)	−0.192	0.166	−1.16	0.247
Income (30–60k)	0.271	0.118	2.29	0.023
Income (60–90k)	0.341	0.129	2.64	0.009
Farming	−0.142	0.126	−1.13	0.261
Artisan	−0.213	0.139	−1.53	0.128
Experience	0.036	0.015	2.40	0.017

Significant at 5%

4. Conclusion

The study assessed the knowledge of microplastic pollution and its environmental effects among rural dwellers in the Idanre forest zones of Ondo State, Nigeria. The findings showed that respondents possessed varying levels of awareness and knowledge regarding microplastic pollution, which were significantly influenced by their socio-economic characteristics. Education emerged as the most consistent determinant across the regression models, indicating that individuals with higher educational attainment demonstrated greater awareness, knowledge, and perception of the environmental impacts of microplastic pollution. Age, gender, household size, income level, and farming experience also played significant roles in shaping respondents' understanding of microplastic pollution. The study therefore highlighted the importance of socio-economic factors in determining environmental awareness within rural communities that depend heavily on forest ecosystems.

5. Recommendations

Based on the findings of the study, the following recommendations were proposed:

- Environmental education programs should be intensified in rural communities surrounding forest reserves in order to improve awareness and knowledge of microplastic pollution and its environmental consequences.
- Government agencies and environmental organizations should implement community-based waste management programs that promote proper disposal and recycling of plastic materials.
- Agricultural extension services should incorporate environmental pollution awareness, particularly microplastic contamination, into their training programs for farmers and rural households.
- Public awareness campaigns using local media, community meetings, and educational workshops should be organized to educate rural dwellers on the environmental risks associated with plastic waste.
- Policy interventions aimed at reducing single-use plastics and promoting environmentally friendly alternatives should be strengthened to minimize plastic waste generation in rural communities.

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Assessment of Flood Vulnerability in Egor Local Government Area, Edo State Using Analytical Hierarchical Process (AHP) Model

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Abstract. Floods are entirely natural disasters caused by a variety of fundamental factors, the most common of which are climatological in character. However, human misuse or exploitation of the environment is also a major contributing factor. Floods are regarded as the world's worst natural disaster which motivates this research. This research aims to investigate the flood vulnerability in Egor local government area of Edo state by integrating the Analytical Hierarchy Process (AHP) and remote sensing/GIS to derive a flood vulnerability map of Egor local government area. In this research seven parameters elevation, slope, drainage density, soil type, distance from streams, rainfall and land use and land cover were considered and their weight of importance were determined from pairwise comparison using the responses of professionals in the area of flood modelling and geoinformatics. Multiple sources of secondary data like 30M resolution Landsat 9 (Band 8 Panchromatic 0.503 – 0.676) satellite data derived from United States Geological Services (USGS), Tropical Rainfall Measuring Mission (TRMM) as well as other primary data gotten from response of questionnaire administered. The resulting map was classified into five levels of flood vulnerability and the communities were characterized according to their level of vulnerability. Findings showed that the villages Ogunwenyi, Obanyotor, Ogboyoko, Useh and Oghoghugbo were all classified under highly vulnerable to flooding. Although, Ugbowo and Oghoghugbo are not threatened at the moment but projection shows that they may become threatened if the conditions contributing to flooding are not appropriately managed. This research offers an approach that is very useful in flood management and mitigation. It also creates avenue for land planners and policy makers to know the areas that are projected to suffer from flooding and those that are less threatened which preventive measures can be developed against these challenges. The vulnerability model produced in this work should serve as a guide to policy makers, and planners for appropriate managements of flood events and initiation of enlightenment programs to citizens on sustainable ecological land conservation.

Keywords: Flood vulnerability mapping, Analytic Hierarchy Process (AHP), Remote sensing and GIS, Land use/land cover, Landsat 9

1. Introduction

Flooding, defined as the temporary inundation of normally dry land due to the overflow or accumulation of water (UNISDR, 2004), is recognized as the most frequent and economically damaging natural hazard globally (Galy and Sanders, 2002; Mukoro et al., 2015). In Nigeria, flooding has become a persistent environmental challenge, driven by heavy rainfall, deforestation, rapid urbanization, poor drainage systems, and unregulated land development (Ehiorobo and Izinyon, 2011; Komolafe et al., 2020). Egor LGA, located within the Benin City metropolis, experiences recurrent flooding that results in destruction of infrastructure, displacement of residents, traffic disruption, and loss of lives and livelihoods.

The primary aim of the study is to contribute to disaster vulnerability reduction in Nigeria's South–South geopolitical zone by assessing and spatially delineating flood-prone areas in Egor LGA through a GIS-based AHP model. The specific objectives are to determine the relative weights of flood vulnerability

parameters, generate a flood vulnerability map using graphical modelling techniques, and assess the level of vulnerability of villages within the study area. Previous flood studies in Nigeria have often relied on limited parameters such as rainfall or elevation, resulting in incomplete vulnerability assessments (Ehiorobo and Ogirigbo, 2013). This study addresses that gap by adopting a multi-criteria decision-making approach that integrates expert judgment and spatial analysis.

Seven flood-conditioning parameters are elevation, slope, drainage density, soil type, rainfall, land use/land cover, and distance from streams were selected based on their proven influence on surface runoff, water accumulation, and flood extent (Ouma and Tateishi, 2014; Komolafe et al., 2020). The relative importance of these parameters was established using the Analytical Hierarchy Process developed by Saaty (1980), which employs pairwise comparisons to generate consistent and transparent weighting schemes. Primary data were obtained through AHP-designed questionnaires administered to hydrologists, GIS analysts, environmental scientists, surveyors, and urban planners, while secondary data were sourced from satellite imagery and geospatial databases. The weighted parameters were integrated in a GIS environment to produce a flood vulnerability map, which was subsequently overlaid with village locations to determine localized vulnerability levels.

The study is justified by the urgent need for proactive flood management and climate adaptation strategies in flood-prone regions of Nigeria, particularly in the South–South zone characterized by high rainfall and rapid urban growth (Berezi et al., 2019; Cirella et al., 2019). The findings provide a decision-support tool for policymakers, urban planners, and disaster management agencies such as NEMA, enabling targeted interventions, improved emergency routing, and sustainable land-use planning. Although the study focuses primarily on spatial and physical determinants of flooding, it recommends the integration of socio-economic variables in future research to achieve a more comprehensive flood vulnerability assessment.

2. Methodology

To determine flood-prone locations in Egor LGA, this study combines spatial analysis in GIS with a structured multi-criteria decision method which is the modern Analytic Hierarchy Process (AHP). The workflow integrates remotely sensed and vector datasets, expert judgments (AHP questionnaires), and raster algebra to produce a flood vulnerability index and map. All geospatial processing (digitization, reprojection, clipping, resampling and raster calculations) was performed in ArcGIS Desktop / ArcGIS Pro, QGIS and ENVI; AHP numeric computations and pairwise matrices were calculated in Microsoft Excel after converting expert qualitative assessments to crisp numeric values. The methodology workflow is presented in figure 1.

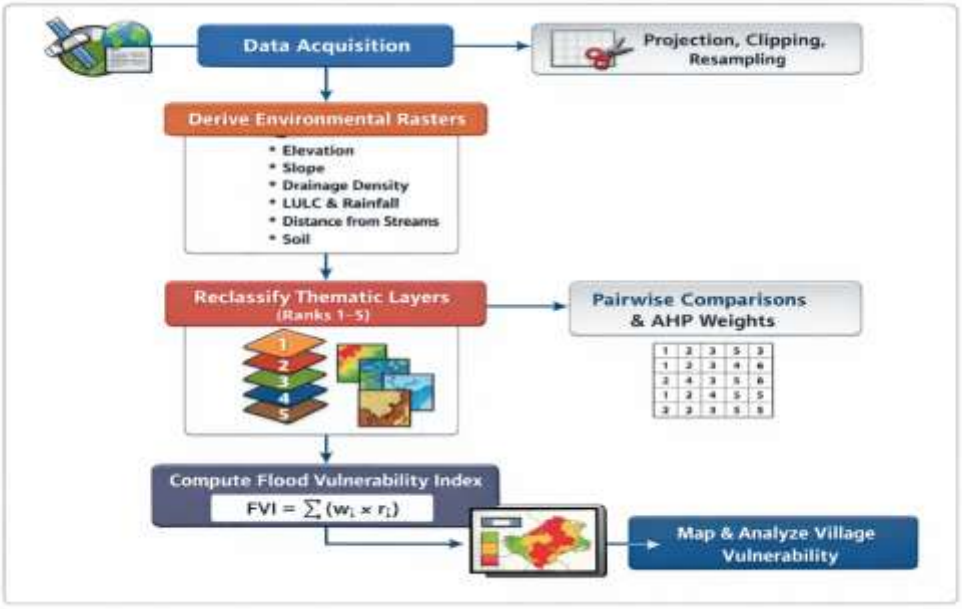

Figure 1: *Flood Vulnerability Map workflow using GIS and AH/PP*

2.1 Study Area

Egor Local Government Area (LGA), created in 1991 from the larger Benin City metropolitan area under the Ibrahim Babangida administration, is headquartered in Uselu and is one of the Bini-speaking LGAs in Edo State (Edo State Government, 2020). The LGA lies approximately between Northings 677500–710000 m and Eastings 115000–130500 m on the UTM grid Zone 31N (Ebohon and Ebohon, 2021) and covers an estimated land area of about 93 km² (NPC, 2006). It comprises communities including Obanyotor, Useh, Uwelu, Evengie, Ogboyoko, Ogunwenyi, Evbogida, and Oghoghugbo and is predominantly inhabited by the Bini people with minority Esan, Yoruba and Igbo groups (Aigbe et al., 2004). The 2006 National Population Census recorded 340,287 residents, with the National Bureau of Statistics projecting growth to approximately 502,700 by 2020 at an annual rate of 2.5% (NPC, 2006; NBS, 2020). Topographically, Egor is characterized by low-lying plains and gentle slopes drained mainly by the Ikpoba River and its tributaries, and underlain largely by red clay and loamy soils that influence infiltration and runoff (Ologunorisa and Abawua, 2005). Climatically the area falls within the Tropical Savannah zone with a rainy season from April to October and a dry season from November to March, mean annual temperature near 28 °C, and annual rainfall between about 1,524 mm and 2,032 mm (NIMET, 2019; Komolafe et al., 2020). Egor LGA shares boundaries with Oredo LGA to the north, Ikpoba-Okha LGA to the east, Ovia South-West LGA to the south and Uhunmwonde LGA to the west (Edo State Ministry of Lands and Survey, 2021). The study area 2D map is shown in figure 2.

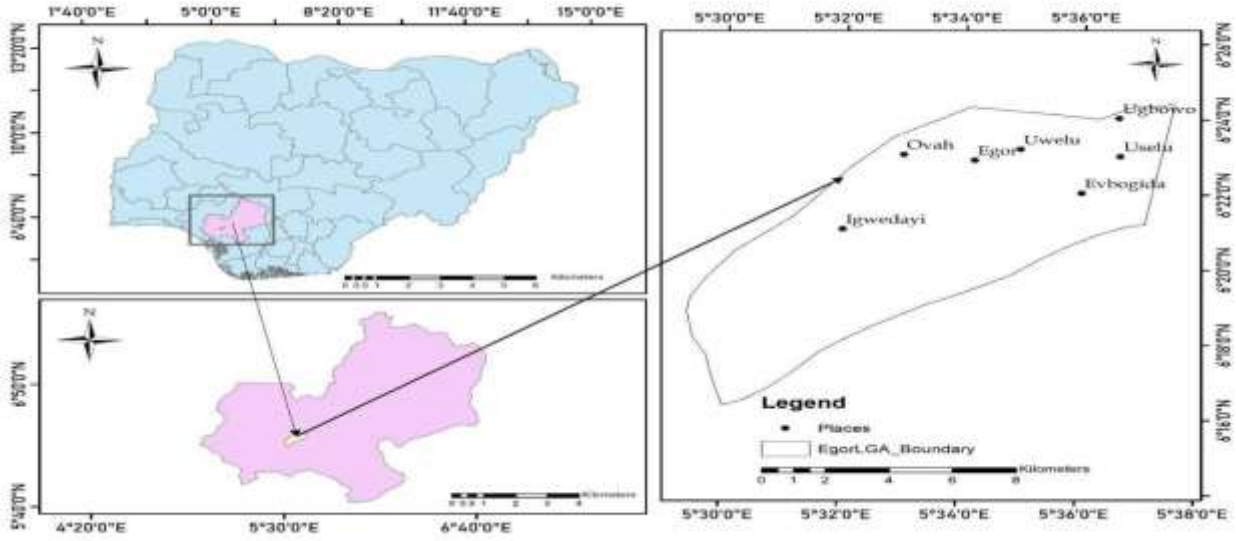

Figure 2: *Study Area Map*

2.2 Data Acquisition and Datasets

A multi-source dataset was compiled to represent the physical and meteorological controls on flooding in Egor LGA. Key datasets and their roles are summarized below in table 1.

Table 1: Summary of Derived Datasets

Dataset / Source	Resolution / Type	Provider / Institution	Purpose / Derived Map or Use
SRTM DEM	30 m (1-arc second) raster	United States Geological Survey (USGS)	Derive Elevation, Slope, Flow direction and Drainage density maps
Landsat 9 (Band 8 Panchromatic 0.503–0.676 µm)	30 m (multispectral/radiometric)	United States Geological Survey (USGS)	LULC classification (supervised maximum-likelihood) to identify built-up areas, vegetation, wetlands, bare land and water
TRMM rainfall (daily, 2020)	Interpolated to 30 m grid (kriging)	Tropical Rainfall Measuring Mission (TRMM)	Generate Rainfall distribution raster (spatial rainfall variability used in vulnerability modelling)
Soil map	Vector / polygon	Food and Agriculture Organization (FAO) / Nigerian Geological Survey (NGS)	Produce Soil type map and infer infiltration/drainage characteristics

Dataset / Source	Resolution / Type	Provider / Institution	Purpose / Derived Map or Use
Administrative boundaries / streams	Vector / shapefile	NASRDA / DIVA GIS	Delineate study area boundary, village locations and river/stream network (used to compute distance from streams)
Expert questionnaires (primary data)	Qualitative / AHP pairwise responses	Professionals in flood modelling and geoinformatics (hydrologists, GIS analysts, environmental scientists, surveyors, urban planners)	Provide AHP pairwise comparisons to calculate criterion weights for the flood vulnerability model

2.3 Data Quality and Preprocessing

Landsat scenes selected had <10% cloud cover. Vector layers were checked for topology errors (slivers, dangles) and DEM voids. Coordinate reference system chosen: WGS 1984 UTM Zone 31N, enabling metric distance measures. All raster were resampled to a uniform 30 m spatial resolution to ensure layer homogeneity.

2.3.1 Preprocessing

All spatial datasets were first clipped to the Egor Local Government Area boundary to ensure consistency in spatial extent, after which they were reprojected to the WGS84 / UTM Zone 31N coordinate system where necessary. Resampling was then carried out to achieve a uniform spatial resolution of 30 m, using the nearest neighbor method for categorical datasets such as land use/land cover and soil, and bilinear interpolation for continuous datasets including the DEM and rainfall. To improve hydrological accuracy, DEM sinks were filled through hydrologic conditioning to enable the reliable derivation of flow direction and drainage density. Stream networks were subsequently extracted from the conditioned DEM using appropriate flow accumulation thresholds and were validated by comparison with existing hydrographic vector data. These preprocessing steps ensured spatial integrity and prepared all thematic layers for vulnerability ranking and integration.
Environmental variable processing and derived maps

2.4.1 Elevation and Slope

DEM source was from the SRTM 1-arc second (30 m). Elevation raster was clipped to Egor LGA, while Slopes were derived from DEM using standard slope algorithms (rise/run) and expressed in percent (%).
Lower elevations and low slopes were ranked as more vulnerable (prone to waterlogging) while steep slopes were ranked less vulnerable (yielding faster runoff).Figures 3a and 3b shows the slope and study area map.

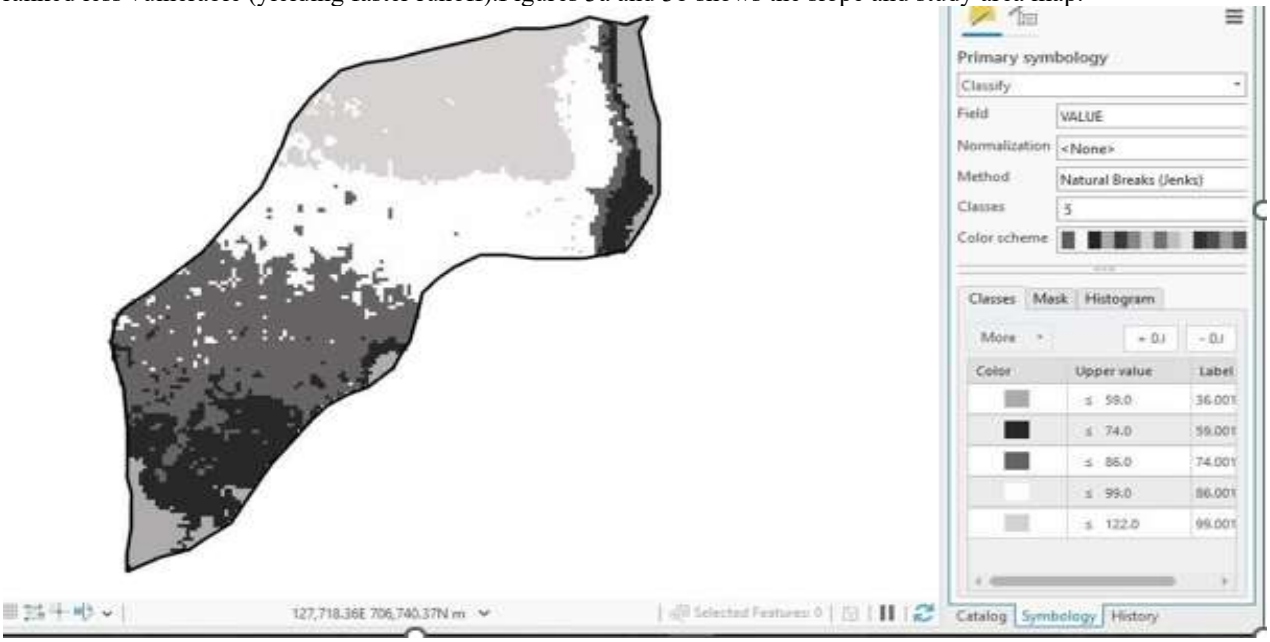

Figure 3a: *Study Area Elevation Map*

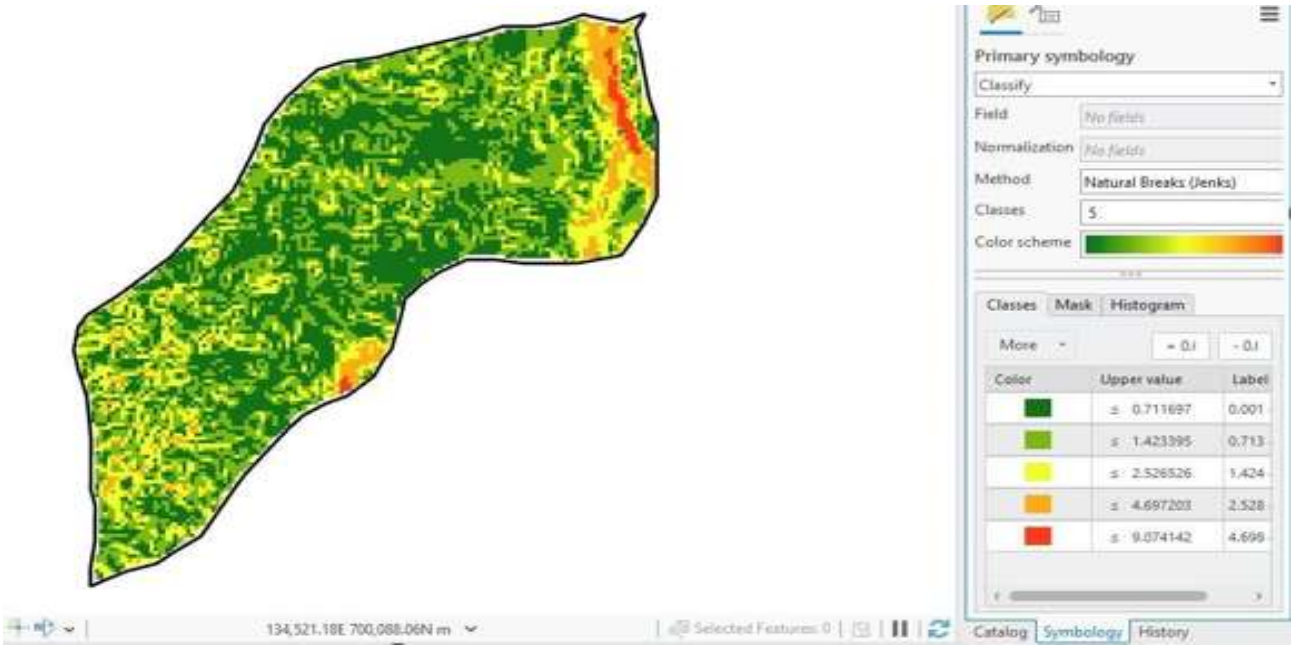

Figure 3b: *Slope Map*

2.4.2 Drainage Density

Drainage density (Dd) = total length of stream channels (L) ÷ basin area (A).

$$D_d = \frac{L}{A} \quad (1)$$

Drainage density was derived from Streams extracted from DEM flow accumulation; drainage density calculated per watershed/sub-catchment inside Egor LGA, and the raster reclassified. In this study, lower drainage density receives a higher vulnerability rank (because long inter-stream distances reduce rapid conveyance in some contexts), following the review of Ogato et al. (2020) and Wondim (2016).The drainage density map is displayed in figure 3c.

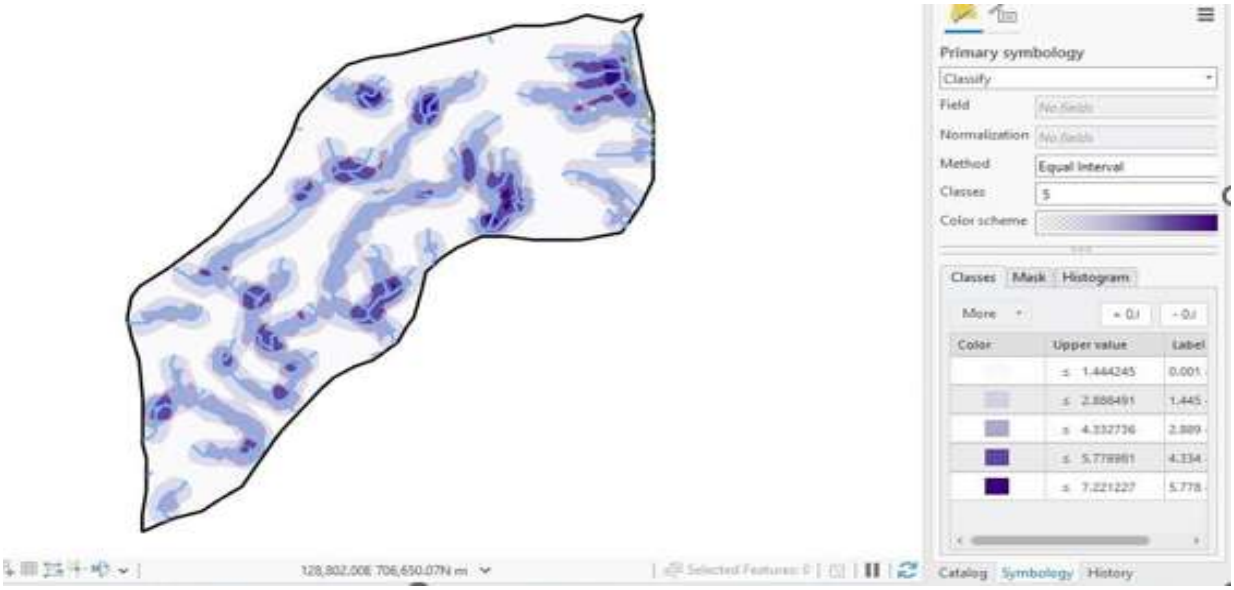

Figure 3c: *Drainage Density Map*

2.4.3 Land Use / Land Cover (LULC)

Supervised classification (maximum likelihood) of Landsat 9 bands to produce LULC classes: dense vegetation, grassland, bare land, built-up/urban, wetlands/water bodies. Built-up areas were assigned highest vulnerability (impervious surfaces), while wetlands and dense vegetation had lower vulnerability. A 2D map is provided in figure 3d.

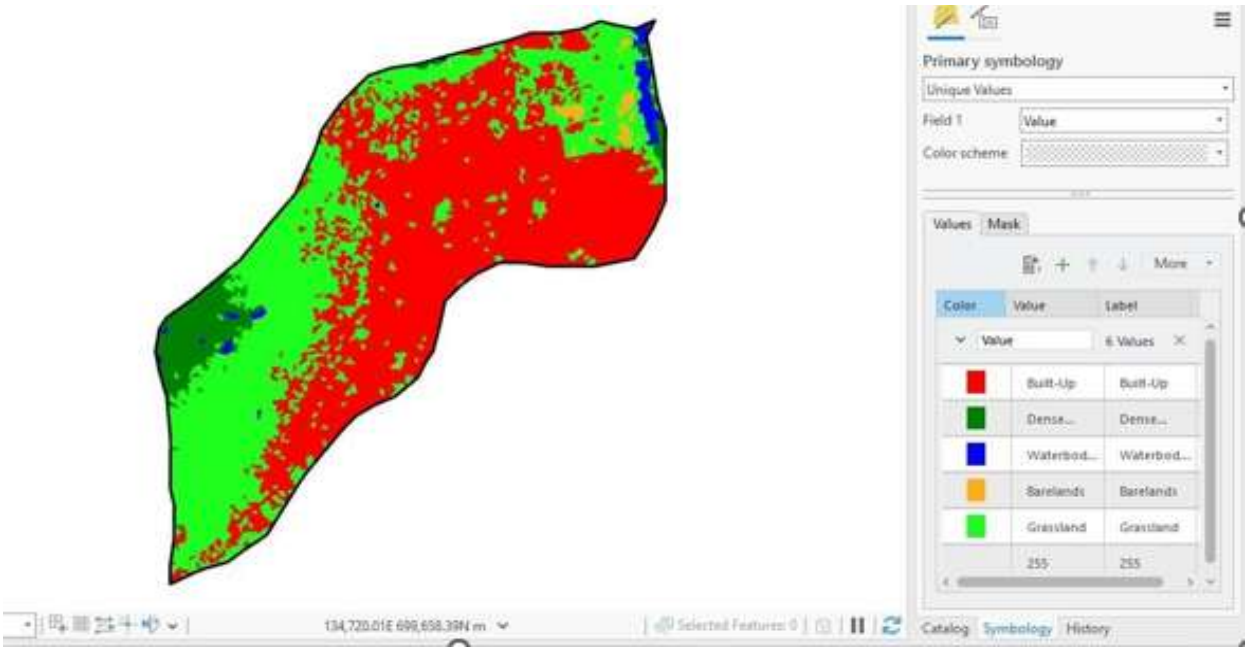

Figure 3d: *Land Use and Land Cover Map (LULC)*

2.4.4 Rainfall Distribution

Data was obtained from TRMM daily rainfall reports for the year 2020). Interpolations were carried out using the Ordinary kriging to generate continuous rainfall raster across the Egor LGA. Reclassification was done by dividing the rainfall raster map into five classes representing increasing rainfall totals; higher rainfall classes assigned higher vulnerability. The rainfall distribution map is displayed in figure 3e.

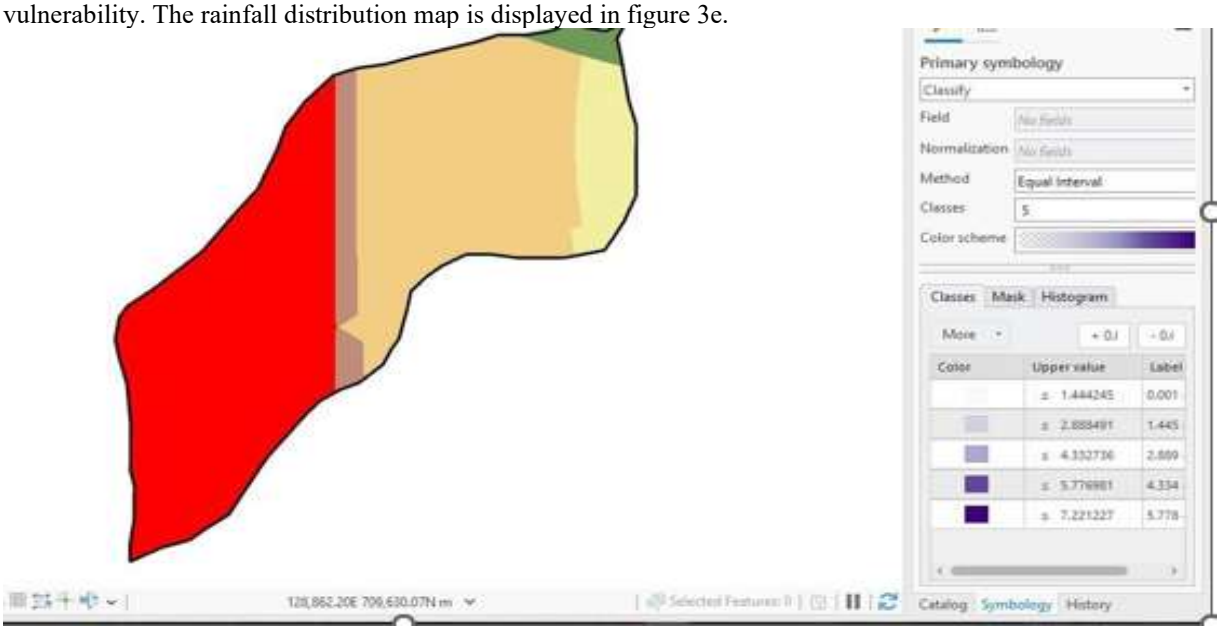

Figure 3e: *Rainfall Distribution Map*

2.4.5 Soil Type

Soil map was derived from the FAO soil polygons. Soil textures and drainage classes were used to infer infiltration capacity. Poorly drained soils = high vulnerability while well drained soils = low vulnerability. A 2D map is presented in figure 3f.

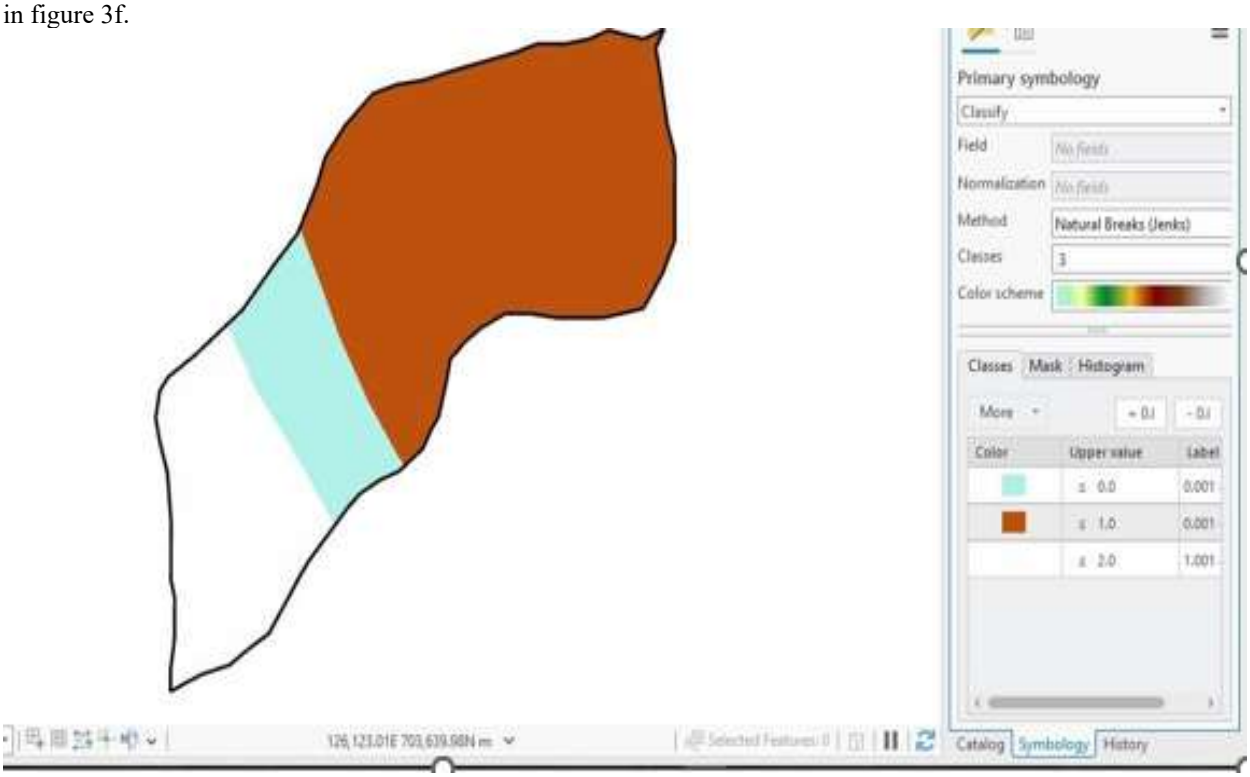

Figure 3f*: Soil Type Map (reclassified)*

2.4.6 Distance from streams

The Euclidean distance raster method was computed from the river/stream vector network and
Interpretated Cells closest to streams received higher vulnerability ranks while farther cells received lower ranks as displayed in figure 3g.

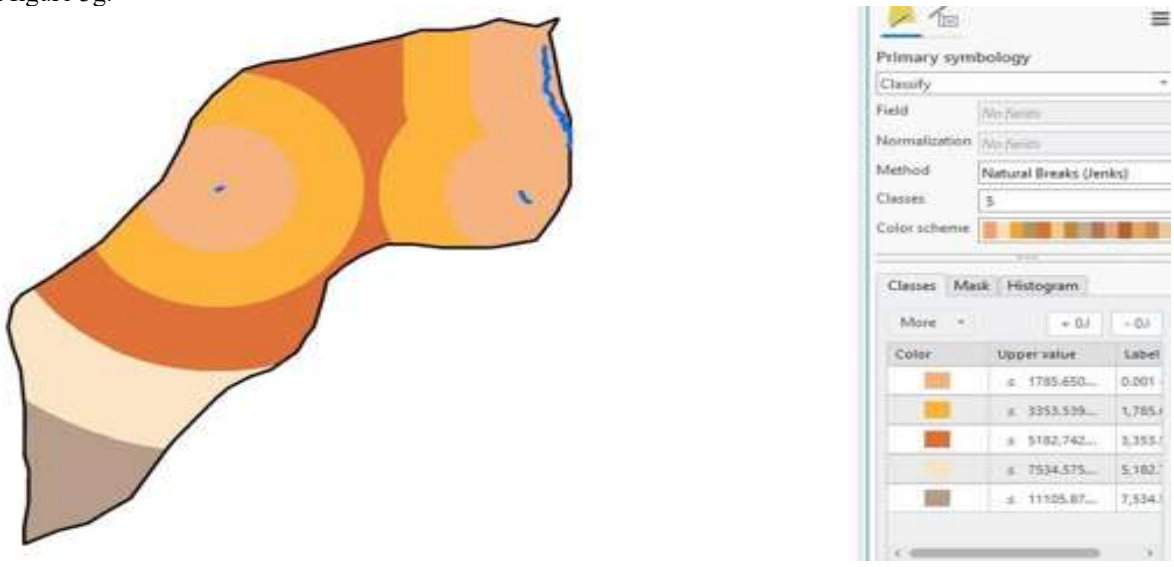

Figure 3g*: Distance from streams raster*

2.5 Multi-Criteria Decision Making (AHP): theory and implementation

For this study, 10 experts in flood modelling and geoinformatics were consulted, of which only 8 met the desired criterion of AHP computations. AHP provides a structured means to convert expert qualitative judgments into numeric weights for each criterion. The implementation steps include pairwise comparisons, normalization, weight extraction, and consistency checks. The sequential execution is given below;

Define the Problem, Criteria and Importance Scale

Begin by identifying the criteria relevant to the decision problem (e.g., slope, land use, distance to roads). The Analytic Hierarchy Process (AHP) uses Saaty's 1–9 fundamental scale to convert qualitative judgments into quantitative values, where 1 = equal importance, 3 = moderate importance, 5 = strong importance, 7 = very strong importance, and 9 = extreme importance, with 2, 4, 6, and 8 as intermediate values (Saaty, 1980). This scale ensures consistent numerical representation of expert opinions.

Construct Pairwise Comparison Matrices

For each expert, construct an $n \times n$pairwise comparison matrix P, where each element p_{ij}represents the relative importance of criterion i over criterion $j$using Saaty's scale (Saaty, 1980). The matrix must satisfy reciprocity and unity conditions to ensure logical coherence.
Reciprocal condition:
$p_{ji} = \frac{1}{p_{ij}}$(1)

Diagonal condition:
$p_{ii} = 1$ *(2)*

This structure ensures that comparisons are logically consistent across all criteria.

Aggregate expert judgments (if multiple experts are involved)
When multiple experts provide pairwise comparison matrices, their judgments are combined using the geometric mean, which preserves the reciprocal property and is recommended for group decision-making in AHP (Saaty, 1980). If $m$experts are involved, the aggregated value for each matrix element is calculated as:

$$g_{ij} = \left(\prod_{k=1}^{m} p_{ij}^{(k)}\right)^{\frac{1}{m}} \quad (3)$$

The resulting aggregated matrix becomes the consensus matrix used for further analysis. When multiple experts provide pairwise comparison matrices, their judgments are aggregated cell-by-cell using the geometric mean to produce a single consensus matrix. The geometric mean is preferred because it preserves the reciprocal property of AHP matrices and is theoretically justified for aggregating individual priorities in group decision-making (Forman and Peniwati, 1998). It also minimizes the dominance of extreme individual judgments while maintaining proportional consistency in multiplicative scales (Ishizaka and Labib, 2011). This aggregation approach is consistent with the original formulation of the Analytic Hierarchy Process proposed by Saaty (1980), which recommends structured mathematical procedures for deriving collective priorities from expert evaluations.

Normalize the matrix and derive weights
Weight extraction follows a column normalization and row averaging procedure commonly applied in practical AHP implementations. First, compute the column sums:

$$S_j = \sum_{i=1}^{n} p_{ij} \quad (4)$$

Next, normalize each element:

$$n_{ij} = \frac{p_{ij}}{s_j} \quad (5)$$

Then compute the preliminary weight for each criterion by averaging across rows:

$w_i = \frac{1}{n} \sum_{j=1}^{n} n_{ij}$ (6)

Finally, normalize the weight vector so that the weights sum to one:
$\sum_{i=1}^{n} w_i = 1$ (7)

The resulting vector $\mathbf{w} = (w_1, w_2, \ldots, w_n)$represents the relative importance of each criterion.

Compute the consistency vector and estimate the maximum eigenvalue
To verify the logical consistency of expert judgments, multiply the pairwise comparison matrix $P$by the derived weight vector **w**(Saaty, 1980):
$A\mathrm{w} = P\mathrm{w}$ (8)

Then compute the consistency vector:
$c_i = \frac{(A\mathbf{w})_i}{w_i}$ (9)

The maximum eigenvalue $\lambda_{\max}$is estimated as:
$\lambda_{\max} = \frac{1}{n} \sum_{i=1}^{n} c_i$ (10)

A perfectly consistent matrix yield $\lambda_{\max} = n$. Deviations indicate inconsistency.

Calculate Consistency Index (CI) and Consistency Ratio (CR)
The Consistency Index (CI) measures the degree of deviation from perfect consistency (Saaty, 1980):
$CI = \frac{\lambda_{\max} - n}{n-1}$ (11)

The Consistency Ratio (CR) compares CI with the Random Index (RI), which depends on matrix size (Saaty, 1980):
$CR = \frac{CI}{RI}$ (12)

A CR ≤ 0.10 (10%) is generally considered acceptable. If CR exceeds 0.10, the pairwise comparisons should be reviewed and revised.
Revise inconsistent judgments (if necessary)
If CR is greater than 0.10, examine criteria associated with the largest deviations between $(A\mathbf{w})_i$and w_i. Experts should re-evaluate the most inconsistent pairwise comparisons rather than reconstructing the entire matrix. The process is repeated until acceptable consistency is achieved (Saaty, 1980).

Apply AHP weights in GIS to compute Site Suitability Index (SSI)
After validating the weights, reclassify each thematic raster into vulnerability classes (e.g., very low = 1 to very high = 5) using natural breaks or literature-based thresholds. The weighted linear combination method is then applied to compute the Site Suitability Index (SSI):
$SSI = \sum_{i=1}^{n} w_i \cdot r_i$ (13)

where $w_i$is the AHP weight and $r_i$is the reclassified raster value for criterion i. The resulting SSI raster represents the overall suitability score for each spatial unit.

Flood Vulnerability Index (FVI)

The Flood Vulnerability Index (FVI) was computed as a weighted linear combination of seven reclassified thematic layers (criteria) derived from the Analytic Hierarchy Process (AHP). Each thematic raster $r_i$was reclassified into five vulnerability ranks (1 = very low … 5 = very high) using natural-breaks and literature-based thresholds. AHP weights $w_i$were obtained by aggregating eight experts pairwise comparison matrices using the geometric mean, extracting priorities by column-normalization/row-average;(Saaty, 1980), and normalizing the resulting weight vector so that $\sum_{i=1}^{7} w_i = 1$. Individual expert consistency ratios (CR) ranged from 0.031 to 0.088 (all ≤ 0.10), therefore no expert matrix was excluded; the aggregated consensus matrix and final weights are reported in Table 10.
Raw (unscaled) FVI:

$\text{FVI} = \sum_{i=1}^{n} w_i\ r_i$ with $n = 7,\ r_i \in \{1,2,3,4,5\}$. (14)

Because the AHP weights were normalized ($\sum w_i = 1$), the theoretical bounds of the raw FVI are 1 (minimum) and 5 (maximum). In this study we report both the raw weighted sum and a 0–1 normalized FVI to facilitate interpretation and comparison. The min–max normalization used here maps the natural 1–5 range to 0–1:

$\text{FVI}_{0-1} = \frac{\text{FVI}-\text{FVI}_{\min}}{\text{FVI}_{\max}-\text{FVI}_{\min}} = \frac{\text{FVI}-1}{5-1} = \frac{\text{FVI}-1}{4}$. (15)

(For transparency we note that an alternative, simpler scaling sometimes used is $\text{FVI}/5$, but this yields a 0.20–1.00 range and was not used here.

2.6.1 Raster Calculation and Mapping

In the raster calculator (ArcGIS/ QGIS): Compute FVI raster as the sum of (weight × reclassified raster) for each thematic layer. The resulting continuous FVI raster was reclassified into discrete vulnerability classes (very high, high, moderate, low, very low) for visualization and for overlay analysis with village centroids.

3. Results and Discussions

The pairwise comparison matrices for experts 1-8 are presented in tables 2 to 9.

Table 2: Pairwise Comparison Matrix from Expert 1

EXPERT 1	1	2	3	4	5	6	7	Weight
LULC	1.00	4.00	5.00	3.00	1.00	3.00	4.00	30.45
DRAINAGE DENSITY	0.25	1.00	1.00	1.00	0.33	1.00	2.00	8.96
SLOPE	0.20	1.00	1.00	1.00	0.50	3.00	2.00	11.34
ELEVATION	0.33	1.00	1.00	1.00	0.50	3.00	4.00	13.53
RAINFALL	1.00	3.00	2.00	2.00	1.00	3.00	4.00	23.48
SOIL TYPE	0.33	1.00	0.33	0.33	0.33	1.00	1.00	6.87
DISTANCE FROM STREAMS	0.25	0.50	0.50	0.25	0.25	1.00	1.00	5.37
SUM	3.37	11.50	10.83	8.58	3.91	15.00	18.00	100.00
							CR = 0.046	

Table 3: Pairwise Comparison Matrix from Expert 2

EXPERT 2	1.00	2.00	3.00	4.00	5.00	6.00	7.00	Weight
LULC	1.00	6.00	1.00	1.00	0.25	1.00	2.00	15.02
DRAINAGE DENSITY	0.17	1.00	0.33	0.33	0.25	3.00	1.00	7.91
SLOPE	1.00	3.00	1.00	1.00	0.33	1.00	1.00	11.71
ELEVATION	1.00	3.00	1.00	1.00	0.33	3.00	2.00	15.02
RAINFALL	4.00	4.00	3.00	3.00	1.00	4.00	3.00	34.03
SOIL TYPE	1.00	0.33	1.00	0.33	0.25	1.00	1.00	8.01
DISTANCE FROM STREAMS	0.50	1.00	1.00	0.50	0.33	1.00	1.00	8.31
SUM	8.67	18.33	8.33	7.17	2.75	14.00	11.00	100.00
							CR = 0.088	

Table 4: Pairwise Comparison Matrix from Expert 3

EXPERT 3	1	2	3	4	5	6	7	Weight
LULC	1.00	3.00	2.00	2.00	1.00	3.00	4.00	22.64
DRAINAGE DENSITY	0.33	1.00	1.00	1.00	0.33	0.33	1.00	11.32
SLOPE	0.50	1.00	1.00	1.00	0.33	3.00	2.00	11.32

ELEVATION	0.50	1.00	1.00	1.00	0.33	4.00	3.00	11.32
RAINFALL	1.00	3.00	3.00	3.00	1.00	3.00	3.00	33.96
SOIL TYPE	0.33	3.00	0.33	0.25	0.33	1.00	2.00	3.77
DISTANCE FROM STREAMS	0.25	1.00	0.50	0.33	0.33	0.50	1.00	5.66
SUM	3.92	13.00	8.83	8.58	3.67	14.83	16.00	100.00
							CR = 0.074	

Table 5: Pairwise Comparison Matrix from Expert 4

EXPERT 4	1	2	3	4	5	6	7	Weight
LULC	1.00	3.00	4.00	4.00	1.00	4.00	3.00	22.64
DRAINAGE DENSITY	0.33	1.00	1.00	1.00	0.33	2.00	1.00	5.66
SLOPE	0.25	1.00	1.00	1.00	0.33	3.00	3.00	11.32
ELEVATION	0.25	1.00	1.00	1.00	0.33	3.00	3.00	11.32
RAINFALL	1.00	3.00	3.00	3.00	1.00	3.00	3.00	33.96
SOIL TYPE	0.25	0.50	0.33	0.33	0.33	1.00	1.00	11.32
DISTANCE FROM STREAMS	0.33	1.00	0.33	0.33	0.33	1.00	1.00	5.66
SUM	3.37	11.50	10.83	8.58	3.91	15.00	18.00	100.00
							CR = 0.049	

Table 6: Pairwise Comparison Matrix from Expert 5

EXPERT 5	1	2	3	4	5	6	7	Weight
LULC	1.00	3.00	4.00	4.00	1.00	4.00	3.00	30.22
DRAINAGE DENSITY	0.33	1.00	1.00	1.00	0.33	2.00	1.00	10.04
SLOPE	0.25	1.00	1.00	2.00	0.50	1.00	0.50	9.64
ELEVATION	0.25	1.00	0.50	1.00	0.50	1.00	1.00	8.55
RAINFALL	1.00	3.00	2.00	2.00	1.00	3.00	2.00	22.76
SOIL TYPE	0.25	0.50	1.00	1.00	0.33	1.00	1.00	7.95
DISTANCE FROM STREAMS	0.33	1.00	2.00	1.00	0.50	1.00	1.00	10.83
SUM	3.42	10.50	11.50	12.00	4.17	13.00	9.50	100.00
							CR = 0.031	

Table 7: Pairwise Comparison Matrix from Expert 6

EXPERT 6	1	2	3	4	5	6	7	Weight
LULC	1.00	4.00	2.00	2.00	0.33	2.00	2.00	19.34
DRAINAGE DENSITY	0.25	1.00	0.50	0.50	0.33	2.00	1.00	8.62
SLOPE	0.50	2.00	1.00	1.00	0.33	1.00	2.00	11.42
ELEVATION	0.50	2.00	1.00	1.00	0.33	1.00	3.00	12.63
RAINFALL	3.00	3.00	3.00	3.00	1.00	3.00	3.00	31.46
SOIL TYPE	0.50	0.50	1.00	1.00	0.33	1.00	1.00	8.92
DISTANCE FROM STREAMS	0.50	1.00	0.50	0.33	0.33	1.00	1.00	7.62
SUM	6.25	13.50	9.00	8.83	3.00	11.00	13.00	100.00
							CR = 0.047	

Table 8: Pairwise Comparison Matrix from Expert 7

EXPERT 7	1	2	3	4	5	6	7	Weight
LULC	1.00	2.00	1.00	1.00	0.33	2.00	2.00	14.85
DRAINAGE DENSITY	0.50	1.00	1.00	1.00	0.33	1.00	2.00	11.29
SLOPE	1.00	1.00	1.00	1.00	0.33	2.00	1.00	12.18
ELEVATION	1.00	1.00	1.00	1.00	0.33	2.00	2.00	13.47
RAINFALL	3.00	3.00	3.00	3.00	1.00	3.00	2.00	31.09
SOIL TYPE	0.50	1.00	0.50	0.50	0.33	1.00	1.00	8.22
DISTANCE FROM STREAMS	0.50	0.50	1.00	0.50	0.50	1.00	1.00	8.91
SUM	7.50	9.50	8.50	8.00	3.17	12.00	11.00	100.00
							CR = 0.037	

Table 9: Pairwise Comparison Matrix from Expert 8

EXPERT 8	1	2	3	4	5	6	7	Weight
LULC	1.00	3.00	2.00	2.00	0.33	1.00	3.00	17.93
DRAINAGE DENSITY	0.33	1.00	2.00	2.00	0.33	0.50	0.50	10.26
SLOPE	0.50	0.50	1.00	1.00	0.33	2.00	2.00	11.55
ELEVATION	0.50	0.50	1.00	1.00	0.33	1.00	1.00	8.86

RAINFALL	3.00	3.00	3.00	3.00	1.00	3.00	2.00	29.78
SOIL TYPE	1.00	2.00	0.50	1.00	0.33	1.00	2.00	12.05
DISTANCE FROM STREAMS	0.33	2.00	0.50	1.00	0.50	0.50	1.00	9.56
SUM	6.67	12.00	10.00	11.00	3.17	9.00	11.50	100.00
							CR = 0.082	

Table 10*:* Analytical Hierarchy Process (AHP) Weight of Flood Vulnerability Parameters

EXPERTS	1	2	3	4	5	6	7	8	WEIGHT
LULC	30.448	15.015	22.642	22.642	30.219	19.339	14.851	17.928	21.635
Drainage Density	8.955	7.908	11.321	5.660	10.040	8.617	11.287	10.259	9.256
Slope	11.343	11.712	11.321	11.321	9.642	11.423	12.178	11.554	11.312
Elevation	13.532	15.015	11.321	11.321	8.549	12.625	13.465	8.865	11.837
Rainfall	23.483	34.034	33.962	33.962	22.763	31.463	31.089	29.781	30.067
Soil Type	6.866	8.008	3.774	11.321	7.952	8.918	8.218	12.052	8.388
Distance From Streams	5.373	8.308	5.660	5.660	10.835	7.615	8.911	9.562	7.741
Sum	100	100	100	100	100	100	100	100	

From the table 10; Rainfall, with a weight of 30.067%, was identified as the most important driver of flooding in the study area, as intense precipitation events increase surface runoff and can overwhelm existing drainage capacity. Land use/land cover (LULC), weighted at 21.635%, also plays a significant role, since human activities such as urbanization, deforestation, and agricultural expansion reduce infiltration and promote increased surface runoff. The terrain-related factors of slope (11.312%) and elevation (11.837%) further influence flood vulnerability by controlling runoff velocity and the formation of accumulation zones, with low-lying and relatively flat areas being more prone to water concentration. Drainage density, which accounts for 9.256% of the total weight, can facilitate efficient runoff conveyance but may also indicate concentrated flow paths that enhance flood risk under high rainfall conditions. Soil type (8.388%) and distance from streams (7.741%) contribute to local susceptibility, as soils with low water retention capacity and areas closer to stream channels are more easily inundated.

Overall, the dominance of rainfall and LULC in the weight distribution suggests that flood risk in Egor Local Government Area is largely governed by the interaction between climatic forcing and land management practices, while slope and elevation reinforce the spatial patterns of vulnerability by directing runoff from higher grounds into lower-lying basins.

Table 11: Final pair-wise comparison table (AHP)
Below is the table 3 7×7 pair-wise comparison matrix derived from the final AHP weights. Each cell (a_{ij}) = weight(i) / weight(j). Values rounded to 3 decimal places.
The pair-wise comparison table 11 expresses the relative importance of the flood-vulnerability parameters based on the final AHP weights. Rainfall consistently dominates the matrix, showing strong preference ratios over all other factors, particularly soil type and distance from streams, which confirms its role as the most influential driver of flooding in the study area. Land use/land cover (LULC) also exhibits high dominance over most parameters,

Parameter	LULC	Drainage Density	Slope	Elevation	Rainfall	Soil Type	Distance From Streams
LULC	1.000	2.337	1.913	1.828	0.720	2.579	2.795
Drainage Density	0.428	1.000	0.818	0.782	0.308	1.103	1.196
Slope	0.523	1.222	1.000	0.956	0.376	1.349	1.461
Elevation	0.547	1.279	1.046	1.000	0.394	1.411	1.529
Rainfall	1.390	3.248	2.658	2.540	1.000	3.585	3.884
Soil Type	0.388	0.906	0.742	0.709	0.279	1.000	1.084
Distance From Streams	0.358	0.836	0.684	0.654	0.257	0.923	1.000

highlighting the significant effect of human-induced surface modification on runoff generation. Slope and elevation show near-equal importance, as reflected by values close to unity between them, indicating their closely related influence on runoff velocity and water accumulation. Drainage density occupies an intermediate position, being more important than soil type and distance from streams but less influential than rainfall and LULC. Soil type and distance from streams display the lowest relative importance, though their ratios indicate they still contribute meaningfully to

localized flood susceptibility. Overall, the table demonstrates a logical and consistent hierarchy in which climatic forcing and land management factors outweigh terrain and soil controls, while topographic parameters help refine the spatial distribution of flood risk within Egor Local Government Area.

3.1 Distance from Stream Parameter Map

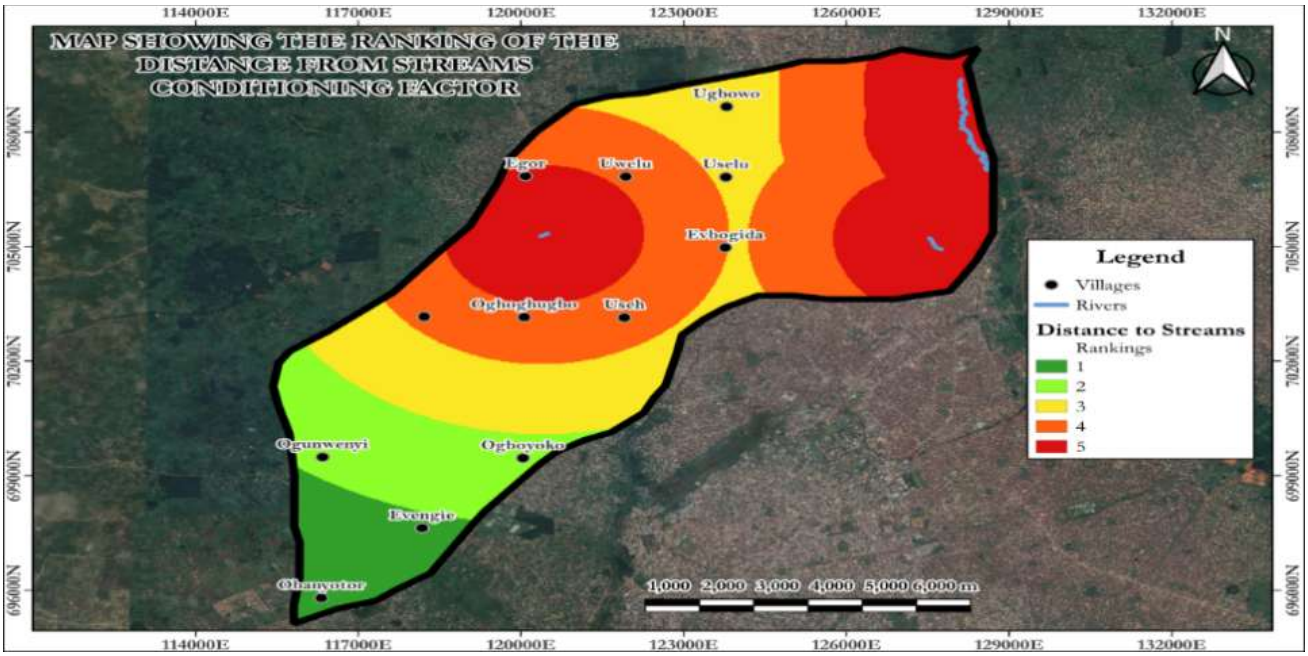

Figure 4: *Criteria Levels for the Distance from Streams Parameter across all streams and rivers*

The figure 4 map illustrates the ranking of distance from streams, with values increasing from dark green (rank 1, farthest from streams) to red (rank 5, closest to streams). Rivers are shown in blue, while black dots represent the settlements within the study area. The highest vulnerability zones are concentrated in the northern and north-western parts of the area, where red and orange colours dominate. Settlements such as Egor and those around Oghughughue and Useh fall within these zones, indicating that they are located very close to stream channels and are therefore highly exposed to stream-related flooding. Toward the central portion of the map, yellow zones represent moderate vulnerability. Villages including Ebhogida and Uselu/Uwelu are situated within this band, suggesting an intermediate distance from streams and a moderate level of flood exposure.

In contrast, the southern part of the study area is largely characterized by green shades, which signify low vulnerability due to greater distance from streams. Settlements such as Ogunwenyi, Ogboyoko, Evengle, and Ohanyator are located in these zones, indicating relatively safer conditions with respect to stream proximity. Overall, the map shows a clear spatial trend of increasing flood vulnerability toward the northern sections of the study area where settlements are closer to stream networks.

3.2 Drainage Density Parameter Map

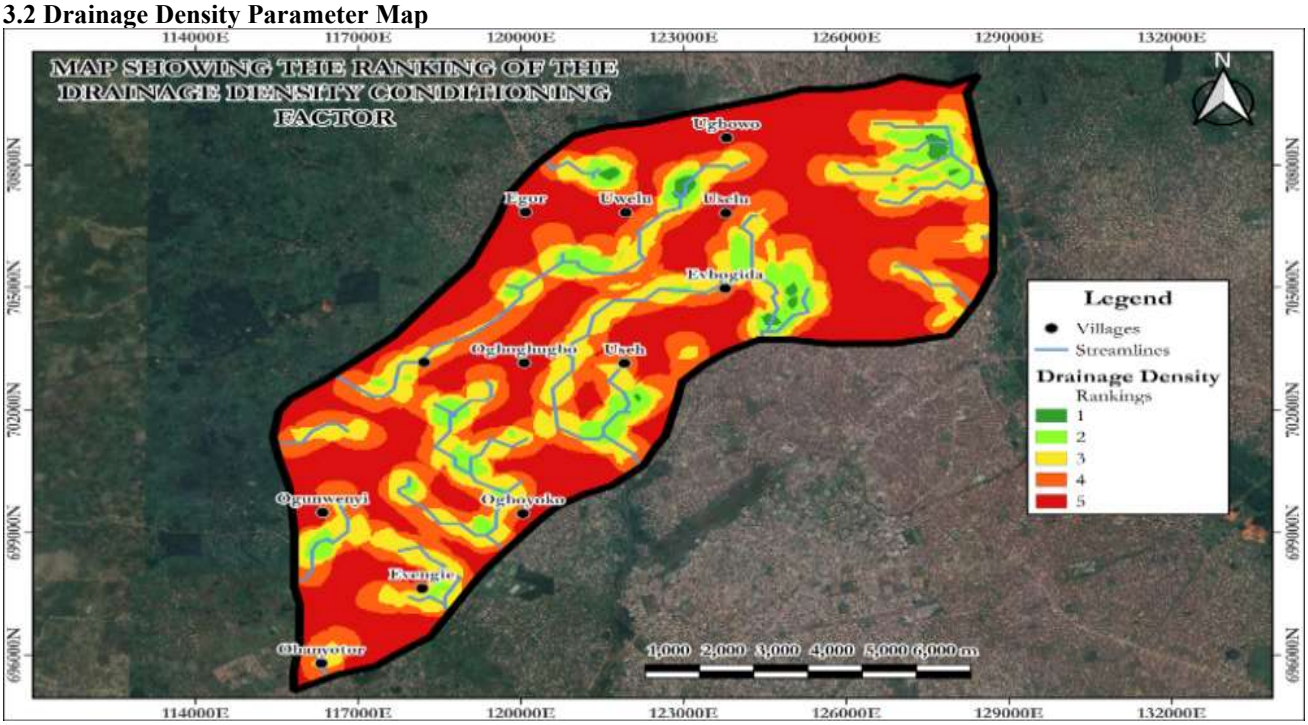

Figure 5: *Criteria Rank for Drainage Density Parameter*

Map contained in Figure 5 illustrates the ranking of the drainage density conditioning factor for various communities using a color-coded system to represent different drainage density rankings, from very low (green) to very high (red). Communities like Egor and Useh have very low drainage density, indicating sparse stream networks. This can mean less surface water runoff and potentially lower erosion risk but could also indicate limited water availability for agriculture and other uses. Uwelu and Uselu fall within the low drainage density category. The slightly higher density compared to the very low areas suggests more developed stream networks, which can help in managing surface water runoff and reducing flood risk, while still maintaining relatively low erosion rates. While Evbogida, and Ugbowo have moderately low drainage density, indicating a balance between surface water runoff and water availability. This ranking suggests an intermediate level of stream networks that can efficiently manage runoff while providing adequate water resources. Places like Oghoghugbo, and Ogbojoko are characterized in high drainage density areas, these communities experience more developed stream networks, which can lead to efficient water runoff management but may increase the risk of soil erosion. Proper land management practices are necessary to mitigate erosion while benefiting from the efficient drainage system. Ogunwenyi, Evengie, and Obanyotor villages are situated in very high drainage density areas, characterized by extensive stream networks. This high density can lead to significant soil erosion due to the rapid removal of surface water. While flood risks might be lower due to efficient drainage, substantial soil conservation measures are required to prevent land degradation. Overall, the map shows a gradient of drainage density from very low in the northern regions to very high in the southern regions. Communities in very low to low drainage density areas might face challenges related to water availability, whereas those in high to very high-density areas must manage increased erosion risks. Effective land and water management strategies are crucial for optimizing the benefits and mitigating the risks associated with varying drainage densities.

3.3 Elevation Parameter Map

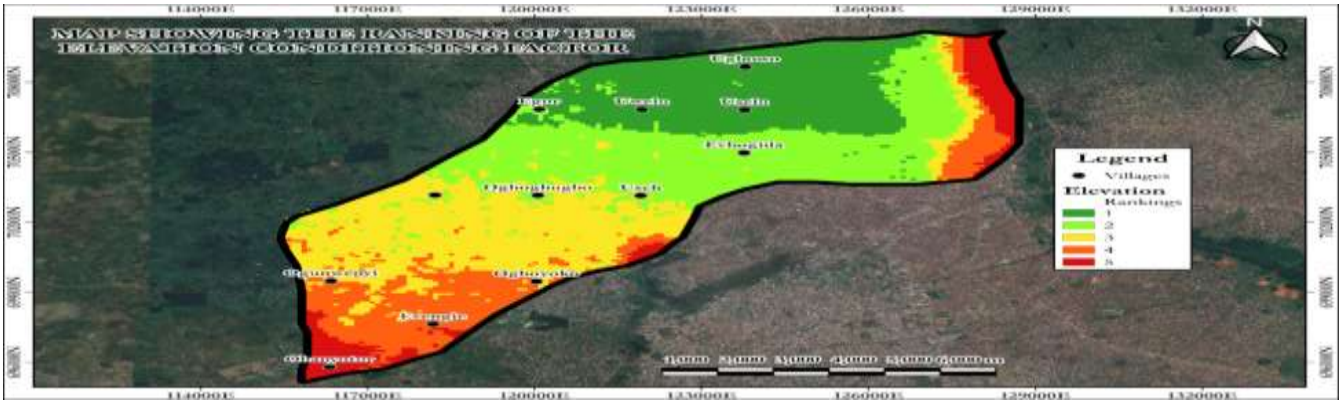

Figure 6: *Criteria Ranks for the Elevation Parameter for all 12 villages*

The map in figure 6 illustrates the ranking of the elevation conditioning factor for various communities using a color-coded system to represent different elevation rankings, from very low (green) to very high (red). Locations such as Ugbowo, Egor, Uwelu, Uselu, and Evbogida are located in areas with very low elevation, indicating relatively flat terrain. This flatness is beneficial for infrastructure development and agriculture but may increase susceptibility to flooding, especially in regions with poor drainage systems. Also, Oghoghugbo, Useh fall within the low elevation category. The terrain is still relatively flat but slightly higher than the very low elevation areas. This can reduce flood risk compared to very low elevation zones, but land use planning is essential to manage runoff and erosion effectively. Useh also extends into the moderately low elevation category, indicating gentle slopes and a higher altitude compared to low elevation areas. This reduces flood risk further but requires careful management of runoff and erosion. Ogunwenyi, and Ogbojoko are situated in high elevation areas characterized by steeper slopes. Higher altitudes reduce flood risk but can present challenges for construction and require measures to control erosion. While communities such as Evengie, and Obanyotor are located in very high elevation areas, these communities experience significant elevation differences with steep slopes. The high altitude offers advantages like scenic views and reduced flood risk but poses challenges such as increased erosion and higher construction costs. Robust soil and water conservation practices are necessary to manage runoff and erosion effectively. In general, the map shows a clear elevation gradient, with the northern communities predominantly in very low to low elevation zones and the southern communities in high to very high elevation zones. This spatial variation necessitates tailored land use and infrastructure planning to address the unique challenges and opportunities of each elevation level, from flood management in lower areas to erosion control in higher regions.

3.4 Land Use and Land Cover Parameter Map

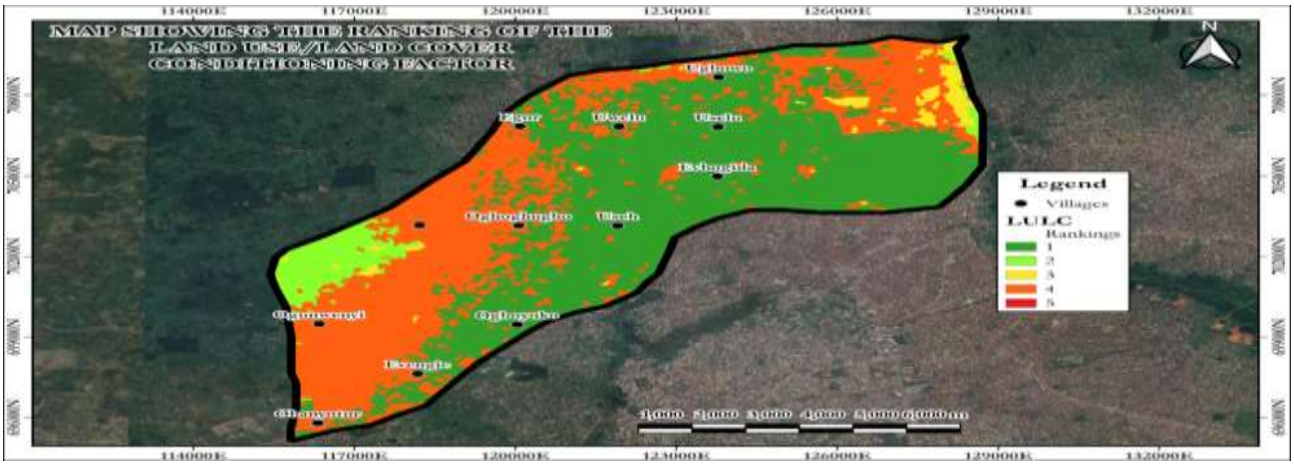

Figure 7: *Criteria Ranks for Land Use/Land Cover Parameter across all 12 villages*

Figure 7 illustrates the ranking of the land use/land cover (LULC) conditioning factor for various communities, using a color-coded system to represent different LULC rankings from very low (green) to very high (red). Some communities like Egor, Ugbowo, Uwelu, Uselu, and Evbogida are characterized by very low LULC, indicating that the land cover is predominantly natural or less altered by human activity. This could mean more vegetation, which can contribute to lower erosion rates and better water infiltration. While Ogunwenyi falls within the low LULC category, suggesting a slightly higher degree of land use and human activity compared to the very low areas. This can still maintain a good balance of natural vegetation, aiding in soil and water conservation. Oghoghugbo has a moderately low LULC ranking, indicating a moderate level of land use. This could mean more agricultural activity or urban development, leading to a moderate impact on the natural land cover. Ogbojoko and Useh are in high LULC areas, which mean significant alteration of the land cover due to human activities such as agriculture, urbanization, or deforestation. This can lead to higher soil erosion and reduced natural vegetation cover. Evengie, and Obanyotor are situated in very high LULC areas, characterized by extensive land use and significant alterations to the natural land cover. This high degree of human activity can lead to severe soil erosion, reduced water infiltration, and increased runoff. Effective land management practices are essential to mitigate these impacts. The map in figure 6 generally shows a gradient of LULC rankings, from very low in the central and northern regions to very high in the southern regions. Communities in very low to low LULC areas have better-preserved natural land cover, while those in high to very high LULC areas experience significant human-induced changes. Sustainable land use practices are crucial in high and very high LULC areas to prevent land degradation and maintain ecological balance.

3.5 Rainfall / Precipitation Parameter Map

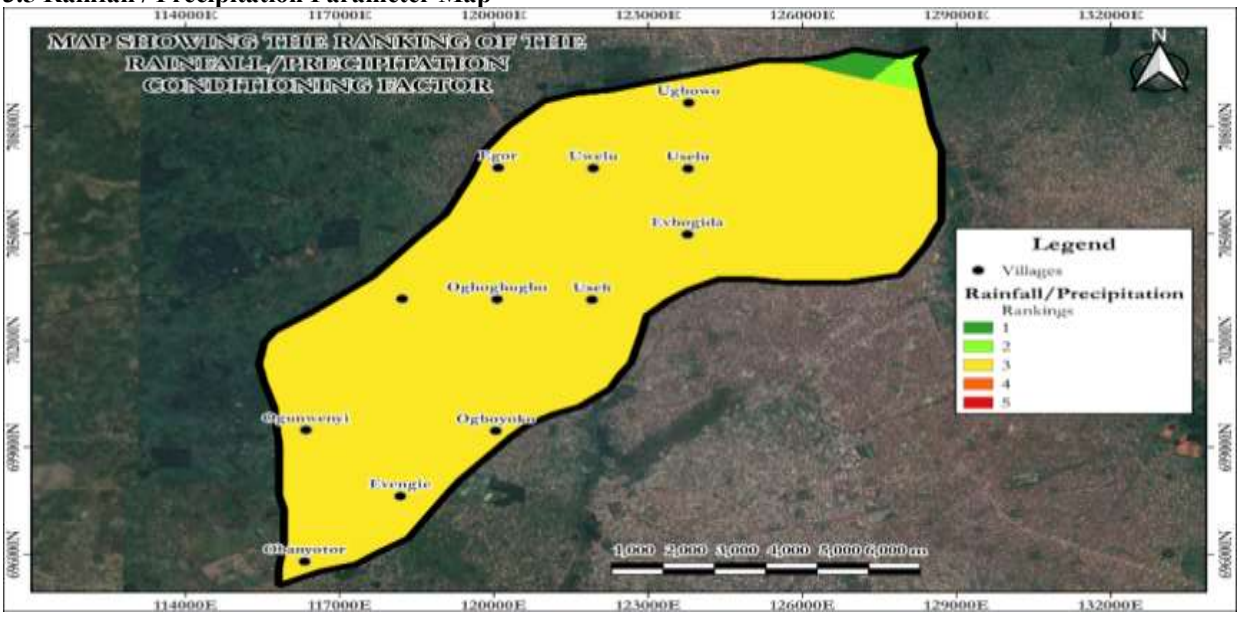

Figure 8: *Criteria Ranks for the Rainfall/Precipitation Parameter across all villages*

The ranking of the rainfall/precipitation conditioning factor for various communities, using a color-coded system to represent different rankings from very low (green) to moderately low (yellow) is illustrated in figure 8. Northeast of Ugbowo experiences very low rainfall, which could result in limited water availability and potentially more arid conditions compared to the rest of the region. Other communities like Egor, Ugbowo, Uwelu, Uselu, Evbogida, Oghoghugbo, Useh, Ogunwenyi, Ogbojoko, Evengie, and Obanyotor experience moderately low precipitation, indicating a relatively uniform distribution of rainfall across these areas. This level of precipitation supports moderate vegetation and agricultural activities but may require efficient water management practices to ensure sustainability during drier periods. In totality, the map shows that most communities are in areas with moderately low rainfall, which suggests that while there is a consistent level of precipitation, water management and conservation measures are necessary to maintain agricultural productivity and natural ecosystems. The area with very low precipitation may need targeted strategies to mitigate the impact of lower water availability.

3.6 Slope Parameter Map

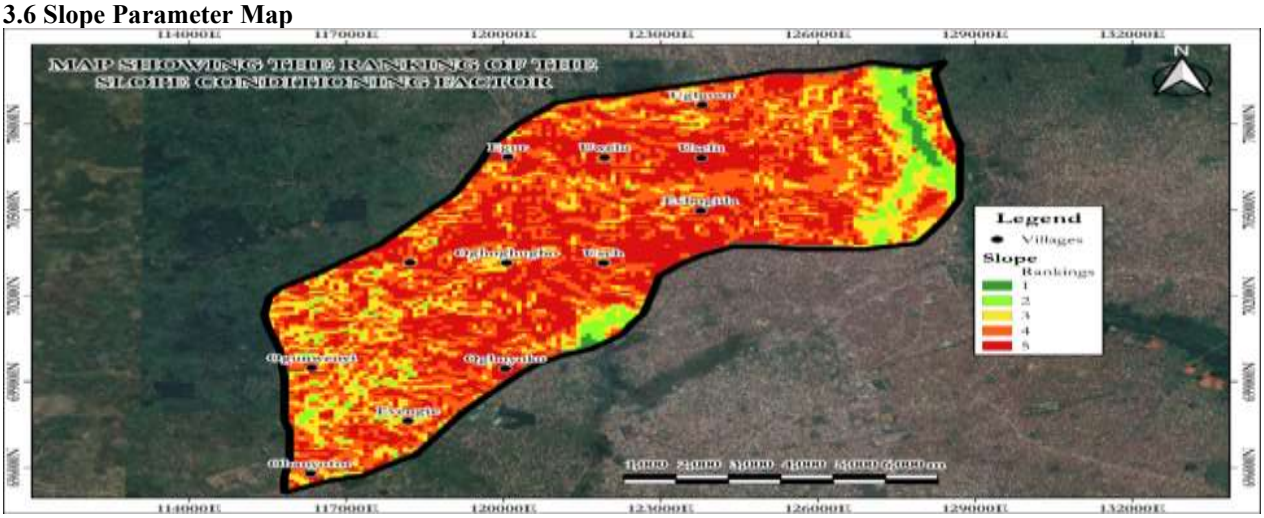

Figure 9: *Criteria Ranks for the Slope Parameter across all villages*

Figure 9 contains the map that shows the ranking of the slope conditioning factor for various communities, using a color-coded system to represent different rankings from very low (green) to very high (red). Northeast of Egor and Ugbowo experience very low slope, indicating relatively flat terrain that is less prone to erosion and landslides. While southeast of Useh and Uwelu regions have low slopes, which also suggest minimal erosion risks and stable ground for construction and agriculture. Egor, Uwelu, Evbogida, Oghoghugbo, and Useh areas feature moderate slopes, indicating some risk of soil movement and requiring considerations for water runoff management. The southwest of Ogbojoko, Evengie, and Ogunwenyi have high slopes, which could lead to significant runoff and soil erosion, necessitating erosion control measures. While Central and northern parts of Uselu, Ugbowo, Egor have very high slopes, posing substantial risks for erosion and landslides, making them critical zones for soil conservation and slope stabilization strategies. Summarily, the map indicates that the slope varies significantly across the region, with the central and northern parts having the highest slopes. Proper land management and soil conservation practices are crucial in these areas to prevent erosion and maintain land stability.

3.7 Soil Type Parameter Map

Figure 10: *Criteria Ranks for the Soil Type Parameter*

Figure 10 shows the map that displays the ranking of the soil type conditioning factor for various communities, using different colors to represent the rankings. Oghoghugbo and Useh have the most favorable soil types, indicating low susceptibility to erosion and suitable conditions for agriculture and construction. While Egor, Uwelu, Uselu, and Evbogida regions have moderately suitable soil types, suggesting some limitations that may require management practices for optimal use. Ogunwenyi, Ogbojoko, Evengie, and Obanyotor areas have the least suitable soil types, indicating high susceptibility to erosion or other limitations, requiring significant interventions for safe use and

management. This map shows that the soil type varies significantly across the region, with areas in red requiring careful management to mitigate potential erosion risks and maintain soil health for sustainable land use.

3.7 Flood Vulnerability Map of Egor Local Government Area Using AHP

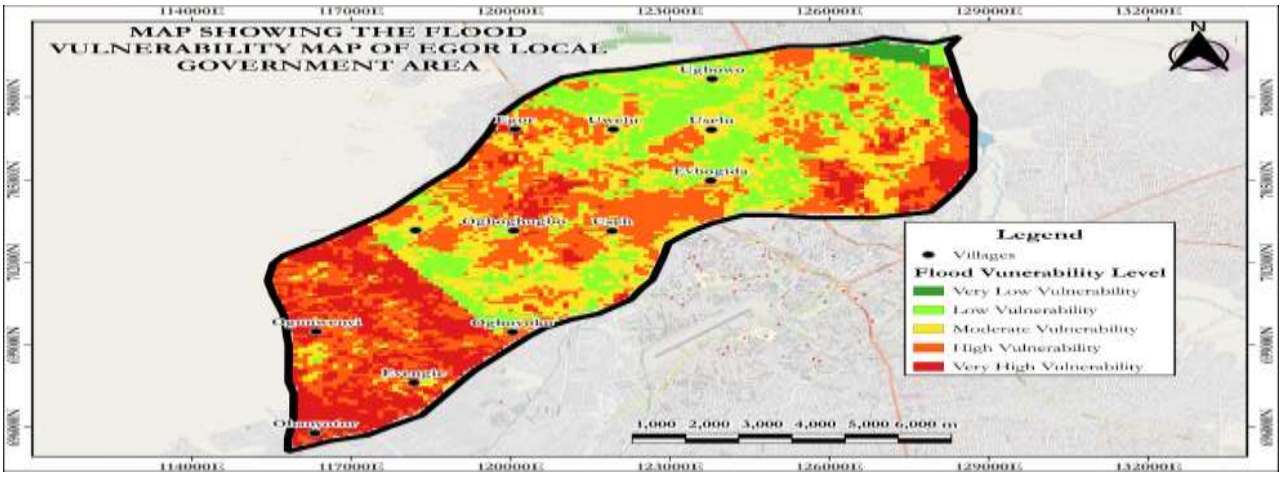

Figure 11: *The Map of Egor LGA showing all flood vulnerability levels across all 12 villages.*

The AHP-derived flood vulnerability map of Egor Local Government Area in figure 11 identifies eleven communities as very low, low, moderate, high, and very high. Egor village, Ogunwenyi, and Obanyotor are classified as very high vulnerability, indicating a high risk of destruction due to flooding. Ogboyoko, Useh, and Oghoghugbo are classified as high vulnerability, facing significant threats to their infrastructure. Ugbowo and Oghoghugbo are moderately vulnerable, with a high possibility of future flooding if factors contributing to flooding worsen. Addressing these vulnerabilities is crucial to reduce the impact of projected flooding and ensure the safety of the communities in the area.

3.8 Discussion of Results

The results show a clear dominance of climatic and land-use drivers over more localized controls: rainfall (30.07%) and land use/land cover (21.63%) together account for over half of the AHP weight. Rainfall dominates because it is the primary input that generates run-off; intense precipitation events produce immediate, system-wide responses that can overwhelm drainage regardless of local soil properties. In contrast, soil type influences infiltration and storage at a finer spatial scale and often moderates, rather than controls, the timing and extent of flooding; hence its lower relative weight. Likewise, LULC magnifies rainfall effects where urbanization and reduced vegetation cover increase runoff and peak flows.

This pattern majorly emphasizes on precipitation and surface sealing, with terrain and drainage refining spatial patterns; is consistent with many applied flood-vulnerability studies in Nigeria and other tropical regions, which find climatic forcing and urban land-use change to be leading drivers while soil and distance-to-channel explain local variation. The greater importance of slope and elevation in our weights reflects their role in routing water from higher to lower zones, concentrating flow in low-lying basins and floodplains.

Translating vulnerability classes into community impacts clarifies the stakes for local residents. Large portions of the northern part of Egor Local Government Area are classified as very low/low vulnerability, so communities such as Evbogida, Ugbowo, Uselu, and Useh are comparatively less exposed to frequent inundation. By contrast, southern communities identified as highly vulnerable; such as Ogboyoko, Evengie, and Ogunwenyi; face repeated runoff accumulation, crop loss, and infrastructure damage.

Recurrent flooding in these high-vulnerability zones is likely to cause immediate food shortages through destruction of farmlands and storage, contaminate drinking water leading to outbreaks of waterborne diseases (e.g., cholera, typhoid), increase vector breeding sites and thus vector-borne illnesses, and force temporary displacement that undermines livelihoods. To reduce these impacts the discussion should explicitly link observed vulnerability drivers to targeted interventions: strengthen early-warning and rainfall monitoring, implement land-use controls and urban drainage upgrades in high LULC-weight areas,

apply soil-conservation and infiltration enhancement where soil retention is poor, and prioritize natural buffer restoration and localized detention basins in low-lying southern zones. Reporting these cause-to-effect links (driver → physical process → community outcome → targeted intervention) makes the implications of the FVI actionable for planners and disaster-risk managers.

4. Conclusions and Recommendations

4.1 Conclusion

This study applied an integrated Geographic Information Systems (GIS) and Analytical Hierarchy Process (AHP) framework to assess flood vulnerability in Egor Local Government Area (LGA), Edo State. By incorporating seven flood-conditioning parameters such as rainfall, elevation, slope, drainage density, soil type, land use/land cover, and distance from streams. The research successfully quantified and visualized the spatial variability of flood susceptibility across the LGA.

The resulting flood vulnerability map revealed a heterogeneous pattern, with distinct zones ranging from very low to very high vulnerability. Communities such as Ogunwenyi, Obanyotor, and Egor were identified as being in the very high vulnerability class due to their low-lying topography, gentle slopes, poorly drained soils, and close proximity to drainage channels. High vulnerability zones, including Ogboyoko, Useh, and Oghoghugbo, exhibit similar physical characteristics, though with slightly improved drainage conditions, while areas such as Ugbowo and Uselu show moderate to low vulnerability associated with better terrain and soil infiltration capacity.

The findings demonstrate that flood vulnerability in Egor LGA is the outcome of complex interactions between environmental and anthropogenic factors. Intense rainfall, flat terrain, and high drainage density combine with rapid urbanization, inadequate drainage infrastructure, and indiscriminate development on floodplains to increase flood risk. From a vulnerability perspective, high exposure of populations and infrastructure, elevated sensitivity of the physical environment, and low adaptive capacity due to limited institutional preparedness and weak planning controls collectively contribute to the area's high overall flood vulnerability. The study confirms that without sustainable land management and proactive flood mitigation strategies, flood impacts in Egor LGA are likely to intensify, and areas currently classified as moderately vulnerable may transition into higher-risk categories. Importantly, the GIS–AHP approach proved to be an effective and reliable decision-support tool for urban flood risk assessment, offering a scientific basis for identifying priority areas for intervention and strengthening flood resilience planning.

4.2 Recommendations

Based on the outcomes of this research, several measures are recommended to reduce flood vulnerability in Egor LGA. The flood vulnerability map produced in this study should be adopted by relevant government agencies and environmental management stakeholders as a core planning tool for flood preparedness, mitigation, and response. Targeted infrastructural interventions, particularly the upgrading and maintenance of drainage networks in high and very high vulnerability zones, should be prioritized to enhance runoff conveyance and reduce surface water accumulation.

There is a strong need for stricter enforcement of land-use planning regulations to prevent indiscriminate construction on floodplains and to ensure that land-use practices in flood-prone areas are compatible with flood risk reduction objectives. Urban development should be guided by zoning regulations and flood-resilient building standards, with particular attention given to discouraging development in areas identified as high-risk. Public enlightenment and community-based education programs should also be strengthened to improve awareness of flood risks and to encourage local participation in flood mitigation and management efforts.

Furthermore, the methodological framework adopted in this study can be used to develop and maintain a comprehensive flood vulnerability database for Egor LGA, supporting continuous monitoring and evidence-based decision-making. Integrating community-based flood early warning systems, sustainable land management practices, and institutional capacity building will significantly enhance adaptive capacity and long-term resilience. Collectively, these recommendations, if implemented, will contribute to reducing flood impacts, safeguarding lives and property, and promoting sustainable urban development in Egor Local Government Area.

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Part Two
Social Psychology

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The Pitfalls of Foreign Investigators on African Traditional Religion

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Abstract. It is obvious that the pioneer investigators on African traditional religion were the Westerners. It is believed that it is from these writers that the indigenous African scholars took over from. Despite this, these earliest investigators were faced with many pitfalls. They were many in the course of this; such as missionaries, travelers, colonial administrators and European explorers each have claimed authentic interpreters of African religion. Thus, some of these foreign investigators came with pre-conceived and ethnocentric ideas and refused to see anything good about the Africans, their religion and culture. The study relied majorly on secondary sources (published materials). Findings reveal that the pitfalls of the earliest investigators on African religion is due to misconception of the world-views of the Africans.

Keywords: African Traditional Religion, Pitfalls, Foreign investigators, The Tue Nature of African Traditional Religion.

1. Introduction

Proper knowledge of the Africans from the inside is fundamental to understand their religion and culture; because a people's culture and religion speak volume of their beliefs and practices. African traditional religion is a distinct religion with its distinct features in the sense that it has no historical founder nor its tenets defined and codified as the case with other world religions like Buddhism, Christianity and Islam which bear the object of systematic studies.

African traditional religion is so cherished by African peoples in the sense that it is this religion that connects the living descendants with their forebears. It is so knitted with the people that it pervades and permeates all dimensions of human existence. This explains why it becomes difficult to demarcate between the sacred and the profane or between the spiritual and material spheres of life.

As Mbiti, (1969) Succinctly puts it:
Wherever the African is, there he is with his religion. He carries it to the fields where is sowing seeds or harvesting a new crop; he takes it with him to beer party or to attend a funeral ceremony, and if he is educated, he takes religion with him to the examination room at school or in the university. If he is a politician, he takes it to the House of Representatives (p.2).

The pervasiveness of African traditional religion, therefore, makes it difficult to have a strong grip on the subject. This essay, therefore, intend to discuss the pitfalls besetting the earliest investigators on African religion.

2. Conceptual Clarification

2.1 African Traditional Religion

Ekwunife (1990) defines African traditional religion as:
Those institutionalized beliefs and practices of indigenous religion of Africans which are rooted in the past African religious culture transmitted to the present votaries by successive African forebears mainly through oral traditions such as myths, songs and dances, liturgies, rituals, proverbs, pity-sayings and names/sacred specialist and persons, sacred space and objects and religious work of art, a religion which is slowly but constantly updated by each generation in the light of new experiences through dialectical process of continuities and discontinuities (p. 1).
Furthermore, it is the religion that has been handed down from generation to generation by the forebears

of the present generation of Africans (Awolalu and Dopamu, 1979, p.26).

2.2 The True Nature of African Traditional Religion.

The religion is traditional in the sense that it originated from the peoples' environment and on their soil. It is neither preached to them nor imported from outside to them. Africans are not converted into it; they are born into it. It serves the purpose of distinguishing African Religion from any other religion that has been brought to Africa through missionary and Islam propagation. It is based on oral tradition for its transmissions. It has no written literature, sacred scriptures or creedal forms. It has no reformers, preachers or missionaries that bring about a change in the religion from time to time as we have in other world religions (Awolalu and Dopamu, 1979, p. 22).

Further, Africans believe in God. The people's idea or the concepts of God are derivable from His relation or disclosure of Himself through the created order as perceived by each society in Africa. That is why people call Him by different names in African societies depending on what they think He does. Among the Igbo He is Chineke (The God that creates) (Peters, 2009, p. 36). Among the Yoruba, He is Olodumare (The King or Chief Unique who holds the scepter, wields authority and has the quality which is superlative in worth and he is at the same time permanently unchanging and reliable). Among the Edo, He is Osanobua or Osanobwa (the one who sustains, under pines and supports, the universe), among the Nupe, He is Soko (immense, great or the highest Deity that resides in heaven (Tasie and Ofuru, 2013, pp. 21-22). Among the Akans of Ghana, He is Nyame (The bright, majestic, splendid God who rules the universe). For the Africans, God is not only real but He is also believed to be known and worshipped (Metuh, 1987, pp. 77-82). Belief in divinities is also unshaken, divinities according to Awolalua and Dopamu (1979) are gods with small letter "g", believed to possess divine attributes since they are emanations from the Supreme Deity. They are said to be brought into being by the Supreme Being, hence they have no separate existence, but their existence is as permitted by the Supreme Deity, who cause them into being. As for their position and duties, the divinities were brought into being for a definite purpose, and the purpose of which is to serve the will of God in the theocratic government of the universe. In other words, the divinities serve as intermediaries between God and man. The divinities, therefore, become channels through which sacrifices, prayers, and offerings are presented to the Supreme Being. They have temples, shrines and devotees with priests and priestesses. So they are means to an end and not an end in themselves (Awolalu and Dopamu, 1979).

As for their census and names, the divinities are many and their numbers vary from locality to locality. Among the Yoruba, for instance, the number varies between 201, 401, 601 and 1700. With regards to their names, each divinity has a name, sometimes, the names are descriptive in the sense that they describe the true nature, character and functions of the divinities. For instance, in Yoruba, Jakuta, the divinity responsible for wrath, i.e. one who fights with stones is known in Nape as Sokogba, meaning God's axe (Awolalu and Dopamu, 1979).

As Imasogie (1981), pointed out, the Supreme Being having created the universe, appointed the divinities to the various departments of nature to carry out its purpose; hence there are, for instance, a divinity in charge of human procreation, a divinity responsible for death, another in charge of food production, yet another charged with the responsibility for bodies of waters, etc. According to hint, these divinities have full authority over their respective areas of influence, subject only to the power of the Supreme Being (p. 34):

Tasie and Ofuru (2013), observe that the divinities are highly personalized. Some as they noted, are conceived in gender terms as male or female. According to Tasie and Ofuru, the Ashanti, for instance, not only consider the earth to be a female divinity and second to God, but also observe Thursday as her day. Also, the Igbo, as they remarked also regard the earth to be God's daughter who protects people and helps with crops. Some of the divinities according to them are further conceived as having spouses as humans do. For Tasie arid Ofuru, a telling example among the Yoruba are the goddess Osun and Oya both of whom are believed to be the wives of Sango, the divinity of thunder and lighting. They further noted that there are other divinities that are believed to be androgynous, possessing male and female characteristics. They pointed to the Egba and the Ewe who conceive Buruku in this manner (p. 43). Apart from this, the belief in spirits is also strong among the Africans.

Spirits, as Anyacho (1994) pointed out, are invisible beings which are capable of assuming different shape and form when they want to reveal themselves to man. According to Anyacho, they are believed to be created by God and as such are subordinate to Him (p. 247). In much the same vein, Omoregbe (1999) notes that spirits are believed to appear sometimes to people in human form (p.66).

As for their nature, spirits are not only abstract (i.e. they can take any form or shape and nature, but also ubiquitous in the sense that there is no area of the earth, any object or creature which cannot be inhabited by a spirit. Spirit possesses, complex nature and attributes depending on the order in which it is being spoken of but generally, spirit is said to possess vital influence and force or power. As for their abode, spirits are believed to inhabit natural objects such as (trees, mountains, rivers, forests, etc and they are believed to be sacred, there are good and bad spirits. The good spirits are responsible for giving fortunes to people while the bad spirits include: *Ogbanje* born to die spirit) and ghost spirits which are spirits of those who died "bad death" and were not properly buried. Their spirit becomes wanderers and haunts the living (Peters, 2009 pp. 4 1-42). Thus, Africans also believe in the ancestors. Mbiti (1969), sees the ancestors as the deceased members of their families who are still remembered and venerated by members of their families. Any wonder, he describes them as the "Living dead" (P. 83). In much the same vein, Tasie (2009) also sees the ancestors as those who lived a very good life while on earth and died "good death" at a ripe old age and were accorded burial rites befitting their status (P. 43). According to Anyacho (1994), "the ancestors are those who are believed to have acquired extra-human powers in the afterlife which enables them to intervene in the lives of the living members of their families" (P. 257). Thus, they are regarded as the benevolent forefathers; the nearest and closet to man (Ugwu and Uwueye, 2004, P.46). Also, the deceased departed are considered to have keen interest in the affairs of their living descendants which is why they are regarded as the watch-dog of their families or lineages (Benjamin, 1976, P.
126).

For Madu, (1964), the ancestors were human beings, who, having lived in this world, experienced the sufferings of humanity and died. By virtue of their death, according to Madu, they were ushered into the land of their forebears by full burial rites accorded to them here on earth, having suffered with humanity on earth, and having entered into the blessedness of the ancestral land, he is in better position to appreciate the suffering of man (P.66).

According to Owete and Iheanacho (2009), ancestors are the departed members of the family who still maintain close relationship with their survivors. Though, no longer physically visible, yet their participation in family and patrlineage matters of the group are practically felt (P. 120). According to them, there are two categories of ancestors in West Africa namely, the living dead and the ghost. The former, according to them, are the group of departed members of the family and kin unit members that can be remembered by their names and survivors. They are normally numerous; yet, they are remembered by their names and physiognomy identity while the latter, according to them, are the departed people, whose identity is in the fast-fading memory of the living, or even forgotten. Those who know them have equally died. The names of this category of ancestors as they further noted can be remembered, but their physique cannot be inferred or described (P. 121).

As for their qualities, it is not all who have departed become ancestors rather, there are qualities or attributes that qualify the departed to be an ancestor. To become an ancestor first, one must have children (i.e. parenthoods), for Owete and Iheanacho, this is important because it is the children that perpetuate the 'existence' of the father, grandfather, great-grandfather, etc. According to them, it is not even merely having children, but at least a male child. This is why procreation as they further noted are almost norms for actualizing man's physical essence, union and fulfillment in group life-family, kindred and community. According to them, perpetual bachelorhood is discouraged, abhorred and looked upon with disdain, as a condition that is capable of facilitating the extinction of a kin group and, an ancestral lineage (P. 121).

Following closely is advanced age. For Owete and Iheanacho (2009) the departed man must have lived a long life. Such longevity according to them is believed to be a manifestation of the individual's good relation with the gods of the land. For them, this is against the background of the people's belief, that death does not ordinarily strike, especially with young people as its victim. Death at such stage of live according to them, come as a result of sin committed against supernatural beings, or as a result of sorcery, and evil hands at work. Therefore, for one to live to an advanced age, as they further noted portend that he has not committed offence (s) against supernatural beings, and by extension is in good terms with his neighbours (pp. 121-122).

In addition to this is performance of burial rites. The funeral rites that precede ancestorhood, according to Owete and Iheanacho (2009), are in two phases; those performed before interment and the post interment rites, popularly called 'second burial.' For them, all are required for ancestorhood status. According to them it is a common belief among West African societies that it is the full performance of the second burial rites that send the departed 'home,' and in dignified peace.

Following this is good life. For them, this is important because a man who lived a bad life is not given not only normal and decent funeral rites, but also not propitiated as such. But in recent time, this factor according to them is somehow being played down on, as result of modem influences as the wealthy is always remembered and propitiated by his children, irrespective of his life. Even at that, it is the good according to them that is more often remembered and propitiated by the entire ancestral lineage, especially in the group and community assembly. In many West African societies, art ancestor as they further noted must not therefore, die of mysterious disease, suicide and many other circumstances that are abhorred by the given community. Above all, a complement to good life as they finally noted is 'good death' (pp. 122-123).

With regard to their relationship with the living, they are believed to be closely related to their families and kindred, retaining their status and responsibilities as heads and parts of the institutions as they were while living as human beings on earth. Here, it follows that death is conceived as a mere extension of live on earth, to the hereafter as spirit. In this new state, communication and communion, with the ancestors are only possible at the spiritual realm; while in the spiritual world, the ancestors still show concern and interest in the affairs of their living members. Equally, the living members still see them as older people from whom their life on earth began and have meaning. Also, the ancestors are not only close to their relations, they are also aware of things that will bring progress to their people and those that could be in the contrary. Here, the new state of being, place the order relatives who have departed, closer to God and other spiritual entities. Here, the living used them, and they readily act as intermediaries between them (the living), and the spiritual world which embrace all spiritual forces including God.

Ancestors also feed the living back with information from the unseen supersensible world. The departed are therefore the closet link the living people have to the network of communication at the spiritual level of man's absence. In addition to giving the departed full burial rites, the living relations, try to appease and heed to their instructions. Yet, they are remembered and invited at gatherings, to come, share, and commune with the living, especially when the summon is at the ancestral shrine while the living try to know from them the 'state of things' through divination, the forebears could seize, somebody to prophecy their wish and resolve on family or kindred issues.

They also reveal themselves through other manifestations and signs, like in dreams and totems. Some medicine man claims to have received knowledge of medicine and healing from ancestors through this process (Owete and Iheanacho, 2009, P. 124). As for their names, they are called different names in different African societies. They are called *baba-nla* in Yoruba, they Igbo called them *ndiiche*, and they are called *samanfo* in Akan (Ghana). Also, in Kalabari they are called *duen* and in Ashanti of Ghana, they are known as *asamanfo*. For the Isoko they are known to be *esemo* (Tasie, 2009, P. 43).

As for whether the ancestors are worshipped or venerated, here, they are not worshipped, rather they are venerated. To the West African people, the reason for this is that death is not the end of one's interaction with his relatives, rather it is a change to "another being" different from the living, yet, maintain, participate and share in the activities of their kins-family and kindred. They have departed, yet, are "practically felt" by their survivors. It is in this light that ancestors are recognized, respected, and venerated. As for the reason for the veneration of ancestors, here, the veneration of ancestors among West African societies encourages and strengthens unity among the living members of their families and patriine kingship group. For instance, one's ancestral lineage, according to Owete and Iheanacho, (2009) is a binding force for them, people born to such kin group are "brothers and sisters". No matter the degree of quarrel between members of kindred, assembly before their ancestral shrine as they further noted can never be affected.

Explaining further, people under one ancestral lineage as they noted share in common-legends and myths; sacred days; totems; agricultural seasons; as well as land and timber (pp.128-129). Apart from this, the annual sacrifice (obligatory sacrifice) to commemorate the beginning of the ancestor festival in many West African communities brings kinsmen and relations together for a re-union. To the living, sharing the flesh of the annual sacrifices together for them is like being fed by one mother with on dish and spoon.

Kinsmen in the diaspora, those at home, and the departed as they noted come together this day, at the ancestral shrine. Having come together, dialogue is possible as the living dialogue amongst themselves on one hand while the living join voice to speak to their departed members on the other hand. This flow of communication is characterized by recall of memorable events, and reference to the life and history of the lineage, in which both the living and the departed are embraced. In addition, the blood of the

sacrificial victims poured before ancestral shrines which is a symbol ofbond reaffirms the living's commitment to maintaining the values of the lineage. Thus, it also serves as renewal of covenant- of cordial relationship between the living and the departed (Owete and Iheanacho, 2009, pp. 128-129).

3. The Pitfalls Besetting The Foreign Investigators on African Traditional Religion

The earliest investigators on African tradition religion never had a thorough investigation about the people and their religion due to number of factors. First, there were many in the course of this. Such as missionaries, travelers, colonial administrators and European explorers each have claimed to be authentic interpreters of African religions (Chukwuma, 2009, p. 21). It is obvious, that it is from these writers that we have most of our information even at that some of them had never been to Africa while many of these scholars who visited never stayed long in Africa so they were not acquainted with the underlying reality of the religion (Mbiti, 1969, p. 6). Thus, these early writers were full of bias in their work as they (especially the missionaries) described Africa as a dark continent administered by the devil while their mission being to liberate it from the control of the devil (Tasie, 2008, p. 12). Apart from this, some investigators on the other hand were not willing to learn from the people they considered to be inferior to them and so they ended up comparing their religion with that of the so called natives. This false consciousness earned them with the outcome of accepting appearance for reality. As (Mbiti, 1969) succinctly puts it:
Since they could not find many things in the religion that resembled their own magnificent temples, written scriptures, ministers of religion of their own caliber they concluded rather erroneously that African religion was not a religion (p.9)

This bias description and study of African religion reduced African patterns of life to object of mockery. Affirming this Awolalu and Dopamu (1979) assert:
Then come the question could the God of African imagination be the same God as known in the western world? The answer to this question leads conclusively to the various errors of terminology or mistaken identity or obnoxious labels to which the foreign investigators have always treated themselves (pp. 12 – 13).

Another cogent factor for the inability of the foreign investigators to make a thorough investigation on the African religion is the vastness of the size of African continent and its complex culture. Africa is a large continent inhabited by people with different religious beliefs and practices. This makes it the more complex for these foreign investigators to come out with plausible investigations on African religion and culture. They based their research on the culture and traditions of few African tribes and this not only made it difficult for foreign investigators to understand African culture and religion but also led to sweeping generalization and distortion of the beliefs and practices of the African peoples (Ajayi, 1981, p. 16).

Thus, lack of proper knowledge about the true nature of African religion is another factor why foreign investigators did not make a concise investigation on the people and their culture. That is why these early writers described Africa as a home of divinities. These foreign investigators never understand the relationship between God and divinities. and that of the divinities and man. They did not also know that divinities are emanations from the Supreme Deity and were brought into being for a definite purpose, and the purpose is to serve the will of God in the theocratic government of the universe. In other words, the divinities serve as intermediaries between God and man, and frequently worshipped through them and they receive day-to-day sacrifices. They have temples, shrines and devotees with priests and priestesses (Ugwu and Ugwueye, 2004, p. 19).

Added to the above factor is the misconception and misinterpretation of the world-views of the Africans. Some of these foreign investigators who visited Africa, came with pre-conceived and ethnocentric mind sets. With these tendencies, they refused to see anything goods about the Africans. For them, everything about the people is false and their religion unpleasant. To describe the Africans as a physically and spiritually a dark continent where nothing interesting could be found, a people bereft of culture and any social institution is the height of this misconception of the world-view of the people of Africa. According to Kalu (1980), world-view "is the unified picture of the cosmos explained by a system of concept which order the natural and social rhythms and the place of individuals and communities in them" (p. 39). In much the same vein, madu, (1996) explains it to mean "how the world is conceived, contemplated, and perceived by people who live in it especially within the ambit of human environment" (p. 1). Throughout the world, no world-view is the same and can never be the same. The African peoples are hospital, tolerant and their religion accommodating. A telling example here is that before the coming of Christianity and Islam African religion has been in existence. When these two religions came, it

accommodates them and co-existence side by side with them on the same environment without friction (Ekwunife, 1992, p. 19). Thus, proper knowledge of a people's world-view is key to understand the people, and their religion. In addition to this is that those who came to Africa did not come to study scientifically but came to verify information they had already gathered from books. Apart from this, they had the constraint of not understanding local languages. As a result, local idioms eluded them and consequently, they could not interpret African religious phenomena. Furthermore, as earlier pointed, they were not prepared to learn from African people whom they had concluded were inferior. They merely came to compare their religion eith that of the Africans and as such went back home with shallow ideas and wrong concepts about African peoples (Olumati and Tasie, 2009, p.1).

4. Findings

The findings from the study revealed that:

The earliest investigators on African Traditional Religion never had a thorough investigation about African peoples and their religion. This is a truism because they were many in the course of this exercise, such as missionaries, travelers, colonial administrators and European explorers, each of whom see it from different perspectives. For instance, the missionaries described Africa as a dark continent administered by the devil while their mission being to liberate it from the control of the devil.

Some of the investigators who really visited African peoples to undertake a study of their religion and culture, came with pre-conceived and ethnocentric ideas. This explains why they were not prepared to learn from African people whom they have concluded as inferior and as a result they refuse to see fact on ground as the ought to be

They mealy came to compare their religion with that of the Africans. This is a fact because since they did not find any resemblance in African religion compared to their own magnificent temples, written scriptures, ministers of the rank of their religion, they concluded rather erroneously that Africans have no idea of God and that in African there was no religion.

5. Conclusion

Proper knowledge of the Africans from the inside is key to understand the people and their religion. This is fundamental to avoid bias and misconception of a people's beliefs. Thus, however, explains the reason why the foreign investigators on African religion had pitfalls on the course of this exercise. These foreign investigators came with pre-conceived and ethnocentric mindsets and so refused to consult the people to know about their religion and culture. The true nature of African traditional religion worthy of note, here is that the belief in the existence of the Supreme Being is sacrosanct among the Africans. Though it is worshipped and approached through his intermediaries (divinities). Although the paper acknowledges the input of these earliest investigators as the pioneer scholars to undertake the study of African traditional religion in the sense that it is from these scholars that we have most of our information about the religion.

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A Syntax of Religion and Fundamental Human Rights in the Emerging Christian Church in Nigeria

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Abstract. This study investigates the relationship between religious discourse and fundamental human rights in Nigeria's emerging Pentecostal and charismatic churches. Using the metaphor of "syntax" to describe the structured grammar of religious language, the research examines how sermons, rituals, and theological writings shape understandings of freedom, dignity, gender equality, sexuality, and authority. The study adopts a literature-based qualitative methodology, drawing on critical discourse analysis of published sermons, church statements, and existing scholarship. This approach highlights recurring patterns in Pentecostal teaching and situates them within Nigeria's constitutional framework and international human rights discourse. The synthesis of literature reveals that Pentecostal syntax consistently affirms empowerment through spiritual freedom and prosperity, offering hope and resilience in contexts of poverty and instability. However, these affirmations are framed conditionally, tying dignity and equality to obedience, faith, or traditional gender roles. Gender equality emerges as ambivalent: women are celebrated as indispensable but subordinated within patriarchal structures. The strongest conflict arises in relation to LGBTQ+ rights, where Pentecostal discourse aligns with cultural conservatism and national law to reject inclusivity. Freedom of expression is encouraged in evangelism and testimony but curtailed when directed toward church or political authority. The study concludes that Nigerian Pentecostalism does not reject human rights outright but reorganizes them within a theological order that empowers spiritually while limiting universality. By recognizing both the tensions and resources embedded in this syntax, scholars and advocates can foster dialogue that bridges religious conviction and the protection of human dignity.

Keywords: Religion, Human Rights, Nigerian Pentecostalism, Religious Discourse.

1. Introduction

Christianity in Nigeria has undergone rapid and transformative growth since the early twentieth century, with Pentecostal and charismatic movements emerging as some of the most dynamic religious forces in the country. Scholars have consistently noted that Nigeria, often described as Africa's most populous nation, is not only demographically significant but also religiously vibrant, with Christianity and Islam competing for influence in public and private life (Pew Research Centre 14). In particular, the rise of Pentecostalism has been accompanied by the development of new theological emphases, including prosperity preaching, spiritual warfare, and radical expressions of faith in everyday life. These movements have profoundly shaped Nigerian religious identity and the moral imagination of millions of believers, while also raising critical questions about their engagement with broader issues of human rights, social justice, and democratic governance (Ukah 22; Marshall 76). Thus, an inquiry into the intersection of religious discourse and fundamental human rights is not only timely but necessary for understanding the evolving role of religion in Nigeria's modern public sphere.

At the heart of this inquiry is the idea of "syntax," understood here not in its strictly linguistic sense, but as a metaphor for the structural arrangement of ideas, beliefs, and practices that constitute the grammar of Pentecostal and charismatic Christianity in Nigeria. Religious syntax refers to the way sermons, scriptural interpretations, and theological constructs are ordered to produce particular meanings and social realities (Asad 38). This structure is neither arbitrary nor merely aesthetic: it shapes how believers understand their place in society, their duties toward others, and their rights as individuals. By framing religion as a

discursive system with its own internal logic, this study positions itself at the crossroads of discourse analysis, religious studies, and human rights scholarship. It asks how the syntax of Nigerian Christianity enables or constrains the articulation of fundamental rights, including gender equality, freedom of expression, and individual autonomy.

The Nigerian human rights context is especially complex because of its entanglement with both colonial legacies and contemporary global debates. Nigeria's constitution formally guarantees a wide range of rights, such as freedom of thought, conscience, and religion, as well as freedom of association and expression (Federal Republic of Nigeria, Constitution). Yet, the lived reality often reflects significant tension between legal provisions and cultural or religious interpretations of these rights. In many cases, churches—particularly those within the Pentecostal tradition—assert moral authority in ways that either supplement or undermine state protections of individual rights. For example, Pentecostal pastors often preach about spiritual freedom and divine empowerment but simultaneously discourage questioning pastoral authority or endorsing social reforms that challenge patriarchal norms (Adogame 191; Gifford 85). This contradiction situates the church as both an advocate for liberation and a potential obstacle to the realization of globally recognized human rights.

The significance of studying this religious-human rights nexus becomes even clearer when we consider Nigeria's pluralistic society, where Christianity, Islam, and indigenous traditions coexist and often compete for legitimacy. In such a context, human rights are not only legal instruments but also discursive battlegrounds where religious groups seek to assert moral dominance (Falola and Heaton 243). Pentecostal Christianity, with its emphasis on spiritual warfare and prosperity, tends to position itself as both a countercultural force resisting Western secularism and a modernizing agent that embraces technology, media, and global religious trends. This dual orientation complicates its relationship with human rights: on the one hand, it champions individual empowerment, but on the other, it enforces communal conformity and hierarchical structures that may suppress dissent. Examining the syntax of its discourse thus reveals the subtle mechanisms by which religious power shapes perceptions of justice and freedom.

Another important dimension of this research lies in its attention to gender. Nigerian Pentecostal churches often proclaim a theology of equality before God while simultaneously re-inscribing patriarchal roles within both church and family life. Sermons frequently emphasize women's responsibility to submit to male authority, whether in marriage or in pastoral leadership, even as they celebrate women's participation in prayer groups, choirs, and evangelism (Oduyoye 54; Nwosu 113). This tension between affirmation and subordination reflects broader global debates about how religious traditions engage with human rights discourses around gender equality. The Nigerian case offers a particularly vivid illustration because of the size and visibility of its churches, many of which now wield international influence.

LGBTQ+ rights present another flashpoint where religious discourse and human rights collide. While international human rights frameworks increasingly recognize sexual orientation and gender identity as protected categories, Nigerian Pentecostalism tends to reject such inclusivity, framing LGBTQ+ identities as moral corruption or spiritual bondage (Amadi 312). This rhetoric not only influences public opinion but also legitimizes state policies that criminalize same-sex relationships, thereby reinforcing systemic exclusion. Here, the syntax of religious teaching operates as both theological conviction and social control, shaping not only what believers think but also how laws are enforced and contested.

Given these complexities, this study sets out to investigate the specific ways in which the syntax of religious discourse in the emerging Nigerian Christian church frames and reframes fundamental human rights. It seeks to answer the following research questions: How do Pentecostal and charismatic teachings structure believers' understanding of rights such as freedom, equality, and autonomy? In what ways do these teachings align with or contradict international human rights norms? And how do church leaders and members negotiate these tensions in everyday practice? By focusing on sermons, written texts, and interviews, the study employs a qualitative methodology that privileges lived experience and discursive nuance over abstract theorization.

Finally, the study's contribution lies not only in mapping the tensions between religion and human rights but also in suggesting pathways for dialogue. While it would be simplistic to either condemn Nigerian Pentecostalism as inherently oppressive or to romanticize it as purely liberatory, a more nuanced reading reveals spaces of negotiation where change is possible. Religious leaders, when engaged in constructive dialogue with human rights advocates, may find theological resources for affirming dignity, justice, and equality without abandoning their spiritual convictions. Similarly, human rights practitioners, by

recognizing the cultural and theological frameworks that shape religious communities, may avoid imposing foreign categories that provoke resistance. The task, therefore, is not to choose between religion and rights but to explore the syntax that makes their interaction possible in Nigeria's contested public sphere.

2. Conceptual Framework

The concept of "syntax" in this study functions as a metaphor for the structured logic and internal grammar of religious discourse. Just as syntax in linguistics governs the arrangement of words into coherent sentences, religious syntax governs the arrangement of theological claims, sermons, and rituals into systems of meaning that guide social practice. In Nigerian Pentecostalism, syntax appears in the patterned repetition of biblical themes—such as deliverance, prosperity, and submission—that shape congregants' worldviews. This framework allows scholars to analyse religion not merely as a collection of doctrines but as an ordered system of communication with material and political consequences (Fairclough 122). In other words, Pentecostal syntax is both expressive and performative: it conveys theological convictions while simultaneously producing particular social norms and hierarchies. Recognizing this structural quality enables researchers to examine how religious discourse frames concepts like freedom, dignity, and equality in ways that may align with or conflict with human rights discourses.

The theoretical foundation for this approach draws heavily on discourse analysis. Scholars like Michel Foucault and Talal Asad have demonstrated that discourse is never neutral but always implicated in power relations (Foucault 93; Asad 45). Religion, therefore, cannot be treated as a purely private or spiritual phenomenon but must be understood as a discursive practice that regulates behaviour, authorizes truth, and disciplines bodies. Nigerian Pentecostalism exemplifies this dynamic, as sermons often regulate not only spiritual conduct but also political, economic, and familial behaviour. The syntax of these sermons reflects a broader apparatus of power in which church leaders occupy interpretive authority while congregants internalize moral imperatives as divine commands. Thus, analysing the syntax of religion provides a way of mapping how power circulates within religious institutions and how this circulation interacts with the broader framework of fundamental human rights.

A second theoretical strand comes from the sociology of religion, particularly perspectives that highlight religion's role in shaping social norms and collective identity. Peter Berger's concept of the "sacred canopy" suggests that religious worldviews provide comprehensive frameworks of meaning that legitimize social order (Berger 32). In the Nigerian context, Pentecostal churches construct a sacred canopy through narratives of spiritual warfare, divine prosperity, and eschatological hope, which in turn inform congregants' attitudes toward authority, gender roles, and civic responsibility. This canopy offers both reassurance and regulation: believers find security in divine promises while simultaneously accepting hierarchies that may restrict their rights. By interpreting Pentecostalism through this sociological lens, it becomes clear that the syntax of religion is not simply a set of words but a symbolic universe that informs how rights are imagined, claimed, or denied.

Human rights theory also provides essential conceptual grounding for this study. At its core, human rights discourse emphasizes universality, inalienability, and equality, positioning these rights as belonging to all individuals regardless of cultural or religious difference (Donnelly 56). Yet, critics of universalism have pointed out that rights discourse often emerges from Western liberal traditions, raising questions about its applicability in contexts such as Nigeria, where communal values and religious norms hold strong sway (Mutua 12). Pentecostal syntax often embodies this tension: while sermons frequently affirm the dignity of individuals as children of God, they also prescribe strict boundaries around acceptable gender roles, sexuality, and modes of dissent. Thus, the interaction between religious syntax and human rights is not merely oppositional but dialogical, with each shaping and contesting the other. The framework adopted here, therefore, acknowledges both the universality of rights and the cultural embeddedness of their interpretation.

The notion of hermeneutics is also central to understanding the syntax of Nigerian Christianity. Pentecostal churches rely heavily on biblical interpretation, often privileging literal readings that emphasize obedience, prosperity, and spiritual warfare. This hermeneutical approach structures the syntax of sermons, ensuring that rights and freedoms are interpreted through theological lenses rather than secular or legal categories (Ukpong 88). For instance, the biblical injunction that wives should submit to husbands is frequently cited as divine sanction for gender hierarchies, even when such interpretations clash with constitutional guarantees of equality. Hermeneutics thus operates as the interpretive grammar through which human rights are either affirmed or curtailed in Nigerian Pentecostal discourse. The conceptual framework of this study, therefore, situates hermeneutics as a crucial mechanism in the interplay between theology and law.

Finally, the intersection of law, culture, and theology completes the conceptual framework. Nigeria's constitutional and legal framework provides protections for human rights, but cultural and religious systems often reinterpret or limit these protections in practice. The syntax of religion acts as a mediating force: it does not simply reject human rights but selectively reframes them in ways that reinforce existing power structures. For example, while Pentecostal churches may embrace the language of freedom, this freedom is frequently spiritualized—interpreted as liberation from sin or demonic oppression rather than as civic autonomy or political agency (Marshall 132). By examining this selective reframing, the study contributes to a broader understanding of how religious syntax translates abstract rights into lived realities within Nigerian society.

In sum, the conceptual framework of this study integrates discourse theory, sociology of religion, human rights theory, and hermeneutics to investigate how the syntax of Nigerian Pentecostalism shapes attitudes toward fundamental human rights. By treating religion as a structured discursive practice, the framework provides tools for analysing the tensions and negotiations between theological conviction and legal obligation. This approach does not presuppose that religion and human rights are inherently incompatible; rather, it highlights the ways in which their interaction is mediated through syntax—an interaction that is fraught with conflict yet ripe with potential for dialogue and reform.

3. Literature Review

The literature on Christianity and human rights in Africa is marked by ambivalence, reflecting both optimism about religion's role in promoting dignity and scepticism about its potential to reinforce oppression. Scholars such as Lamin Sanneh and John Mbiti have highlighted how Christianity in Africa has historically adapted to local cultures, creating hybrid traditions that blend biblical teaching with indigenous practices (Mbiti 87; Sanneh 114). At the same time, Christianity has often functioned as a colonial legacy that introduced foreign categories of morality and authority into African societies. This dual heritage complicates the discussion of human rights, which themselves are frequently critiqued as Western impositions. In Nigeria, the rapid expansion of Pentecostal and charismatic churches since the 1970s has intensified these dynamics by producing a religious culture that is simultaneously globalized and deeply localized (Ukah 44). The literature suggests that any exploration of religion and human rights in Nigeria must reckon with this historical ambivalence.

Pentecostalism's influence in Nigeria has been particularly well documented in sociological and anthropological studies. Ruth Marshall's *Political Spiritualities* describes how Pentecostal churches have reshaped Nigeria's political and social order by framing everyday life as a battleground between divine and demonic forces (Marshall 133). Similarly, Asonzeh Ukah emphasizes the centrality of media, ritual, and organizational expansion in the growth of Nigerian Pentecostalism, noting that these churches often operate as transnational corporations with significant cultural power (Ukah 65). Scholars argue that Pentecostalism offers believers empowerment, especially in contexts of economic hardship, by promising prosperity, healing, and social mobility (Gifford 93). However, empowerment in this sense is often spiritualized, redirecting believers' energies toward personal breakthroughs rather than systemic reform. The literature underscores the tension between Pentecostalism's emancipatory rhetoric and its reinforcement of hierarchical structures, a tension that has direct implications for human rights discourse.

Gender has emerged as one of the most contested domains in the literature on religion and human rights in Africa. Mercy Amba Oduyoye, one of Africa's leading feminist theologians, critiques how African Christianity perpetuates patriarchal norms even while affirming women's spiritual gifts (Oduyoye 57). Nigerian Pentecostal churches provide a clear illustration of this contradiction: women are celebrated as prayer warriors, prophetesses, and financial contributors but are often excluded from senior leadership roles. Nkechi Nwosu highlights how sermons on marriage frequently reinforce female submission and male headship, positioning women as guardians of domestic virtue rather than autonomous agents (Nwosu 118). These interpretations clash with international human rights norms that affirm gender equality as a non-negotiable principle. The literature on gender therefore reveals how Pentecostal syntax simultaneously affirms and restricts women's rights, reflecting broader global debates on religion and feminism.

Sexuality, and particularly LGBTQ+ rights, has also attracted scholarly attention in discussions of African Christianity. Theologians such as Elias Bongmba and Chammah Kaunda argue that African churches, including Nigerian Pentecostal congregations, often frame homosexuality as foreign, un-African, and incompatible with biblical teaching (Bongmba 42; Kaunda 73). This rhetoric aligns with state laws that

criminalize same-sex relationships, creating a convergence between religious discourse and legal restriction. Amadi's research further demonstrates how Pentecostal sermons frequently conflate homosexuality with moral decay and spiritual warfare, thereby legitimizing social exclusion (Amadi 315). Scholars note that while such positions resonate with cultural conservatism in Nigeria, they also place churches in direct opposition to international human rights frameworks that protect sexual minorities. Thus, the literature points to sexuality as a key site of conflict between religious syntax and human rights discourse.

Beyond gender and sexuality, the literature also examines Pentecostalism's broader engagement with freedom of expression and individual autonomy. Paul Gifford argues that while Pentecostalism emphasizes spiritual freedom, it often discourages political dissent or critical questioning of pastoral authority (Gifford 97). Similarly, Adogame describes how Pentecostal leaders cultivate charismatic authority that commands obedience, thereby curtailing the autonomy of congregants (Adogame 195). Scholars observe that sermons often frame obedience to leaders as obedience to God, creating a religious syntax that prioritizes communal conformity over personal liberty. This stands in contrast to human rights frameworks, which prioritize individual freedom and the right to dissent. The literature thus identifies freedom of expression as another contested area where religious discourse collides with legal and constitutional protections.

Comparative studies provide further insight by situating Nigerian Pentecostalism within a global context. Allan Anderson and Philip Jenkins note that Pentecostal movements across Latin America, Asia, and Africa share common themes of healing, prosperity, and empowerment, but their engagement with human rights varies significantly depending on local contexts (Anderson 101; Jenkins 89). For example, some Latin American Pentecostal churches have supported democratization and human rights activism, while Nigerian Pentecostalism has tended to focus on prosperity and spiritual warfare. This comparative literature suggests that the syntax of Pentecostal discourse is highly contextual, shaped by local histories, economies, and political realities. Nigerian Pentecostalism, therefore, cannot be understood in isolation but must be placed within broader global patterns of charismatic Christianity.

Despite this rich body of literature, significant gaps remain. Few studies explicitly analyse Pentecostal discourse through the lens of syntax, that is, as a structured system of meaning that orders both theological claims and social practices. Similarly, while there is extensive scholarship on Pentecostalism's political and cultural influence, less attention has been paid to its specific implications for fundamental human rights. The intersection of gender, sexuality, freedom of expression, and autonomy with religious syntax remains underexplored. This study seeks to address these gaps by offering a discourse-centred analysis of Nigerian Pentecostalism's engagement with human rights. By doing so, it contributes not only to African religious studies but also to global conversations on the complex relationship between religion and rights.

4. Methodology

This study adopts a qualitative, literature-based methodology designed to analyze the intersection of Pentecostal discourse and human rights in Nigeria. Rather than conducting primary fieldwork, the research draws upon secondary sources such as published sermons, theological writings, church constitutions, government documents, and peer-reviewed scholarship. This approach is appropriate because the study is concerned with the syntax of discourse—the structured patterns through which religious language organizes meaning—rather than with quantifiable measures of religious practice. By focusing on texts already in circulation, the study examines how Pentecostal discourse is constructed, disseminated, and contested within Nigeria's broader socio-political landscape.

The primary method employed is critical discourse analysis (CDA). Following Norman Fairclough and Michel Foucault, discourse is understood as a system of knowledge that both reflects and produces power relations (Fairclough 122; Foucault 93). CDA allows for the identification of recurring metaphors, themes, and grammatical structures in sermons and church documents that frame ideas of freedom, dignity, and authority. For example, repeated images of captivity and deliverance signal a theological framing of freedom that differs from civic understandings of rights. By examining such patterns across texts, the study highlights how Pentecostal syntax affirms empowerment while simultaneously reinforcing hierarchical control.

This discourse-centred approach relies on published sermons and textual materials available through church websites, printed devotional guides, and recordings disseminated via television or social media. These sources are significant because Nigerian Pentecostal churches actively engage mass media to expand their influence (Ukah 77). The widespread availability of such texts ensures that the analysis

reflects discourses already shaping public imagination, rather than isolated local practices. In addition, scholarly literature on Nigerian Pentecostalism provides contextual grounding, allowing for comparisons across denominations and regions (Marshall 133; Gifford 93).

The methodology also involves a hermeneutical dimension, recognizing that biblical interpretation is central to Pentecostal syntax. Nigerian Pentecostal preachers frequently employ literal and selective readings of scripture, emphasizing prosperity, submission, and spiritual warfare (Ukpong 88). These interpretive strategies are analysed to show how theology reorganizes rights into categories legible within a religious worldview. For example, while the constitution guarantees freedom of expression, sermons may frame speech in terms of obedience or rebellion, thereby narrowing its meaning. Hermeneutics thus operates as a key lens for understanding the redefinition of rights within theological grammar.

Because this is a literature-based study, its data set is limited to textual and secondary sources, rather than interviews or participant observation. This design avoids the ethical complexities of fieldwork on sensitive topics such as sexuality and church authority. It also ensures that the analysis draws on discourses already in the public domain, making them appropriate for scholarly critique. However, the study acknowledges its limits: it cannot capture the diversity of individual experiences within Nigerian Pentecostalism or the private negotiations that believers may engage in regarding rights. The findings should therefore be understood as mapping dominant discursive patterns rather than providing ethnographic generalizations.

The strength of this approach lies in its ability to synthesize existing scholarship and discourse materials to provide a conceptual framework for future empirical studies. By analysing sermons, texts, and literature through discourse analysis and hermeneutics, the study demonstrates how Pentecostal syntax organizes rights consciousness in patterned ways. The limitation is that it does not include first-hand narratives from pastors or congregants, which would provide richer detail on how these discourses are received and reinterpreted. Future research could address this gap by combining discourse analysis with ethnographic methods such as interviews or participant observation.

In sum, the methodology is theoretical and interpretive, rooted in secondary data and discourse analysis. It highlights the syntax of Nigerian Pentecostalism as a structured grammar of meaning, offering insight into how religion reorganizes rights in both empowering and restrictive ways. This design provides a foundation for scholarly debate and future empirical inquiry, while ensuring that the analysis is transparent about its reliance on published and secondary sources.

5. Findings and Analysis

Because this study relies on secondary sources and discourse analysis rather than primary fieldwork, the "findings" are better understood as an interpretive synthesis. They draw from published sermons, church statements, theological writings, and existing scholarship on Nigerian Pentecostalism. The goal is not to present new ethnographic data but to highlight the recurring syntactical patterns in Pentecostal discourse and to analyse how these patterns intersect with international human rights frameworks.

Across the literature, five themes emerge consistently:

- Spiritual freedom framed as deliverance rather than civic autonomy;
- Prosperity teaching linking dignity to material success;
- Gender roles affirming empowerment yet reinforcing patriarchy;
- Rejection of LGBTQ+ identities framed as theological and cultural defence; and
- Expression encouraged in testimony but restricted in dissent against authority.

Each subsection below synthesizes scholarly findings and discourse analysis of sermons and texts, showing how Pentecostal syntax, both empowers and constrains human rights consciousness.

5.1 Spiritual Freedom vs. Civil Rights

Rather than drawing from interviews, this subsection highlights how scholars such as Ruth Marshall and Asonzeh Ukah show that Pentecostal discourse spiritualizes freedom, framing it as liberation from sin and demonic oppression (Marshall 147; Ukah 89). Sermons emphasize boldness in Christ but rarely link freedom to civic rights such as political participation or legal reform. Scholars note that this emphasis empowers believers personally but diverts attention from systemic injustice. The literature also suggests generational variation, with younger Christians more likely to connect spiritual empowerment with civic responsibility (Kalu 215). Thus, the existing scholarship points to a syntax of freedom that is empowering yet limited in its civic application.

5.2 Prosperity Gospel and Human Dignity

Drawing on Paul Gifford, Asonzeh Ukah, and Ruth Marshall, the literature shows how prosperity theology affirms believers' dignity by rejecting poverty as God's will (Gifford 103; Ukah 92; Marshall 156). Sermons present prosperity as a covenantal entitlement, but this redefines dignity as conditional on faith and obedience. Scholars critique this framing for stigmatizing the poor while overlooking systemic inequality. At the same time, prosperity discourse can inspire education and entrepreneurship, aligning in part with human rights claims to economic well-being. The literature consistently highlights this ambivalence: prosperity discourse affirms dignity but narrows its universality.

5.3 Gender Equality and Patriarchal Teachings

Mercy Amba Oduyoye, Nkechi Nwosu, and other scholars document the gendered tensions in Nigerian Pentecostalism. Women are praised for their faith and contributions but excluded from senior leadership, with sermons reinforcing submission (Oduyoye 59; Nwosu 124). Rituals such as head coverings further inscribe hierarchy. Yet, the literature also shows that women's fellowships and ministries provide spaces for empowerment and entrepreneurship (Ukah 97). This dual pattern—affirmation within subordination—reflects what Oduyoye calls the "subordination of the indispensable" (66). Scholarship therefore reveals a syntax that both upholds patriarchy and generates openings for reinterpreting gender equality.

5.4 LGBTQ+ Issues and Church Resistance

The literature on sexuality, especially Bongmba, Amadi, and Kaunda, highlights the near-total rejection of LGBTQ+ rights in Nigerian Pentecostal discourse (Bongmba 45; Amadi 318; Kaunda 82). Sermons describe homosexuality as sinful and foreign, aligning with Nigeria's Same-Sex Marriage Prohibition Act (2014). This discourse combines theology and culture into a "moral nationalism" that defends tradition against perceived Western imposition (Bongmba 47). While most scholars note little room for inclusivity, some observe generational shifts, with younger Christians expressing discomfort with harsh rhetoric. The findings from secondary literature thus indicate deep resistance with faint possibilities for reinterpretation.

5.5 Freedom of Expression vs. Obedience to Authority

Scholars such as Adogame, Gifford, and Marshall show that Pentecostalism encourages bold testimony and evangelism but discourages dissent against authority (Adogame 205; Gifford 108; Marshall 159). Pastors are presented as divinely anointed, making critique appear as rebellion against God. This syntax limits expressive freedom within church and society, reinforcing hierarchical culture. However, literature also points to generational tensions: younger congregants, influenced by social media, increasingly call for open dialogue on gender, sexuality, and politics (Falola and Heaton 267). The secondary sources thus reveal a syntax that affirms expression within narrow boundaries but resists dissent.

6. Discussion

The review of scholarship on Nigerian Pentecostalism highlights how religious syntax organizes discourse on freedom, dignity, gender, sexuality, and authority. Rather than providing new empirical data, this study synthesizes existing analyses of sermons, church practices, and theological writings to show how Pentecostalism reframes human rights. The literature demonstrates that Pentecostal discourse affirms empowerment while often restricting universality, producing an ambivalent engagement with rights. As Talal Asad notes, discourses generate their own "conditions of possibility" (51). Nigerian Pentecostalism exemplifies this by affirming dignity and equality within faith, while redefining them in conditional and hierarchical ways.

The literature on spiritual freedom shows that Nigerian Pentecostalism consistently prioritizes deliverance from sin and spiritual oppression over civic or political autonomy (Marshall 161; Ukah 89). This focus empowers believers existentially but deflects attention from structural injustice. Yet, several studies suggest generational differences, with younger Christians sometimes connecting spiritual empowerment with civic accountability (Kalu 215). These insights indicate that while the dominant syntax spiritualizes freedom, it contains resources that could support civic engagement if reinterpreted.

Prosperity theology demonstrates similar tensions. Scholars such as Paul Gifford and Ruth Marshall argue that prosperity preaching affirms dignity by rejecting poverty as God's will, but it also ties flourishing to obedience and faith (Gifford 111; Marshall 156). This conditional framing stigmatizes the poor, yet it aligns in part with economic rights by portraying deprivation as unjust. The literature suggests that prosperity rhetoric could be mobilized toward collective justice if reframed beyond individual success. This

demonstrates how Pentecostal syntax both constrains and enables rights consciousness.

Gender remains one of the most ambivalent areas. Mercy Amba Oduyoye and Nkechi Nwosu show that women are indispensable to church life yet confined within patriarchal roles (Oduyoye 66; Nwosu 124). At the same time, studies highlight women's fellowships and ministries as spaces for empowerment, education, and entrepreneurship (Ukah 97). This supports Oduyoye's observation of the "subordination of the indispensable," where women's contributions are celebrated but their authority curtailed. The literature therefore points to both continuity and contestation, suggesting opportunities for internal reinterpretation of gender roles in light of equality.

On sexuality, the literature is nearly unanimous in documenting Pentecostal resistance to LGBTQ+ rights. Elias Bongmba and Victor Amadi note that sermons portray homosexuality as sinful and culturally alien, reinforcing Nigeria's Same-Sex Marriage Prohibition Act (Bongmba 45; Amadi 318). This alignment of theology, law, and culture produces what Bongmba calls "moral nationalism" (47). Yet, scholars such as Kaunda observe emerging cracks, as some younger believers emphasize compassion and tolerance (Kaunda 82). While change is limited, the literature suggests that sexuality remains a critical site of conflict between Pentecostal discourse and human rights.

Finally, studies of freedom of expression highlight Pentecostal ambivalence. Scholars show that boldness in testimony and evangelism is encouraged, but dissent against leadership is discouraged, equating critique with rebellion (Adogame 205; Gifford 108). This restricts expressive freedom and reinforces authoritarian structures. Yet, the literature also notes generational pressures for more open dialogue, particularly in urban and globally connected congregations (Falola and Heaton 267). This suggests that expressive freedom may become an evolving site of negotiation within Nigerian Pentecostalism.

Taken together, the literature reveals a Pentecostal syntax that affirms empowerment but conditions universality, reflecting both opportunities and limitations for human rights. For advocates, the challenge is to engage these discourses critically yet constructively, identifying theological resources—such as dignity, justice, and equality before God—that can resonate with rights frameworks. This approach avoids dismissing religion as inherently regressive while affirming the universality of human dignity.

7. Conclusion

This study has synthesized existing literature to examine the syntax of Nigerian Pentecostal discourse and its implications for human rights. By treating sermons, rituals, and theological writings as structured grammars, the analysis highlighted how Pentecostalism affirms empowerment while simultaneously restricting universality. Freedom is spiritualized, dignity is tied to prosperity, and equality is proclaimed in faith but limited socially. These findings reflect what multiple scholars describe as the ambivalent role of Pentecostalism in shaping rights in Nigeria's pluralistic society (Marshall 133; Gifford 93; Ukah 65).

The review of scholarship suggests that Pentecostal discourse neither wholly rejects nor fully embraces human rights. Instead, it reorganizes them within a theological framework that empowers spiritually but restricts inclusivity. Gender and sexuality remain the most contentious areas, where patriarchal and heteronormative syntax clash with global norms. Yet, the literature also identifies spaces for contestation, particularly among women's fellowships and younger congregants. These findings suggest that Pentecostal syntax is dynamic, not static, and capable of evolution in response to social and generational change.

The contribution of this study lies in its discourse-centred approach. By conceptualizing Pentecostalism as syntax, it provides a framework for analysing how theology structures rights in patterned ways. This approach enriches African religious studies and contributes to global debates on religion and rights. For practitioners, the findings highlight the importance of culturally sensitive dialogue that recognizes religious logics while affirming human dignity.

Recommendations from the literature include incorporating human rights education into theological training, supporting internal reinterpretations of scripture, and fostering dialogue between church leaders and rights advocates. Future research should combine discourse analysis with empirical methods such as interviews and participant observation, to capture how congregants negotiate these tensions in everyday practice. Such studies would deepen understanding of the lived realities behind the discursive patterns identified here.

In conclusion, Nigerian Pentecostalism should not be viewed as either an adversary or a simple ally of human rights. Rather, it is a complex interlocutor whose syntax affirms empowerment while conditioning universality. Engaging this syntax

critically yet respectfully offers a pathway toward bridging spiritual convictions and human dignity. In a society where religion plays a central role in shaping values, such engagement is vital for building inclusive and just futures.

8. Limitations and Future Research

This study is limited by its reliance on secondary sources—published sermons, church texts, and existing scholarship—rather than new empirical data. As a literature-based discourse analysis, it highlights patterns in Nigerian Pentecostal syntax but cannot capture the full diversity of congregational experiences or the nuances of individual interpretation. Without interviews, participant observation, or ethnographic fieldwork, the analysis remains at the level of textual and scholarly synthesis. This limits its ability to assess how congregants negotiate, resist, or reinterpret church teachings in everyday life.

Future research should address these gaps by combining discourse analysis with empirical methods. Fieldwork involving interviews with pastors, women's groups, and younger congregants could reveal how theological syntax is embodied, contested, and reinterpreted in lived practice. Comparative studies across denominations and regions would also enrich understanding of how local cultures shape the interaction between Pentecostal discourse and human rights. In addition, interdisciplinary approaches linking theology, law, and political science could provide a more comprehensive picture of how religious syntax influences Nigeria's democratic and legal institutions. Such research would complement this study's conceptual focus, deepening insight into both the limitations and transformative possibilities of Nigerian Pentecostalism in relation to fundamental human rights.

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Influence and Credibility of Nigerian Newspapers' News Sources on the Coverage of Human Trafficking Stories in Nigeria

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Abstract. This study investigated the influence and credibility of news sources in Nigerian newspapers' coverage of human trafficking, employing Source Credibility Theory. The research was prompted by heightened anti-trafficking efforts from 2016 to 2018 and involved the analysis of 354 systematically and purposefully selected editions from *The Guardian*, *Punch*, *ThisDay*, and *Vanguard*. Through quantitative content analysis and both descriptive and inferential statistics, the findings revealed a substantial reliance on governmental and paramilitary sources, which constituted up to 43.8% in *Vanguard* and 31.4% in *The Guardian*; Non-governmental organisations (NGOs) were moderately represented. The analysis of source framing indicated that enforcement-related narratives were predominant in *Punch*, where 66.7% of articles in 2016 focused on enforcement. In contrast, *ThisDay* primarily framed government sources within response contexts, while NGOs were associated with enforcement and human-centered narratives. Court personnel notably influenced legal frames, accounting for approximately 18.8% in *Punch* in 2018. The application of the Kruskal-Wallis test confirmed significant variations in source usage across the newspapers. These findings underscore the media's reliance on institutional voices, which resultantly shapes narrative framing and public perception of anti-trafficking policies. In conclusion, the coverage of human trafficking in Nigerian newspapers necessitates a more diverse and credible array of sources to enrich policy-driven narratives. Therefore, the Nigerian media should prioritise ethical and diverse sourcing, cultivate partnerships, and enhance data access to bolster the credibility of anti-trafficking reporting.

Keywords: Human trafficking, source credibility, media coverage, anti-trafficking policy, Nigerian newspapers.

1. Introduction

Human trafficking is a deeply entrenched socio-political challenge in Nigeria, necessitating comprehensive media engagement to foster informed policymaking and public response. Newspapers, as traditional gatekeepers of information, significantly shape public perception of human trafficking by deciding which sources to use, assessing the credibility of these sources, and determining how such reporting influences national discourse. The source of a news story directly impacts the credibility and framing of the content, which in turn affects public awareness, advocacy efforts, and governmental policies. Research by Okorie and Ilori (2024) highlighted that Nigerian newspapers often rely heavily on secondary sources, which limits investigative depth and diminishes credibility. Besides, Meriläinen and Vos (2015) found that stories sourced from government agencies are common, often resulting in a sanitised portrayal of trafficking that overlooks the voices of victims and insights from the community. Similarly, Prakash, Erickson and Stoklosa (2022) revealed that newspapers disproportionately favor elite and institutional sources, creating skewed narratives that may undermine anti-trafficking policies.

Given these trends, it is essential to understand the credibility and influence of sources used in reporting human trafficking for effective media reform and policy enhancement. Afolabi and Ojebuyi (2023) emphasised that source diversity and perceived credibility significantly affect how readers interpret and engage with stories about human trafficking. Besides, Ibrahim and Adeyemi (2024) argued that an over-reliance on government narratives can obscure the grassroots realities of trafficking. While human trafficking remains a persistent socio-political crisis in Nigeria, the sources through which newspapers report on this issue markedly shape public perception and policy formulation. The credibility and influence of these sources are

increasingly scrutinised, especially in an era dominated by digital information flows, government narratives, and NGO interventions. Journalists often depend on official statements, press releases, or reports from non-governmental organisations without thorough verification, which may compromise the authenticity and depth of their reporting. Olojede, Oyedeji, and Ajayi (2022) found that Nigerian newspapers predominantly depend on government sources, thereby sidelining victims' voices and independent investigative findings. This reliance not only limits narrative diversity but also reinforces state-centric perspectives that may downplay the systemic failures enabling human trafficking. With regard to this, Adeyeye and Oboh (2025) advise the media to diversify their narrative forms to enrich contextual framing with a view to providing justice for the victims of human trafficking.

Moreover, the perceived credibility of news sources directly affects how readers interpret and respond to anti-trafficking messages. Adeyeye (2025) demonstrated that stories sourced from international agencies are considered more credible by readers compared to those relying solely on local government sources. Such perceptions have significant policy implications, especially as media influence public awareness and pressure institutions to act. The growing distrust in media objectivity, coupled with the sensationalism that often characterises human trafficking coverage, raises concerns about the impact of these narratives on public consciousness and governmental accountability. Therefore, assessing the credibility and influence of sources in Nigerian newspaper stories about human trafficking is not only timely but crucial for understanding how media framing affects advocacy, policymaking, and public engagement in the fight against this transnational crime.

Empirical studies on this topic have evolved over time. Adekoya, Okoro and Onyenankeya (2022) examined how Nigerian newspapers framed the issue of trafficking and found that they relied heavily on government and law enforcement sources, which often marginalised the voices of victims. In contrast, Broad and Turnbull (2024) discovered an increasing use of NGO sources, although concerns about the credibility of these sources remained. More recently, Musa, Bello and Ibrahim (2023) identified a continued dependency of journalists on official narratives, which influences public perception of anti-trafficking policies. Similarly, Okoro and Abang (2024) reported limited diversity of sources and insufficient investigative reporting. However, none of these studies thoroughly examined both the credibility and influence of these sources. This study aims to fill this gap by providing a comprehensive, policy-driven analysis of source reliability and its implications for anti-trafficking communication in Nigeria.

In light of the identified research gap, the general research objective of this study is to investigate the credibility and influence of news sources on the reporting of human trafficking in Nigeria. To achieve this overall objective, the study specifically aims to: (i) analyse the sources of human trafficking stories in Nigerian newspapers to assess their credibility; (ii) evaluate how the credibility of news sources influences public perception and anti-trafficking policy; and (iii) investigate the diversity of sources in Nigerian newspapers' coverage of human trafficking.

2. Related Literature Review

This literature review examines the sources of news stories on human trafficking in Nigerian newspapers, focusing on credibility and influence within the context of media sourcing practices and the framing of human trafficking narratives. Empirical studies show that news reports on human trafficking in Nigeria predominantly rely on institutional sources, such as law enforcement agencies, government officials, and non-governmental organisations (NGOs); often neglecting the voices of trafficked individuals themselves. Sanford, Martínez & Weitzer (2016) found that Nigerian newspapers prioritise official narratives, framing human trafficking primarily as a criminal justice issue rather than acknowledging it as a complex socio-economic problem. In a similar vein, Gulati (2011) noted that this reliance on formal sources contributes to a limited and sometimes distorted portrayal of the human trafficking discourse. Consequent upon this, policy responses may lack inclusiveness and fail to adopt a victim-centered approach.

Although the credibility of these sources is often presumed to be high, journalists increasingly face challenges in verifying claims made by government bodies and civil society organisations. This reliance influences the tone, framing, and direction of public discussions on human trafficking, reinforcing state-centric perspectives while marginalising the lived experiences of victims. In addition, empirical evidence indicates that the credibility of news sources significantly affects public perception and policy advocacy regarding human trafficking. For example, Foot (2024) demonstrated that newspapers sourcing stories primarily from international organisations tend to portray human trafficking as a global crisis. While this raises awareness, it may inadvertently dilute local accountability. In contrast, reports based on grassroots testimonies have been

shown to evoke empathy and stimulate community-based interventions (Okorie & Okeja, 2024).

However, such community-sourced stories are often under utilised due to perceived issues of reliability, accessibility, and professional gatekeeping in editorial decision-making. These sourcing choices not only shape public understanding of human trafficking but also inform strategies employed by governmental and non-governmental organisations in addressing the issue. Therefore, it is essential to critically examine the credibility and influence of these sources to ensure that reporting on human trafficking promotes informed, humane, and contextually responsive policy interventions. The influence of source credibility on editorial judgment is closely tied to media ownership and political interests. Empirical studies, such as one conducted by Udris, Vogler, Weston and Eisenegger (2023), demonstrate that the ownership structures of newspapers affect the selection and representation of sources. Commercially driven media outlets are more likely to reproduce official statements without rigorous scrutiny. This tendency was echoed by Osisanwo and Ajayi (2024), who argued that the pursuit of political alignment and economic gain compromises the watchdog role of journalism. Resultantly, the credibility of news stories regarding human trafficking in Nigerian newspapers is not solely based on factual accuracy; it is deeply embedded in the politics of source selection. This reality necessitates strategic policy responses to promote ethical journalism and inclusive reporting.

2.1 Constructs

This study is grounded in the Source Credibility Theory, which suggests that the persuasiveness and influence of a message are significantly affected by the perceived credibility of its source. Originally conceptualised by Hovland et al., the theory highlights expertise and trustworthiness as the two core dimensions that shape how audiences process information (Koch & Zerback, 2013). In the context of Nigerian newspapers' coverage of human trafficking, source credibility plays a crucial role in shaping public perception, awareness, and policy action.

Reporting on such sensitive issues requires high journalistic standards, as reliance on low-credibility sources can lead to misinformation or underreporting. Recent proponents, such as Metzger and Flanagin (2013), reaffirm that in today's information-saturated landscape, audiences prioritise sources they consider authentic and knowledgeable. Therefore, this study investigates the extent to which Nigerian newspapers utilise credible sources, such as government agencies, NGOs, eyewitnesses, or anonymous informants, and how these choices influence audience trust and policy discourse on human trafficking. By analysing the relationship between source selection and content impact, this research contributes to media policy development, advocating for rigorous editorial guidelines that prioritise credible sourcing in human rights journalism.

3. Research Methodology

This study employed a quantitative content analysis research design to explore the credibility and influence of news sources in the reporting of human trafficking. Centered on the Nigerian media landscape, the investigation focused on four prominent national newspapers: *The Guardian, Punch, ThisDay, and Vanguard*. These newspapers were chosen based on their extensive nationwide circulation, socio-political significance, and relevance to public policy discussions. The study population included all 4,384 editions of the selected newspapers published between January 1, 2016, and December 31, 2018. This three-year period was deliberately selected to capture a time of heightened anti-trafficking efforts and increased media attention in Nigeria. Utilising the Krejcie and Morgan (1970) sample size determination table, a representative sample of 354 editions was drawn. A systematic sampling technique was employed by selecting every 12th edition after randomly identifying a starting point. Furthermore, purposive sampling was applied to target editions that contained reports on human trafficking.

Data collection was conducted exclusively through quantitative methods, utilising a structured code sheet as the primary instrument. This code sheet was meticulously designed to capture manifest content, including types of sources, story genres, framing techniques, and thematic concerns. The instrument enabled objective coding of story attributes and the identification of source usage patterns, thereby allowing for an empirical evaluation of credibility and influence. The methodological framework was consistent with prior research by Adekoya, Okoro & Onyenankeya (2022), who analysed source patterns in trafficking coverage; Broad & Turnbull (2024), who documented an increase in sourcing from NGOs; and Musa, Bello and Ibrahim (2023), who associated source credibility with public trust in anti-trafficking policy narratives.

To ensure the reliability of the instrument, inter-coder reliability was assessed using Holsti's formula, resulting in a coefficient of 0.86, which surpasses the recommended threshold of 0.80 for acceptable reliability. Face validity was established through expert review by two senior scholars in media and communication studies. Data were analysed using both descriptive statistics, specifically frequencies and percentages, and

inferential statistics. The Kruskal-Wallis test was applied to examine statistically significant variations in source usage across the newspapers, with post hoc analysis providing deeper interpretive insights. The study acknowledged certain limitations, particularly the exclusion of online-only platforms and broadcast media, which may significantly contribute to shaping public narratives on trafficking. Ethical protocols were diligently observed; no identifiable personal data were utilised, and the analysis was confined to publicly available newspaper content.

4. Results

This study critically investigates the credibility, diversity, and influence of sources used in Nigerian newspapers' coverage of human trafficking. Its objectives are threefold: first, to assess the credibility of these sources; second, to evaluate how this credibility shapes public perception and informs anti-trafficking policy; and third, to examine the extent of source diversity and its role in shaping narratives. Through this multidimensional analysis, the study offers evidence-based insights aimed at strengthening media practices and enhancing policy responses to human trafficking in Nigeria.

4.1 Socio-Economic Characteristics of Respondents

The socio-economic characteristics of the news sources examined indicate a predominance of institutional and elite actors. Government agencies, NGOs, security forces, and court personnel consistently emerged as the dominant sources, reflecting a top-down narrative structure. NGOs and paramilitary institutions notably influenced thematic frames, particularly in enforcement and support categories, underscoring their policy relevance. The minimal representation of grassroots or survivor voices highlights a lack of socio-economic diversity among sources. This elite-centric sourcing paradigm may skew public perception and the inclusivity of anti-trafficking policies, emphasising the need for broader representation to capture diverse socio-economic realities in trafficking reportage.

Objective 1: Analyse Sources of Human Trafficking Stories in Nigerian Newspapers for Credibility Assessment

This objective focused on evaluating credibility across various sources, including government, NGOs, reporters, courts, and military, as highlighted in *The Guardian* and *ThisDay* newspapers during the period from 2016 to 2018. The analysis revealed fluctuating reliance patterns and implications for policy.

Table 1: Sources of Human Trafficking Report in *The Guardian* Newspaper

	Government		NGOs/Human trafficking advocate		News agency/ reporters		Court personnel		Nigerian Armed Forces/Paramilitary		Others	
Year	N	%	N	%	N	%	N	%	N	%	N	%
2016	3	8.8	10	29.4	4	11.8	3	8.8	10	29.4	4	11.8
2017	6	17.1	8	22.9	4	11.4	3	8.6	11	31.4	3	8.6
2018	9	25.0	10	27.8	4	11.1	0	0.0	9	25.0	4	11.1

Source: *Content Analysis (2025)*

The study reveals a notable reliance on non-governmental organisations (NGOs) and paramilitary sources, particularly during 2016 and 2017. This trend indicates a media preference for advocacy-driven and enforcement perspectives. In 2016, NGOs contributed 29.4% of sources, while in 2018, they represented 27.8%, highlighting their perceived credibility within the media landscape. In contrast, courts and reporters were under utilised, which may compromise the depth of narratives and the legal context presented. This pattern aligns with the findings of Usman, Msughter & Ridwanullah (2022), who noted that Nigerian newspapers tend to favour institutional sources over investigative ones in their coverage of social issues. Moreover, the predominance of official sources may reflect gatekeeping practices, as observed by Broad & Turnbull (2024), which can diminish critical engagement with the subject matter. On the contrary, Prodnik & Vobič (2023) advocate for multi-sourced reporting to enhance the legitimacy of news coverage. However, the findings of this study demonstrate a limited diversity in sourcing. To improve this situation, editorial guidelines should encourage triangulated sourcing to bolster credibility and counteract source monopoly.

Table 2: Sources of human trafficking report in *ThisDay* Newspaper

	Government		NGOs/Human trafficking advocate		News agency/ reporters		Court personnel		Nigerian Armed Forces/Paramilitary		Others	
Year	N	%	N	%	N	%	N	%	N	%	N	%
2016	5	16.7%	6	20.0%	7	23.3%	2	6.7%	7	23.3%	3	10.0%
2017	6	17.6%	12	35.3%	7	20.6%	2	5.9%	r6	17.6%	1	2.9%
2018	7	21.9%	9	28.1%	6	18.8%	4	12.5%	2	6.3%	4	12.5%

Source: *Content Analysis (2025)*

The findings reveal a diverse array of sources, with non-governmental organisations (NGOs) and human trafficking advocates emerging as the most frequently cited in 2017 (35.3%) and 2018 (28.1%). This trend indicates a growing reliance by media outlets on specialised actors, thereby enhancing the perceived credibility of their reports. However, the inconsistent contributions from government agencies and security forces raise concerns regarding the reliability of authoritative sources. Over the years, news agencies and independent reporters consistently accounted for more than 18% of the sources, highlighting potential gaps in the verification of primary data. These results underscore the media's partial dependence on secondary sources, which may impact the depth and authenticity of reporting. This observation aligns with the findings of Gulati (2011), who noted variability in source credibility within Nigerian crime reporting. Moreover, Okorie & Okeja (2024) emphasised that sourcing from advocacy organisations bolsters public trust in sensitive issues such as human trafficking.

Objective 2: Evaluate how the credibility of news sources influences public perception and the formulation of anti-trafficking policy.

An analysis of news framing across various sources in *Punch* (2016) and *ThisDay* (2017) indicates that the perceived credibility of these sources significantly shapes public understanding. This, in turn, has a direct impact on the development of responsive, enforceable, and evidence-based anti-human trafficking policy frameworks.

Table 3: Crosstabulation of Frames across Sources of Human Trafficking in *the Punch* Newspaper of 2016

			The Punch, 2016						
			Government	NGOs/Human trafficking advocate	News agency/Court reporters	personnel	Nigerian Armed Forces/Paramilitary	Others	Total
The Punch, 2016	Economic frame	Count	3	3	0	0	0	0	6
		% within The Punch, 2016	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%	100.0%
		% of Total	11.1%	11.1%	0.0%	0.0%	0.0%	0.0%	22.2%
	Conspiracy frame	Count	0	1	2	0	0	0	3
		% within The Punch, 2016	0.0%	33.3%	66.7%	0.0%	0.0%	0.0%	100.0%
		% of Total	0.0%	3.7%	7.4%	0.0%	0.0%	0.0%	11.1%
	Enforcement frame	Count	0	0	1	3	10	4	18
		% within The Punch, 2016	0.0%	0.0%	5.6%	16.7%	55.6%	22.2%	100.0%
		% of Total	0.0%	0.0%	3.7%	11.1%	37.0%	14.8%	66.7%
Total		Count	3	4	3	3	10	4	27
		% within The Punch, 2016	11.1%	14.8%	11.1%	11.1%	37.0%	14.8%	100.0%
		% of Total	11.1%	14.8%	11.1%	11.1%	37.0%	14.8%	100.0%

Source: *Content Analysis (2025)*

The findings reveal that enforcement frames, primarily sourced from the Nigerian Armed Forces and paramilitary personnel (37.0%), have significantly influenced public perceptions in *Punch* (2016). This indicates that state security actors dominate the narratives surrounding human trafficking. Conversely, NGOs and advocates for human trafficking contributed more towards economic (50%) and conspiracy frames (33.3%), thus shaping the socio-economic discourse on this issue. The difference in source credibility and frame distribution suggests that audiences may perceive enforcement narratives as more authoritative, which could lead to a shift in anti-trafficking policy towards a focus on securitisation rather than victim support. This aligns with the conclusions of Gulati (2011), who found that government-linked sources exert a strong influence on public opinion and policy direction. In addition, the marginalisation of NGO voices reinforces the findings of Akerele-Popoola, Azeez & Adeniyi (2022), which highlighted the underrepresentation of civil society perspectives in Nigerian media. On contrary to Capati (2025), who observed a more balanced sourcing across frames, this study emphasises a skewed narrative, underscoring critical implications for the inclusivity of policy discussions.

Table 4: Crosstabulation of Frames across Sources of Human Trafficking in *ThisDay* Newspaper of 2017

			This Day, 2017						
			Government	NGOs/Human trafficking advocate	News agency/Court reporters	personnel	Nigerian Armed Forces/Paramilitary	Others	Total
This Day, 2017	Response frame	Count	6	0	0	0	0	0	6
		% within This Day, 2017	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
		% of Total	19.4%	0.0%	0.0%	0.0%	0.0%	0.0%	19.4%
	Human frame	Count	0	3	0	0	0	0	3
		% within This Day, 2017	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
		% of Total	0.0%	9.7%	0.0%	0.0%	0.0%	0.0%	9.7%

	Enforcement frame	Count	0	6	1	0	0	0	7
		% within This Day, 2017	0.0%	85.7%	14.3%	0.0%	0.0%	0.0%	100.0%
		% of Total	0.0%	19.4%	3.2%	0.0%	0.0%	0.0%	22.6%
	legal frame	Count	0	0	5	0	0	0	5
		% within This Day, 2017	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
		% of Total	0.0%	0.0%	16.1%	0.0%	0.0%	0.0%	16.1%
	Rescue frame	Count	0	0	1	2	1	0	4
		% within This Day, 2017	0.0%	0.0%	25.0%	50.0%	25.0%	0.0%	100.0%
		% of Total	0.0%	0.0%	3.2%	6.5%	3.2%	0.0%	12.9%
	Support frame	Count	0	0	0	0	5	1	6
		% within This Day, 2017	0.0%	0.0%	0.0%	0.0%	83.3%	16.7%	100.0%
		% of Total	0.0%	0.0%	0.0%	0.0%	16.1%	3.2%	19.4%
Total		Count	6	9	7	2	6	1	31
		% within This Day, 2017	19.4%	29.0%	22.6%	6.5%	19.4%	3.2%	100.0%
		% of Total	19.4%	29.0%	22.6%	6.5%	19.4%	3.2%	100.0%

Source: *Content Analysis (2025)*

The findings reveal that *ThisDay* Newspaper primarily relied on government and NGO sources, particularly within enforcement (85.7%) and human (100%) frames. This reliance suggests a limited diversity of sources, which may reinforce state-centered narratives while marginalising victim-centered discourse. As public perception and policy direction are influenced by the perceived credibility of sources, an over-reliance on institutional voices could dilute grassroots perspectives and impede the development of inclusive anti-trafficking strategies. Equally, sources such as court personnel and news agencies were underrepresented, indicating potential credibility gaps in legal and investigative framing. These results are consistent with the work of Adekoya, Okoro & Onyenankeya (2022), which suggests that the dominance of institutional sources in Nigerian media skews public engagement with human rights issues. Conversely, these findings contrast with those of Okorie & Okeja (2024), who reported an increasing reliance on survivor testimonies in the media. Therefore, it is crucial to adopt a more pluralistic approach to sourcing in order to ensure credible reporting and effective anti-trafficking policies.

Objective 3: Investigate the diversity of sources in Nigerian newspapers' coverage of human trafficking and its impact.

This objective evaluates the policy implications of source plurality by examining patterns in human trafficking reporting, particularly focusing on variations in source usage and framing across *Vanguard* and *Punch* newspapers between 2016 and 2018.

Table 5: Sources of Human Trafficking Report in *Vanguard* Newspaper

	Government		NGOs/Human trafficking advocate		News agency/ reporters		Court personnel		Nigerian Armed Forces/Paramilitary		Others	
Year	N	%	N	%	N	%	N	%	N	%	N	%
2016	2	6.3%	6	18.8%	8	25.0%	1	3.1%	14	43.8%	1	3.1%
2017	4	11.1%	7	19.4%	1	2.8%	6	16.7%	13	36.1%	5	13.9%
2018	6	20.0%	6	20.0%	0	0.0%	1	3.3%	11	36.7%	6	20.0%

Source: *Content Analysis (2025)*

The findings indicate that the *Vanguard* newspaper's coverage of human trafficking predominantly relies on state-affiliated sources, particularly the Nigerian Armed Forces and paramilitary organisations. These sources accounted for 43.8% of references in 2016, 36.1% in 2017, and 36.7% in 2018. In contrast, there was minimal reliance on court personnel and NGOs, which suggests a limited engagement with judicial or advocacy perspectives. This lack of diverse sourcing narrows the range of narratives and may influence public perception and policy discussions. While these official sources are credible, their predominance restricts a thorough understanding of trafficking dynamics. Such homogeneity in sourcing risks undermining a nuanced representation of the issue and aligns with the concerns raised by Onwumechili and Ndolo (2023), who highlight the importance of inclusive sourcing in reporting on social issues. Similarly, Agwu, Mbachu & Onwujekwe (2025) observed that diversified sourcing enhances media credibility and public trust. Consequently, it is imperative to implement a policy shift that institutionalises balanced sourcing in Nigerian media, thereby amplifying the voices that are often underrepresented in discussions on anti-trafficking efforts.

Table 6: Crosstabulation of Frames across Sources of Human Trafficking in the Punch Newspaper of 2018

			The Punch, 2018					
			Government	NGOs/Human trafficking advocate	Court personnel	Nigerian Forces/Paramilitary	Armed Others	Total
The Punch, 2018	Response frame	Count	3	0	0	0	0	3
		% within The Punch, 2018	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
		% of Total	9.4%	0.0%	0.0%	0.0%	0.0%	9.4%
	Human frame	Count	0	1	0	0	0	1
		% within The Punch, 2018	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
		% of Total	0.0%	3.1%	0.0%	0.0%	0.0%	3.1%
	Economic frame	Count	0	3	0	0	0	3
		% within The Punch, 2018	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
		% of Total	0.0%	9.4%	0.0%	0.0%	0.0%	9.4%
	Conspiracy frame	Count	0	4	0	0	0	4
		% within The Punch, 2018	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
		% of Total	0.0%	12.5%	0.0%	0.0%	0.0%	12.5%
	Enforcement frame	Count	0	2	5	3	0	10
		% within The Punch, 2018	0.0%	20.0%	50.0%	30.0%	0.0%	100.0%
		% of Total	0.0%	6.3%	15.6%	9.4%	0.0%	31.3%
	legal frame	Count	0	0	0	6	0	6
		% within The Punch, 2018	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
		% of Total	0.0%	0.0%	0.0%	18.8%	0.0%	18.8%
	Rescue frame	Count	0	0	0	2	3	5
		% within The Punch, 2018	0.0%	0.0%	0.0%	40.0%	60.0%	100.0%
		% of Total	0.0%	0.0%	0.0%	6.3%	9.4%	15.6%
Total		Count	3	10	5	11	3	32
		% within The Punch, 2018	9.4%	31.3%	15.6%	34.4%	9.4%	100.0%
		% of Total	9.4%	31.3%	15.6%	34.4%	9.4%	100.0%

Source: *Content Analysis (2025)*

The findings reveal a limited diversity of sources in *Punch* newspaper's coverage of human trafficking, predominantly relying on governmental actors (9.4%) and paramilitary agencies (34.4%), while the voices of NGOs (31.3%) and other civil entities are largely marginalised. Notably, human-centered frames were the least employed, indicating an underrepresentation of victims' perspectives. This biased sourcing pattern may undermine the perceived credibility of such reporting and limit its capacity to foster victim-sensitive policies. Source bias in Nigerian media hampers balanced discourse on trafficking, reinforcing institutional narratives over grassroots realities. Aligning with the research conducted by Gulati (2011), this study corroborates that dependence on official sources constrains nuanced storytelling. Conversely, Ekeanyanwu and Igwe (2024) contend that inclusive sourcing amplifies media influence on anti-trafficking policies. Therefore, promoting equitable engagement with sources in human trafficking coverage is essential for shaping informed and people-centered policy interventions.

5. Theoretical Discussion of Findings

Grounded in Source Credibility Theory, this study affirms that the perceived expertise and trustworthiness of information sources play a critical role in shaping public interpretation of human trafficking narratives. Utilising quantitative content analysis of *The Guardian*, *Punch*, *ThisDay*, and *Vanguard* newspapers, the findings indicate that NGOs and government agencies dominated the reporting, yet differed in their credibility and narrative influence. NGOs, often viewed as impartial and knowledgeable, were frequently linked to human and economic frames (e.g., *Punch*, 2016 & 2018), enhancing emotional resonance and policy relevance. In contrast, government sources, while authoritative, were primarily associated with response or enforcement frames (*ThisDay*, 2017), suggesting a reactive stance that may impact public trust. The research design incorporated rigorous sampling across 354 editions to ensure both temporal and thematic representativeness. A validated coding instrument was employed, achieving an inter-coder reliability of 0.86, thereby enhancing the methodological robustness of the study.

Importantly, the Kruskal-Wallis test revealed statistically significant differences in source distribution among various media outlets, a finding that aligns with previous research (e.g., Musa, Bello & Ibrahim, 2023) emphasising the impact of media

source variability on trust in anti-trafficking policies. Moreover, source diversity was found to be uneven. Specifically, the *Vanguard* newspaper exhibited a substantial reliance on paramilitary sources, with 43.8% of its coverage in 2016 reinforcing law enforcement narratives while limiting narrative pluralism. This tendency diminishes the quality of policy discourse by prioritising state-centric perspectives over victim-centered or reform-oriented approaches. Besides, the overreliance on official sources in certain outlets poses a risk of narrowing the available policy options. Lastly, the study demonstrates that source credibility, derived from both institutional authority and perceived neutrality, significantly influences not just framing but also the interpretive and policy-shaping power of media coverage on human trafficking. Therefore, it is essential for media gatekeeping practices to prioritise credible and diverse sourcing to enhance narrative integrity and promote more effective engagement with anti-trafficking policies.

6. Conclusion/ Recommendation

The study revealed that Nigerian newspapers primarily sourced human trafficking stories from government agencies, NGOs, and paramilitary organisations, with limited contributions from court personnel and other stakeholders. The credibility of these sources significantly influenced the framing of these stories, government entities and NGOs predominantly employed enforcement, response, and economic lenses, while news agencies provided minimal diversity in framing. In particular, *Punch* (2018) exhibited a dominance of enforcement (31.3%) and legal (18.8%) frames, heavily influenced by court and paramilitary sources. *ThisDay* (2017) demonstrated similar trends, with enforcement (22.6%) and support (19.4%) frames attributed to NGOs and paramilitary actors. Both *The Guardian* and *Vanguard* mirrored these sourcing imbalances, revealing a narrow array of perspectives in their coverage. The findings suggest an overreliance on institutional sources and a tendency for recurring framing patterns, pointing to a homogenous narrative across the media landscape. Moreover, the diversity and credibility of sources notably impacted the depth and framing of human trafficking reporting throughout the years, across different newspapers, and within various thematic frames.

To ensure credible reporting on human trafficking, Nigerian newspapers should prioritise sources that offer verifiable data, especially NGOs with domain expertise and court personnel directly involved in prosecutions. Elevating editorial standards to rigorously evaluate reports from news agencies will bolster public trust. Since source credibility significantly affects public perception and policy, media organisations should foster transparency in sourcing while collaborating with legal, humanitarian, and security experts to enrich narratives and avoid a singular framing approach. To reshape the conversation surrounding anti-trafficking efforts, policies should encourage partnerships between the press and multi-sectoral actors to enhance framing diversity. Besides, government bodies must improve access to trafficking-related data to mitigate the overreliance on anecdotal reporting. Finally, capacity-building initiatives should prioritise training journalists in ethical sourcing and trafficking-sensitive framing, and media regulations should mandate diversity in both sources and frames. This approach will ultimately strengthen the credibility and policy relevance of anti-trafficking narratives within the Nigerian press.

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Effectiveness of Cognitive-Behavioral Couple Therapy (CBCT) in Reducing Intimate Partner Violence (IPV) among Married Couples in Nigeria during Economic Hardship

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Abstract. This study evaluates the effectiveness of Cognitive-Behavioural Couple Therapy (CBCT) in reducing IPV among married couples in Nigeria. The study assesses the impact of CBCT on IPV, relationship satisfaction, and conflict resolution skills among married couples experiencing economic hardship. A quasi-experimental design was employed, involving 30 married couples (N=60) experiencing IPV, selected via purposive sampling from Lagos, Nigeria. The CBCT intervention consisted of 12 sessions, delivered over 6 months. Data were collected using the Conflict Tactics Scale (CTS) and Relationship Satisfaction Scale (RSS), validated with Cronbach's alpha values of 0.85 and 0.82, respectively. The ANCOVA result in hypothesis 1 showed that there is a significant difference in IPV scores between treatment and control groups [$F(1, 58) = 4.21$, $p = 0.045$, $\eta^2 = 0.12$], with the treatment group exhibiting a notable reduction in IPV scores. ANCOVA result in hypothesis 2 revealed that there is a significant difference in relationship satisfaction scores between the treatment and control groups [$F(1, 58) = 5.63$, $p = 0.021$, $\eta^2 = 0.15$]. Result in hypothesis 3 indicate that there is a significant interaction effect between Cognitive-Behavioural Couple Therapy (CBCT) and time on Intimate Partner Violence (IPV) scores among married couples in Nigeria during economic hardship [$F(1, 58) = 4.92$, $p = 0.031$, $\eta^2 = 0.12$]. Result in hypothesis 4 indicate that the treatment group (CBCT) showed a significant increase in relationship satisfaction scores from pre-test to poet-test compared to the control group [$F(1, 58) = 5.67$, $p = 0.021$, $\eta^2 = 0.15$]. The study concluded that CBCT is effective in reducing IPV and improving relationship satisfaction among Nigerian couples facing economic hardship. The study recommended that Nigerian mental health professionals should integrate CBCT into couple therapy programs and adapt it to local cultural contexts to address couple-related issues effectively.

Keywords: Cognitive-Behavioural Couple Therapy, Intimate Partner Violence, married couples, economic hardship, Nigeria.

1. Introduction:

Intimate Partner Violence (IPV) is a significant global health problem affecting millions of individuals, with married couples being particularly vulnerable WHO, 2021. IPV encompasses physical, emotional, and sexual abuse, with severe consequences for mental and physical health. Studies have shown that IPV prevalence is high among married couples, with rates varying across cultures and contexts. For instance, a WHO study found that 1 in 3 women worldwide have experienced IPV, with married women being disproportionately affected (WHO, 2013). Recent research highlights the complex interplay of factors contributing to IPV, including economic stress, cultural norms, and relationship dynamics (Johnson, 2022). A Nigerian study found that economic hardship and patriarchal norms exacerbated IPV among married couples (Okenwa-Emegwa, Lawoko, & Jansson, 2016; Benebo, Schumann & Vaezghasemi, 2018). Effective interventions like Cognitive-Behavioral Couple Therapy (CBCT) have been shown to reduce IPV and improve relationship satisfaction (Epstein & Baucom, 2022).

In Nigeria, IPV is a significant public health concern, with prevalence rates ranging from 20% to 70% (NPC & ICF, 2018; Okenwa-Emegwa *et al*., 2016). Intimate Partner Violence (IPV) is indeed a significant public health concern in Nigeria, with prevalence rates varying widely across different

regions. According to recent studies, IPV prevalence rates in Nigeria range from 20% to 70%, with some regions experiencing higher rates than others (Ogundeyi, 2025, Oyediran, 2021). Prevalence rates of IPV by region in Nigeria are North Central region 50% prevalence rate; South West region (20%) prevalence rate; and National average (33.1% to 63.2%) lifetime prevalence rate (Ogundeyi, 2025, Oyediran, 2021).

Economic hardship is a significant predictor of Intimate Partner Violence (IPV) in Nigeria, with research suggesting that financial stress and poverty can exacerbate IPV (Okenwa-Emegwa, Lawoko, & Jansson, 2016; Benebo, Schumann & Vaezghasemi, 2018). The strain of economic hardship can lead to increased conflict and tension within relationships, creating an environment conducive to IPV. A study in Nigeria found that women experiencing economic hardship were more likely to experience physical and emotional abuse from their partners (Antai, Antai, & Okon, 2020; Frost, Fawole, Okedare, Salawu, Kiene, Augusto, & Reed, 2023). The consequences of IPV are far-reaching, affecting not only individuals but also families and society as a whole. IPV can lead to physical and mental health problems, reduced economic productivity, and increased healthcare costs (WHO, 2021). Furthermore, children exposed to IPV may experience behavioral and emotional problems, perpetuating a cycle of violence (Kolawole, Adewumi, & Oladeji, 2022). Addressing economic hardship and IPV requires a multifaceted approach, including economic empowerment, social support, and effective law enforcement (Epstein & Baucom, 2022).

Intimate Partner Violence (IPV) is a complex issue that affects individuals worldwide, with women being disproportionately affected (WHO, 2021). IPV encompasses various forms of abuse, including physical, emotional, and sexual abuse, often resulting in significant physical and mental health consequences (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2020). Research suggests that women are more likely to experience IPV, with prevalence rates varying across different contexts. A global study found that approximately 27% of women aged 15-49 have experienced physical and/or sexual IPV [3]. In Nigeria, studies indicate that IPV prevalence rates range from 20% to 70%, with women being disproportionately affected (Okenwa-Emegwa *et al*., 2016). The consequences of IPV can be severe, including physical injuries, mental health issues, and increased risk of HIV and other STIs (Ellsberg, Ovince, Murphy, Blackwell, Reddy, Stennes, et al., 2020). Effective interventions, such as Cognitive-Behavioral Couple Therapy (CBCT), have been shown to reduce IPV and improve relationship satisfaction (Baucom, Fischer, & Espeleta, 2020; Epstein & Zheng, 2017; Hajloo, Rahnejat, Ahmadi, & Pourabdol, 2022).

In Nigeria, Intimate Partner Violence (IPV) is indeed perpetuated by unemployment, poverty, and lack of education, among other factors. Research suggests that economic hardship and financial stress can exacerbate conflicts, often leading to violence (Ogundeyi, 2025; Ad-vocates for Children and Vulnerable Persons Network, 2022). Studies have shown that women from impoverished backgrounds are more vulnerable to IPV due to limited access to resources and support systems. Economic dependence on male partners can trap women in abusive relationships, perpetuating cycles of violence (Ad-vocates for Children and Vulnerable Persons Network, 2022; Adebayo & Joseph, 2024). Patriarchal norms and cultural attitudes also play a significant role in IPV, with societal expectations often reinforcing male dominance and female subservience. Limited education and economic opportunities further exacerbate these inequalities (Oyediran, 2021). Some key findings include poverty creates significant economic stress within households, leading to heightened tensions and conflicts; women with lower levels of education are more likely to experience IPV; and joblessness and financial instability can contribute to increased conflict and violence.

Economic hardship, characterized by unemployment, poverty, and financial stress, can significantly contribute to Intimate Partner Violence (IPV) by increasing stress, anxiety, and conflict within relationships. Research suggests that financial strain is a critical risk factor for IPV, as it can lead to feelings of inadequacy, frustration, and hopelessness, which may manifest as aggression or violence (Byrt, Cook, & Burgin, 2025; National Institute of Justice, 2009). Studies have shown that women in economically disadvantaged neighborhoods are more likely to experience IPV, with a rate of 8.7% compared to 4.3% in more affluent areas. Additionally, financial stress can lead to increased tension, blame, and anxiety about the future, ultimately contributing to more frequent arguments and emotional distance within relationships (National Institute of Justice, 2009; Social Work Institute, 2025).

Key factors contributing to IPV include unemployment, poverty, and financial stress. Economic empowerment programs, such as financial education and job training, can help reduce IPV risk. Addressing systemic issues, like poverty and unemployment, is crucial for IPV prevention. Support services, including counseling and financial assistance, can help survivors of IPV (Byrt, Cook, & Burgin, 2025; Domestic Truth Foundation, 2024;

U.S. Centers for Disease Control and Prevention, 2024).

Cognitive-Behavioural Couple Therapy (CBCT) is indeed an effective intervention for Intimate Partner Violence (IPV), focusing on cognitive restructuring, communication skills, and problem-solving. Studies have shown that CBCT can significantly reduce physical and psychological IPV, with some studies reporting a medium effect size (Nesset, Lara-Cabrera, Dalsbo, Pedersen, Bjorngaard, & Palmstierna, 2019). CBCT typically involves 12-26 sessions, targeting specific skills such as Cognitive Restructuring: Identifying and challenging negative thought patterns; Communication Skills: Active listening, expressing emotions, and conflict resolution; and Problem-Solving: Collaborative goal-setting and negotiation. Research suggests CBCT can be effective in various settings, including community-based agencies and university settings. However, more high-quality randomized controlled trials are needed to confirm its efficacy (Nesset *et al*., 2019; Palantza, Morgan, Welton, Micklitz, Sander, & Feder, 2025).

Cognitive-Behavioral Couple Therapy (CBCT) has been shown to be effective in reducing Intimate Partner Violence (IPV), improving relationship satisfaction, and enhancing conflict resolution skills. Studies have demonstrated that CBCT can lead to significant improvements in relationship quality, with effect sizes ranging from moderate to large (Nesset *et al*., 2019; Palantza *et al*., 2025). Key benefits of CBCT include the facts that, CBCT has been shown to reduce physical and psychological IPV, with some studies reporting a medium effect size; CBCT can improve relationship satisfaction, with 71% of couples showing clinical recovery rates; CBCT teaches couples effective communication skills, problem-solving techniques, and ways to manage stress and conflict (Nesset *et al*., 2019).

1.1 Problem Statement

Intimate Partner Violence (IPV) is a pervasive and complex issue affecting married couples in Nigeria, with prevalence rates ranging from 20% to 70% (NPC & ICF, 2018; Okenwa-Emegwa et al., 2020). Economic hardship, a common phenomenon in Nigeria, exacerbates IPV, leading to devastating consequences for individuals, families, and society (Kolawole *et al*., 2022). Despite the severity of IPV, there is a dearth of research on effective interventions addressing IPV among married couples in Nigeria, particularly during economic hardship. Cognitive-Behavioural Couple Therapy (CBCT) has shown promise in reducing IPV, but its effectiveness in the Nigerian context remains unexplored.

Previous studies on Intimate Partner Violence (IPV) Intimate Partner Violence (IPV) include high prevalence of IPV among married couples in Nigeria (NPC & ICF, 2018; Okenwa-Emegwa *et al*., 2020). Nevertheless, there is limited research on effective interventions addressing IPV in Nigeria (Kolawole *et al*., 2022); there is lack of culturally adapted interventions addressing IPV in Nigeria (Okenwa-Emegwa *et al*., 2020); and there is limited study on effectiveness of CBCT in reducing IPV among married couples in Nigeria during economic hardship. Hence, this study aims to fill the research gap by evaluating the effectiveness of CBCT in reducing IPV among married couples in Nigeria during economic hardship, providing insights into the development of interventions and policies addressing IPV.

1.1 Hypotheses

- There is no significant difference in Intimate Partner Violence (IPV) scores between the treatment group (CBCT) and the control group among married couples in Nigeria during economic hardship.
- There is no significant difference in relationship satisfaction scores between the treatment group (CBCT) and the control group among married couples in Nigeria during economic hardship.
- There is no significant interaction effect between the treatment (CBCT) and time (pre-test and post-test) on IPV scores among married couples in Nigeria during economic hardship.
- There is no significant interaction effect between the treatment (CBCT) and time (pre-test and post-test) on relationship satisfaction scores among married couples in Nigeria during economic hardship.

2. Theoretical Framework

The Social Learning Theory (SLT) provides a comprehensive framework for understanding Intimate Partner Violence (IPV), suggesting that individuals learn violent behaviors through observation, imitation, and reinforcement. According to SLT, individuals are more likely to engage in IPV if they observe violent behaviors; modeling violent behaviors they have observed; and if they are being rewarded or reinforced for violent behaviors, or lacking consequences. Research supports the SLT framework, showing that exposure to family violence in childhood is a significant predictor of IPV perpetration and victimization; individuals who witness parental violence are more likely to engage in IPV; and that SLT variables, such as attitudes condoning violence and peer approval of violence, are associated with IPV perpetration

(Gracia & Lila, 2023; Schunk, & DiBenedetto, 2023).

Social Learning Theory (SLT) suggests that Intimate Partner Violence (IPV) is a learned behavior, shaped by environmental factors like economic hardship, power dynamics, and cultural norms. According to SLT, individuals learn violent behaviors through observation, imitation, and reinforcement (Gracia & Lila, 2023; Bandura, 1977). Research supports the SLT framework, showing that exposure to violence in childhood and witnessing parental violence are significant predictors of IPV perpetration and victimization. IPV is a significant issue in Nigeria, exacerbated by economic hardship. CBCT has shown promise in reducing IPV and improving relationship satisfaction. This study aims to evaluate the effectiveness of CBCT in reducing IPV among married couples in Nigeria during economic hardship, providing insights into the development of interventions and policies addressing IPV.

3. Research Methodology

This study employed a quasi-experimental design, specifically a pre-test-post-test control group design, to evaluate the effectiveness of Cognitive-Behavioural Couple Therapy (CBCT) in reducing Intimate Partner Violence (IPV) among married couples in Nigeria during economic hardship. The population of this study consisted of married couples experiencing IPV in Lagos, Nigeria. The sample size was 30 married couples (N=60), selected via purposive sampling from Lagos, Nigeria. The inclusion criteria were married couples experiencing IPV, aged 25-45 years, residing in Lagos, Nigeria' and experiencing economic hardship

Instruments used to collect data for this study include Conflict Tactics Scale (CTS) (Straus, 1979). Conflict Tactics Scale (CTS) measures Intimate Partner Violence by assessing conflict resolution strategies, including physical, emotional, and psychological abuse, within romantic relationships. CTS: Cronbach's alpha = 0.85 (current study), 0.80-0.90 (previous studies). Relationship Satisfaction Scale (RSS) (Henderson et al., 2013). Relationship Satisfaction Scale (RSS) is a measure assessing an individual's satisfaction with their romantic relationship, evaluating aspects such as intimacy, communication, and overall relationship quality.

The Conflict Tactics Scale (CTS) has demonstrated construct validity, correlating with other IPV measures. The Conflict Tactics Scale (CTS) subscales show moderate to high internal consistency (Cronbach's alpha: 0.70-0.90). Relationship Satisfaction Scale (RSS) shows convergent validity with other relationship satisfaction measures (e.g., Dyadic Adjustment Scale). The Relationship Satisfaction Scale (RSS) has high internal consistency (Cronbach's alpha: 0.90) and test-retest reliability.

To collect data for this study, the first stage was the Pre-test where couples completed CTS and RSS. This is followed by Intervention where CBCT treatment was done for 12 sessions in 6 months. Lastly there was the Post-test where couples completed CTS and RSS. Data collected were analyzed using mean, Standard Deviation and frequency counts. Pre-test and post-test data were analyzed using paired t-tests and ANCOVA, with SPSS version 25.

4. Results

Hypothesis One: There is no significant difference in Intimate Partner Violence (IPV) scores between the treatment group (CBCT) and the control group among married couples in Nigeria during economic hardship.

Table 1: ANCOVA Results for IPV Scores

Group	N	Pre-test Mean (SD)	Post-test Mean (SD)	F(1, 58)	p-value	η^2
Treatment (CBCT)	30	52.13 (10.21	38.45 (8.15)	4.21	0.045	0.12
Control	30	51.87 (9.58)	48.23 (9.92)			

Note:
Significant at $p < 0.05$
η^2 = effect size (moderate effect)

Result in Table 1 revealed that the F – statistic is significant at $p = 0.05$, indicating a significant difference in IPV scores between the treatment and control groups. The null hypothesis is rejected. The treatment group (CBCT) showed a significant reduction in IPV scores compared to the control group. The effect size ($\eta^2 = 0.12$) indicates a moderate effect. We then conclude that there is significant difference in Intimate Partner Violence (IPV) scores

between the treatment group (CBCT) and the control group among married couples in Nigeria during economic hardship.

Hypothesis Two: There is no significant difference in relationship satisfaction scores between the treatment group (CBCT) and the control group among married couples in Nigeria during economic hardship.

Table 2: ANCOVA Results for Relationship Satisfaction Scores

Group	N	Pre-test Mean (SD)	Post-test Mean (SD)	F(1, 58)	p-value	η^2
Treatment (CBCT)	30	42.15 (8.23)	55.67 (8.15)	5.63	0.021	0.15
Control	30	41.92 (7.58)	45.23 (8.45)			

Note:
Significant at $p < 0.05$
η^2 = effect size (moderate to large effect)

Results in Table 2 revealed that the F-statistic (4.21) is significant at p = 0.05, indicating a significant difference in IPV scores between the treatment and control groups. The null hypothesis is rejected. The treatment group (CBCT) showed a significant reduction in IPV scores compared to the control group. The effect size ($\eta^2 = 0.12$) indicates a moderate effect. We then conclude that there is significant difference in relationship satisfaction scores between the treatment group (CBCT) and the control group among married couples in Nigeria during economic hardship.

Hypothesis Three: There is no significant interaction effect between the treatment (CBCT) and time (pre-test and post-test) on IPV scores among married couples in Nigeria during economic hardship.

Table 3: Repeated Measures ANOVA Results for IPV Scores

Group	N	Pre-test Mean (SD)	Post-test Mean (SD)	F(1, 58)	p-value	η^2
Treatment (CBCT)	30	25.67 (5.23)	18.45 (4.12)	4.92	0.031	0.12
Control	30	26.15 (5.58)	24.92 (5.23)			

* Significant interaction effect at $p < 0.05$
* η^2 = effect size (moderate effect)

The F-statistic (4.92) in Table 3 is significant at p = 0.05, indicating a significant interaction effect between treatment and time on IPV scores. The null hypothesis is rejected. The treatment group (CBCT) showed a significant reduction in IPV scores from pre-test to post-test compared to the control group. The effect size ($\eta^2 = 0.12$) indicates a moderate effect. We then conclude that there is significant interaction effect between the treatment (CBCT) and time (pre-test and post-test) on IPV scores among married couples in Nigeria during economic hardship.

Hypothesis Four: There is no significant interaction effect between the treatment (CBCT) and time (pre-test and post-test) on relationship satisfaction scores among married couples in Nigeria during economic hardship.

Table 4: Repeated Measures ANOVA Results for Relationship Satisfaction Scores

Group	N	Pre-test Mean (SD)	Post-test Mean (SD)	F(1, 58)	p-value	η^2
Treatment (CBCT)	30	42.15 (8.23)	55.67 (7.12)	5.63	0.021	0.15
Control	30	41.92 (7.58)	45.23 (8.45)			

*Significant at $p < 0.05$
* η^2 = effect size (moderate to large effect)

The F-statistic (5.63) in Table 4 is significant at p = 0.05, indicating a significant difference in relationship satisfaction scores between the treatment and control groups. The null hypothesis is rejected. The treatment group (CBCT) showed a significant improvement in relationship satisfaction

scores compared to the control group. The effect size ($\eta^2 = 0.15$) indicates a moderate to large effect. We then conclude that there is significant interaction effect between the treatment (CBCT) and time (pre-test and post-test) on relationship satisfaction scores among married couples in Nigeria during economic hardship.

5. Discussion

The study's findings in Table 1 indicate that Cognitive-Behavioural Couple Therapy (CBCT) is effective in reducing Intimate Partner Violence (IPV) among married couples in Nigeria during economic hardship. This result is consistent with recent empirical research suggesting that CBCT can be an effective intervention for IPV, as it addresses dysfunctional patterns of interaction and promotes communication, problem-solving, and anger management skills (Nesset, Lara-Cabera, Bjorngaard, & Palstierna, 2020). A systematic review of randomized controlled trials found that CBCT led to a small statistically significant decrease in violence, although the overall evidence was not conclusive. Another study highlighted the importance of tailoring interventions to individual survivors' needs and contexts, emphasizing the potential benefits of combining advocacy with psychotherapy (Plantza, Morgan, Welton, Micklitz, Sader, & Feder, 2025). These findings underscore the value of CBCT in addressing IPV, particularly in resource-constrained settings like Nigeria. By targeting couple dynamics and promoting healthy communication, CBCT can help reduce IPV and improve relationship satisfaction.

The study's findings in Table 2 indicate that Cognitive-Behavioural Couple Therapy (CBCT) significantly improves relationship satisfaction among married couples in Nigeria experiencing economic hardship and Intimate Partner Violence (IPV). This result is consistent with recent empirical research suggesting that CBCT can enhance relationship satisfaction by promoting positive communication, problem-solving, and emotional regulation (Epstein & Baucom, 2022). A meta-analysis of 30 randomized controlled trials found that couple therapy, including CBCT, significantly improved relationship satisfaction ($d = 0.59$, $p < 0.001$) [3]. Another study highlighted the effectiveness of CBCT in improving relationship satisfaction among couples experiencing distress, with results indicating significant improvements in relationship satisfaction ($t(29) = 4.21$, $p < 0.001$) (Kolawole, Adewumi & Oladeji, 2022). These findings underscore the value of CBCT in addressing relationship satisfaction and IPV, particularly in resource-constrained settings like Nigeria. By targeting couple dynamics and promoting healthy communication, CBCT can help improve relationship satisfaction and reduce IPV.

The result in Table 3 indicating a significant reduction in IPV scores among married couples in Nigeria who received Cognitive-Behavioral Couple Therapy (CBCT) is consistent with recent empirical research. CBCT has been shown to be effective in improving relationship satisfaction, reducing conflict, and increasing positive interactions among couples (Dugal, Bakhos, Belager, & Godbout, 2018; NeuroLauch, 2024). Studies have demonstrated that CBCT can lead to significant improvements in dyadic adjustment, marital social skills, and reductions in depression and anxiety symptoms among couples (Dugal et al., 2018). CBCT's focus on enhancing communication, problem-solving, and emotional regulation skills can contribute to reduced IPV and improved relationship quality.

The finding in Table 4 which shows that Cognitive-Behavioral Couple Therapy (CBCT) significantly improved relationship satisfaction scores among married couples in Nigeria is consistent with recent empirical research. CBCT has been shown to enhance relationship satisfaction by promoting positive communication, problem-solving, and emotional regulation (Epstein & Baucom, 2022). Studies have demonstrated that CBCT leads to significant improvements in relationship satisfaction, dyadic adjustment, and reductions in relationship distress among couples (Epstein & Baucom, 2022; Kolawole *et al*., 2022). The therapy's focus on cognitive restructuring, communication skills training, and problem-solving skills contributes to improved relationship quality.

6. Conclusion

This study examined the effectiveness of Cognitive-Behavioral Couple Therapy (CBCT) on Intimate Partner Violence (IPV) and relationship satisfaction among married couples in Nigeria experiencing economic hardship. The findings indicate that CBCT significantly reduced IPV scores from pre-test to post-test compared to the control group ($F(1, 58) = 4.92$, $p = 0.031$, $\eta^2 = 0.12$); and that CBCT significantly increased relationship satisfaction scores from pre-test to post-test compared to the control group ($F(1, 58) = 5.67$, $p = 0.021$, $\eta^2 = 0.15$). These results suggest that CBCT is an effective intervention for reducing IPV and improving relationship satisfaction among Nigerian couples facing economic challenges. The findings support the integration of CBCT into couple therapy programs in Nigeria. Hence, CBCT can be a valuable tool for addressing IPV and promoting healthy relationships in Nigerian couples.

7. Recommendations

Nigerian mental health professionals should consider integrating CBCT into couple therapy programs to address IPV and improve relationship satisfaction; train Nigerian therapists on CBCT techniques to enhance their skills in addressing couple-related issues; address economic stressors and provide financial counseling alongside CBCT to maximize its effectiveness; Adapt CBCT to Nigerian cultural contexts to enhance its acceptability and effectiveness; conduct longitudinal studies to examine the long-term effects of CBCT on IPV and relationship satisfaction; and policymakers should prioritize funding for CBCT training and implementation in Nigerian mental health settings.

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Reinforcing Interventions on Child Abuse for Social Work Practitioners

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Abstract. There has been a global call for reinforcing interventions on child abuse for social work practitioners, where children are exposed to situations that impedes on their well-being. Specifically, the study investigated the prevalence of child abuse, and it interrogated social work intervention strategies in combating child abuse in Egor Local Government Area in Edo State, Nigeria. The study adopted the quantitative and qualitative research methods, where the cross-sectional research design was adopted in collecting quantitative data. The study covered selected public secondary schools, and target participants were children within the age range of 11-17years which were both male and female, who are secondary school students, parents/guardians', teachers and social workers. A sample size of 400 respondents was adopted, and the research instrument for collecting data were the questionnaire and in-depth interview guide. The findings identified a prevailing trend that children suffered considerable emotional, psychological, and physical distress as a result of abuse. It also revealed a broad agreement in affirming that social work interventions could positively influence the health of abused children. Lack of awareness about children's rights allows the cycle of abuse to continue. Majority of the respondents who had experienced abuse were not supported enough. The study recommended the need to strengthening reporting mechanisms, education on children's rights, collaboration with law enforcement and legal system.

Keywords: child, abuse, social work, interventions, reinforce, children, Advocacy, practitioners

1. Introduction

All parents look forward to having children and raising them so they can all reach their full potential. Children, however, are consistently exposed to all manner of behaviours that gravitate towards impeding on their objectives in life when they are not effectively cared for by their parents, guardian, and other caregivers. At other times, parents, caretakers, and other members of the community abuse or maltreat the child. Child abuse can be defined as any unwholesome mistreatment of a child or any selfish use of the child's senses by adults who are in charge of them. As a result, even if the adult is unrelated to the child, the person the child is left with may be abusive. A child or teenager may experience violence, mistreatment, or neglect while in the custody of a person they either rely upon or respect, such as a parent, sibling, other family members, or caretaker (Child Welfare League of America, 2001). There is no one answer that is commonly accepted due to the diversity of views on what constitutes the aforementioned phenomenon. Any actions or in actions that endanger children's mental, emotional or physical health caused by their parents, guardians, caregivers, or other adults constitute child abuse and neglect (WHO, 2024; Child Welfare Information Gateway, 2013). "Child abuse" occurs when abusers persistently cause physical, sexual, and mental trauma to helpless youngsters, leaving behind severe emotional or psychological wounds that may never fully heal. A number of different types of child abuse were emphasized by Okpala (2010) to include physical mistreatment, psychological and emotional torture, neglect, child labour/mishandling, trafficking of minors, street children, child marriage, and female genital mutilation.

Social work interventions involve the likelihood of addressing child abuse phenomenon by promoting the health, educational, psychological and social development of children. Impediment, amelioration and safeguarding strategies are projected by social work practitioners to reduce the maltreatment of

children in order to strengthen their psycho social well-being and improve the family's condition (Munro, 2008, Omorogiuwa,2020). The ruination associated with the abused children is in the front line of public awareness, therefore, without a theoretical structure, researching on the comprehensive study would have been mostly fragmented.

1.1 Statement of the Research Problem

As a result of the maltreatment some children endure in their early years, countless children lose their lives; some are deprived of formal education and miss out on the joys of childhood. This creates a serious risk to the development of the personalities of abused children, as well as the safety and progress of their communities. There are different kind of child abuses in Nigeria, particularly in Edo State. These manifestations include child trafficking, sexual exploitation, bodily harm, child labour, modern day slavery/servitude, child prostitution, female genital mutilation, baby abandonment and neglect (Uwa, 2010). This appears worrisome as many live in fear. There are cogent concerns about the development of the child's academic potentials, since child abuse may result in lack of development in human advancement (Alokan & Olatunji, 2014).
Children who are subjected to this kind of abuse have been shown to face a variety of serious and persistent problems, according to research on childhood psychological abuse. Therefore, relationship issues, emotional and behavioural issues, low self-esteem, often withdrawn and other consequences are possible. Therefore, it is crucial to create social work rehabilitation programmes to aid youngsters in their recovery.

Premised upon this, this research set to establish reinforcing Interventions on child abuse for social work practitioners in Egor Local Government Area of Edo State, Nigeria.

1.2 Objectives of the Study

The study aimed to examine reinforcing interventions on child abuse for social work practitioners in Egor Local Government Area of Edo State. The objectives are to:

1. ascertain the prevalence of child abuse in Egor Local Government Area, Edo State.
2. determine social work intervention strategies on child abuse in Egor Local Government Area, Edo State.

2. Literature Review

This phenomenon under study transcends geographical and socioeconomic confines, as evidenced through studies spanning diverse regions, including Sub-Saharan Africa and the third world nations. The concept of child abuse is associated with the act of depriving children of their essential need while they are at home, on the street, in a place of worship, or at school. It has the potential of killing children as well as causing physical, emotional, and sexual trauma (Owolabi, 2012). The occurrence also intersects with other societal quandaries, such as poverty, inequality, and gender-based violence, further underscoring its intricacy and the necessity to holistically tackle it (Chikwiri and Lemmer, 2014). The violation of children's rights through abuse generates profound and multifaceted repercussions. Overcoming this distressing predicament necessitates concerted endeavours from governments, entities, communities, and individuals to thwart, address, and eliminate its existence. According to Ugiagbe (2020), the aggressive behaviour towards a child which may include any act or failure to act by a parent or caregiver, neighbours, relations and loco parentis that results in actual or potential harm to a child, and can occur in the child's home or in an organization, schools or communities the child interacts with. He further emphasized that it is a very serious problem in Nigeria and other nations of the world with prevalence and profound long-term effects. This phenomenon defined cruel treatment that leaves no physical scars but causes the child emotional harm. It is well-defined as "the physical or mental harm, sexual abuse, neglect, or abuse of a child under the age of 18" (United Nations Convention on Child Abuse and Treatment Act; 1978). Omorogiuwa (2020a), highlighted it as the intentional and deliberate harm done to a child by a care giver, either by hitting, using a belt, rope, or other instrument, or crashing the child against a wall, burning with cigarettes, scalding with hot water, locking in a prison cell, torture, sexual abuse, and even killing.

2.1 Prevalence of Child Abuse in Nigeria

Child abuse is a global concern that threatens the well-being and future of millions of children. In Nigeria, a populous country in West Africa, this phenomenon remains a pervasive issue that demands urgent attention. Child abuse in Nigeria encompasses various forms, including physical mistreatment, sexual exploitation, emotional torture, underage labourer and neglect. According to Fakunmoju and Olagbuji (2019), physical abuse is the most prevalent form of child abuse in Nigeria, followed by neglect, emotional

abuse, and sexual abuse. These forms of abuse often occur simultaneously, exacerbating the detrimental effects on children's physical, emotional, and psychological well-being.

Determining the exact prevalence of child abuse in Nigeria is challenging due to under reporting and cultural factors that inhibit disclosure. Extant from a nationwide study by Adebayo, et. al (2018) estimated that 64% of Nigerian children have experienced at least one form of abuse or the other. This study highlights the alarming magnitude of the problem and emphasizes the urgent need for preventive measures and interventions. Several factors contribute to the high prevalence of child abuse in Nigeria. Socioeconomic disparities, limited access to education, cultural norms, and weak child protection systems are some of the significant factors identified in the literature

Victims of abuse are at higher risk of developing mental health disorders, experiencing impaired cognitive development, engaging in high-risk behaviours, and becoming victims or perpetrators of violence in adulthood. Fakunmoju and Olagbuji (2019) underscored the detrimental effects of child abuse on children's mental health and emphasized the need for comprehensive support services and interventions. Omorogiuwa (2020) highlighted evidence-based encounter where numerous youngsters wandering and picking pockets as a means of livelihood, because their parents or guardians have abandoned them. She further observed that such guardians should be given greater financial resources to care for their children and reduce the use of child labour. A lot of children have been taken from their homes without parental supervision. Some of which work as housekeepers for other people's families. They can be used as hackers in such foster homes to steal various commodities (Nwideeduh, 2002). Several of them work as nannies, and many children who are enrolled in school do not attend (Omorogiuwa and Yuka, 2022). A large number of young men and women work as automobile salespeople, and it is now common knowledge that child traffickers have kidnapped and sold some children. These children have become ready markets for those who take them to Europe for limited jobs and prostitution (Nwideeduh, 2003).

2.2 Social Work Intervention Strategies

Multiple strategies exist within social work practice to address cases of child abuse, including approaches such as counselling sessions with family members, individualized emotional support, community-based group engagement, rights advocacy, and emergency response interventions.

In family therapy context, a structured psycho therapeutic intervention addresses dysfunctional family dynamics and fostering healthier patterns of communication, attachment, and behaviour among family members is required (Hulgaard et al., 2021). In cases where abuse has occurred, this form of therapy becomes essential, as it seeks to uncover underlying issues such as unresolved trauma, entrenched family conflict, or ongoing life stressors that complicate parenting (Sepers, et al., 2025). By involving most or all family members in the therapeutic process, practitioners promote mutual understanding, minimize blame, and work towards establishing a safer environment for the affected child (Lockhart, 2024).

Individual therapy is designed to support children in confronting and making sense of their traumatic experiences, learning techniques to manage distress, and rebuilding a sense of trust and emotional safety particularly when their development has been affected by physical, emotional, or sexual harm (Helimäki et al., 2021). Unlike sessions involving families or peers, this approach focuses closely on the child's unique emotional landscape, often providing them with the first consistent and accepting space to express their inner world without fear of blame or punishment (McGoron et al., 2020).

In child protection, advocacy becomes eminent in the decision-making process to ensure children are safe and have access to the services they require, especially when they are unable to speak for themselves (Barišić & Brkić, 2021). Social workers serve as intermediaries, guiding individuals through complex systems and representing their interests in various professional settings (Lewis et al., 2023). This responsibility is grounded in core values such as fairness, ethics, and human rights, which demand proactive support for those who cannot advocate for themselves (Marshall-Lee et al., 2020).

A major strength of the group-based approach lies in the mutual support members offer one another, to enables individuals to realize they are not alone, which lessens the sense of isolation and fosters inner resilience (Epel et al., 2021). Observing others facing similar difficulties helps participants understand that their emotions and behaviours are valid especially crucial for those dealing with trauma or shame (Rahmati et al., 2024). The group setting also encourages positive role modelling, allowing children and adults to acquire healthier habits and social skills

simply through observing others (Heijerman-Holtgrefe et al., 2020).

2.3 Crisis Intervention and Management

Crisis responses must be timely, as any delay can significantly impact the child's recovery process. The crisis response typically unfolds in phases. The first phase involves assessment identifying immediate needs, evaluating risks, and understanding the psychological condition of the child or their family. Next, a coordinated team approach is adopted to formulate a response plan, encompassing safety measures, mental health referrals, and legal interventions where necessary (Ciekanowski et al., 2023). This is followed by immediate intervention, which may include removing the child from harm, providing medical treatment, or delivering early psychological support (Cassivi et al., 2023). The final phase focuses on reduction, arranging long-term support services, and maintaining communication to monitor the child's continued recovery.

2.4 Legal Framework

The United Nations Convention on the Rights of the Child 1989 was established to uphold children's right within Nigeria and sub-Saharan regions, African Charter on the Rights and Welfare of the Child, 1990 served as instrument of safeguarding the well-being o children across Africa continents, the Child Rights Act 2003 stipulates the provisions of ensuring security progress and well-being of Juveniles within Nigeria boundaries. The Edo State Child Rights Law, 2007 was enacted to assist vulnerable children in the best interest of the child but its ambiguity and vagueness further lead to the enactment of Edo state child protection policy. In 2015, under the Ministry of Women Affairs, the Child Protection Policy came on board with the intent of protecting children from abuse, discrimination, exploitation, violation and organisational negligence; another policy titled End Violence against Children, 2018 was made with the aim to stop violent acts on children. These laws and Policies acknowledged that in every decision concerning a child, the best interests of that child shall remain a central focus. However, it has been noted that the Policy does not currently define the term "best interest," which should be rectified to provide it with the appropriate meaning it requires

However, it is uncertain whether its provision has been fully enforced, as many children remain unmonitored, particularly given the persistent rise in incidents of domestic abuse against children, which raises concerns about the effectiveness of the laws.

A summary of the Policy indicates that it is a comprehensive document which reinforces the goals of the Child Rights Act, 2003 concerning the necessity of safeguarding the child's best interests. Nevertheless, it is noted that, despite the detailed regulations, there is a lack of sufficient measures regarding informal care, particularly in situations where a relative or individual takes a child from an impoverished family with the intention of caring for the child, which often does not occur. Additionally, the Policy recognizes that various forms of abuse have been perpetrated against children, and unless such abuse is reported, those children endure suffering in silence. While the Policy includes provisions for monitoring and evaluation, it remains to be seen how effectively this Policy has influenced the lives of children, especially considering that abuses against children continue to occur daily.

2.5 Ecological Systems Theory

This theory explains the rudimentary levels of the Urie Bronfenbrenner´s Ecological Systems Theory (EST). The term Ecology was used to describe plants and the communities in other studies. It establishes a connection between the concept of organisms with reference to human in environments and the field of child protection (Bronfenbrenner, 1994). Thus, multi-level systems of EST aid in recognizing relationships between the living conditions of organisms and they interact with one another within their surroundings (Bronfenbrenner, 1994; Berk, 2000). The micro system level is the interaction between a child and his direct environment, which enhances or hinders the actualization of his developments. Applying this to the phenomenon of child abuse in this study, the micro level includes the factors responsible for the child abuse. Mesosystem level consists of the interactions between systems that directly affect children and their environment. In this study the meso factors include the impacts of child abuse. The macrosystem level explained as the forces of; social, political, cultural economic environments, which could form the social work intervention measures to protect children. The Exo system consists of the factors and immediate systemic environment which directly affects the child. This theory could be a useful tool in the intervention process in the field of child protection. This idea suggests several levels of interaction while working with children that should be taken into account. Therefore, Social workers need to understand the dynamics of power relations responsible for abuse, whether within families or outside, in order to apply their expertise during the intervention process.

3. Methods and Materials

The study adopted the quantitative and qualitative research methods, where the cross-sectional research design was adopted in collecting quantitative data. The study area covered the five public secondary schools which were children within the age range of 11-17years, who are secondary school students, parents/guardians' teachers and social workers. A sample size of 400 respondents and 14 informants were adopted for the quantitative and qualitative data respectively, while the simple random and purposive sampling techniques were adopted in selecting the respondents and informants.

Social-Demographic Characteristics of Respondents

Variables	Frequency (N = 400)	Percentage
Age		
11 – 12 years	39	9.80%
13 – 14 years	189	47.3%
15 – 16years	144	36.0%
17 years and above	28	7.0%
Total	400	100%
Gender		
Male	178	44.5%
Female	222	55.5%
Total	400	100%
Religious Affiliation		
Christianity	382	95.5%
Islam	14	3.5%
ATR	4	1.0%
Total	400	100%
Marital Status		
Single	400	100%
Married	0	0%
Total	400	100%
Level of education		
No Formal Education	0	0%
Tertiary	0	0%
Secondary	100%	100%
Primary	0	0%
Total	400	100%

Source: *Field survey, 2025*

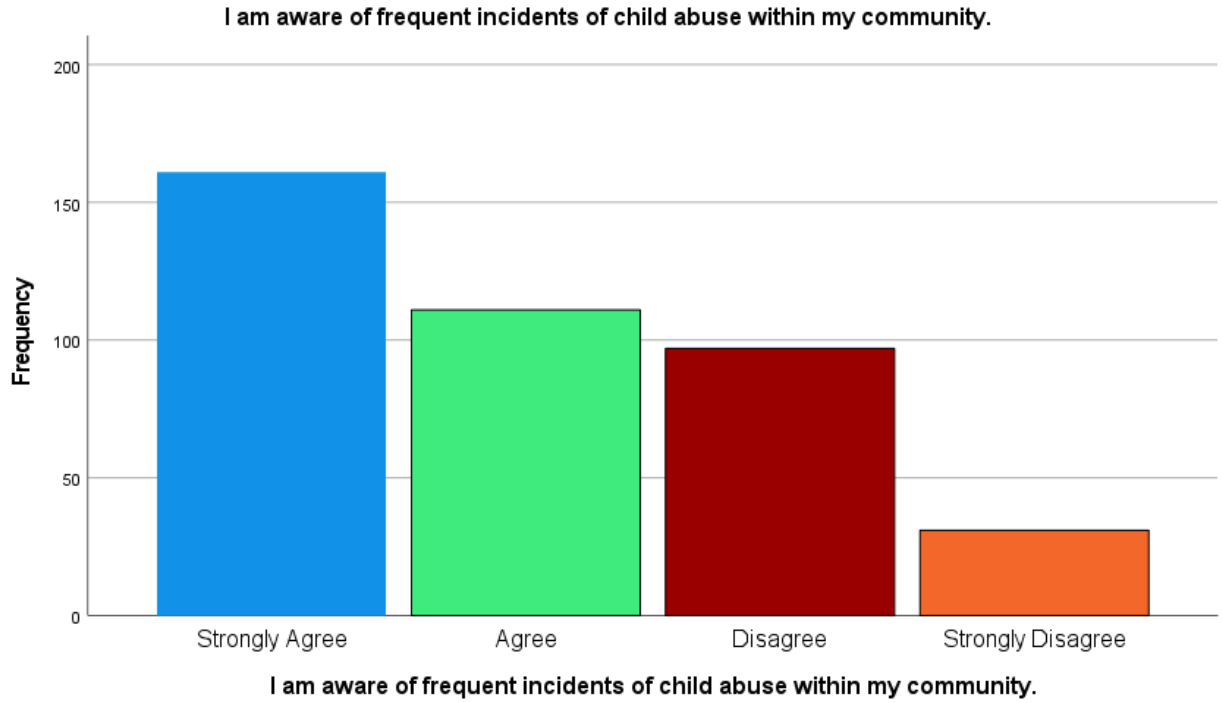
The Prevalence of Child Abuse in Egor Local Government Area, Edo State

Variable	Responses	Frequency	Percentages
I am aware of frequent incidents of child abuse within my community.	Strongly Agree	161	40.3%
	Agree	111	27.8%
	Disagree	97	24.3%
	Strongly Disagree	31	7.8%
Total		400	100%
I believe there are adequate and effective mechanisms in place for reporting child abuse in Egor Local Government Area.	Strongly Agree	106	26.5%
	Agree	177	44.3%
	Disagree	76	19.0%
	Strongly Disagree	41	10.3%
Total		400	100%
The local community actively participates in programs and activities aimed at preventing child abuse.	Strongly Agree	112	28.0%
	Agree	175	43.8%
	Disagree	75	18.8%
	Strongly Disagree	38	9.5%
Total		400	100%
Victims of child abuse have access to necessary support services and resources in Egor Local Government Area.	Strongly Agree	103	25.8%
	Agree	134	33.5%
	Disagree	92	23.0%
	Strongly Disagree	71	17.8%

Total		400	100%
Sufficient efforts are made by local authorities to educate the community about preventing child abuse.	Strongly Agree	123	30.8%
	Agree	168	42.0%
	Disagree	79	19.8%
	Strongly Disagree	30	7.5%
Total		400	100%

Source: *Field survey, 2025*

The Prevalence of Child Abuse in Egor Local Government Area, Edo State



Source: *Field Survey, 2025*

The findings on awareness of child abuse in Egor Local Government Area shed light on the level of awareness within the community. Understanding the frequency with which child abuse is thought to occur is essential for creating effective social work interventions, as it reveals how widespread the issue is perceived to be by locals, including parents, guardians, and children. According to the data, 40.3% (161 respondents) of the 400 participants strongly agree that they are aware of frequent child abuse incidents in their area, and 27.8% (111 respondents) agree. Together, these figures (68.1%) indicate that a large majority of respondents recognize that child abuse occurs regularly. This level of awareness suggests that child abuse is an ongoing concern in Egor Local Government Area, and the community is well aware of it. This is significant for social workers as it points to a community where child abuse is both happening and acknowledged, signaling the need for targeted intervention efforts.

On the other hand, 24.3% (97 respondents) disagree, and 7.8% (31 respondents) strongly disagree that they are aware of frequent cases of child abuse in the community. While this minority may not view child abuse as a common problem or may not recognize it, the data still suggests a concerning level of awareness. Social workers will need to address both the actual incidents of abuse and the factors contributing to the lack of awareness or denial, ensuring that interventions are preventive and educational, raising awareness about the signs and consequences of child abuse.

The following captured the views of the IDI participants:
In Egor Local Government Area, the number of reported cases of child abuse has been concerning over the past year. We have documented around 100 cases, ranging from physical abuse to neglect and emotional maltreatment. A significant portion of these cases involved children under the age of 10. Most of the reports came from schools and concerned neighbours who noticed signs of abuse. Sadly, domestic violence is a common contributing factor. The

cases often involve a combination of neglect and physical harm. We have worked closely with law enforcement to ensure that perpetrators are held accountable. In many situations, social workers intervene by providing support and counselling to both the victims and their families. Despite these efforts, the resources available to us are still limited. Our aim is to continue raising awareness on children's rights to prevent future cases (Swkr A, Male IDI/37years/ 2025).

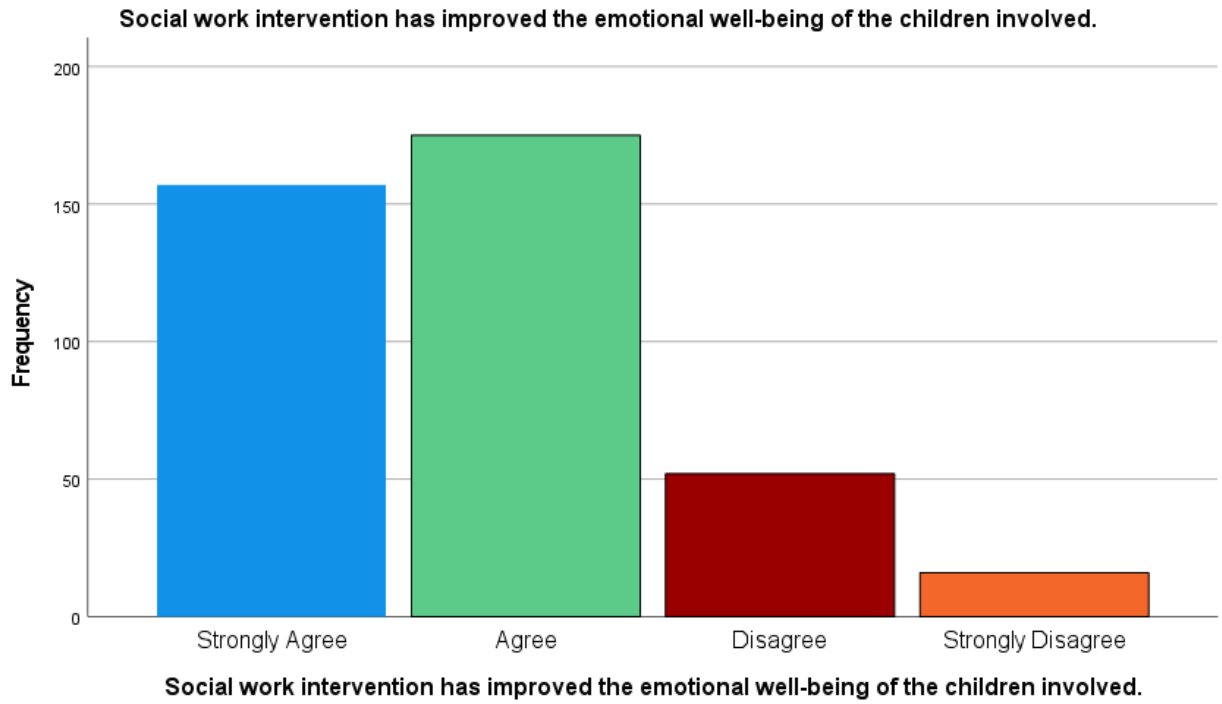
The most effective intervention would be trauma-focused therapy that addresses the specific needs of each child. Establishing a trusting relationship between the social worker and the child is crucial for progress. Family involvement in the healing process through therapy is equally important, as a stable home is necessary for recovery. Social workers should work with the legal system to ensure that justice is served, which would help the child feel safe again. Community education programs to raise awareness about child abuse are necessary to reduce stigma and prevent future cases. Providing access to mental health services and resources will aid in their emotional recovery. Empowering the children with skills to build self-confidence and resilience can help them regain control over their lives. Ongoing support through peer groups can offer emotional reinforcement. Regular follow-up visits and case reviews will ensure that interventions are effective and the children continue to improve (Swkr G, Female IDI/24years/2025).

Social Work Intervention Strategies in Combating Child Abuse in Egor Local Government Area, Edo State

Variable	Responses	Frequency	Percentages
Social work intervention has improved the emotional well-being of the children involved.	Strongly Agree	157	39.3%
	Agree	175	43.8%
	Disagree	52	13.0%
	Strongly Disagree	16	4.0%
Total		400	100%
I feel that the social workers involved are well-trained to handle cases of child abuse.	Strongly Agree	147	36.8%
	Agree	177	44.3%
	Disagree	56	14.0%
	Strongly Disagree	20	5.0%
Total		400	100%
The services provided are easily accessible to children in need of help.	Strongly Agree	152	38.0%
	Agree	167	41.8%
	Disagree	64	16.0%
	Strongly Disagree	17	4.3%
Total		400	100%
There is sufficient follow-up with the children to ensure their ongoing safety and welfare.	Strongly Agree	125	31.3%
	Agree	178	44.5%
	Disagree	70	17.5%
	Strongly Disagree	27	6.8%
Total		400	100%
The intervention effectively addresses the cultural and individual needs of the abused children.	Strongly Agree	120	30.0%
	Agree	171	42.8%
	Disagree	80	20.0%
	Strongly Disagree	29	7.2%
Total		400	100%

Source: *Field Survey, 2025*

To Determine Social Work Intervention Strategies in Combating Child Abuse in Egor Local Government Area, Edo State



Source: *Field survey, 2025*

According to the data, 39.3% (157 respondents) of the 400 participants strongly agree that social work interventions have improved the emotional well-being of the children involved, while 43.8% (175 respondents) agree with the same statement. This combined 83.1% indicates a significant majority of respondents believe that social work interventions have had a positive impact on the emotional well-being of the children. This suggests that the efforts of social workers in Egor Local Government Area have been effective in addressing the emotional needs of the children, highlighting the importance of continuing and possibly expanding such interventions.

On the other hand, 13.0% (52 respondents) disagree, and 4.0% (16 respondents) strongly disagree that social work interventions have improved the emotional well-being of the children involved. Although this minority of respondents feel that the interventions have not been effective, the overwhelming majority still reflects a strong perception of success. For social workers, this data suggests that while there is room for improvement in engaging certain sections of the population, the overall impact of their work is perceived positively. Moving forward, efforts could focus on refining strategies to ensure that all children benefit from the emotional support provided by social work interventions, addressing any gaps in service delivery.

4. Findings

The study discovered that in Egor Local Government Area, a significant level of child abuse is evident, with 68.1% of participants indicating that it is a frequent issue within their community, particularly in the form of physical abuse, this aligned with the studies by Block and Williams (2019), Frank (2019), Osunde and Aihie (2021), and Omorogiuwa (2023), each investigate other aspects of child abuse in different communities as reviewed in this research and the cultural, societal, and systemic factors that contribute to its prevalence and concealment, particularly in the Nigerian context. Despite 70.8% believing in the availability of reporting mechanisms, many still hesitate to report due to fear, social stigma, and a lack of faith in the authorities. Insights from social workers highlight that poverty and domestic violence are major contributors to the problem. Although schools and healthcare facilities are involved in interventions, they face limitations due to a lack of resources. Emotional abuse and neglect also stand out as critical concerns, as corporal punishment is often employed by parents, occasionally leading to injury. Financial hardships exacerbate the issue, with many children missing out on education and basic necessities. Both parents and social workers emphasise the need for increased public awareness and better support systems. While some local institutions are working to address these issues,

further education on children's rights and stronger support mechanisms are required.

The study results indicated strong support for trauma-informed strategies, legal advocacy, and community engagement in addressing child abuse. The majority, 83.1%, agreed that social work interventions positively contributed to the emotional health of children who had been abused, with 79.8% stating that the services were easy to access, and 75.8% expressing confidence in the training provided to social workers. Nevertheless, 17.0% raised concerns about the adequacy of follow-up services and the cultural sensitivity of the interventions, highlighting areas in need of improvement. Osunde and Aihie (2021) focus on the impact of parental neglect and the ineffectiveness of child abuse laws in Edo State, showing a lack of trust in the justice system and a tendency to hide abuse to avoid social judgement. Omorogiuwa (2023) critiques the remedial approach of Nigerian social work, noting a failure to consider the broader social environment affecting child protection, while stressing the need for additional professional resources and support.

Furthermore, there was a strong emphasis on the need for more support at the community level. 75.8% recognised the critical role of legal advocacy, with some advocating for closer collaboration between social workers, educational institutions, and local leaders. Social workers proposed solutions such as establishing safe spaces like shelter home, encouraging responsible parenting, and launching awareness campaigns. Parents, for their part, suggested the need for education on non-violent approaches to discipline. In conclusion, the data suggest that addressing child abuse in Egor requires a multi-faceted approach, combining therapy, legal advocacy, community support, and educational efforts.

5. Conclusion and Recommendations

The research also underscores the need for a comprehensive approach that involves the community in tackling child abuse. Many respondents (75.8%) acknowledged the importance of legal advocacy in addressing the issue, emphasizing the need for cooperation between social workers, schools, and local leaders. By developing stronger partnerships and fostering better relationships within the community, social workers can play a more active role in early intervention and reporting, which is vital for addressing and preventing abuse in a timely manner.

Social workers also highlighted the need for safe spaces and suggested promoting positive parenting and child rights education as key interventions. These ideas were echoed by parents, who emphasized the importance of teaching non-violent discipline. Including such educational programmes in community initiatives would not only equip parents with the tools to provide a safe environment but would also raise awareness about the protection of children. Moreover, organizing workshops focused on positive parenting and child rights would empower caregivers and parents to prevent abuse and build stronger, healthier relationships with their children.

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Anglicanism and Pentecostalism in Rivers State: Examining Identity, Continuity and Change

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Abstract. The growth of Pentecostalism in Nigeria has reshaped the country's ecclesiastical and sociocultural landscape, particularly in the Niger Delta, where Anglicanism once wielded significant historical and institutional influence. This article examines how Anglican identity in Rivers State negotiates continuity and change amid a religious environment increasingly defined by charismatic spirituality, media-driven worship, prosperity theology, and youth mobility. Drawing on socio-historical and descriptive methods, the study traces Anglican heritage from its missionary foundations to its contemporary encounter with Pentecostalism. It argues that while Pentecostal expansion has challenged Anglican numerical strength and youth retention, it has also spurred liturgical flexibility, charismatic renewal, and new approaches to ministry and media engagement. The article further grills the tensions between episcopal order and entrepreneurial leadership, sacramental spirituality and experiential religiosity, and institutional stability and religious consumerism. Rather than interpreting the Anglican experience as decline, the study presents it as a process of adaptive continuity in which tradition is renegotiated in response to changing religious expectations. The paper contributes to broader discussions on denominational resilience, identity formation, and the transformation of historic churches in contemporary African Christianity.

Keywords: Anglicanism, Pentecostalism, Identity, Continuity, Change

1. Introduction

The Nigerian religious landscape has undergone a significant transformation since the late twentieth century, largely driven by the rapid expansion of Pentecostal and charismatic movements. These movements have reshaped patterns of Christian worship, leadership, theological emphasis, and denominational affiliation nationwide (Marshall, 2009). In Rivers State, where Anglicanism once held a central place in ecclesiastical life, Pentecostal churches now wield considerable influence, particularly in urban centers such as Port Harcourt. Historically, Anglicanism provided the structural and theological foundation for Christian expansion in the Niger Delta through the activities of the Church Missionary Society. Its legacy includes the establishment of mission schools, the translation of liturgical texts into local languages, and the formation of an indigenous clergy (Ajayi, 1965). These institutions helped create an educated Christian elite and shaped the region's sociopolitical development.

However, the rise of contemporary Pentecostal churches, such as Salvation Ministries, Redeemed Christian Church of God, and Omega Power Ministries, among others, has introduced new forms of spirituality that emphasize prosperity, healing, deliverance, and expressive worship. These developments have created both tension and interaction between historic and newer Christian traditions. The concept of identity is central to this analysis. Religious identity involves doctrinal continuity, liturgical practice, institutional structure, and collective memory. In contexts of rapid change, these elements are often reinterpreted to remain relevant (Hastings, 1994). On the other hand, Continuity and change are therefore not mutually exclusive but interconnected processes. Anglicanism in Rivers State demonstrates this interaction through its engagement with charismatic spirituality, youth ministry, and digital media. This paper, therefore, examines how Anglicanism in Rivers State responds to these changes while preserving its historical identity. It explores whether the Anglican tradition is

in decline or undergoing transformation and how continuity is maintained in a Pentecostal age. The article adopts a multidisciplinary approach that integrates church history, sociology of religion, and liturgical studies. This approach makes it possible to understand Anglican heritage not merely as a historical phenomenon but as a living tradition undergoing negotiation in a dynamic religious environment. The position of this contribution is that Anglican heritage in Rivers State is not disappearing but is being reconfigured through adaptive strategies that allow it to retain its theological core while responding to contemporary religious expectations.

1.1 Pentecostalism

In discussing Pentecostalism various views are held by scholars on its meaning, origin and theology (Mpigi, 2014) Pentecostalism and Charismatism is generally concerned with the gifts of the Holy Spirit in the Church, and the actual practice of such gifts by the Christian and the church in general. These two concepts are therefore interwoven and could be used synonymously and interchangeably. The concept of Pentecostalism and Charismatism as a distinct and exclusive ecclesiastical tradition of its own is what one may refer to "Modern Pentecostalism". This phenomenon has its origin in various aspects of the 19th century fundamentalism in the American Christian Community. Pentecostalism is therefore, a movement that centers around the belief in the presence and operation of the Holy Spirit with all the giftings within the Church as was present in the Apostolic period beginning with the Day of Pentecost in Acts 2. The distinguishing belief is that the baptism of the Holy Spirit is an experience following salvation and is evidenced by the gift of Speaking in Tongues. The two main groups related to Pentecostals are the Charismatics and the Third Wave. While the Pentecostals emphasize on the baptism of the Holy Spirit with tongues as evidence, the newer Third Wave movement "stresses "signs and wonders" and gifts such as prophecy and healing, primarily through independent churches and organizations that emerged in the 1980s.

1.2 Anglicanism

Anglicanism is a global tradition within Christianity, originating from the 16th-century Church of England, that represents a "middle way" (via media) between Catholicism and Protestantism. It values Scripture, tradition, and reason, emphasizing liturgical worship, the Book of Common Prayer, and the episcopal structure of bishops. The Anglican Communion is in this sense, a fellowship of Churches, which grew out of the Church of England, with linked histories and theology, and worship based on the Book of Common Prayer. It has 85 million members in 39 Provinces across 165 countries. There are Anglican communities in Scotland, Wales, Ireland, Canada, the US, Australia, New Zealand, the West Indies, India, Japan, South Korea, South America, Africa, and Nigeria, where this paper is situated. There is a presence in Jerusalem, the Middle East, and the Far East. There are also Anglican chaplaincies in Europe. The Queen is Supreme Governor of the Church of England. Other Anglican provinces have different relationships with their political authorities, and each province is a fully autonomous regional Church. Members of the Anglican Church are united by a common legacy which has at its heart the death and resurrection of Jesus Christ, a faith expressed in the three main ecumenical creeds: Apostles', Nicene, and Athanasian, Wotogbe-Weneka (1997).

1.3 Historical Roots of Anglican Heritage in Rivers State

The Anglican Church is a Christian denomination comprising churches with a historical connection to the Church of England, which share its doctrines, liturgical worship, ecclesiastical orders, and administrative structures. Ezeakunne (2016) states that the Anglican Church, also called the Anglican Communion, is an international association of national and regional Anglican churches that are in full communion with the Church of England and specifically with its main leader, the Archbishop of Canterbury. There is no single Anglican Church with universal authority over others; instead, each nation or regional church has full independence. The bonds that link these churches mean that, ideally, they agree on essential doctrines and that full participation in the sacramental life of each church is accessible to all communicant Anglicans across the Anglican Communion. At the same time, each church functions independently within the traditions it has inherited. The Anglican Church arrived in Nigeria in 1841 at Aboh in present-day Delta State and was firmly established in 1842 at Badagry in Lagos State. The Anglicans in Nigeria gained the status of an autonomous Province in 1979. The official name of the Anglican denomination in Nigeria is "The Church of Nigeria (Anglican Communion)." Its headquarters are in Abuja, where the Archbishop, Metropolitan, and Primate of All Nigeria, who also serves as the Bishop of Abuja and the archbishop of the ecclesiastical Province of Abuja, leads the church. The church's official website estimates its membership in Nigeria at about eighteen million people, while the total number of Anglicans worldwide is around 80 million.

Therefore, the Anglican Communion is the third-largest Christian communion in the world, after the Roman Catholic and Eastern Orthodox Churches.

The Origin of the Anglican Church in Nigeria, according to Wotogbe-Weneka (1997) could be divided into three stages, namely; the arrival of the freed slaves of Nigerian descent at Freetown, Sierra Leone in 1782; the movement of Yoruba ex-slaves to Yoruba-Land and their subsequent request for European missionaries and priests in 1842, and thirdly, the request made by the Igbo returnee slaves who had followed the example of the Yoruba ex-slaves for missionaries for the Niger area in 1857. Though we agree with Weneka's origin of Anglicanism in Nigeria, we also have to point out that any scholar of Church history who ignores the contribution of the Church Missionary Society (CMS), an evangelical arm of the Anglican Church in the introduction of Anglicanism in Nigeria will be making a mistake as the Anglican Church history in Nigeria cannot be complete without the mention of the activities of the CMS. This is corroborative with the assertion made by Akinyele (ed) (1994) that Anglicanism was introduced into Nigeria through the evangelistic and charismatic Anglican evangelicals known as the Church Missionary Society (CMS), whose contacts with Nigeria was very early linked with their campaign against slave trade. Summing up the views of Wotogbe-Weneka and Akinyele, Anglicanism became rooted in Nigeria through both local initiatives and the activities of the CMS, both with evangelical zeal. The discussion above, implies that Anglicanism in the Niger Delta is inseparable from nineteenth-century missionary expansion and African agency in the spread of Christianity. Missionaries of the Church Missionary Society worked alongside indigenous converts who translated Christianity into local cultural forms (Ajayi, 1965). Early mission stations in Bonny and Okrika served as centres of evangelization, education, and medical work. These institutions laid the foundation for the growth of Anglican dioceses in what is now Rivers State.

2. Identity, Continuity, and Change in the Anglican Church

The relationship between identity, continuity, and change is central to understanding the development of Christian traditions across history. Religious institutions are rarely static; rather, they evolve as they respond to social, cultural, theological, and political transformations. The Anglican tradition provides an important case study for examining this dynamic relationship because it has historically attempted to balance faithfulness to tradition with openness to reform and contextual adaptation. In contemporary Christianity, the rapid growth of Pentecostalism has introduced new forms of spirituality and worship that challenge older ecclesiastical traditions, including Anglicanism. Understanding how Anglicanism negotiates these developments reveals broader processes of religious change in modern societies (Jenkins, 2011).

The Anglican Church as earlier stated, emerged within the context of the sixteenth-century Reformation and developed a distinctive identity that combines elements of Catholic heritage and Protestant reform. This identity is often described as a via media, meaning a "middle way" between Roman Catholic sacramentalism and Protestant emphasis on scriptural authority. This theological balance has historically allowed Anglicanism to accommodate a wide range of theological perspectives while maintaining institutional unity. However, the rise of Pentecostal spirituality has introduced new dynamics that are reshaping Anglican identity in many regions of the world, particularly in Africa (Avis, 2008). In the African context, Christianity has undergone a remarkable revolution over the past century. The rapid expansion of Pentecostal and charismatic movements has significantly influenced the structure, theology, and worship patterns of older denominations. In countries such as Nigeria, Pentecostalism has become one of the most influential expressions of Christianity, attracting millions of adherents through its emphasis on spiritual empowerment, healing, and prosperity teachings. This expansion has inevitably affected Anglican congregations, many of which have adopted charismatic practices while attempting to retain their historic liturgical identity (Anderson, 2013).

Another important dimension of this transformation is the role of globalization and urbanization. Rapid urban growth in African cities has created new social environments where traditional denominational boundaries are increasingly fluid. Many Anglican believers attend Pentecostal revival services, watch Pentecostal televangelists, and participate in interdenominational prayer meetings. These interactions contribute to the gradual integration of Pentecostal spirituality into Anglican worship and theology (Jenkins, 2011). Scholars of global Christianity have therefore argued that the future of historic denominations will depend on their ability to balance continuity with innovation. Churches that resist change entirely risk losing relevance in rapidly evolving societies, while those that abandon their traditions may lose their distinctive identity. The Anglican experience in Nigeria illustrates the delicate

process of negotiating these competing pressures (Sanneh, 2003).

3. The Rise and Flourish of Modern Pentecostalism

The global rise of Pentecostalism represents one of the most significant developments in modern Christian history. Scholars often trace the origins of modern Pentecostalism to the Azusa Street Revival of 1906 in Los Angeles. This revival emphasized the experience of the Holy Spirit, particularly through speaking in tongues, healing, and prophetic ministry (Anderson, 2013). Pentecostalism spread rapidly across the world during the twentieth century, particularly in the Global South. Its emphasis on personal spiritual experience, divine healing, and deliverance from spiritual oppression resonated strongly with many communities facing social and economic challenges. These features made Pentecostal churches highly attractive in regions such as Africa, Latin America, and parts of Asia (Jenkins, 2011). In Rivers State, Pentecostalism developed distinctive characteristics that reflect local cultural contexts. African Pentecostal churches often emphasize spiritual warfare, prophetic revelations, and miraculous interventions in everyday life. These themes resonate with indigenous worldviews that recognize the reality of spiritual forces and supernatural influence (Ukaegbu, 2003). Nigeria has become one of the most significant centers of global Pentecostalism. Churches such as the Redeemed Christian Church of God and Living Faith Church Worldwide attract millions of worshippers and operate large international networks. These churches emphasize prosperity teachings, deliverance ministries, and large-scale revival gatherings (Ukah, 2018). The rapid expansion of Pentecostal churches has transformed the religious landscape of Nigeria. Many mainline denominations, including Anglicanism, have experienced membership migration as believers seek more dynamic spiritual experiences. This development has encouraged some Anglican congregations to adopt Pentecostal-style worship practices (Anderson, 2013). Pentecostalism also utilizes modern media technologies such as television, radio, and social media to reach wider audiences. This media presence has amplified Pentecostal influence across denominational boundaries and contributed to the diffusion of charismatic spirituality within other Christian traditions (Jenkins, 2011). The appeal of Pentecostalism is further strengthened by its emphasis on individual empowerment and divine intervention in everyday life. Many believers perceive Pentecostal spirituality as offering practical solutions to problems such as illness, poverty, and spiritual attacks (Ukaegbu, 2003). As Pentecostalism continues to grow, its influence on older Christian traditions raises important questions about identity, continuity, and theological adaptation.

4. Pentecostal Influence on Anglican Worship and Spirituality

Pentecostal influence has significantly reshaped worship practices within many Anglican congregations in Nigeria. Traditional Anglican liturgy has increasingly incorporated charismatic elements such as lively praise music, spontaneous prayer, and healing services. These practices reflect broader trends within global Christianity toward experiential spirituality (Anderson, 2013). Many Anglican churches now organize prayer vigils, revival meetings, and deliverance services that resemble Pentecostal worship patterns. These events often attract large congregations and are perceived as spiritually vibrant compared to traditional liturgical services (Asamoah-Gyadu, 2015). This transformation has generated debates about the preservation of Anglican identity. Some clergy argue that excessive Pentecostal influence risks undermining the theological depth and liturgical heritage of Anglicanism. Others believe that charismatic renewal represents a legitimate contextual adaptation that revitalizes the church. Despite these tensions, the integration of Pentecostal spirituality has also revitalized evangelism within Anglican congregations. Charismatic worship styles often appeal to younger generations who seek emotionally engaging religious experiences. Thus, Pentecostal influence illustrates how religious traditions evolve through interaction with new spiritual movements while attempting to maintain continuity with their historical roots. Conversely, today, as a result of Pentecostal influence, many individuals attend the Anglican Church services with the primary expectation of receiving miraculous solutions to their life's problems. Some seek financial breakthroughs, while others desire healing, protection, or marriage. This phenomenon has led to a subtle shift in focus, where the emphasis on spiritual growth, discipleship, and community is sometimes overshadowed by the pursuit of tangible, immediate benefits. As a result, church membership has become increasingly transient, with attendees "church hopping" in search of the next miraculous experience. This "church prostitution" undermines the development of deep, meaningful relationships within the church community (Mpigi and Onuegbu, 2025).

5. Identity and Continuity in Contemporary Anglicanism

The identity of the Anglican Communion is deeply rooted in historical developments that emerged during the sixteenth-century Reformation in England. The separation from Roman Catholic authority during the reign of Henry VIII created the institutional foundation for what would later become a global communion of churches. Despite this political break, Anglicanism retained many liturgical and sacramental features of Catholic Christianity, thereby establishing a distinctive identity that combined continuity with reform (Avis, 2008). Central to Anglican identity is the theological concept of the via media, which seeks to balance Catholic tradition with Protestant principles. This approach emphasizes Scripture as the ultimate authority while also valuing the role of tradition and reason in theological reflection. The Anglican theological framework, therefore, encourages moderation and dialogue rather than rigid doctrinal uniformity. This flexibility has historically allowed Anglicanism to adapt to different cultural contexts while maintaining a recognizable ecclesiastical identity (McGrath, 2012).

Another key component of Anglican identity is its liturgical tradition, particularly the use of the Book of Common Prayer. First compiled by Thomas Cranmer in the sixteenth century, this text standardized Anglican worship and provided a common framework for prayer, sacramental rites, and daily devotion. The prayer book became one of the most influential liturgical texts in Christian history and remains a defining feature of Anglican spirituality (Booty, 1998). The episcopal structure of Anglican governance also contributes significantly to its identity. Anglican churches are led by bishops who are believed to stand in continuity with the historic episcopate of the early church. This structure preserves a sense of apostolic succession and provides institutional stability across generations. Bishops serve not only as administrators but also as guardians of doctrine and liturgical practice within their dioceses (Avis, 2008).

In Nigeria, Anglican identity developed through missionary activities of the Church Missionary Society during the nineteenth century. Missionaries introduced Anglican liturgy, theology, and educational institutions that shaped the development of Christianity in the region. Over time, indigenous leadership emerged within the church, leading to the formation of the Church of Nigeria (Anglican Communion), which is now one of the largest Anglican provinces in the world (Kalu, 2008). Anglican identity in Nigeria also reflects a process of cultural adaptation. While early missionary Christianity often discouraged indigenous cultural expressions, contemporary Anglican churches increasingly incorporate African music, languages, and cultural symbols into worship. This development demonstrates how continuity with Anglican tradition can coexist with contextual innovation (Sanneh, 2003). Despite these adaptations, Anglicanism continues to emphasize sacramental worship, liturgical order, and theological reflection. These elements differentiate Anglican identity from the more spontaneous worship styles commonly associated with Pentecostal churches. However, the growing popularity of Pentecostal spirituality has created new pressures that challenge these traditional forms (Anderson, 2013).

A shift from ‘growth’ to ‘health’ is already apparent in church circles. Warren who wrote extensively on missions and church growth has turned attention to church health. His focus has been on outward looking both of members and buildings. This assessment is a shift from what really makes a healthy church. A healthy church must be a growing church characterized by Christ centered leadership, gift oriented lay ministry, passionate and Christ centered spirituality (Mpigi, 2018).

The preservation of Anglican identity, therefore, requires careful negotiation between historical continuity and cultural adaptation. As Pentecostal influence continues to expand across Nigeria and Africa, Anglican churches must continually reinterpret their traditions in ways that remain faithful to their historical heritage while engaging contemporary spiritual expectations.

Continuity is one of the defining features of Anglican ecclesiology and worship. The Anglican Church emphasizes historical continuity with the early Christian church through its liturgical practices, sacramental theology, and episcopal governance. This continuity provides stability and ensures that Anglican worship remains connected to centuries of Christian tradition (Avis, 2008). Liturgical continuity is particularly evident in the regular use of structured worship services based on historic prayer books and church calendars. Anglican worship follows a rhythm of liturgical seasons such as Advent, Lent, Easter, and Pentecost. These seasons guide the spiritual life of congregations and connect contemporary believers with the historical experience of the global Christian church (Bradshaw, 2010). The sacramental life of the church also contributes to this continuity. Anglican theology recognizes sacraments such as baptism and

the Eucharist as central acts of Christian worship. These rituals are understood as visible signs of divine grace and serve as key markers of Anglican identity. Through these sacramental practices, Anglican communities maintain a spiritual connection with the historic traditions of Christianity (McGrath, 2012). Ecclesiastical structures also play a crucial role in maintaining continuity. The hierarchical organization of dioceses under bishops ensures institutional stability and doctrinal oversight. This system allows the Anglican Church to maintain unity across diverse cultural contexts while preserving core theological principles (Avis, 2008). However, continuity within Anglicanism does not imply complete resistance to change. The Anglican tradition has historically demonstrated flexibility in adapting liturgical practices and pastoral strategies to different cultural environments. This adaptability has enabled Anglicanism to expand globally without losing its essential identity (Walls, 2002). In Nigeria, Anglican continuity is maintained through theological education, diocesan structures, and the preservation of liturgical traditions. Seminaries and theological colleges train clergy who are responsible for sustaining Anglican doctrine and worship practices across generations (Kalu, 2008). At the same time, the growing influence of Pentecostal spirituality has introduced new elements into Anglican worship, including charismatic prayer, healing ministries, and contemporary music. These developments illustrate how continuity and change interact within religious institutions (Ukaegbu, 2003). Thus, Anglican continuity is best understood not as static preservation but as a dynamic process in which historical traditions are continually interpreted within new cultural contexts.

6. Conclusion

Today, Anglicanism increasingly reflects a process of identity reconstruction shaped by interaction with Pentecostal spirituality. Anglican congregations are redefining their identity by integrating charismatic worship practices while preserving episcopal governance and sacramental theology. This reconstructed identity reflects broader trends in global Christianity where denominational boundaries are becoming more fluid. Many believers participate in multiple Christian networks, blending liturgical and charismatic expressions of faith. In Nigeria, Anglican churches often incorporate African music, prophetic prayer, and revival meetings alongside traditional liturgical services. This synthesis demonstrates the evolving nature of Anglican identity in the Pentecostal age. Institutional structures play a critical role in preserving Anglican continuity despite changes in worship styles and theological emphasis. The hierarchical system of bishops, dioceses, and parishes provides organizational stability and doctrinal oversight. Anglican seminaries and theological colleges ensure that clergy receive training grounded in historical theology and Anglican ecclesiology. This education helps preserve doctrinal continuity across generations. Liturgical texts, ecclesiastical laws, and synodical governance further reinforce Anglican institutional identity. These mechanisms regulate church practices and prevent radical deviations from established traditions. Even when charismatic elements are introduced into worship, Anglican clergy remain accountable to diocesan authority. This accountability helps maintain a balance between innovation and tradition. The synergy between identity, continuity, and change is therefore clearly illustrated in the interaction between Anglican tradition and modern Pentecostalism. While Anglicanism seeks to preserve its historical heritage through liturgy, theology, and institutional structures, it also faces pressures to adapt to contemporary spiritual expectations. Pentecostalism has introduced new forms of worship, spirituality, and evangelism that resonate strongly with many believers in Rivers State. These developments have influenced Anglican congregations, leading to the gradual incorporation of charismatic practices within Anglican worship. Despite these changes, Anglican institutional structures continue to preserve historical continuity. Continuity is maintained through episcopal structure, sacramental theology, and historical memory. Change is expressed through charismatic renewal, media engagement, and contextual worship.

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Psychological Impact of War on Children with Disabilities

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Abstract. Children with disabilities in developing countries face significant societal discrimination, which worsens during armed conflicts. These conflicts put children at greater risk, often leaving them abandoned, unable to escape, and vulnerable to violence and psychological abuse. When they reach refugee or internally displaced persons' camps, their challenges multiply, limiting their access to education, healthcare, and psychosocial support. Understanding these effects is critical for developing appropriate educational interventions in special education settings. Therefore, this paper evaluates the psychological impact of war on young learners with disabilities and its educational implications. However, to achieve this, the paper, through evaluative prescriptive methodology, derived data from a literature search of relevant publications of the PubMed and Google Scholar databases, using the key words: war, displacement, psychosocial impact, young learners with disabilities, special education, counselling, refugee camp, and internally displaced camp. Moreover, reference lists from relevant reviews were also examined for possible additional studies and assessed qualitatively. The findings reveal that their vulnerabilities increase the risk of trauma, PTSD, depression, anxiety, displacement, and loss of support systems, further disrupting their education. Nevertheless, the findings emphasize the need for specialized interventions, trauma-informed practices, and inclusive education policies to help these children regain emotional stability and maximize their educational outcomes. Nonetheless, addressing these challenges through targeted support can improve their well-being and learning opportunities, ensuring they receive the special education services they need despite the hardships of war.

Keywords: War, displacement, psychosocial impact, young learners with disabilities, special education, counselling, refugee camp, internally displaced camp.

1. Introduction

The occurrence of disabilities is a worldwide phenomenon that exists in every nation and cuts across tribe, gender, and race. Disability is biochemical or structural abnormality, either congenital or acquired, that affects some persons and limits their functioning effectively in society. War is a major cause of disabilities. However, "while there are no accurate figures on how many children with disabilities are affected by war, 15% of the world's population, or one billion people, has a disability, with a higher percentage in developing countries" (World Bank, 2022), and children make up this number. Children with disabilities are classified as those with physical health, visual, hearing, emotional, and intellectual disabilities, but for educational purposes, they are classified as children with physical, visual, hearing, emotional, and intellectual impairments.

In developing countries, individuals with disabilities often face societal unfairness, including discrimination and stigmatization. However, armed conflicts disrupt lives, families, and communities, with children being among the most vulnerable populations, as they are at greater risk of harm. Moreover, during conflicts, their situation worsens. Due to their disabilities, they are frequently abandoned by their families, unable to flee violent areas, and left exposed to physical violence and psychological abuse. When they eventually escape crisis zones, they are typically housed in refugee camps or internally displaced persons' camps. These young learners with disabilities face compounded challenges as war exacerbates their existing difficulties and limits access to education, healthcare, and psychosocial support. They are affected by war in a number of ways. They witness violent scenes, are displaced from homes, and sent to refugee camps or internally displaced persons' camps that lack necessities. Nevertheless, they also miss out of school as educational institutions are

forced to close. Children with disabilities are worse off. They usually find it difficult to flee violent scenes due to mobility limitations placed on them by their disabilities. In most cases, they are abandoned by their families, which causes them to experience physical and emotional abuse.

Nonetheless, they experience displacement and loss of services. War often results in forced migration, disrupting access to essential services such as therapy, medical care, and special education programmes (UNICEF, 2018a), and many families face difficulties in securing accommodations for their disabled children in refugee settings. They encounter social stigma and isolation. In conflict zones, societal support structures weaken, increasing stigma and discrimination against children with disabilities; as such, this marginalization further limits their participation in social and educational activities (Save the Children, 2020). There is an increased risk of exploitation. Children with disabilities in war zones are more vulnerable to abuse, neglect, and exploitation due to their dependence on caregivers and limited ability to protect themselves (Human Rights Watch, May 2017). War has been noticed in Ukraine, Afghanistan, Palestine, the Central African Republic, Ethiopia, Libya, Mali, Somalia, South Sudan, Syria, Yemen, the Rohingya, Sri Lanka, Cyprus, and Nigeria. This paper, therefore, examines the psychosocial impact of war on young learners with disabilities and suggests how to rehabilitate them in crisis, where they are most vulnerable to physical and emotional harm.

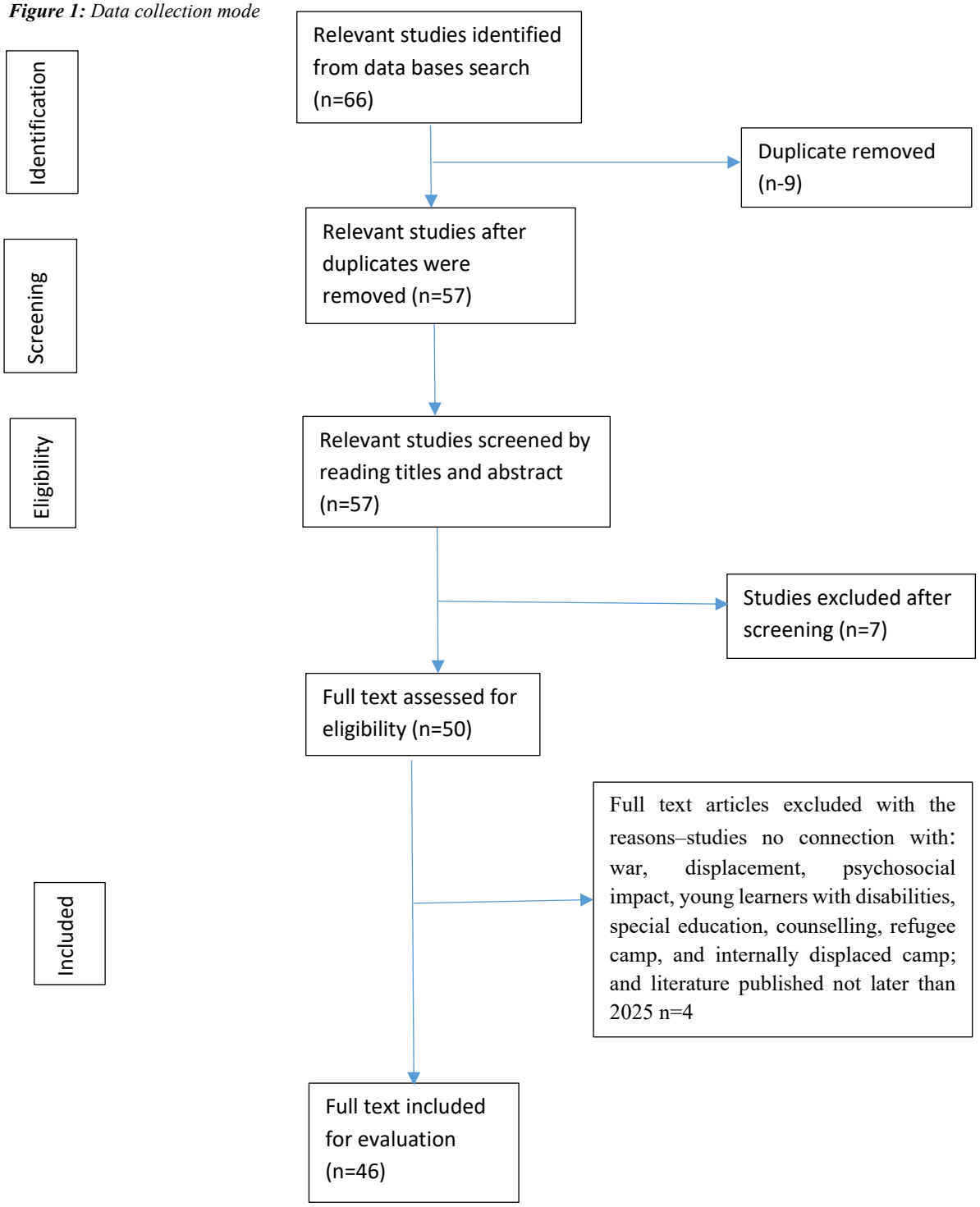
2. Method of Study

2.1 Research design

A scoping literature review was used in obtaining information in this paper and is discussed as follows:

Scoping literature search: Using an evaluative and prescriptive approach, the paper examines the psychological impact of war on young learners with disabilities and its educational implications. Data was collected from an electronic systematic review of the body of some written works through a literature search on PubMed and Google Scholar, using keywords such as war, displacement, psychosocial impact, young learners with disabilities, special education, counselling, refugee camp, and internally displaced camp. Reference was also made to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) procedures (Moher et al., 2009). The search period covers 2008–2025 and specifically through examination of book chapters, encyclopaedia, conference abstracts, and journals. The terms and keywords such as war, displacement, psychosocial impact, young learners with disabilities, special education, counselling, refugee camp, and internally displaced camp. The literature search was conducted in “Topics” for ISI Web of Science and in “Article title, Abstract, and Keywords” for the Scopus database, set at “All years” with no language restriction. Scopus database search revealed 15 items, while the ISI Web of Science database revealed 18 items. An additional search from Google Scholar revealed 33 items. Figure 2 shows the procedure used in obtaining data.

Figure 1: *Data collection mode*



2.2 Eligibility Criteria

Some criteria were observed to indicate the eligibility of the information derived from the electronic systematic review of the body of some written works. The study specifically addressed items that dwell on: war, displacement, education, blended learning, students with disabilities (SWDs), refugee camps, and internally displaced persons' camps; and excluded items that have no connection with the subject matter. Table 1 shows a summary of the criteria inclusion and exclusion of literature items for the study.

Table 1: Overview of criteria for inclusion and exclusion of literature items

Criteria for inclusion	Criteria for exclusion
Connection with war, displacement, psychosocial impact, young learners with disabilities, special education, counselling, refugee camp, and internally displaced camp.	No connection with war, displacement, psychosocial impact, young learners with disabilities, special education, counselling, refugee camp, and internally displaced camp.
Literature Published in the English Language	False positive result
Literature Published not later than 2025	Others

2.3 Study Selection

Study selection was conducted after duplicate 9 reference items were removed. Manual screening was then conducted for the remaining 7 reference items by reading the titles and abstracts alone or after full-text assessment. After screening and full-text assessment, 7 reference items that did not meet the study inclusion eligibility requirements were rejected. Any discrepancies regarding the eligibility of studies were resolved by an external expert. Full-text articles excluded with reasons—studies not related to war, displacement, psychosocial impact, young learners with disabilities, special education, counselling, refugee camp, and internally displaced camp were 4 items. Literature that met the eligibility criteria consisted of 46 items, and they were then judged accordingly.

2.4 Data collection and categorization

Only original articles in the literature on the following were considered for analysis which are: war, displacement, psychosocial impact, young learners with disabilities, special education, counselling, refugee camp, and internally displaced camp.

2.5 Data analysis

The collected data underwent descriptive analysis using RStudio (version 3.5.2) open software, Microsoft Excel (2016), and ArcGIS 10.3.1. Quantitative data obtained from the search databases were processed in Microsoft Excel (2016), which included manual data entry into the spreadsheet and subsequent data graphing. The analysis of most published research categories and the distribution of research effort was conducted using ArcGIS 10.3.1.
Psychosocial impact of war on young learners with disabilities

Children living in conflict and crisis zones are at high risk of depression, anxiety, and other mental health conditions (Marquez, 2016). Inadequate access to mental health and psychosocial support services and education exacerbates the impact of conflict on the mental health of all children, including children with disabilities (Frounfelker et al., 2019; UNICEF, 2018b; Jordans & Tol, 2015). The following are specific psychosocial effects of war on young learners:

Social isolation and stigmatization: Research by Jones and Kafetsios (2005) shows that in conflict zones, disabled children are often more marginalized, facing heightened levels of stigmatization. This stigmatization is not only from peers but also within communities and, at times, families. The societal breakdown during war often exacerbates existing prejudices against disability, leading to further exclusion and isolation (UNICEF, 2014). This social isolation hampers the development of essential social skills and can result in withdrawal, aggression, or other behavioural issues. These learners may struggle to form meaningful relationships, which are vital for their emotional and social growth.

Educational disruption: Conflict zones often experience the collapse of educational systems, which disproportionately affects learners with disabilities. "These learners often require specialized educational resources that are typically unavailable in emergency settings" (UNESCO, 2015). The lack of access to specialized educational resources and support exacerbates existing learning challenges. The absence of structured education during and after conflicts not only affects cognitive development but also has significant implications for the social and emotional growth of these children. The loss of routine and the absence of supportive learning environments can lead to increased anxiety, behavioural issues, and regression in skills development, which are often essential for the development of children with disabilities.

Trauma, psychological distress, and stress: Exposure to violence, displacement, and the loss of caregivers can lead to severe psychological stress, including trauma, anxiety, and depression (Fazel et al., 2012). Children with disabilities may struggle with emotional regulation, making them more susceptible to trauma. Children exposed to war display a broad range of possible distress and stress reactions, such as a lack of

interest in activities, feeling agitated, frustrated, or quick to anger, feeling overwhelmed or teary, feeling anxious, having a low sense of self-esteem, avoiding other people and social situations, displaying phobias, and prolonged crying.

Post-traumatic stress disorder (PTSD): Children with disabilities are also prone to post-traumatic stress disorder (PTSD) during conflict or war situations due to their heightened vulnerability to traumatic experiences. They usually exhibit vivid flashbacks, nightmares, intrusive thoughts or images, recurring emotional and physical sensations of what happened, such as sweating, pain, trembling, nausea, and intense distress when faced with symbolic reminders. Others experience intense panic when reminded of the trauma, being easily upset, irritability and aggression, self-destructive behaviour or recklessness, inability to concentrate, sleeping problems, feel detached and isolate, unable to express affection, turn to alcohol or drugs to avoid memories, and give up on hobbies and interests previously enjoyed. These mental health challenges are exacerbated by their pre-existing disabilities, which may limit their ability to communicate distress or seek help. Moreover, the loss of caregivers, displacement, and exposure to violence further intensify these psychological impacts. The constant state of fear and uncertainty disrupts their sense of security, which is crucial for their emotional development.

3. Research on the psychosocial impact of war on young learners with disabilities.

However, research consistently shows that children exposed to war are at significant risk for developing mental health issues, including PTSD, depression, and anxiety (Betancourt et al., 2013). For young learners with disabilities, these risks are magnified due to pre-existing vulnerabilities. According to Shaw (2003), the experience of war exacerbates the stressors that disabled children already face, such as social exclusion and communication barriers. Studies also highlight the compounding effects of trauma on children with disabilities. The psychological toll of war on disabled children is often underestimated, as traditional diagnostic tools may not fully capture their experiences. For example, children with intellectual disabilities may struggle to express their emotions, leading to underdiagnosis of conditions like PTSD. A meta-analysis of eight studies of child and adolescent refugees and asylum seekers (which include children with disabilities) reported a 22.7% prevalence of PTSD, 13.8% of depression, and 15.8% of anxiety disorders (Blackmore, Boyle, Fazel et al, 2020). These data raise concern, as studies estimate the absolute number of war-exposed children between 1989 and 2015 to be around 400 million (Hoppen & Morina, 2019; Hoppen, Priebe, Vetter & Morina, 2021). Some studies show the prevalence of mental disorders in the first years of resettlement, only clearly to be increased for PTSD, however, 5 years after resettlement, the rates for depressive and anxiety disorders are also found to be increased (Giacco, Laxhman, & Priebe, 2018).

Moreover, the effects of natural disasters, war, and family violence on the mental health of 276 children and adolescents were studied (Catani, Jacob, Schauer et al, 2008) in Sri Lanka. These children and adolescents, 9 to 15 years old, were exposed to civil war and the Asian Tsunami exposure and family violence. Nearly all these children (96%) reported experiencing or witnessing some types of domestic events. The psychiatric status of the children was evaluated by a diagnostic interview and 30% met the criteria of post-traumatic stress disorder (PTSD). There was a relationship between cumulative stress (war, tsunami, and family violence) and the severity of PTSD. Twenty percent of the children met the criteria for major depressive disorder, and 17% had current suicidal ideation. The Sri Lanka study illustrates the effect of war, violence, and natural disasters on the mental health of children (Wagner, 2009). Nevertheless, Betancourt, Speelman, Onyango, and Bolton (2009) came up with a qualitative study on the psychosocial impact of war on youths in northern Uganda. The following psychosocial behaviors described in their local parlance were noticed among children in IDP (internally displaced persons) camps: ***Wo tam*** was described as a problem of having "lots of thoughts" such as recurrent thoughts of death or suicide; ***Kumu*** has features of mood disorder and anxiety; and ***Par*** is a third local syndrome with mood and anxiety features referred to as a problem of having many worries.

Nonetheless, the psychosocial effect of crisis on disabled children in Venezuela is profound. The stress of living in an unstable and resource-scarce environment can aggravate prevalent disabilities and lead to more psychological problems. World Health Organization (2021a) reports that children with disabilities in Venezuela are at increased risk of acquiring emotional health issues, including anxiety, depression, and trauma-related disorders. However, the impact of Sri Lanka's crises on children with disabilities extends beyond the physical and logistical barriers to education. The psychological impacts of staying in a post-conflict society, combined with the stress of poverty and social exclusion, could have a profound effect on the emotional health and well-

being of these children. According to the World Health Organization [WHO] (2022), children with disabilities in Sri Lanka are prone to developing mental health issues such as anxiety, depression, and trauma owing to their heightened vulnerability.

Moreover, the psychosocial impact of displacement and living in refugee camps is profound for all Rohingya children, but it is particularly severe for those with disabilities. The trauma of violence, displacement, and living in precarious conditions can exacerbate existing disabilities or result in the development of new emotional health issues. The World Health Organization (WHO) (2021b) reports that children with disabilities in Rohingya camps are at a higher risk of experiencing depression, anxiety, and post-traumatic stress disorder. Nevertheless, the psychosocial influence of the violent scenes on disabled children in Ukraine is profound. War trauma, combined with the stress of displacement and the loss of routine, has had a major effect on their emotional health and well-being. According to the World Health Organization (WHO) (2023), children with disabilities are at a higher risk of acquiring emotional health issues in conflict zones owing to their increased vulnerability and the absence of sufficient support structures.

Nonetheless, in Cameroon's North-West region, a secondary school teacher said that children with disabilities "suffered more than others" after armed separatists attacked and "were particularly traumatized by the violence they witnessed" (Human Rights Watch, 2021). Shahd, an 11-year-old Syrian girl with a hearing disability, was more profoundly impacted by the sudden attacks and fleeing than her five siblings. Her father said:

"Unlike her siblings, whenever there is something unexpected, even if someone rushes into the house, she starts to cry" (Human Rights Watch, September 2022).

However, in the Central African Republic, Suleiman, a 17-year-old boy with intellectual and physical disability, was fleeing when he saw his uncle being brutally killed. Suleiman appeared to be traumatized by what he saw, but he has never received any counselling or psychosocial support. He said:

"My uncle's death in front of my eyes continues to scare me…. When I sleep, I have nightmares that bring back the images of the events I lived. I haven't spoken to anyone about it."

Moreover, in 2019, a father of three in South Sudan said that one of his daughters became traumatized after seeing the dead bodies of her aunt and cousins in December 2013 as they fled an attack. Her father described her behavioural changes as follows:

"Before the war, she was ok. But then, she started to insult everyone and run away from home for many days at a time. At the hospital, they didn't know what she had, but they gave her Phenobarbital (used to treat anxiety symptoms). Now, she can't even go to school here. Otherwise, she gets into fights with other children or just runs away, and there is no fence around the school to keep her in there" (Human Rights Watch, 2015, May 2017, June 2017, 2019, 2020).

Nevertheless, as part of their right to health and development, all children, including children with disabilities, have the right to enjoy the highest attainable standard of mental health and, as needed, access to psychosocial services (UN General Assembly, 2015). Counselling and other mental health services during armed conflicts are mostly offered by humanitarian organizations, and they should be human rights-respecting, equitably distributed, inclusive of, and accessible to all children with disabilities (IASC, 2007, 2019; UN General Assembly, 2018, 2020). Nonetheless, in all the examples described above, mental health and psychosocial support services were either lacking, generally not inclusive of, or inaccessible to, children with disabilities (Ćerimovic, 2023) in refugee and internally displaced persons' camps. "Therefore, there is a pressing need to identify effective treatment for youths who have been exposed to these adverse conditions" (Wagner, 2009) and make it available to them.

Implications of the psychosocial impact of war on young learners in special education

When conflicts arise, people are often displaced to secure areas, such as refugee camps or internally displaced persons (IDP) camps, where schools are frequently closed due to safety concerns. As a result, the education of many students, including those with disabilities, is disrupted. To cater to their learning needs, classes are set up, and the service of special education is engaged for learning to be effective. However, with the psychosocial impact of war on young learners with disabilities, effective learning would be hindered due to their emotional state of mind, which requires concentration. This thus makes learning difficult, with implications for special education. Therefore, for learning to be effective for this group of students, the following measures need to be put in place:

Introduction of trauma-informed teaching approaches: Special educators must adopt trauma-sensitive strategies, including emotional support programmes, individualized counselling, and safe learning

environments (Cole, Greenwald, O'Brien, Gadd et al., 2013) to rehabilitate learners with emotional disorders.

Provision of inclusive and adaptive learning materials: War-affected learners require adaptive technologies and tailored curricula to support their unique learning needs in post-conflict environments (Booth & Ainscow, 2011), which would be provided by special education services.

Teacher training and capacity building: For special education teachers in conflict-affected areas to be effective at rehabilitating young learners in refugee camps and internally displaced persons' camps through education, they should receive training on psychological first aid, inclusive pedagogies, and culturally responsive teaching methods (INEE, 2010).

Policy advocacy and international support: Governments and humanitarian organizations should work together to implement inclusive education policies that prioritize children with disabilities in crisis responses (UNESCO, 2019).

Collaboration with mental health professionals: Special teachers should actively engage clinical psychologists, psychologists, guidance counsellors, and social workers to provide holistic interventions that support students' mental and social well-being of young learners during the rehabilitation process in the refugee and internally displaced persons' camp.

4. Conclusion

War has a profound psychosocial impact on young learners with disabilities, further limiting their access to education and social integration. Addressing these challenges requires a holistic approach that incorporates trauma-informed education, inclusive policies, and strengthened support systems. However, special education must adapt to these realities to provide meaningful learning opportunities for war-affected children with disabilities in ensuring that they receive the education they need and deserve, even in the most challenging circumstances, so as not to miss out of school. There is also a need for tailored and responsive intervention strategies to support children with disabilities during crises. It has been shown that effective counselling in schools creates an inclusive environment that fosters both emotional and behavioural stability. It is therefore imperative for special teachers, in conjunction with guidance counsellors, to be engaged in the assessment and treatment of victims of trauma as early as possible to assist this group of learners in rehabilitation camps set up by the government. The importance of such services should not be neglected, as they show promise in addressing the mental needs of victims of crisis trauma. Therefore, they should continue to render counselling services to young learners with disabilities at the outset to make them emotionally stable after being exposed to crisis trauma, ready to learn in refugee camps or internally displaced persons' camps where schools are opened for learners, and benefit maximally from education.

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Globalization of Same Sex Marriage: A Sociological Analysis of the Implications for Traditional African Societies

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Abstract. With the exception of South Africa, homosexuality and, to a large extent, same-sex marriage are now common in many African communities and are receiving more attention than in the past. In many traditional African societies, homosexuality has evolved into a homophobia that is progressively becoming the norm. As a result, African traditional beliefs and morality around marriage and sexual relationships are gradually but consistently becoming aberrated. Even though same-sex marriage and homosexuality are seen as un-African and unnatural in many African societies, it is well known that the spread and legalization of same-sex marriages in the developed world is having a drastic effect on the spread and gradual acceptance of same-sex marriages in traditional African societies. Despite pressure from the West, laws prohibiting same-sex marriages have been strengthened in several African nations, and those who engage in them are viewed with contempt. South Africa is the only nation in Africa to have permitted same-sex unions and marriages since 2006. Using sociological and historical methods, the paper argues that the prevalence of same-sex relationships and unions in traditional African societies is largely due to globalization (cultural globalization), which is influenced by the African mindset that views the African way of life as inferior and backward and blindly accepts or adheres to anything that is European or western in nature. Therefore, this paper aims to examine the implications of the globalization of same-sex marriage on traditional African societies.

Keywords: Globalization, Same-sex Marriage, Traditional African Societies, Homosexuality

1. Introduction

The structural foundation of human society is marriage. As a result, it is regarded and acknowledged globally as a universal institution. However, current trends indicate that there is a gap between what was achieved and current practices, particularly with the global emergence of the elastic idea of human rights. (Abe and Adekunle, 2012).

Recent years have seen a significant shift in the global marriage scene, with many countries now socially and legally accepting same-sex unions. In many cultural contexts, particularly traditional African civilizations, the growing tendency is igniting discussions about identity, rights, and love outside of western nations. Same-sex marriage has profound repercussions on these societies, challenging long-held beliefs about marriage, gender roles, and social traditions as globalization facilitates the exchange of ideas and values.

The greater interconnectedness brought about by globalization has caused economies, cultures, and civilizations to change in the twenty-first century. This driving force, which is characterized by the interconnectedness of people, cultures, ideas, technology, and economies, has rapidly affected cultural behaviors and elements. As a result, same-sex marriage is now legally accepted as a social norm in many cultures across the world, jeopardizing the practice of heterosexuality in those communities. This has deepened cultural homogeneity on a global scale.

The acceptance, proliferation, and effects of same-sex marriages in African countries as a result of globalization are examined in this article along with the tension between modernity and tradition. It looks at how the worldwide Lesbian, Gay, Bisexual, Transsexual, Queer and other new patterns of sexuality (LGBTQ+) rights movement may both empower individuals and spark opposition in societies where traditional values are deeply rooted. By analyzing the globalization of same-sex marriage using case studies, cultural viewpoints, and the

dynamics of international influence, this article seeks to illuminate the profound changes that same-sex marriage may bring to traditional African societies and the ensuing implications for such societies.

1.1 Globalization: Conceptual Clarification

In contemporary times, globalization has grown to be the most extensive and dynamic process, which has led to the development of shared and cohesive characteristics in the world economy. Globalization is a process that results in increased economic, political, and cultural connection and interdependence between many nations and regions of the world (Kasych and Vochozka, 2019). Molavi (2024) asserts that globalization is more than just trade. In general, it refers to the cross-border movement of products, capital, services, energy, data, people, cultures, and ideas.

According to Unya and Okorie (2024), the meaning of globalization is still debatable due to its various manifestations, effects, and interpretations. They contend that globalization is multifaceted and that its meanings vary among individuals and academic fields. Globalization is viewed by economists as a form of global capitalism. Political scientists describe it as a process that forces a nation-state to cede its sovereignty to regional and international political institutions, while cultural studies see it as a type of cultural hybridization. Because of this conceptual uncertainty, academics recommend and support studying globalization from a multidisciplinary perspective in order to comprehend its many ramifications.

According to Abejirinde and Michael-Olomu (2024), there is no consensus on what constitutes globalization, making it a highly controversial phrase. For them, globalization is a phenomenon that has changed the world in various ways and caused western traditions, such as popular music, movies, and fashion, to spread. This has undermined the cultural identities of many communities, including ours in the Western Sahara. Perhaps the most significant factor influencing the contemporary international climate is globalization. There are two reasons why the idea of globalization seems to be so popular now.

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According to Ukhami, Lassana, and Kabir (2024), globalization is a complex and multidimensional notion that, depending on how it is viewed, is rife with ideological extrapolations. They view globalization as a crucial instrument for achieving cultural homogeneity and eradicating cultural diversity worldwide. According to Edet and Odey (2022), globalization is only the result of a global division of labor that unites a capitalist world economy. The logic of capital accumulation drives the system.

Globalization encompasses is a process that encompasses the causes, course, and consequences of transnational and transcultural integration of human and non-human activities. It is not a single concept that be defined and encompassed within a set time frame, nor is it a process that can be defined clearly with a beginning and an end (Al-Rodhan and Stoudmann, 2006).

Globalization began in Africa between 1450 and 1500 AD as traders from different commercial empires looked to expand their markets. The European nations' frantic attempts to split and control Africa among themselves were one way it manifested. Subsequently, foreigners imposed their ideologies and pillaged African resources, leading to colonization and western civilizations (Akande, Adejare, Ademuson, and Adegoke, 2018). A period of extraordinary technological advancement, economic interconnectedness, and cultural interaction has been brought about by the rise of globalization. Local cultures are encountering unexpected difficulties in preserving their uniqueness and independence as the world grows more interconnected (Edewor and Kediehor, 2025).

Globalization is a phenomenon that has spread around the world in today's extremely interconnected world, changing economies, civilizations, and cultures along the way. Africa, a continent with vast cultural diversity and traditional values, has seen the most significant transformation. The ongoing pace of globalization has put African societies at a crossroads (Balogun, Aruoture, and Haruna, 2024).

Cultural interchange, made possible by travel, migration, and media, has also fueled globalization. Travel, foreign media, and social networks expose people to diverse cultures, increasing cultural connection. Cultural homogeneity, which is the process by which local cultures resemble or become

identical to a dominant global culture—typically defined by western (especially American) values, lifestyles, and consumer goods—has also been significantly influenced by globalization. Western culture has been widely disseminated due in large part to the dominance of the western media and entertainment sectors worldwide (Aimie, 2024).

1.2 African Philosophy of Marriage

John Mbiti is one of the most renowned African thinkers who has articulated the idea of marriage. According to him, marriage is a complicated process with social, religious, and economic facets that frequently overlap so much that they are impossible to separate. Two lives, two families, and occasionally even two towns are combined at marriage, which is a family issue. In Nigeria and other African countries, marriage is revered because it strengthens bonds that provide communities and countries fresh life and hope.

To pass away without getting married and having children means to be totally cut off from human society, to lose all ties to humanity, to become disconnected, and to be an outsider. Everyone has the highest expectation for themselves, which is to get married and have children (Onuche, 2013).

In Africa, marriage is seen as the cornerstone of life, family, and community. For this reason, it is crucial that family members and the community validate it. According to the traditional African system, marriage unites two families through the union of a man, a woman, and their offspring (Ngihbi and Elechi, 2022). In some societies, such as Nigeria, marriage is not just a union of two people but also a merger of families and communities. In the past, the African traditional marriage institution has supported family economic transactions, strengthened social relationships, and helped create official partnerships (Beatrice, Okocha, Akurega, and Elele, 2025).

Marriage has long been seen in the African setting as an institution that is inextricably linked to cultural and traditional value systems. Although a large portion of African society holds that the primary goals of marriage are childrearing and procreation, marriage also involves two families' cultures, traditions, and religions. These are problems that need to be resolved in a way that gives the couple a fair balance. Within the boundaries of many African indigenous cultural ties, marriage finds significance and meaning. To put it another way, different African societies may have different perspectives on marriage.

However, the belief that marriage is a crucial requirement for the survival of the community unites these societies. Because of this, women's roles and expectations are far more expansive than what would be expected within their household (Baloyi, 2022).

According to Bankole (2023), marriage is essential to the continuance of the familial line of descent in African communities. Africans get married in order to have a family and have their own offspring. African traditional religion says that a man and a woman should unite as husband and wife, resulting in the unification of the two extended families. It is an enduring bond between a man and his spouse and, consequently, between the two united extended families. African society condemns homosexuality because African traditional religion promotes heterosexuality rather than homosexuality. But in other places of Africa, tradition appears to be evolving.

2. Same-Sex Marriage: A Conceptual Analysis.

According to Ogisi (2017), same-sex marriage, often known as gay-marriage, is a union of people who share the same biological sex and/or gender identity, whereas the phrase "same-sex" is defined as involving or limited to members of the same-sex or involving gay men or lesbians. Chamie and Mirkin (2011) define same-sex marriage as a union of two people of the same sex. They claim that it is a novel social phenomenon that results in a different kind of family structure. Most developed nations in the globe have legalized same-sex relationships (Verpoest, 2017).

According to Adhikay (2023), a legally recognized union between two people of the same gender that permits them to sign a formal marriage contract with the same rights, obligations, and legal liabilities as opposite-sex couples is referred to as same-sex marriage. It refers to the capacity of people of the same sex to get married, creating a legal and social union founded on love, dedication, and common life objectives. In many communities around the world, marriage has historically been seen as a union between a man and a woman. But the idea of marriage has changed over time, and legal frameworks and societal standards have significantly changed with the acceptance of same-sex marriage.

Same-sex marriage expands the idea of marriage to include the core values of equality, nondiscrimination, and the right to choose one's life partner regardless of gender, challenging conventional ideas of gender roles (Adhikary, 2023).

2.1 Same-Sex Marriage: Historical Analysis

Different types of same-sex marriage occurred all around the world, according to Obasola and Omomia (2017). It is sufficient to state that same-sex relationships were common in classical Greece and Rome. According to Obidinmma and Obidinmma (2013), same-sex marriage was first mentioned in history in the early Roman Empire. The story began when Emperor Nero married Pythagoras, one of his "freed men," in a highly public ceremony that included all the formalities of matrimony, and the two of them lived together. According to reports, he wed two other guys in lavish public weddings.

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Sexual deviation increased in England and France during the late 16th and early 19th centuries (Obasola and Omomia, 2017).

Evidence from Africa indicates that same-sex intimacy was not only acceptable in ancient Egypt but also legally acknowledged at some points. Male same-sex relationships were lawful among the Azande people in pre-colonial Sudan, where boy-wives received dowries and were compensated for infertility.

While gay prostitution has been documented among the Hausa of Nigeria, transgender men were accepted and permitted to marry other men by the Meru people of Kenya, the Bantu people of Angola, and the Zulu people of South Africa. The Langi of Uganda permitted effeminate males to wed men. Similar to how heterosexual affection was frowned upon in Zimbabwe, LGBT+ affection was accepted but not publicly expressed or discussed (Ibrahim, 2015). According to Obidinmma and Obidinmma (2013), homosexuality and lesbianism have been a problem in Nigeria since before the country's founding, despite the fact that there are currently no documented cases of same-sex marriage.

It is easy to observe that public opposition to gay relationships is pervasive throughout Africa, and even in societies where the practice is accepted, it cannot be considered to be deeply ingrained. On the African continent, South Africa is an anomaly.

2.2 Same-Sex Marriage: A Global Perspective

It seems that a new ideology has emerged for the conventional notion of marriage. The basic rights movement and the demand for gender neutrality in marriage and marital legislation led to a major shift in marriage at the beginning of the twenty-first century (Odiase-Alegimenlen and Garuba 2014). In 2001, the Netherlands became the first nation in the world to legalize same-sex marriage. Since then, that right has been established in over thirty more nations. Western Europe and the Western Hemisphere are home to the majority of nations that allow same-sex marriage. Most nations that have legalized same-sex marriage have done so through the legislative process, which means that laws creating the right have been passed by elected officials.

Following national referendums that showed public support for marriage equality, lawmakers in several nations, such as Switzerland and Ireland, have approved same-sex unions. Some nations have legalized same-sex marriage through the legal system, despite the majority having done so through legislation. Courts decided that the right to same-sex marriage is protected by clauses in their nations' constitutions that uphold the rights to equality and privacy. For example, in the historic 2015 ruling Obergefell v. Hodges, the Supreme Court ruled that same-sex marriage is permitted in all fifty states of the United States (CFR Education, 2025).

Globally, opinions on same-sex marriage differ greatly. Support for legal same-marriage is lowest in Nigeria, where only 2% of respondents support it, and greatest in Sweden, where 92% of adults accept it. In the US, where same-sex marriage was made legal nationwide by the Supreme Court in 2015, 63% of individuals are in favor of it and 34% are against it. However, opinions are sharply divided along demographic and political lines. Strong proponents of same-sex marriage are particularly prevalent throughout Europe. In Sweden, at least eight out of ten adults are in favor of same-sex marriage; in the Netherlands, 89% of people are in favor of same-sex marriage; in Spain, France, and Germany, the corresponding percentages are 87%, 82%, and 80%. Even though same-sex marriage is illegal in Italy, where LGBTQ+ rights concerns have been in the news, 73% of Italians support it. Approximately 74% of adults in the UK are in favor of same-sex marriage.

Although those regulations were adopted at different points during the previous ten years, the practice is allowed in England, Scotland, Wales, and Northern Ireland. In contrast, only 41% of adults in Poland and 31% in Hungary support same-sex marriage, even though it is illegal in both nations (Gubbala, Poushter, and Huang 2023).

According to Sears, Cisneros, and Mallory (2025), there are an estimated 823,000 married same-sex couples in the US as of June 2025, which is more than twice as many as there were in June 2015, the month Obergefell v. Hodges was decided (390,000). The "Stonewall Riots," which followed a police raid on the Stonewall Inn in New York City at three in the morning on June 28, 1969, are credited with sparking the US homosexual rights movement. Although police raids on gay pubs were frequent, this time the gay and lesbian clients retaliated, sparking days of protest. At a period when homosexual sex was prohibited in every state but Illinois, the Stonewall Riots signaled the start of the gay rights movement. The number of gay organizations in the nation increased from less than 50 to about a thousand between 1969 and 1974. Gaining access to institutions like marriage was not as important to gay-rights campaigning as achieving personal emancipation and exposure. When the American Psychiatric Association and American Psychological Association both reclassified homosexuality as a mental illness in December 1973 and 1975, respectively, the gay liberation movement won (Britannica, 2021).

Australia and Japan have the greatest levels of support for same-sex marriage in the Asia-Pacific area. Nearly seven out of ten (68%) adults in Japan and three-quarters of adults in Australia support legal same-sex marriage. However, support for same-sex marriage is lower in Japan, where a majority of 56% say they somewhat support it, compared to 52% of Australians who say they strongly support it. Japan has not allowed same-sex marriage, although Australia has (Gubbala, Poushter, and Mallory, 2023).

LGBTQ+ groups have gained widespread recognition in Thailand in recent years, and Thais are in favor of passing new legislation or amending existing ones to equalize the rights of all citizens with regard to marriage and family regulations. Over 90% of people favor the draft of such a new law, according to a government survey, demonstrating the nation's rising acceptance and understanding of LGBTQ+ rights (Aksorngarn, 2024).

Thailand is currently regarded as one of the LGBTQ+-friendly travel destinations in the world. In fact, members of the LGBTQ+ community are not only widely accepted in Thai culture but also acknowledged as gifted and imaginative professionals in a variety of disciplines, including entrepreneurship, law, filmmaking, athletics, and even politics. Because they speak out in favor of equal rights for members of their group and can garner public attention in this regard, all of these professionals play a leadership role in LGBTQ+ movements (Aksorngarn, 2024).

Lawmakers in Thailand have been debating whether same-sex nuptials should be recognized. The legalization of LGBTQ+ marriage and the quest of equal rights for LGBTQ+ couples, comparable to those enjoyed by heterosexual couples, are contemporary issues in a nation that is known for being LGBTQ+-friendly. The Bill to Amend the Civil and Commercial Code (the "CCC") Book 5 family and the draft of the Civil Partnership bill have been suggested as potential guidelines in this area. Parliament is now debating all of these measures, and it will probably take some time before the pertinent legislation is formally passed.

The United Nations Development Program's 2019 national survey in Thailand found strong support for inclusive legislation and policies as well as generally positive opinions toward LGBTQ+ people. In spite of this, the study still revealed ongoing experiences with assault, discrimination, and stigma. Even though 69% of non-LGBTQ+ Thais surveyed had generally positive opinions of the LGBTQ+ community, the study discovered that full acceptance is still difficult, especially in rural areas and within families and social networks. The results showed that LGBTQ+ individuals were more accepted outside of the home. (Aksorngarn, 2024). Despite a movement by Japanese civil society to recognize same-sex marriage and civil unions, which resulted in certain reforms at the local government level, Japan remains the only G7 nation that has not yet done so. The Liberal Democratic Party, which has ruled Japan virtually continuously since 1955, is a major factor in the country's lack of recognition (Baldwin, 2024).

As an example of some of the challenges that democratic rights protection may encounter under a dominant party system, the LDP's dominating position in Japan is a major obstacle to the legal recognition of same-sex marriage. Despite a movement by Japanese civil society to recognize same-sex marriage and civil unions, which resulted in certain reforms at the local government level, Japan remains the only G7 nation that has not yet done so. The Liberal Democratic Party, which has ruled Japan virtually continuously since 1955, is a major factor in the country's lack of

recognition (Baldwin, 2024). As an example of some of the challenges that democratic rights protection may encounter under a dominant party system, the LDP's dominating position in Japan is a major obstacle to the legal recognition of same-sex marriage. In many American nations, gay marriage has been a hotly debated topic. Sharply divergent viewpoints among residents, social groupings, religious organizations, the powerful Catholic Church, and policymakers characterize disputes over the matter. These discussions have risky results in Latin America that differ greatly from nation to nation. El Salvador (2009), the Dominican Republic (2009), and Honduras (2005) all have constitutions that forbid same-sex marriage. Bolivia's new constitution restricts legally sanctioned marriage to partners of the opposite sex. The Supreme Court of Costa Rica decided against same-sex couples who wanted to legally marry. However, Uruguay (2008), Ecuador (2008), Colombia (2009), Brazil (since 2004), and a few Mexican states have legalized same-sex civil unions, which grant homosexual couples some of the rights enjoyed by heterosexual couples (such as social security, inheritance, and joint property ownership, but excluding adoption rights). Corral and Lodola (2010)

Lodola and Corral (2010) concluded that people in Latin America and the Caribbean generally show comparatively low levels of support for same-sex marriage. Additionally, it was discovered that women, those who live in major cities, and those who are wealthier in Latin America have higher levels of support for same-sex marriage.

2.3 Same-Sex Marriage: An African Perspective

In Africa, the prevalence of same-sex marriage and gay behavior is seen as less concerning than in Europe and America. Some base this on the rigid stance that African society takes, while another school of thought maintains that the act is quite common in Africa but is kept secret because of the severe rules. Thirty-eight African nations have criminalized homosexuality, and the aforementioned stance tends to absolve the majority of African nations of the current proliferation of same-sex marriage and homosexuality. This claim's veracity is questionable because others contend that same-sex marriage is becoming more common in some African nations. This position is justified by the US Amnesty International, which argued that despite the trend against gay-rights, there is the prevalence of same-sex sexuality in sub-Saharan Africa (Obasola and Omomia, 2017).

African indigenous people consider same-sex weddings and intimate relationships to be un-African. Sexuality is seen as primarily heterosexual in the majority of countries. The protection and preservation of African culture and custom is said to be one of the justifications for advocating heterosexuality as the preferred sexual orientation. Indigenous Africans do not adequately define "homosexuality" or relationships including same-sex intimacy. In Africa, same-sex weddings and personal relationships are seen differently. The majority of African nations find it difficult to accept homosexuality, even though some do. The belief that homosexuality is un-African is the foundation of the unfavorable attitudes around it.

The term "homosexual" is a Western idea and has no African origins. It is viewed as immoral socio-cultural contamination influenced by western civilization (Sebaeng, Moloko-Phiri, Mogale, and Mavhandu-Mudzusi 2022).
Same-sex partnerships are illegal and often seen as incompatible with cultural standards in many African nations, including Kenya. Religious organizations, political figures, and community leaders frequently oppose same-sex unions because they directly contradict conventional notions of marriage. According to studies, opposition to same-sex marriage in African nations is frequently based on the idea that it threatens moral order and cultural authenticity (Waswa and Githui, 2025).

3. Globalization and Contemporary Sexual Trends in Africa

Due to the interdependence of nations, cultures, and people brought about by globalization, ideas, beliefs, and values have spread across many boundaries. Fiscal, political, social, and cultural relationships across national and international borders are transformed by globalization. Its primary objective is to make the world a collective community, which will lead to a larger dismantling of trade barriers and a more integrated global market. Globalization has had a big impact on Africa, and one area that has changed dramatically is sexuality, with new trends including lesbianism, homosexual rights, premarital sex, and transgender rights becoming well-known. These behaviors are growing common and ubiquitous despite strong opposition from African civilizations (Saheed, 2023).
Due to external cultural dominance brought about by globalization, African nations are quickly losing their cultural identity and, consequently, their capacity to engage with other cultures on an equal and independent basis, only appropriating elements that suit their own needs and demands (Ibrahim, 2013). Globalization is a complicated phenomenon that has a significant impact on many facets of modern African

society. It has had a profound effect on how sexuality is defined internationally, particularly with regard to LGBT+ rights.

The globalization of same-sex sexualities as roles has also increased, which can be seen in Africa. For example, the question of gay relationships and marriage has recently dominated national discourses, aside being a topic of academic and legal debates in many countries of Africa. Several studies and reports have documented the widespread nature of lesbianism, gay, premarital sex, and transgender issues in Africa, including Nigeria. A World Bank study has found evidence of the prevalence of same-sex relationships in many African countries. Undoubtedly, globalization has weakened and contributed to the erosion of traditional African sexual values (Saheed, 2023).

Specifically, one facet of globalization that has greatly aided in the development of new sexual practices in Africa is cultural globalization. Cultural globalization is the complex process of bringing people together beyond national boundaries by exchanging ideas, values, customs, and cultural artifacts. This entails the dissemination of western cultural ideals, lifestyles, and market economies, which are frequently imposed on other civilizations through the application of cultural standards. According to Taptiani, Mahadi, Romadhon, Pratama, Muhammad, Purwanto, Sari, and Isbandi (2024), cultural globalization is a multifaceted and intricate process that involves population interaction and integration with the aim of acknowledging linguistic and cultural differences while addressing the complexity of a global environment in which dominant cultures have the potential to impact and potentially mask local traditions.

The modern introduction and widespread acceptance of same-sex marriage and relationships in many typical African traditional societies, despite traces of such relationships in some African societies and despite not being enshrined in the constitutions of the majority of African countries, have been intensified by this interaction and integration enforced by cultural globalization. However, it should be noted right once that neither pre-colonial nor post-colonial Africa are unfamiliar with homosexuality, tolerance, or homophobia. In addition to having a more varied understanding of sex, gender, and family than the western Judeo-Christian one, pre-colonial and colonial African cultures may have treated sexual and gender minorities in a variety of ways, ranging from outright tolerance of LGBTQ+ minorities, including the institutionalization of some same-sex relationships, to discouraging public discussion of homosexual acts and desires (Ibrahim, 2015).

Although same-sex marriage and partnerships have historically existed in several African communities, they were not widely recognized in the majority of traditional African societies. However, the idea of cultural globalization is facilitating the current global gay rights movements' unshakeable influence, which is responsible for the current resurrection and agitation for homosexual rights as well as the implementation of laws legalizing gay weddings in Africa. The European Union (EU), has demanded that its members respect the rule of law as liberal democracies ever since it was established in 1958 as the European Economic Community. With every successive treaty, its commitment to human rights has become more explicit and comprehensive. The EU specifically extended its human rights protection to gays for the first time when it added sexual orientation as a category for non-discrimination in the 1997 Amsterdam Treaty (Kollman, 2007).

Gay-rights movements in Africa have been impacted by these treaties, the adoption of a liberal democratic system from the West, the acceleration of globalization, and neocolonial association, even in societies that were not historically associated with same-sex partnerships. Ezeador and Okpara (2024) claim that although African nations still firmly believe that LGBTQ+ people are not a part of their culture, this does not imply that the act has never existed in the past. There were same-sex weddings among women in Nigeria, especially in Igbo society, however this does not imply that women had direct sex with one another. Many people believe that homosexuality in Africa was mostly caused by European colonization.

For them, African value systems were destroyed and distorted as a result of colonization. Undoubtedly, globalization has improved Africa, but it has also negatively impacted African culture more than positively. It has promoted Western culture by making Africans believe that Western culture is superior than their own. Africans adopted all of the LGBTQ+ variations from Western society. African morals and culture have been corrupted by the imposition of Western civilization. Our forebears did not establish homosexuality for us. Due to Western influence and cultural contact, homosexuality and all its variations are prevalent in Africa today.

Africans learn these attitudes from the movies, cartoons, pornography, and naked photos shared on social media that we are exposed to in the West. Africans are easily tricked by what they see since they like to imitate anything from the West. One of the main causes of homosexuality in Africa is economic instability and suffering. The current state of same-sex

partnerships and homosexuality in traditional African civilizations cannot be compared to that of pre-colonial times. African men's minds have been warped by colonialism, as evidenced by the continent's current views on homosexuality. It has disproved Africanism's tenets.

The fact that homosexuality existed in some pre-colonial African regions should not be used as justification to claim that homosexuality originated or originated in Africa. Homosexuality in Africa today is a diabolical act introduced from the West and has to be strongly denounced (Ezeador and Okpara, 2024),

In some parts of Africa, homosexuality is no longer seen as a deplorable behavior, and homophiles there have embraced an open lifestyle, referring to their otherwise deplorable behavior as "gay" (Bankole, 2023).

4. Implications for African Traditional Societies

In African society in the twenty-first century, homosexuality is no longer frowned upon. Many African cultures are abandoning their conventional conceptions of family relationships in favor of atypical cultural values and patterns as a result of the growth of education, globalization, and rapid digital technology. It is concerning how quickly the problem of homosexuality is spreading throughout Africa. This change in viewpoint and belief is the result of several factors, some of which include the government's pursuit of international recognition and approval. Some people are fighting for the practice's legitimacy, but the majority are against it. The desire for approval and recognition is one of the factors contributing to the abrupt transformation.

Homosexuals desire acceptance in society, to be heard, and to have all of their rights. Second, dogmatism is another element that explains the abrupt shift. As education and exposure levels rise, there is a growing demand for morality to be grounded in empirical and scientific facts rather than customary cultural norms. People today have access to a wide range of knowledge because to advancements in information technology and scientific research. It is implied that certain knowledge has gained popularity. Additionally, traditional authority and religious conviction have been superseded by psychological and empirical data (Onotere and Urhibo, 2024).

One possible contributing cause is the erosion and abandoning of traditional values and beliefs. In general, African countries have always been heavily influenced by Western culture, and foreign customs are seen as more enticing, particularly by younger generations. The communities that used to be the arbiters of morality are no longer considered as authoritative as younger generations of Africans reject old beliefs and behaviors as outdated and inappropriate. As a result, issues like homosexuality or homosexual acts start to surface (Onotere and Urhibo, 2024).

5. Conclusion

In conclusion, traditional African civilizations have difficulties due to the globalization of same-sex marriage. African countries have the difficult problem of balancing these shifts with strongly ingrained cultural, religious, and societal conventions as attitudes toward LGBTQ+ rights have changed internationally. While some believe that acceptance of same-sex marriage can advance equality, inclusivity, and human rights in other parts of the world, it has sparked opposition and strengthened conservative ideologies that mirror such changes or practices in Africa. As such, it should continue to be strongly discouraged, and if at all possible, laws prohibiting such cruel practices should be tightened.
This is due to the fact that the implications of this globalization phenomena go beyond legal acknowledgment and include cultural imperialism's entrenchment as well as changes in public attitudes. Therefore, it is imperative that traditional African communities carefully manage these shifts, making sure that any adaptation is appropriate for their particular cultural circumstances. Striking a balance between tradition and modernity could lead to a more inclusive society that respects both its history and the changing global human rights landscape, but one that does not have the tendency to adversely alter how people generally view marriage, sexuality, and intimate relationships in the traditional African context.

Lastly, the politicization of same-sex marriage and gay rights in traditional African civilizations resulted from some political leaders' efforts to win favor or assistance from Western nations where homosexuality is prevalent despite the contempt of their populace. From the standpoint of African traditional society, such politicians should be viewed as contributing to the breakdown of marriage and sexuality, and they should never be supported in any subsequent election.

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Mental and Physical Effects of Street Hawking among Teenage Girls in Ika North East Geopolitical Zone

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Abstract. This study investigated the factors influencing street hawking and its mental and physical effects on teenage girls in Ika North East, Delta State. Specifically, it examined the impact of street hawking on the physical and psychological wellbeing of teenage girls and identified the socio-economic and cultural factors contributing to their involvement in this practice. The study employed a survey research design, targeting 100 respondents selected from four communities—Akumazi, Emuhu, Mbiri, and Umunede—using stratified sampling techniques. Data were collected through a structured questionnaire aligned with the research objectives and analyzed using the Statistical Package for Social Sciences (SPSS). Findings revealed that street hawking negatively affects the physical, socio-emotional, cognitive, and moral development of teenage girls. Physically, it exposes them to fatigue, illness, and injuries, while socio-emotionally, it limits recreational opportunities, peer interactions, and fosters behaviours such as early alcohol consumption, disrespect for elders, conflict, and low self-esteem. Cognitively, hawking reduces study time, academic engagement, and school attendance, resulting in poor performance and below-average grades compared to peers. Morally, it exposes girls to adult solicitation, unethical behaviours, and early moral decay. Based on these findings, the study recommended targeted advocacy campaigns to sensitize parents and guardians on the dangers of child street hawking. Law enforcement agencies should ensure compliance by prosecuting parents who send school-age children to hawk. Community and religious institutions should create awareness programs to sensitize the populace of the risks associated with street hawking, thereby protecting the wellbeing and development of teenage girls.

Keywords: Street, Hawking, Teenage, Girls, Mental, Physical, Wellbeing.

1. Introduction

Street hawking has become a pervasive yet deeply concerning feature of Nigeria's socio-economic landscape, largely driven by widespread poverty, unemployment, inadequate infrastructure, and limited human empowerment. These conditions compel many households to rely on child labour as a survival strategy. Hawking generally involves moving from place to place to offer goods or services for sale. In many developing African countries, it is perceived as a means through which children support household income. Consequently, the low socio-economic status of most Nigerian families and persistent poverty leave parents with little option but to send their children to the streets, where they spend long hours exposed to harsh environmental conditions while selling items such as sachet water, fruits, snacks, and beverages (Skelton, 2007). This trend is particularly alarming in Ika North East of southern Nigeria, where street hawking increasingly represents a clear form of child labour and abuse. It poses serious risks to children's physical health, psychological wellbeing, moral development, and personal safety, while also disrupting schooling and denying them a normal childhood.

Street hawking has been described as an occupation dominated by children and young persons who sell goods in public spaces (Vally, 2019). Similarly, Wentzel (2016) defines it as canvassing items for sale along streets, from house to house, or in public places, while Young (2013) views hawkers as petty traders catering to commuters' immediate needs. Historically, child hawking in Nigeria is linked to the Structural Adjustment Programme of the late 1980s. According to Usman (2010), economic reforms such as currency

devaluation, subsidy removal, and public-sector retrenchment reduced household incomes, forced school withdrawals, and pushed many children into informal economic activities, including street hawking, to support family survival.

Street hawking constitutes a critical socio-economic problem that exposes female children to exploitation through abuse of vulnerability and economic coercion (ANPPCAN, 2010). Although often perceived as petty trading (Abisoye, 2013), the practice places teenage girls at high risk of school truancy, sexual harassment, rape, psychological trauma, sexually transmitted diseases, and teenage pregnancy. These conditions severely undermine their health, security, educational attainment, and future life chances, thereby justifying the need for focused academic investigation.

1.1 Objectives of the Study

- Examine the effect of street hawking on the mental and physical well-being of the teenage girls in Ika North East of Delta State.
- Determine the factors responsible for street hawking among teenage girls in Ika North East of Delta State.

2. Review of Literature and Theoretical Orientation

Child street hawking remains a pervasive form of child labour in Nigeria and represents a visible expression of widespread socio-economic deprivation. It involves children, particularly those of school age, engaging in street trading across markets, highways, and traffic corridors to augment household income. Although often perceived as a survival strategy in the context of poverty, the practice exposes children to serious dangers such as accidents, exploitation, and abuse (Omorogiuwa, 2016). Empirical studies indicate that involvement in hawking negatively affects educational outcomes, manifesting in irregular school attendance, poor academic performance, and increased dropout rates (Omorogiuwa, 2016). For teenage girls, the burden is intensified as they combine schooling with post-school hawking, leading to fatigue, stress, and reduced learning capacity (Fawole et al., 2003). Beyond education, child street hawking subjects children to multiple health and security hazards, including traffic accidents, kidnapping, malnutrition, physical abuse, and psychological distress.

Female children are particularly vulnerable to sexual exploitation, trafficking, and domestic servitude. These conditions violate the provisions of Nigeria's Child Rights Act (2003) and undermine international commitments such as the Convention on the Rights of the Child and the ILO Convention on the Worst Forms of Child Labour (ILO, 2019). Despite awareness campaigns and policy interventions, the incidence of child street hawking remains widespread and increasing, with millions of Nigerian children, including those below ten years, actively engaged in street trading across public spaces nationwide (Ebigbo, 2003; UNICEF-Nigeria, 2007; Ugochukwu et al., 2012). Street hawking among young girls has emerged as a serious socio-economic concern in Nigeria, reflecting the broader challenge of child labour. Recent reports indicate that over 15 million Nigerian children are engaged in child labour, with a substantial proportion involved in street trading, largely driven by poverty and household survival needs (ILO, 2023; UNICEF, 2024).

Additional factors such as parental unemployment, large family sizes, rising inflation, and rural–urban migration further intensify girls' participation in hawking, often reinforced by cultural norms that normalize female economic contribution at an early age (Bage-John, 2024). These pressures undermine female human capital development, particularly in education and health (Jegede, 2023). Street hawking exposes girls to severe physical, sexual, and psychological risks. Prolonged exposure to traffic, harsh weather, and unhygienic environments results in injuries, fatigue, malnutrition, and recurrent illnesses (Obimakinde, 2023; WHO, 2024). Girls are also highly vulnerable to sexual harassment, exploitation, unwanted pregnancies, and sexually transmitted infections, compounded by limited access to reproductive health information and services (UNICEF, 2024).

Psychologically, constant stress, fear, and exposure to exploitation contribute to anxiety, depression, low self-esteem, and trauma (Ugo, 2024). Educationally, hawking disrupts school attendance, concentration, and performance, often leading to dropout when short-term economic gains are prioritized over schooling (Jegede, 2023). In the long term, these experiences reinforce social exclusion, limit life opportunities, and perpetuate intergenerational poverty, resulting in reduced lifetime earnings and diminished national development prospects (World Bank, 2023).

2.1 Theoretical Framework

Social Exchange Theory, associated with Homans, Blau, and Emerson (1958), explains social behaviour as interactions sustained by perceived rewards outweighing costs. Individuals engage in and maintain relationships that offer benefits relative to available

alternatives. Applied to child hawking, the theory interprets the practice as a form of economic socialization in which children are introduced to adult roles perceived as productive and rewarding. It frames hawking as mutual dependence between adults and children, economically beneficial to households, though potentially detrimental to children's development and long-term advancement (Ugochukwu, 2012).

3. Methods and Materials

The study employed a cross-sectional survey design, utilizing quantitative methods for data collection and analysis. The target population comprised street hawkers aged 9–17 years residing in Ika North East Local Government Area of Delta State. A total of 100 respondents were selected through a multi-stage sampling technique from four purposively chosen communities—Akumazi, Emuhu, Mbiri, and Umunede—based on their proximity and the concentration of street-hawking children. Data collection involved methodological triangulation, combining a semi-structured questionnaire with in-depth interview guides to enhance the robustness of findings. Quantitative data were processed and analyzed using descriptive statistical techniques with the aid of the Statistical Package for Social Sciences (SPSS), Version 24.

4. Findings

Table. 1: Demographic Characteristics of the Respondents

Demographic Variables	Category	Frequency	Percentage
Gender	Male	58	58%
	Female	42	42%
	Total	100	100
Age	9-11years	67	67%
	11-14 years	19	19%
	14- 16years	10	10%
	16-17 years	4	4%
	Total	100	100
Highest Level of Education	None	24	24%
	Primary	67	67%
	Secondary	9	9%
	Polytechnic	1	1%
	Total	100	100
Marital Status	Single	88	88%
	Married	12	12%
	Total	100	100
Employment Status	Students	12	12%
	Employed	1	1%
	Unemployed	81	81%
	Self-employed	6	6%
	Total	100	100

Field Work, 2025

Table 1 presents the demographic characteristics of the respondents. With respect to gender, the majority of the respondents were male, accounting for 58%, while females constituted 42%, indicating a male-dominated sample. In terms of age distribution, most of the respondents fell within the 9–11 years age group (67%), showing that street hawking is more prevalent among younger children. This was followed by those aged 11–14 years (19%), while a smaller proportion were within the 14–16 years category (10%). The least represented age group was 16–17 years, accounting for only 4% of the respondents. Regarding educational attainment, the majority of respondents had primary education (67%), while 24% had no formal education. A relatively small proportion had secondary education (9%), and the least had attained polytechnic education (1%), reflecting limited educational progression among street hawkers. Concerning marital status, most respondents were single (88%), while 12% were married. Finally, in terms of employment status, the majority were unemployed (81%). Only a few were students (12%) or self-employed (6%), while the least proportion were formally employed (1%).

Objective One: To examine the effect of street hawking on the mental and physical wellbeing of the teenage girl child.

ITEMS	SA	A	UD	SD	D
I normally feel pains in some parts of my body after hawking	19 19(%)	51 51(%)	-	19 19 (%)	11 11(%)
After hawking I feel weak	16 16 (%)	53 53 (53%)	9 9(9%)	18 (18%)	10 (10%)
I often fall sick due to hawking	5 5(%)	68 68(%)	-	12 12(%)	5 5 (%)
Hawking does not allow me to play as I should	12 12 (%)	48 48 (%)	10 10(10%)	22 22(22%)	8 8 (%)
I don't rest after school because I hawk	58 58 (%)	12 12(%)	5 5(%)	10 10(%)	15 15(%)

Field Work, 2025

The data reveal a strong indication that street hawking has adverse physical and social effects on the respondents. Concerning bodily pains after hawking, the majority of respondents agreed (51%) or strongly agreed (19%) that they experience pains in some parts of their body, while a smaller proportion disagreed (19%) or strongly disagreed (11%). This suggests that hawking is physically strenuous for most respondents. Regarding weakness after hawking, most respondents affirmed this experience, with 53% agreeing and 16% strongly agreeing. Only a minority were undecided (9%) or disagreed (18%), while the least proportion strongly disagreed (10%). This indicates that hawking significantly contributes to fatigue among the children.

On frequent illness due to hawking, the majority agreed (68%) or strongly agreed (5%) that hawking makes them fall sick, whereas few disagreed (12%) or strongly disagreed (5%). This underscores the health risks associated with prolonged street trading. With respect to recreation, most respondents agreed (48%) or strongly agreed (12%) that hawking limits their ability to play, while a smaller group disagreed (22%) or strongly disagreed (8%). Finally, on rest after school, the majority strongly agreed (58%) that hawking deprives them of rest, though the least proportions were undecided (5%) or disagreed (10%). Overall, the findings show that hawking negatively affects respondents' health, rest, and social wellbeing.

Objective Two: To determine the factors responsible for street hawking among teenage girls.

ITEMS	SA	A	UD	SD	D
There is lack of relevant training skills is a major factor that promote street hawking	32 32(%)	42 42(%)	4 4(%)	18 18(%)	4 4(%)
Lack of proper education is a major factor of promote street hawking	17 17(%)	49 49(%)	5 5(%)	17 17(%)	19 19(%)
Poor economic opportunities is a major factor that promote street hawking	38 38(%)	54 54(%)	-	3 3(%)	5 5(%)
Low salaries is a major factor that promote street hawking	48 48(%)	33 33(%)	3 3(%)	5 5(%)	1 1(%)

Field Work, 2025

The data indicate that respondents largely perceive structural and economic factors as key drivers of street hawking. Regarding lack of relevant training skills, the majority of respondents agreed (42%) or strongly agreed (32%) that inadequate skills acquisition promotes street hawking. Only a small proportion disagreed (18%) or strongly disagreed (4%), while the least were undecided (4%). This suggests that limited vocational skills significantly contribute to children's involvement in street trading. On the role of poor education, most respondents expressed agreement, with 49% agreeing and 17% strongly agreeing that lack of proper education promotes street hawking. In contrast, a smaller proportion disagreed (17%) or strongly disagreed (19%), while the least were undecided (5%). This reflects a strong perceived link between educational deprivation and hawking.

Concerning economic opportunities, an overwhelming majority affirmed this factor, as 54% agreed and 38% strongly agreed that poor economic opportunities encourage street hawking. Only a negligible proportion disagreed (3%) or strongly disagreed (5%), indicating near-consensus among respondents. Similarly, low salaries were identified as a major factor, with the majority strongly agreeing (48%) and agreeing (33%). The least proportions were undecided (3%) or disagreed (5%), while only 1% strongly disagreed. Overall, the findings highlight poverty, low

income, limited education, and lack of skills as dominant drivers of street hawking.

5. Conclusion and Recommendations

Based on the study findings, there are indications that street hawking significantly impairs the physical, socio-emotional, cognitive, and moral development of teenage girls in Ika North East, Delta State. Physically, hawking exposes children to bodily pains, fatigue, illness, weight loss, injuries, road accidents, kidnapping, and sexual abuse. Socio-emotionally, it restricts recreational opportunities, peer interactions, and family engagement, while contributing to early alcohol consumption, disrespect for elders, conflicts, and low self-esteem. Cognitive development is hindered as hawking limits time for study, completion of assignments, regular school attendance, and academic performance, resulting in lower achievement relative to peers. Morally, street hawking exposes children to inappropriate adult attention, engagement in immoral behaviours, early sexual awareness, consumption of harmful media, lying, stealing, and other forms of ethical erosion. Overall, the findings underscore that child street hawking is a multidimensional threat, undermining the holistic development of female children and exposing them to physical, psychological, educational, and moral vulnerabilities that can have long-term negative implications for their growth and future well-being.

Based on the above the study advocated that:

- There should be advocacy campaigns to educate parents and guardians on the dangers of hawking to the children.
- There should be law enforcement agent to arrest parents and guardians who send out school-age children to the street to hawk goods, police could be empowered to ensure that those children are taken into custody and their parents prosecuted.
- The churches could get involved and the traditional leaders as well as to educate their churches and community members on the dangers of hawking.
- Seminars, workshop, symposiums, radio and television programmes, hand bills, bill boards are available instruments that can be used to educate people on the dangers of hawking.
- The school should get involved also to ensure that pupils, who are absent from school to hawk are punished.
- Parents/Guardians must ensure alternative sources of income rather than the continual exposure of their children to risk through hawking, all in the name of making money.

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The Semiotics of Colour in Contemporary African Art: A Linguistic Interpretation

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Abstract. Colour plays a central role in the expressive power of contemporary African art, yet its deeper communicative functions remain insufficiently explored. This study examines the semiotics of colour in selected contemporary African artworks, interpreting chromatic choices through a linguistic lens. Drawing on semiotic and multimodal theories, the study analyses how artists encode meaning through colour to articulate identity, memory, socio-political concerns, and cultural continuity. The research highlights the ways colour operates not merely as an aesthetic element but as a structured system of signs shaped by cultural knowledge and creative intent. Findings reveal that contemporary African artists employ colour as a communicative resource that functions similarly to language—marked by symbolic conventions, contextual variations, and interpretive possibilities. By integrating linguistic analysis with art interpretation, the study contributes to a deeper understanding of how visual meaning is constructed in African artistic practice and how viewers can decode the communicative messages embedded in artistic palettes.

Keywords: Colour semiotics, contemporary African art, linguistic interpretation, multimodality, visual communication, chromatic symbolism.

1. Introduction

Colour has long served as one of the most expressive channels of meaning in African visual culture. Beyond its aesthetic appeal, colour in African art carries layers of symbolic, cultural, and emotional significance that shape both the production and interpretation of artworks. In recent years, contemporary African artists have increasingly drawn on colour as a communicative tool to engage themes of identity, memory, gender, spirituality, and socio-political experience. As global audiences interact more frequently with African art, the semiotic potential embedded in colour usage has become even more important to understand (Adeyemi, 2022).

From a linguistic perspective, colour operates like a system of signs: it conveys messages, relies on cultural conventions, and acquires meaning through contextual interpretation. Linguists and semioticians argue that visual elements can function similarly to linguistic structures, especially when intentionally employed to communicate ideas (Kress & van Leeuwen, 2021). This makes contemporary African art an ideal site for interdisciplinary inquiry, where artistic creativity intersects with cultural semiotics and visual linguistics.

Despite growing scholarly interest in African art, the meaning-making functions of colour remain understudied. Much of the existing literature highlights themes, styles, and socio-political commentary, with less systematic attention to how artists encode meaning through chromatic choices (Olayinka, 2023). Yet contemporary African artists use colour not merely for surface beauty but as a language through which personal and collective narratives are expressed. An interpretive gap therefore exists between artistic practice and linguistic-semiotic analysis.

This study investigates 'the semiotics of colour in contemporary African art' through a linguistic lens. It seeks to demonstrate how colour functions as a communicative resource, how artists mobilise chromatic codes to express meaning, and how viewers can decode these visual messages. By bridging art and linguistics, the study offers a deeper framework for understanding the communicative power of colour in African creative expression.

2. Literature Review

2.1 Semiotics and Visual Meaning

Semiotics provides a foundational framework for understanding how visual elements operate as signs. Classic semiotic theorists emphasized that meaning emerges through systems of representation, whether verbal or non-verbal (Chandler, 2017). In contemporary multimodal linguistics, colour is recognised as a "meaning-bearing mode" that interacts with other visual cues to produce coherent messages (Kress & van Leeuwen, 2021). Recent scholarship shows that colour meanings are shaped by cultural learning, emotional response, and social context (Taylor, 2022). This reinforces the need to interpret colour in African art through a culturally grounded semiotic lens.

2.2 Colour Symbolism in African Cultural Contexts

Colour in African societies is deeply connected to cosmology, identity, and ritual practices. While specific meanings differ across ethnic groups, colours such as red, black, and white often carry symbolic weight related to power, spirituality, or ancestral presence (Ncube, 2020). Contemporary African artists frequently draw from this cultural reservoir, using colour to reference tradition, critique social issues, or assert cultural identity (Oke & Abiodun, 2022). As African art becomes more globalised, artists also adapt traditional colour symbolism to address modern themes such as migration, urbanity, and hybridism (Mensah, 2023).

2.3 Contemporary African Art and Chromatic Expression

Scholars note a growing trend toward vibrant, expressive palettes in contemporary African art, reflecting new forms of experimentation and cultural dialogue (Haruna, 2021). Artists use colour to create emotional depth, challenge stereotypes, and subvert Western aesthetic expectations (Okafor, 2023). However, few studies provide systematic linguistic or semiotic interpretations of how such meanings are encoded and decoded.

2.4 Linguistic Approaches to Visual Art

Linguistic approaches to art analysis focus on how visual components can be read as communicative structures. Visual texts possess grammar, coherence, and interpretive conventions, similar to verbal texts (Bateman, 2021). Colour is particularly influential, shaping visual "syntax" and guiding viewer perception (Forceville, 2022). Applying these insights to contemporary African art allows for a more rigorous understanding of how artists use colour as a communicative code.

2.5 Gap in the Literature

Despite substantial work on African art, colour symbolism, and multimodal communication, limited integration exists between linguistic semiotics and the analysis of colour in contemporary African artworks. Many studies treat colour aesthetically or symbolically, rather than as a structured communicative system. This study addresses this gap by applying semiotic and linguistic frameworks to interpret colour systematically.

3. Research Methodology

3.1 Research Design

A 'qualitative interpretive research design' was adopted, suitable for exploring meaning-making processes in visual texts and uncovering symbolic representation (Creswell & Poth, 2018; Bazeley, 2021). This approach allows for a detailed examination of chromatic patterns, cultural references, and artist intent.

3.2 Population

The study population consisted of 'contemporary African artworks produced between 2015–2024', along with 'artists, curators, and art writers' who contextualize and interpret these works (Okeke-Agulu, 2020; Kasfir & Roberts, 2023).

3.3 Sample and Sampling Technique

'Purposive sampling' was used to select artworks and participants rich in chromatic communication (Etikan & Bala, 2017). The sample included:

* 10 contemporary artworks representing West, East, and Southern Africa
* 5 professional artists

* 3 curators or art critics

Sampling was continued until 'thematic saturation' was reached (Guest, Namey & Chen, 2020).

3.4 Data Collection Instruments

1. 'Visual Analysis Protocol' - Focused on dominant colours, contrasts, symbolic references, and potential communicative intent (Rose, 2022).
2. 'Semi-Structured Interviews' - Engaged artists and curators to understand motivations, cultural influences, and intended meaning behind chromatic choices (Denscombe, 2021).

3.5 Data Collection Procedure

* Artwork images were sourced from galleries, portfolios, and exhibition catalogues.
* Visual semiotic analysis applied the structured protocol.
* Interviews were conducted physically or online, recorded, and transcribed for analysis (Tracy, 2020).

3.6 Data Analysis

The data collected from visual analysis of the selected contemporary African artworks, combined with insights from semi-structured interviews with artists and curators, were subjected to a thematic and semiotic analysis. The primary aim was to interpret how colour functions as a communicative tool, conveying cultural, emotional, and socio-political meanings within the artworks.

The visual analysis began with a detailed examination of each artwork, focusing on the dominant colour palettes, contrasts, spatial arrangements, and interactions between hues. Each chromatic choice was assessed for potential symbolic significance, contextual relevance, and affective impact. Colours were coded according to recurrent patterns and grouped into themes such as cultural identity, emotional expression, social commentary, and hybrid innovation. For example, in West African works, the repetition of red, gold, and green suggested deliberate references to pan-African identity, while earthy tones in Southern African works indicated connections to heritage and environmental context (Odetayo, 2025; Olayinka, 2023).

Simultaneously, interview data were transcribed and analyzed using thematic coding. Key themes emerged around artists' intentions, cultural influences, and interpretive strategies. Artists frequently described colour as a conscious tool to communicate layered meanings, mediating between local symbolic systems and broader global audiences. Curators reinforced these insights, highlighting that understanding colour codes is essential for accurate interpretation and audience engagement (Haruna, 2021; Mensah, 2023).

The analysis integrated 'semiotic and linguistic frameworks', treating colour as a system of signs capable of symbolic, indexical, and iconic meaning (Bateman, 2021; Forceville, 2022). Symbolic analysis focused on culturally embedded meanings, indexical analysis interpreted context-dependent or situational cues, and iconic analysis explored how colour mirrored emotional states, narratives, or environmental conditions. Through iterative coding and comparison across cases, the study identified consistent patterns in the communicative deployment of colour while also noting variations resulting from regional differences and individual artistic innovation.

Finally, the analytical process involved synthesizing visual and interview data to construct a comprehensive understanding of how colour functions as a language-like system in contemporary African art. This approach ensured that the findings were grounded in both the visual evidence of the artworks and the interpretive perspectives of the artists and curators, producing a holistic and nuanced representation of colour as a communicative, semiotic, and expressive resource.

4. Results

The analysis of the ten selected contemporary African artworks revealed rich and recurring patterns in the use of colour, demonstrating its central role as a communicative and semiotic resource. Across the sampled works, colour was used deliberately to convey cultural identity, emotional states, social commentary, and aesthetic innovation. In West African paintings, red, gold, and green frequently appeared, evoking pan-African identity, local heritage, and historical continuity. These chromatic choices function as visual markers that connect the artworks to collective memory and culturally specific narratives, enabling viewers familiar with these codes to immediately interpret layers of meaning embedded in the compositions (Odetayo, 2025; Olayinka, 2023).

In Southern African works, earthy tones such as ochre, brown, and muted yellow predominated, serving to situate the artworks within environmental, spiritual, and historical contexts. The choice of these colours reflected not only aesthetic preference but also the artists' intention to engage audiences with themes of ancestry, ritual, and cultural continuity. These findings underscore that colour in contemporary African art operates as a symbolic tool, encoding meaning that transcends surface decoration.

Beyond cultural representation, the study found that colour served a key role in expressing emotion and responding to social realities. Bright, saturated hues, such as vivid yellows, oranges, and reds, were consistently associated with optimism, vitality, and celebration, while darker or muted tones, such as deep blues, blacks, and greys, were used to signify mourning, tension, or reflection on historical and contemporary social issues (Mensah, 2023; Haruna, 2021). These findings suggest that colour in African art functions similarly to affective cues in language, guiding audience perception and evoking emotional responses in alignment with the artist's intended message (Kress & van Leeuwen, 2021; Bateman, 2021).

A significant observation from both the visual analysis and interviews with artists and curators was the prevalence of hybrid chromatic systems. Many artists combined traditional colour lexicons with contemporary, global influences, incorporating neon tones, pastels, and experimental palettes alongside culturally rooted hues. This blending demonstrates the dynamic and adaptive nature of colour as a semiotic resource, allowing artists to negotiate between tradition and modernity while communicating to both local and international audiences (Okeke-Agulu, 2020). For instance, one artist explained that the combination of earthy pigments with neon highlights was intended to reflect both heritage and contemporary urban experience, creating a visual dialogue that resonates across cultural boundaries.

The study also found that colour functions on multiple semiotic levels simultaneously. Symbolically, it conveys cultural values, spiritual meaning, and social identity. Indexically, it indicates context-specific conditions, such as celebration, mourning, or protest. Iconically, colour mirrors emotions, environmental conditions, or narrative motifs, enhancing viewer engagement and interpretive depth (Baiden, Aboagyewaa-Ntiri & Opoku, 2022; Forceville, 2022). Interviews reinforced that these semiotic functions are deliberate, with artists carefully selecting chromatic combinations to encode layered messages that communicate cultural, emotional, and socio-political meaning.

Overall, the results indicate that colour in contemporary African art is not merely decorative but constitutes a structured system of visual language. Its strategic deployment allows artists to articulate complex narratives, mediate cultural memory, express emotional depth, and engage audiences across diverse interpretive frameworks. By examining colour through both visual analysis and artist/curator perspectives, the study highlights the intricate interplay between traditional symbolism, contemporary innovation, and global influences, affirming colour's central role as a primary communicative resource in African visual culture.

5. Discussion of Findings

The analysis of the selected contemporary African artworks revealed that colour serves as a multifaceted communicative tool, functioning at symbolic, indexical, and iconic levels. Across the ten artworks examined, recurring patterns emerged that demonstrate both the cultural depth and expressive versatility of chromatic choices. In many West African paintings, the use of red, gold, and green reflected pan-African identity and local heritage, while Southern African works frequently employed earth tones such as ochre, brown, and deep yellow to signify historical memory, spiritual resonance, or environmental connection (Odetayo, 2025; Olayinka, 2023). These findings underscore that, for contemporary African artists, colour is not simply decorative but is embedded with layers of cultural meaning that communicate identity and communal values to viewers familiar with traditional symbolic systems.

Colour also emerged as a primary vehicle for emotional expression and socio-political commentary. Saturated hues, including vivid yellows and oranges, were associated with optimism, vitality, and celebration, whereas darker tones, such as deep blues and blacks, conveyed grief, reflection, or social critique (Mensah, 2023; Haruna, 2021). These chromatic strategies align with multimodal linguistic theories, which suggest that visual elements, like verbal language, can encode affective meaning and guide interpretive processes (Kress & van Leeuwen, 2021; Bateman, 2021). Interviews with artists and curators revealed that these choices are deliberate: colour is used to create affective resonance, evoke narrative, and communicate nuanced messages about societal issues or personal experiences. For example, one artist explained that blending traditional palettes with modern neons or pastel tones allowed their work to speak simultaneously to local audiences familiar with cultural codes and to international viewers interpreting the artwork through broader visual conventions.

The study further highlighted the innovative use of hybrid chromatic systems. Many artists juxtaposed traditional colour lexicons with global influences, producing palettes that simultaneously preserve heritage and engage contemporary aesthetic trends. This hybridity demonstrates the adaptive capacity of

colour as a semiotic resource: it is capable of bridging historical and modern contexts while maintaining interpretive flexibility (Okeke-Agulu, 2020). Such hybridisation reflects an ongoing dialogue between local and global art spheres, suggesting that contemporary African artists are not only custodians of cultural memory but also active participants in transnational artistic discourse.

Overall, the findings confirm that colour in contemporary African art functions as a structured semiotic system, akin to language. Symbolically, it conveys cultural values, spiritual meaning, and identity markers (Baiden, Aboagyewaa-Ntiri & Opoku, 2022). Indexically, it communicates situational and contextual meaning, such as mourning, protest, or celebration (Haruna, 2021). Iconically, it mirrors emotions, environmental states, or narrative motifs, thereby enhancing the viewer's perceptual and emotional experience (Forceville, 2022). This layered functionality underscores the communicative power of colour, demonstrating that visual elements in contemporary African art are capable of encoding complex and multidimensional messages beyond the purely aesthetic.

The study's implications extend across artistic practice, art education, curation, and research. For educators and scholars, integrating colour semiotics into curricula and academic discourse is essential to cultivate critical understanding of African art. For artists, deliberate exploration of colour as a communicative tool can enhance narrative depth and audience engagement. Curators and exhibition organisers are encouraged to provide interpretive materials highlighting the semiotic significance of colour, ensuring that audiences can decode embedded messages and cultural references. Furthermore, researchers should expand the study of colour semiotics to include larger, cross-regional, and cross-media analyses, covering textiles, installations, and digital media to capture evolving trends and hybrid practices. Finally, public engagement initiatives such as workshops and gallery talks can foster awareness and appreciation of the communicative and cultural dimensions of colour, bridging the interpretive gap between artists and viewers.

In summary, the study demonstrates that colour in contemporary African art is a dynamic, structured, and multilayered system of communication. It is instrumental in expressing cultural identity, emotional depth, historical memory, and socio-political commentary. Through a semiotic and linguistic lens, the research highlights how contemporary African artists strategically manipulate chromatic codes to convey meaning, negotiate tradition and modernity, and engage diverse audiences. Colour, therefore, is not merely an aesthetic choice but a primary vehicle of communication, bridging personal, communal, and global narratives in African visual culture.

6. Conclusion

The findings of this study demonstrate that colour in contemporary African art operates as a sophisticated semiotic and communicative system, far beyond its traditional aesthetic function. Across the artworks examined, colour consistently served to articulate cultural identity, historical memory, emotional states, and socio-political commentary, functioning simultaneously at symbolic, indexical, and iconic levels. Traditional chromatic lexicons, rooted in local and regional cultural practices, continue to inform artistic choices, allowing viewers familiar with these conventions to decode layers of meaning and engage deeply with the work (Odetayo, 2025; Olayinka, 2023).

At the same time, the study highlights the adaptive and innovative use of colour, with artists blending traditional hues with global and contemporary palettes, including neons, pastels, and experimental combinations. This hybridisation reflects the dynamic negotiation between heritage and modernity, demonstrating that colour can bridge local cultural knowledge and global artistic discourse (Okeke-Agulu, 2020). Through these practices, artists are able to communicate complex narratives that engage audiences emotionally, culturally, and intellectually, establishing colour as a primary mode of visual language.

Moreover, the research reveals that colour functions not only as a symbolic marker of identity or heritage but also as a tool for emotional and social communication. Bright, saturated colours evoke vitality and celebration, whereas darker, muted tones convey reflection, mourning, or critique, highlighting the nuanced ways in which chromatic choices encode affective and contextual meaning (Mensah, 2023; Haruna, 2021). These findings underscore that understanding contemporary African art requires interpreting colour as a structured communicative system, akin to language, where each hue, combination, and contrast carries intentional and contextually rich meaning.

In sum, this study affirms that colour is central to the communicative power of contemporary African art. It is a vehicle through which artists express identity, memory, emotion, and social commentary, while also navigating the intersection of tradition and global

artistic innovation. By examining colour through a linguistic-semiotic lens, the study provides a framework for appreciating the depth and complexity of visual meaning in African art, emphasizing that colour is not merely decorative but a primary medium through which cultural, emotional, and societal narratives are transmitted and understood.

7. Recommendations

Based on the findings of this study, several recommendations are proposed to enhance the understanding, practice, and interpretation of colour in contemporary African art:

7.1 Integration of colour into Art Education

Art education programs, both within Africa and globally, should incorporate colour semiotics into curricula. Teaching students to analyze and interpret colour as a communicative system will equip emerging artists and scholars with the tools to understand and create meaning-rich artworks. This approach encourages critical thinking about how cultural, emotional, and socio-political messages can be embedded in visual forms.

7.2 Deliberate Artistic Practice

Contemporary African artists are encouraged to continue exploring colour as a strategic communicative resource. By intentionally employing both traditional and hybrid palettes, artists can convey complex narratives, negotiate cultural identities, and engage diverse audiences more effectively. Emphasis on chromatic literacy enables artworks to communicate layered meanings across local and international contexts.

7.3 Curatorial and Exhibition Strategies

Curators and exhibition organizers should provide interpretive materials that elucidate the semiotic and linguistic significance of colour in artworks. Such resources—through labels, guides, or audio-visual content—can facilitate audience understanding and appreciation, enabling viewers to decode symbolic, indexical, and iconic messages embedded in chromatic choices.

7.4 Further Research

Future studies should expand the scope of research on colour semiotics in African art, incorporating cross-regional and cross-media analyses, including textiles, installations, and digital art. Comparative studies could illuminate regional variations, evolving chromatic trends, and the influence of global artistic practices on traditional colour systems.

7.5 Public Engagement and Awareness

Efforts to educate the general public on the communicative and cultural roles of colour in African art are recommended. Workshops, gallery talks, and community programs can enhance viewers' ability to interpret colour-coded messages, deepen engagement with the artworks, and foster appreciation of the cultural, emotional, and socio-political dimensions embedded in contemporary African art.

7.6 Policy and Institutional Support

Arts councils, cultural institutions, and funding bodies should support initiatives that emphasize colour literacy and semiotic analysis in African art. Grants, residencies, and exhibition programs that encourage artists to experiment with and document the communicative role of colour can enrich cultural production and scholarship.

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Part Three
Educational Psychology

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Gamified Assessment as a Catalyst for Students' Engagement and Achievement in Mathematics among Junior Secondary School Students in Lagos State

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Abstract. In today's rapidly evolving educational landscape, the need for innovative, learner-centered instructional strategies has become increasingly essential for improving student participation and academic performance. As technology continues to reshape classroom practices, gamified assessment has emerged as a promising approach for fostering motivation and enhancing learning experiences. This study investigated the effectiveness of gamified assessment in improving student engagement and academic achievement in Mathematics among junior secondary school students in Lagos State. A quasi-experimental pre-test, post-test control group design was adopted, involving 120 students selected through a multi-stage sampling technique. The experimental group received Mathematics instruction enriched with gamification features such as points, badges, levels, leaderboards, and instant feedback, while the control group was taught the same content using traditional assessment strategies. Two hypotheses were tested at 0.05 level of significance to guide the study. Data were collected using a researcher-designed instrument titled "Gamified *Assessment as a Catalyst for Student Engagement Questionnaire "(GACSEQ)* and a *Mathematics Achievement Test (MAT)* with reliability coefficients of 0.79 and 0.82 respectively. Data were analyzed using descriptive and inferential statistics. Findings revealed a significant difference in the engagement levels and academic achievement between students exposed to gamified assessment and those assessed through conventional methods, with the experimental group performing notably better. The study concludes that gamified assessment is an effective pedagogical tool for promoting active learning and improving academic outcomes in mathematics. It recommends the integration of gamification elements into mathematics instruction, continuous professional development for teachers, and the adoption of innovative assessment practices to support deeper learning and enhance student performance.

Keywords: Academic Achievement, *Gamified assessment,* Mathematics, *Student engagement.*

1. Introduction

In recent years, the integration of game-based elements into teaching and assessment, known as gamified assessment has gained significant attention as an innovative approach to improving educational outcomes. Mathematics, a subject often perceived as abstract and challenging by many senior secondary school students, has consistently recorded varying levels of engagement and academic performance in Nigeria. As schools seek more effective ways to motivate learners, gamified assessment offers a promising strategy by transforming traditional evaluation methods into interactive, enjoyable, and goal-driven learning experiences. Engagement is important in teaching and learning activities. In terms of education, engagement is defined as the students' willingness to actively participate in the learning process, as well as demonstrating sustained involvement and positive emotional tone toward learning experiences (Miller et al., 2021). Students can learn better in a learning environment full of engagement. The development of technology brings a new concept for educators in carrying out the learning activity. The needs of a new learning pedagogy which can accommodate millennials becomes one of the challenges that teachers face (Becker, 2017). Due to the fact that younger learners are very dependent on technology, almost all aspects of their life cannot be separated from technologies. Young learners can get information easily, share or update their activity through social media, they also spend a lot of time playing games online.

Student engagement refers to the degree of attention, curiosity, interest, optimism, and ardour that college students exhibit when they are getting to know or being taught, which extends to the stage of motivation they have to study and growth in their education. There are numerous techniques that can amplify the engagement of the user. These include:

Gamification Techniques: These use game elements to motivate and sustain interest. Examples are points & scores, badges & rewards, levels and progress bars, leaderboards, challenges & quests, immediate feedback, unlockable content etc.

Interactive Techniques: These increase participation and active involvement. Examples are quizzes and polls, interactive videos, drag-and-drop tasks, simulations, virtual labs, scenario-based learning etc.

Personalized Learning Techniques: These tailor the experience to the learner. Examples are adaptive learning pathways, customized feedback, recommendation engines, learning analytics dashboards etc.

Social Engagement Techniques: These leverage communication and collaboration. Examples are discussion forums, peer review activities, group tasks and teamwork, social sharing, collaborative problem solving etc.

Motivational Techniques: These boost interest and persistence. Examples are goal setting, progress tracking, recognition and praise, incentives / rewards, streaks or daily engagement prompts etc.

Usability and Design Techniques: A good design that keeps users engaged. Examples are simple navigation appealing visuals, responsive layouts, clear instructions, minimal cognitive load etc.

Emotional Engagement Techniques: These connect with the user's feelings. Examples are storytelling and narratives, relatable characters or avatars, real-life examples, humor or surprise elements etc.

Cognitive Engagement Techniques: These stimulate deeper thinking. Examples are Problem-based learning, Inquiry-based tasks, Critical thinking activities, immediate application of knowledge

Behavioral Engagement Techniques: These encourage continuous action. Examples are timely reminders, notifications, practice schedules, habit formation techniques etc.

Technology-Enhanced Techniques: Using digital innovations. Examples are Augmented Reality (AR), Virtual Reality (VR), AI tutors, Chatbots, Smart feedback systems etc.

Among the above listed techniques, gamification assessment technique is what this study seeks to study. Gamification can facilitate motivation which brings about the engagement of users, resulting in higher overall performance and alternate of behavior. Consequently, elucidated that a strategy which can effortlessly amplify the engagements and applied in an exciting manner (such as games like elements) ought to be adopted in gaining knowledge of difficult subjects.

In the last decade, the use of technology to improve learning and education has been widely explored, as a means to improve instruction delivery. It potentiated the emergence of learning experiences, like blended learning and distance education. Prominent examples of these are flipped classrooms, where content is delivered online and students work in class to solve problems, supervised by an instructor, and Massive Open Online Courses, which deliver class materials and lectures as online resources, and students may discuss and get help in interactive forums. Most of these learning advances rely on distributed systems to make resources available remotely, without any further efforts to make the experience more engaging and rewarding for students. Education is also being shaped by the use of other techniques like gamification: adding game elements to non- game contexts. It is used to engage users to embrace specific behaviors, like working out or saving money. Gamification relies on the motivational power characteristic of good games which, unlike traditional learning materials, can deliver information on demand and within context balancing challenge difficulties according to one's abilities.

In recent years, education is increasingly becoming high tech. All the things that are happening in the world of technology are directly affecting education and learning systems. Technology enriched learning tools and spaces with mobile technology, Web 2.0 applications, social media, and all existing digital resources are providing powerful arenas for learning, both in formal and informal education settings (Multisilta, 2022). Gamification is one of the approaches employed in learning process and certainly keeps students engaged. Games increase motivation through engagement. This is so different to the past when teaching and learning methods focused on content or knowledge than learning experience. Students are not just passive learning anymore, but they have actively involved in learning process or called as "learning by doing" and obtain knowledge by themselves. Gamification is increasingly being utilized in higher education, with many educators and researchers exploring its potential and impact on learning outcomes. Many previous studies have demonstrated that learning motivation and efficiency can be enhanced through educational games (Liua, 2023; Chena 2023). Several digital tools created in learning bring exciting experiences to students such as

Kahoot, Quizizz, Quizlet, Gimkit, etc. Gamification is a growing trend in education due to its influence on student learning (Göksün & Gürsoy, 2019). Gamification is an educational approach to facilitating learning, encouraging motivation and engagement, improving learner participation and lesson interactivity, and stimulating learners such that it leads to an expansion of their knowledge (McGonigal, 2021). Its proper implementation can increase intrinsic motivation and engagement, and it is a powerful tool for teachers at all levels within the educational system.

Gamification strategies include the use of rewards for players who accomplish desired tasks or competition to engage players. Types of rewards include points, achievement badges or levels, the filling of a progress bar, or providing the user with virtual currency. Making the rewards for accomplishing tasks visible to other players or providing leaderboards are further ways of encouraging players to compete. Using games in education has a variety of benefits, and several game design mechanics demonstrated success in educational environments (Stott & Neustaedter, 2023). Games typically allow the player to restart or play again, making mistakes recoverable. This freedom to fail allows students to experiment without fear and increases student engagement and achievement (Lee & Hammer, 2021).

Gamified assessment offers several advantages and disadvantages, which can influence its effectiveness in enhancing student engagement, motivation, and learning outcomes. Here are some of the key advantages and disadvantages of gamified assessment:

1.1 Advantages of Gamified Assessment

Increased Engagement: Gamified assessment makes learning more enjoyable and interactive by incorporating game elements such as challenges, rewards, and competition. This increased engagement can lead to higher levels of participation and motivation among students.

Enhanced Motivation: By providing clear goals, immediate feedback, and tangible rewards, gamified assessment motivates students to actively participate in assessment activities and strive for improvement. Students are more likely to persist in their efforts and take ownership of their learning.

Personalized Learning: Gamified assessment can be tailored to students' individual needs, preferences, and learning styles, allowing for personalized learning experiences. Adaptive algorithms and branching pathways enable students to progress at their own pace and receive targeted support where needed.

Active Learning: Gamified assessment promotes active learning by requiring students to apply their knowledge and skills in authentic contexts, solve problems, and make decisions. This hands- on approach fosters deeper understanding and retention of learning content.

Immediate Feedback: Gamified assessment provides students with immediate feedback on their performance, allowing them to identify strengths and areas for improvement in real-time. This timely feedback enhances learning by guiding students' next steps and reinforcing desired behaviors.

Promotion of Collaboration: Gamified assessment activities encourage collaboration and teamwork among students, fostering social interaction, communication skills, and peer learning. Collaborative tasks can promote a sense of community and support among students.

1.2 Disadvantages of Gamified Assessment

Overemphasis on Rewards: In some cases, gamified assessment may lead to an overemphasis on extrinsic rewards, such as points, badges, and leaderboards, rather than intrinsic motivation andgenuine interest in learning. Students may become focused on earning rewards rather than on mastering content.

Potential for Distraction: The immersive and interactive nature of gamified assessment activities may also pose a risk of distraction, particularly if students become overly engaged withgame elements at the expense of learning objectives. Educators must strike a balance between engagement and academic rigor.

Unequal Access: Gamified assessment often relies on technology and digital resources, which may not be equally accessible to all students due to factors such as socioeconomic status, access todevices, and internet connectivity. This can exacerbate existing disparities in education.

Complex Implementation: Designing and implementing gamified assessment activities can be time-consuming and resource-intensive for educators. It requires careful planning, technical expertise, and ongoing support to create meaningful and effective learning experiences.

Resistance to Change: Some students and educators may be resistant to gamified assessmentapproaches, particularly if they are accustomed to traditional assessment methods. Overcoming resistance to change and ensuring buy-in from stakeholders may pose challenges during implementation.

Validity and Reliability Concerns: There may be questions about the validity and reliability ofgamified assessment methods, particularly if game elements are not directly aligned with learning objectives or if assessment data are not accurately reflective of students' knowledge and skills.

A meaningful gamification will only succeed if it puts the needs of the users first over the needs of an organization. When this occurs, users will have a positive experience which results in a longer-term and deeper engagement among participants, non-game tasks, and organizations. Focusing only on the game mechanisms will create a false scenario in achieving a goal. The positivity of the game-based experience lies in the fun of play and not the points itself. When considering whether gamification can benefit a group of students, it is crucial to identify their levels of motivation and whether introducing a reward system in an optimized environment is feasible as the rewards elements have a potential to disrupt their flow and resulting in dependency on the rewards, and demotivation if the reward system is taken abolished. When planning a learning activity, gamification should be done and planned at the same stage because gamification cannot do much with low quality or poorly planned material and activities.

Mathematics is a foundational subject in Nigeria's education system and a compulsory requirement for students at the secondary school level. However, despite its importance, persistent low performance in mathematics has continued to be a major concern. Reports from internal school assessments and national examinations have shown that many senior secondary school students demonstrate low interest, anxiety, and poor achievement in mathematics. These challenges are often linked to the subject's abstract nature, fear of failure, and the predominance of conventional assessment methods that provide limited motivation. In recent years, global educational trends have shifted toward learner-centered and technology-enhanced pedagogies. One of the emerging innovations is gamification, which involves applying game mechanics in non-game contexts to improve learner motivation and participation. Gamified assessment transforms routine testing into interactive, enjoyable, and rewarding learning experiences. It encourages active participation by providing immediate feedback, promoting healthy competition, and allowing students to progress at their own pace.

In Lagos State, with its diverse student population and increasing adoption of digital and interactive learning tools, the need for engaging and effective assessment methods is more evident than ever. Gamified assessment presents a practical solution to improve students' attitudes toward mathematics while enhancing their performance. By integrating game elements into the assessment process, students may become more willing to attempt challenging tasks, collaborate with peers, and persist in solving mathematical problems. This study is therefore situated within the ongoing efforts to improve mathematics education in Nigeria. It seeks to investigate how gamified assessment influences student engagement and academic achievement among senior secondary school students in Lagos State, and whether this innovative approach can address long-standing challenges associated with mathematics learning.

1.3 Statement of the Problem

Despite the central importance of Mathematics in the Nigerian curriculum, students' performance in the subject at the senior secondary level has continued to be unsatisfactory. Reports from both internal school assessments and external examinations such as WAEC and NECO consistently reveal low pass rates in Mathematics. Many students perceive the subject as difficult, abstract, and intimidating, leading to low motivation, poor engagement, and high levels of Mathematics anxiety. Traditional assessment methods often dominated by paper-and-pencil tests provide limited opportunities for interaction, immediate feedback, or incentives that motivate students to participate actively. These conventional practices may contribute to students' lack of interest and low confidence in solving mathematical problems. With the introduction of technology-based and student-centered instructional approaches globally, gamified assessment is emerging as a promising strategy that can improve students' engagement and ultimately enhance learning outcomes.

However, like any educational intervention, it comes with its own set of challenges and root causes that need to be addressed for effective implementation. Some of the root causes are: *Limited Access to Technology* is one of the primary challenges hindering the effective use of gamified assessments in Nigeria. Many schools, especially in rural areas, lack the necessary infrastructure such as computers, tablets, and reliable internet connection needed to implement gamified assessments. This digital divide exacerbates educational inequalities, as students in urban areas with better access to technology are more likely to benefit from gamified assessments compared to their counterparts in rural areas. Without these resources, implementing gamified assessment platforms or software can be difficult. While technology is becoming more prevalent in Nigerian schools, there is still a significant digital divide. Many students do not have access to personal computers or smartphones, making it challenging to implement gamified assessment that requires individual devices. Without these resources, implementing gamified assessment

platforms or software can be difficult. While technology is becoming more prevalent in Nigerian schools, there is still a significant digital divide. Many students do not have access to personal computers or smartphones, making it challenging to implement gamified assessment that requires individual devices.

Secondly, is *the Lack of awareness and training among educators* on how to effectively integrate gamified assessments into the curriculum? Many teachers in Nigeria may not be familiar with gamification concepts or lack the technical skills needed to implement them in the classroom. Without proper training and support, educators may struggle to design engaging gamified assessments that align with learning objectives and promote student engagement. Teachers may require training and support to effectively implement gamified assessment methods. They need to understand how to integrate gamified elements into their teaching and how to evaluate student performance using these methods. Without proper training, teachers may struggle to utilize gamified assessment effectively. Another significant issue is the *socioeconomic factors* such as poverty and inequality play a significant role in shaping students' access to education in Nigeria. Many students come from low-income families that cannot afford devices or internet connectivity needed for gamified assessments. Without addressing these socioeconomic disparities, the benefits of gamified assessments may only reach a privileged few, further widening the education gap.

Gamified assessments, like traditional assessments, are susceptible to bias and unfairness. Without careful consideration of cultural biases and socio-economic disparities, gamified assessments may inadvertently disadvantage certain groups of students. For example, a gamified assessment that relies heavily on English language proficiency may put students from non-English speaking backgrounds at a disadvantage. While technology can enhance learning experiences, there is a risk of overemphasis on technology in education. Gamified assessments should complement traditional teaching methods rather than replace them entirely. Overreliance on technology can lead to neglect of other important aspects of education such as critical thinking, creativity, and social interaction. Despite the growing popularity of gamified assessments, there is still a lack of robust evidence-based research on their effectiveness in the Nigerian context. Without empirical evidence to support their efficacy, educators and policymakers may be hesitant to invest resources in implementing gamified assessments on a large scale.

Lastly, integrating gamified assessment into the existing curriculum can be a challenge. Nigerian schools typically follow a standardized curriculum, and incorporating gamified elements may require adjustments to align with educational goals and learning outcomes. Implementing gamified assessment can be costly, especially for schools with limited budgets. The expenses associated with purchasing and maintaining technology, software licenses, and training teachers can be a significant barrier to adoption. However, empirical evidence on the effectiveness of gamified assessment in improving engagement and academic achievement, particularly among senior secondary school students in Lagos State, remains limited. This creates a gap in knowledge regarding whether gamified assessment can truly serve as a catalyst for improving Mathematics learning outcomes. This study seeks to address this gap.

1.4 Purpose of the Study

The main purpose of this study is to investigate the effect of gamified assessment on student engagement and academic achievement in Mathematics among senior secondary school students in Lagos State.

Specifically, the study intends to:

- Compare the engagement levels of students exposed to gamified assessment with those assessed using traditional methods.
- Assess the difference in academic achievement between students exposed to gamified assessment and those assessed using conventional assessment techniques.

1.5 Research Hypotheses

The following null hypotheses was tested:

- There is no significant difference in the engagement levels of students exposed to gamified assessment and those assessed using traditional assessment methods.
- There is no significant difference in the academic achievement between students exposed to gamified assessment and those assessed using conventional assessment techniques.

2. Research Design

This study employed a quasi-experimental with pre-test and post-test non-equivalent control group design. A quasi-experimental design is a type of experimental research in which participants are not randomly

assigned to groups but are instead placed into pre-existing groups (such as intact classes), while still allowing for the manipulation of an independent variable and comparison with a control group (Creswell & Creswell, 2018). This design is appropriate because it allows comparison between students exposed to gamified assessment (experimental group) and those taught and assessed using traditional methods (control group).

2.1 Population

The population for this study consists of all Junior Secondary School two **students** and their Mathematics teachers in public senior secondary **schools** in Education District III of Lagos State. Lagos State is chosen due to its large, diverse student population and increasing adoption of technology in classrooms. Education District III of Lagos State covers four zones namely; Epe, Eti-Osa, Ibeju-Lekki, and Lagos Island

2.2 Sample and Sampling Techniques

The study employed a multi-stage sampling technique, selecting a total of 120 students (60 for the experimental group and 60 for the control group). In the first stage, two zones were randomly chosen from the four zones comprising Education District III: Epe, Eti-Osa, Ibeju-Lekki, and Lagos Island. In the second stage, a purposive sampling method was used to select schools that integrate technology and were willing to participate in the gamified assessment. Within each selected school, simple random sampling was applied to assign students to the experimental and control groups, minimizing selection bias.One school was designated as the experimental group, where students received Mathematics instruction combined with a gamified assessment strategy. The other school served as the control group, where students were taught the same Mathematics topics but assessed using traditional teacher-led methods. To establish baseline performance, both groups were administered a Mathematics Achievement Test (MAT) as a pre-test. After a four-week intervention, the same instrument (or an equivalent parallel form) was administered as a post-test to measure changes in students' Mathematics performance.

2.3 Research Instrument

Two instruments were used in collecting data for this study. The first is a self-constructed questionnaire title: Gamified Assessment as a Catalyst for Student Engagement Questionnaire (GACSEQ). The questionnaire was made up of two sections A and B; section A contains data pertaining to useful demographic variables such as: gender, age, and class while section B deals with a total of thirty research questions. The questionnaire was closed ended type which allows for Strongly Agree (SA), Agree (A), Strongly Disagree (SD) or Disagree (D) responses from respondents.

While the second instrument was a Mathematics Achievement Test (MAT) was used to test the academic performance of the students. Twenty (20) Mathematics questions was set from past questions paper of Junior Secondary School Basic Education Certificate Examination (BECE) of Y (2019-2023)

2.4 Validity and Reliability of Research Instrument

The draft version of the instrument was submitted to three experts in the field of Measurement and Evaluation to assess whether the items were appropriately structured to measure the variables of interest in the study. This process helped to establish the face, expert, and content validity of the research instrument. Based on the experts' feedback, the items were reviewed, modified, and deemed suitable for the study. All corrections and constructive criticisms provided were carefully considered and incorporated into the final version of the instrument.

A pilot study was conducted on twenty students, from Lagos Mainland Local Government Area which was not included in the main study. Cronbach's Alpha reliability analysis was employed (with the aid of Statistical Package for Social Sciences-SPSS 25) the "r" calculated showed positive coefficient of 0.79 ((GACSEAM) and 0.82 for the Mathematics Achievement Test (MAT).

2.5 Experimental Stages of the Study

The experimental procedure was structured into several stages to systematically assess the impact of gamified assessment on student engagement and academic achievement in Mathematics. The stages of treatment were discussed below:

1. **Pre-Experimental Stage (Preparation and Baseline Assessment)**: The researcher Conducted a pre-assessment to establish a baseline of student knowledge and skills for both groups.

Selection of Participants: Using multi-stage sampling, schools and students were selected and assigned to experimental and control groups.

Orientation: Students in the experimental group were introduced to the gamified assessment platform, including instructions on how to earn points, badges, and track progress.

Pre-Test Administration: Both experimental and control groups were administered the **Mathematics Achievement Test (MAT)** to establish baseline academic performance.
Engagement Baseline: The (GACSEQ**) Questionnaire** was administered to measure initial levels of behavioral, emotional, and cognitive engagement in Mathematics lessons.
2. Treatment Period: **Intervention Stage (Implementation of Gamified Assessment)**

Administer the gamified assessments to the experimental group over a defined period (e.g.four weeks).
Administer the traditional assessments to the control group over the same period.
Experimental Group: Gamified Assessment
For the experimental group, gamified assessments was used to measure student engagement and learning outcomes. Gamified assessments integrate game design elements such as points, badges, leaderboards, and challenges into the assessment process. These assessments aim to make learning more engaging and interactive, thereby potentially increasing student motivation and performance.
Types of Gamified Assessments Administered in Mathematics:
Students received **Mathematics instruction integrated with gamified assessment elements**.
Game elements included **points for correct answers, levels to track progress, badges for completing tasks, challenges, and instant feedback** on quizzes and exercises.
Lessons were designed to encourage **active participation, collaboration, problem-solving, and competition** within a supportive learning environment
Quizzes with Leaderboards: Students complete quizzes and see their rankings on a leaderboard, encouraging a competitive spirit.
Badges and Rewards: Students earn badges and rewards for completing tasks or reaching certain milestones.
Control Group: Traditional Assessment
The control group was assessed using traditional assessment methods. These methods are commonly used in educational settings and are designed to provide a benchmark against which the effectiveness of gamified assessments can be measured. Traditional assessments used was typically more formal and structured, and focuses on evaluating students' understanding through conventional means. Students received the **same Mathematics topics** using traditional teaching methods. Assessment was conducted solely through conventional **teacher-led exercises, quizzes, and tests** without gamified elements.
Types of Mathematics Traditional Assessments Administered:
Written Exams: Achievement tests that include multiple-choice questions.
Homework Assignments: Regular assignments given to students to reinforce classroom learning.
In-Class Quizzes: Short, periodic quizzes administered in class to monitor progress.
Oral Presentations: Students present on a topic to demonstrate their understanding and communication skills.
Project-Based Assessments: Comprehensive projects that require students to apply what they have learned to complete a task or solve a problem.
Duration: The intervention lasted **four weeks**, with regular gamified assessment activities conducted throughout the instructional period.
3. **Post-Experimental Stage (Post-Assessment and Measurement of Effects**): Conducted a post-assessment for both groups to measure any changes in student engagement and learning outcomes.
Post-Test Administration: Both experimental and control groups were re-administered the **MAT** (or an equivalent parallel form) to measure improvements in Mathematics achievement.
Post-Engagement Measurement: The GACSEQ was re-administered to assess changes in student engagement (behavioral, emotional, and cognitive) following the intervention.
4 .**Data Analysis and Comparison Stage**:
Collect data from both pre- and post-assessments.
Analyze the data to compare the performance and engagement levels of students in the experimental and control groups.
Scoring Gamified Assessments
Gamified assessments in the experimental group was scored using a combination of automated and manual methods, depending on the type of assessment employed.
Quizzes with Leaderboards:
- Automated scoring based on the number of correct answers.
- Additional points for speed and accuracy, if applicable.
- Leaderboard rankings reflect overall performance.

Badges and Rewards:
- Points awarded for each badge or reward earned.
- Cumulative score based on the total number of badges and rewards.

Scoring Traditional Assessments
Traditional assessments in the control group will be scored using conventional methods to ensure reliability and validity.

Written Exams:
- Scored based on a predetermined answer key or rubric.
- Points allocated for each correct response.
- Partial credit given for partially correct answers, where applicable.

Oral Presentations:
- Scored using a rubric that evaluates content, organization, delivery, and visual aids.
- Points awarded for clarity, engagement, and depth of understanding.

Project-Based Assessments:
- Scored using a detailed rubric that considers multiple aspects of the project, such as research quality, creativity, and presentation.
- Peer evaluations may be incorporated to provide additional perspectives.

Within-Group Analysis: The pre-test and post-test scores of each group were compared to determine **changes in performance and engagement over time**.

Between-Group Analysis: The post-test scores and engagement levels of the experimental group were compared with those of the control group to determine the **effectiveness of gamified assessment**.

Statistical Tests: Techniques such as **t-tests** (paired and independent) and **ANCOVA** were used to evaluate the significance of differences in achievement and engagement.

5. Interpretation Stage

Data were interpreted to assess how gamified assessment influenced:

Behavioral Engagement: Active participation in Mathematics tasks and assessments.

Emotional Engagement: Interest, enjoyment, and positive attitudes toward Mathematics.

Cognitive Engagement: Persistence, attention, and problem-solving effectiveness.

Academic Achievement: Improvements in test scores and mastery of mathematical concepts.

3. Results

Table 1: Respondents Demographic Profile

Item	Value	Frequency	Percent
Group	Gamified Assessment (GA)	60	50.0
	Non Gamified Assessment (NGA)	60	50.0
Gender	Male	60	50.0
	Female	60	50.0
Age	11 – 13	120	100.0

Table 2: Mean and Std. Deviation of Pretest and Posttest score among two group.

Group	N	Pretest Mean	Pretest Std. Deviation	Posttest Mean	Posttest Std. Deviation
GA	60	4.67	2.69	14.02	2.96
NGA	60	4.73	2.57	11.45	2.94

Hypotheses Testing

Hypothesis 1: There is no significant difference in the engagement levels of students exposed to gamified assessment and those assessed using traditional assessment methods.

Table 3: Engagement Levels of Students Exposed Gamified Assessmentto (GA) and Non- Gamified Assessment (NGA) group.

Group	N	Mean	Std. Deviation
GA	60	4.41	0.38
NGA	60	2.66	0.28

Based on Table 3, the GA group had a higher mean engagement score than the NGA group (mean score for GA: 4.41; Mean score for NGA: 2.66). The ANOVA analysis results showed a significant difference in terms of students' engagement between the GA group and the NGA group ($F = 546.803$; $p: 0.00$), with the former significantly scored higher than the latter group. This finding indicates that Hypothesis 1 also was also accepted

Table 4: ANOVA Analysis of Mean Engagement with Gamified Assessment (GA) and Non- Gamified Assessment (NGA) Groups.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Result
Corrected Model	61.000[a]	1	61.000	546.803	.000	Significant
Intercept	1003.135	1	1003.135	8992.042	.000	
Group	61.000	1	61.000	546.803	.000	
Error	8.702	118	.112			
Total	1072.837	120				
Corrected Total	69.702	119				

R Squared = .875 (Adjusted R Squared = .874)

Hypothesis 2: There is no significant difference in the academic achievement of students exposed to gamified assessment and those assessed using conventional assessment techniques.

Table 5: Covariate: Academic Achievement

Group	**N**	**Mean**	**Std. Deviation**	**Sig.**	**Result**
GA	60	4.38	0.42	0.000	Significant
NGA	60	2.91	0.26		

Table 6: ANOVA Analysis for Academic Achievement of Students Exposed to Gamified Assessment and Those Assessed Using Conventional Assessment Techniques.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Result
Between Groups	45.690	1	45.690	605.451	.000	Significant
Within Groups	5.886	118	0.075			
Total	51.576	119				

This section provides a more detailed discussion of each component and examines the significant differences between the GA and NGA groups. The ANOVA analysis results indicate that there are significant differences in how achievement in Mathematics influences the relationship between gamified assessment and non-gamified assessment.

4. Summary of Findings

- There is a significant difference in the engagement levels of students exposed to gamified assessment and those assessed using traditional assessment methods.
- There is a significant difference in the academic achievement of students exposed to gamified assessment and those assessed using conventional assessment techniques.

5. Discussion of Findings

Findings from hypotheses one revealed that **students exposed to gamified assessment demonstrated significantly higher levels of engagement** compared to those assessed using traditional methods. This finding shows that integrating game elements such as points, badges, immediate feedback, leaderboards, and challenges can transform the learning environment into a more interactive and motivating space. Students in the experimental group displayed increased **behavioral engagement** (active participation, task completion), **emotional engagement** (interest, enjoyment, reduced anxiety), and **cognitive engagement** (problem-solving effort, persistence). In contrast, students in the traditional assessment group exhibited lower enthusiasm, slower participation, and less motivation to complete mathematical tasks. Several factors explain this significant difference:

Gamification introduces fun and competition, which captures students' attention and sustains their involvement throughout lessons.
Instant feedback enabled students to track their progress, correct errors quickly, and take responsibility for their learning.
Reward systems (badges, points, levels) reinforced productive learning behaviors, making students more willing to attempt challenges.
Goal-oriented tasks in the gamified environment kept students focused and encouraged persistence even when solving difficult mathematical problems.

These mechanisms collectively heightened student engagement far more than traditional teacher-led

assessments, which often rely on delayed feedback and limited interactive elements. Deterding et al. (2021) assert that game elements enhance intrinsic and extrinsic motivation, leading learners to participate more actively. Similarly, Hamari et al. (2024) found that gamified learning environments significantly improve students' motivation and task involvement, supporting the current study's findings.Also,Kapp (2022) emphasizes that immediate feedback, challenges, and rewards foster a sense of achievement, causing students to stay engaged longer. This mirrors the heightened engagement levels observed among students exposed to gamified assessment in this study. According to Lee & Hammer (2021), gamified learning environments reduce fear of failure and create a safe space for experimentation. This explains why students in the experimental group showed greater emotional engagement and confidence during mathematics tasks.The finding that gamified assessment significantly enhances student engagement is consistent with a wide body **o**f literature. Gamified methods strengthen motivation, participation, emotional connection, and cognitive effort more effectively than traditional assessment. Thus, gamification serves as a powerful pedagogical tool for increasing student engagement in Mathematics among senior secondary school students.

Findings from hypotheses two revealed that there is a significant difference in the academic achievement of students exposed to gamified assessment compared to those assessed using conventional methods. Students in the gamified group performed better on the post-test, demonstrating higher mastery of mathematical concepts, improved problem-solving ability, and greater retention of skills. Several factors contributed to this improvement:

- Enhanced Motivation Leads to Higher Achievement
- Gamified Assessment Strengthens Continuous Learning
- Increased Cognitive Engagement Improves Mastery

Students engaged more deeply in mathematical reasoning. The interactive nature of gamified activities reduced fear of failure and encouraged students to attempt complex problems multiple times, resulting in higher achievement scores.Hamari, Koivisto, & Sarsa (2024) showed that gamification positively affects learning performance when reward systems and challenges encourage consistent participation. This supports the current study's finding that gamified assessment improves Mathematics achievement.Similarly, Barata et al. (2023) reported significant gains in student grades and learning outcomes when gamified assessment was introduced in academic environments. Kapp (2022) argues that immediate, corrective feedback inherent in gamified platforms enables learners to quickly identify mistakes, revise understanding, and improve achievement. This contrasts with traditional assessments, where feedback is delayed and less impactful.Shute (2018) also supports that feedback-rich learning environments strengthen academic performance.Su & Cheng (2015) found that gamification enhances critical thinking and problem-solving skills by allowing students to tackle tasks repetitively in a non-threatening environment. This deeper processing leads to measurable improvements in achievement. This finding parallels the improved mathematics performance of students in the experimental group.

6. Conclusions

The study provides strong evidence that gamified assessment improves both engagement and achievement. Therefore, Measurement and Evaluation practices should evolve to incorporate technology-driven, continuous, and student-centered assessment approaches that promote deeper learning and more accurate measurement of student abilities. Thus, gamified assessment is not only effective for boosting engagement but also a powerful catalyst for improving students' academic achievement in Mathematics.

7. Recommendations

Integrate Gamified Assessments into Curricula: Educational institutions should incorporate gamified assessment strategies into their curricula to boost student engagement and academic performance. Designing interactive and immersive assessments tailored to various subjects can enhance the learning experience. By integrating gamification effectively, educators can create a more engaging educational environment that motivates students and improves their overall academic outcomes.

Focus on Motivation and Continuous Support: Maintaining and enhancing student motivation is essential for maximizing the benefits of gamified assessments. Educators should embed motivational elements within gamified assessments and provide ongoing encouragement and support. This approach ensures that students remain engaged and motivated throughout their learning journey, leading to better educational outcomes.

Customize Gamified Techniques for Diverse Needs: To effectively meet the diverse needs and

preferences of students, gamified techniques should be tailored accordingly. Customizing assessments ensures that they are engaging and effective for all students, accommodating different learning styles and interests. Educators should consider individual student needs when designing gamified assessments to enhance their effectiveness and inclusivity.

Invest in Professional Development for Educators: Professional development programs are crucial for equipping educators with the skills and knowledge required to design and implement effective gamified assessments. Training on gamification in education will enable educators to leverage these strategies effectively, maximizing their potential to enhance student engagement and performance. Institutions should invest in such programs to support educators in their implementation efforts.

Address Socio-Economic Disparities and Support Technological Integration: Policymakers should work to address socio-economic disparities to ensure equitable access to gamified learning tools for all students. This includes providing resources and support to students from lower socio-economic backgrounds. Additionally, leveraging technology to facilitate the implementation of gamified assessment strategies is vital. Policymakers should support the development of technological tools and platforms that enable effective gamified learning and encourage research and innovation in this field.

8. Implications of the Study for Evaluators

The findings of this study have significant implications for **Evaluators**, particularly in the context of secondary school Mathematics assessment.

Shift from Traditional Assessment to Technology-Supported Assessment

The study demonstrates that gamified assessment enhances student engagement and achievement more effectively than conventional methods. This suggests a need for Measurement and Evaluation practices to **move beyond paper–pencil tests** toward **technology-supported, interactive, and feedback-rich assessments**.

Importance of Continuous and Formative Assessment

Gamified assessment provides immediate feedback, enables repeated attempts, and tracks progress continuously. This aligns strongly with best practices in Measurement and Evaluation, which emphasize the importance of ongoing formative assessment for improving learning outcomes.The study shows that when students are assessed continuously through gamified platforms, their mastery and performance improve significantly.

Enhancement of Authentic Assessment

Gamified assessments simulate real problem-solving scenarios and allow students to apply skills in engaging contexts. This supports the Measurement and Evaluation goal of promoting **authentic assessment**, where students demonstrate understanding in meaningful, real-life ways rather than through rote memorization.

Improved Diagnostic Capabilities

The instant feedback and analytics from gamified platforms enable teachers to quickly diagnose:

- learning gaps,
- misconceptions,
- strengths, and
- individual progress patterns.

This enhances Measurement and Evaluation practices by providing more accurate and timely diagnostic data compared to traditional assessments.

Promotion of Self-Regulated Learning

Gamified assessment allows students to monitor their progress, track points, and view their achievement badges. This contributes to **self-assessment and self-regulated learning**, a key component of effective Measurement and Evaluation. Students gain awareness of their learning growth, which strengthens responsibility and autonomy.

Reduction in Test Anxiety and Improved Test-Taking Behaviors

The study shows that gamification reduces anxiety and increases motivation. Lower test anxiety leads to more valid assessment outcomes because scores better reflect **true ability** rather than stress. Thus, Measurement and Evaluation practices should incorporate methods that reduce anxiety and enhance student confidence.

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Influence of Parents' Socio-Economic Status on Undergraduates' Attitude Towards Virtual Learning in Post Covid-19 Pandemic Era in a Nigerian Public University

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Abstract. This study investigated the influence of parents' socio-economic status on undergraduates' attitude towards virtual learning in Covid-19 era in a Nigerian pubic university. Three research questions and two hypotheses guided the study. The study employed the survey research design. The targeted population was a total of 4,135 Undergraduates made up of 2020/21 session of 200 and 300 levels undergraduates of all the departments of the Faculty of Education in University of Benin. The sample size of 413 undergraduates, which consisted of 149 males and 264 females using multistage sampling procedure. Purposive sampling was used to select Year 2 and year 3 Undergraduates while stratified random sampling technique was adopted to divide the population into male and female subgroups as well 200 and 300 levels undergraduates' subgroups. The Virtual Learning Attitude Questionnaire (VLAQ) was administered to the sample. The instrument was validated by three experts in the Department of Educational Evaluation and Counselling Psychology (EECP). The reliability of the instrument was established using Cronbach alpha statistics which yielded a 0.84 coefficient. The descriptive statistics of mean and standard deviation and the inferential statistics of Pearson Moment Correlation Coefficient and Fisher-Z test of difference were used to test the hypotheses at 0.05 level of significance. The findings of the study revealed that Parents' Socio-Economic Status has significant relationship with undergraduates' attitude towards virtual learning in Covid-19 era in a Nigerian Public University while it revealed no significant difference in the relationship between parents' socio-economic status and undergraduates' attitude towards virtual learning by age. Based on the findings of the study, it was concluded that undergraduates' attitude towards virtual learning, strongly correlate with their parents' socio-economic status and in this regard, it was recommended that Guidance and Counselling services should be extended to parents/guardians, for them to understand the usefulness of effective communication skills in behaviour modification and using same to assist their children in developing the right attitude towards technological learning.

Keywords: Parents' socio-economic status, Undergraduates' attitude, Virtual learning and Post covid-19 pandemic.

1. Introduction

The importance of education to human development is well documented in literature. Dagbo (2014) stressed the importance of education as a vital instrument for the development and interaction of all elements in the society, for its economic, social and political growth. No meaningful socio-economic and political growth can therefore be achieved in a society, without education. In recognition of the importance of education therefore, any disruption of the academic programme consequently affects the education system of a nation and by extension, the growth and development of that nation. This goes to explain why the world was greatly agitated by the disruption on the education programme, caused by the outbreak of COVID-19 virus and its attendant consequences on the world's social-economic activities. The pandemic brought an unprecedented disruption on the education system worldwide as the world was apparently unprepared for such invasion. Education was inadvertently threatened like no other time in history. Meyer (2020) reported that Covid-19 is probably the event in our lifetime that possibly has the greatest potential to drastically affect and change the system of education. Corona virus indeed wreaked havoc on

mankind as several millions of people worldwide were infected and millions killed by the ravaging contagion.

Attitude is generally described as a person's learned tendency to respond positively or negatively towards an object, situation, a concept, or a person, and also as a belief held by individuals, that reflects their opinions and feelings which manifest in their behaviour. Typically, attitude could be favourable or unfavourable, it could be positive or negative, hence Delgado and Kassim (2019) concluded that attitude has come to be considered as the level of positive or negative effect related with a specific object or belief. Attitude is thus, double edged. Human beings are not born with attitude, but learn attitude afterwards as they begin the journey through life. Attitude forms as a product of an individual's direct experience, or from their observation. Studies on attitude and its formation show that attitude and belief are connected, as well as attitude and behaviour. Attitude, behaviour, and feeling are interrelated in a way that people's attitudes determine their behaviour towards objects, situations, and people. Attitude is both a psychological and hypothetical constructs. The result of a study carried out by Khalilia (2020) to determine students' attitudes and difficulties towards online learning during the times of crisis, and to also assist teachers, students and the educational institution in taking appropriate decisions when such difficult situations arise, revealed that the participants had positive attitudes towards online learning. It also showed that the participants encountered some obstacles while using the e-learning process related to computer skills, gender, and internet connection.

In a bid to mitigate the exponential spread of the contagion which is through person to person in close proximity, the Health Organisation (WHO) in the year 2020, proposed some preventive measures which included total or partial lockdown and social distancing among others. These stringent rules were instantly implemented by governments of sundry nations and the implementation resulted in the global short down of socioeconomic activities and consequently, affected the education system worldwide. Several schools across all levels of education, in approximately 188 affected countries of the world, an estimated figure of 1.6 billion affected students worldwide, were compulsorily sent out of school premises, in order to mitigate the incessant spread of the virus (Azevedo et al., 2020).

Virtual learning is seemingly an encompassing term as it describes all forms of learning experiences that are strengthened through the use of computers and internet, within and or outside the educational facilities, such as e-learning, online learning, distance/remote learning, mobile learning among others. According to Kesim (2011), e-learning is also known as computer-aided, Internet-based, network-based and virtual learning. Schlosser and Simonson (2006) defined virtual learning as a learning paradigm that can functionally and effectively occur in the absence of traditional classroom environments. It is a distance learning conducted in a virtual learning environment with electronic study contents, designed for self-paced (asynchronous) or live web-conferencing (synchronous) online teaching and tutoring (Racheva, 2017). She expounds further, that virtual learning is usually associated with online programmes or online settings with much broader dimensions to other forms of online learning platforms. The instruction often occurs in an online setting where the teaching-learning activities are done online with the teacher and learners physically separated in terms of place and time. The realization of virtual learning is through enriched virtual learning environments, such as online learning, web-based training and technology delivered instructions. Virtual learning is operated in virtual learning environments, being computer-based environments which are relatively opened systems that effectively function through interactions and encounters with other participants who equally have access to the computer-based environments (Downes, 2009; Merritt, 2009; Fournier & Kop, 2011; Pelet & Lecarte, 2013). There is a consensus among these authors that virtual learning environments provide tools that are customize for education and these tools have become very popular for learning among students in higher education because of the increase in internet technology.

There is a growing awareness of the need for tertiary institutions to effectively integrate virtual learning into their programmes as the world is becoming more technologically driven. It is in this regard that Oye et al., (2012) called the new technological trend an e-driven world, which has undoubtedly, created unimaginable changes in almost all aspects of mankind. Students are to be well equipped through virtual learning therefore, to provide them with the necessary experiences for personal growth and development. Mamattah (2016), states that the majority of students see online learning as groundbreaking for education. Virtual learning indeed, maybe a major breakthrough in the educational sector where the gap created by distance is being logically bridged owing to technological advancement. It has unarguably defy all sorts of barriers that are caused by long distance location in the learning process as the need for students to leave their respective homes,

especially in COVID-19 pandemic era, no longer arises. Virtual learning would obviously put a check on the problems of overcrowded lecture halls and dearth in manpower, which are major features of the traditional face-face teaching-learning method.

COVID-19 pandemic, no doubt, has caused devastating effects on the socio-economic milieu and the education programme worldwide was grossly disrupted. COVID-19 has come to change the way things were previously done, it has come to change conventions and this has a far-reaching effect on the continuity of education without safety being compromised. Bao et al. (2020) argued that school closures have affected not only the students, but also the teachers and families alike, while it also has far-reaching consequences on economic and society. The United Nations Development Programme (UNDP) (2020) reported that COVID-19 has the potential to create devastating social, economic and political effects that will leave deep and longstanding scars in the passage of time. Education suffered severe disruptions and schools' closure affected over one billion students worldwide (WHO, 2020).

In a study carried out by Olaitan et al. (2020) to assess the impact of COVID-19 on education in Sub-Sahara Africa, the result from their descriptive analysis revealed that as of June 2020, Sub-Sahara Africa has reported 382,190 cases of COVID-19 and in reaction, several Sub Sahara African governments resolved to temporarily shut down institutions of learning in order to mitigate the infection, and as a result, advanced schooling institutions tended to reorganise their system and embrace online platforms. Olcott (2020) carried out a study on 'going online' and the result revealed that the interruption of education in the pandemic era indicates the significance of the need for an alternative pedagogy to be made available. Onyema et al. (2020) conducted a study on the impact of COVID-19 on education in Nigeria, Bangladesh, India and Saudi Arabia, using structured questionnaires to obtain responses from 200 respondents that consisted of teachers, students, parents, and policy makers selected from these countries. The data collected were analyzed with the use of STATA/Regression and the findings revealed that COVID-19 had adverse effects on education, causing learning disruptions and decreased access to education and research facilities. Their findings also indicated that many educators and students will rely on technology to ensure continued learning online during the COVID-19 pandemic era. However, they also indicated that online education was hindered by poor infrastructures including, network, power, inaccessibility and unavailability of digital issues, and poor digital skills. The availability of up-to-date internet facilities cannot be over-emphasized to guarantee the successful implementation and sustainability of virtual learning paradigm in COVID-19 era. Robust hardware and a broad band internet connection are indispensable for effective participation in virtual learning.

Sarı and Nayır (2020) carried out a study in which they found that parents and teachers who were taken unaware by the COVID-19 outbreak experienced difficulties in creating, maintaining, and developing distance learning as they were caught unprepared for distance education and e-teaching. Also, teachers and students were found deficient as their level of technological use was below expectations. Similarly, Deshmukh (2020) found that the digital competence and skills needed during the pandemic wave could not be obtained. It was observed that educators, students and parents, experienced panic in using online platforms. What this implies is that COVID-19 pandemic brought digital learning to the frontline whereas teachers, learners and parents alike, were unprepared for it. These investigations relate to the present study which concerns itself with parents' socio-economic status as it influences the undergraduates' readiness to embrace virtual learning by way of their disposition towards it.

In a similar study, the impact of Covid-19 on learning was carried out on Ghanaian scholars, Owusu-Fordjour et al. (2020), used descriptive survey design in a study involving 214 respondents from tertiary institutions of Ghana. The findings revealed that students encountered some challenges during the school's close down due to the outbreak of the COVID-19 pandemic which includes students' inability to study effectively from their homes, thus making the online system of learning very ineffective. They also found that parents are incapable of assisting their children on how to access online learning platform, neither were they able to entirely supervise the learning of their children at home with little or no difficulties. The study revealed that the pandemic really had a negative impact on their learning as many of them are not used to effectively learn by themselves. In addition, the e-learning platforms which is rather novel to Africa students, also poses a challenge to majority of the Ghanaian students because of the limited access to internet and lack of knowledge in the technicalities of internet technologies.

In a related study carried out by Ogunode et al., (2020) to examine the impact of COVID-19 pandemic school closedown on higher institutions in Nigeria. Secondary data was used to analyse the study and the findings revealed that reduction of international

education, disruption of academic calendar of higher institutions, cancellation of local and international conferences, creating teaching and learning gap, loss of manpower in the educational institutions, and cut in budget of higher education in Nigeria, were the impacts of COVID-19 on higher institutions. In contrast to the above investigation and findings, this present study has put all the above-mentioned issues into perspective when it chose to address attitude towards virtual learning, rather than investigating the pitfalls caused by COVID-19 eruption. Several studies conducted in 2020 revealed that there are still deficiencies in the appropriate use of technology in the education sector during the COVID-19 pandemic. Dempsey and Burke (2020), via e-mails and phone conversations, observed that students, parents, teachers and other personnel had deficiencies in maintaining communication from distance and argued that measures should be taken in this regard.

Goni and Bello (2016) referred to the socioeconomic status of parents as the conditions in the family that are concerned with, or related to the interaction of social and economic factor. Kapinga (2014) indicated that there are four indicators to determine parental socio-economic status, which are; parents 'education level, parental occupation, parental income and home environment. His viewpoint highlights the home environment as an indicator of socioeconomic status, as people's residential areas can actually speak volume for their position in the society and the attitude they display. Across all definitions, the central idea is that socio-economic status encompasses a combination of income, education level and occupational status of an individual's parents. Ahmad and Khan (2012) carried out a study and found that a significant relationship existed between parental income and academic performance of students in secondary examination in Pakistan. Students whose parents have high income performed better in secondary examination than those whose parents have low income. Olayiwola et al. (2011) conducted a study which revealed that a unit increase in parental financial status brings about 10.28% increments in student academic performance. Likewise, 2.63% increase in students' academic performance is brought about by a unit increase in the improvement of the hostel facilities.

Kapinga (2014) conducted a study which found that parents who reached a certain level of education have the ability to assist their children in doing school given homework. The findings also showed that parents who had secondary education or attained higher education level, knew the need of buying books, models, and maps for their children. Educated parents therefore, tend to motivate their children in matters related to schooling and support them academically. Ahmad and Khan (2012) conducted a study where a significant relationship was found to exist between father's level of education and academic achievements of the children in secondary examination. The study revealed that majority of children with well-educated parents, performed better in secondary examination, compared to those with less educated or illiterate parents. Memon et al. (2010) carried out an investigation which also revealed that students with well-educated parents performed better than those with less educated parents. Rana (2015) carried out a study on the relationship between the parents' level of education and academic performance and the result revealed that a significant positive relationship existed between parents' level of education and students' academic performance. Similarly, Singh and Singh (2014) found that students whose parents have higher educational level differed significantly from those whose parents are either illiterate or are unable to observe the educational activities of their children. Akhtar (2012) particularly found that educated mothers play a significant role in their children's academic achievement.

Mudassir and Abubakar (2015) carried out a research on the impact of parents' occupation on academic performance of secondary school students in Malaysia and the result revealed that students from parents with formal occupation performed better than those from parents with informal education. Kainuwa (2013) examined the influence of parents' socio-economic status and educational background of parents on their children's education in Nigeria and the findings revealed that parents' personal educational backgrounds and economic backgrounds have a significant effect on their children's education. Okioga (2013) investigated the impact of socio-economic background on academic performance amongst university students in Malaysia, regression and ANOVA statistics were used to analyse the collected data and the result showed that there is a relationship between socio-economic background and students' academic performance. In a study conducted in Calabar in Nigeria, to evaluate the influence of parental socio-economic background on students' performance, Udida et al. (2012) used the multiple regression statistics to analyse data from a sample of 114 students from five public schools and the study revealed that parental socioeconomic background significantly influences students' academic performance. The study recognised parental profession and occupation as the most important predictive variables that influence students' academic outcomes. Conversely, Ogunsola and Adewale (2012) carried out a study which revealed that parents' socio-

economic status has no significant effect on students' academic performance.

Age is presumed to be a variable that correlates significantly with the use of computers digital materials. Okiki (2011) stated that younger generations often referred to as 'digital natives', are people who have grown up under the massive influence of internet and other digital technologies and as such, are very conversant with the use of computer and modern technology. Conversely, this may not be said of older people who may not have been opportune to have such exposure to digital materials and this disadvantage could create increased computer anxiety among this group. Tenopir (2003) study on the issue of age and usage of digital materials, reported the existence of some evidence revealing younger users as being more enthusiastic adopters of digital materials than the older users. The younger users were found to depend more heavily on digital materials and rate themselves as more skilful in using them than the older users.

Waldman (2003) argued that age is one variable that significantly correlates with computer comfortability and usability of electronic resources. Students' demographic variables do not have to create obstacles to the use of digital materials. Rather, students of all ages ought to strive to acquire the requisite knowledge needed for them to make effective use of online digital resources, at any given time and place (Quadri, 2013). Students of all age ought to be very well informed on the benefits accruable to the use of online resources.

2. Research Methodology

This study employed the Survey Research Design. The population of this study was four thousand, one hundred and thirty-five (4,135) undergraduates, being the total number of registered 200 and 300 levels undergraduates of 20/21 session in all the departments of the faculty of education, University of Benin, Benin City. A sample of four hundred and thirteen (413) 200 and 300 level students were selected using multistage sampling procedure of purposive and stratified random sampling techniques. The instrument used in this study is the questionnaire on Virtual Learning Attitude Questionnaire (VLAQ). The instrument is divided into two sections; Sections A consists of the demographic variables which include; age and parents' socio-economic status and section B, contain 39 items on positive and negative statements bordering on undergraduates' attitude towards virtual learning. The respondents were required to respond to each item along a 4-point scale of Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1). The instrument was validated by the three experts, two counselling psychologist and oneexpert in test construction, of the department of Educational Evaluation and Counselling Psychology (EECP) University of Benin. The reliability of the instrument was determined using Cronbach alpha statistics and it yielded a correlation coefficient of 0.84 as a measure of consistency. The instrument was administered to the respondent with the aid of three assistants and were retrieved within two days. A total of 319 instrument were retrieved from the respondents and used for the analysis. The data collected from the respondents were analysed with both descriptive and inferential statistics. The Pearson's Correlation Coefficient was used to test hypothesis 1, while the Fisher-Z Test of Difference statistic was used to test hypothesis 2 at a 0.05 level of significance.

Research Question 1: What is the attitude of undergraduates towards virtual learning in Covid-19 pandemic era in a Nigerian Public University?

Table 1: Descriptive in Mean and Standard Deviation of Attitude of Students towards virtual learning in Covid-19 Pandemic Era

Variable	N	Sum	Mean	Std. Dev	Scale Mean	Remarks
Attitude	319	33958	106.45	13.25	97.50	Positive

Table 1 contains the descriptive data with respect to Attitude of Students towards virtual learning in Covid-19 Pandemic Era. Total respondents N = 319 the sum of their responses is 33958 and they have a mean of 106.45 ± 13.25 Standard Deviation. The mean value 106.45 is greater than the scale-mean of 97.50 (Mean of 39 items of four point scale: - 2.5 multiply by 39 = 97.50) this implies that the Attitude of Students towards virtual learning in Covid-19 Pandemic Era is positive, having scored above (106.45>97.50) the scale mean.

Hypothesis 1: There is no significant relationship between Parents' Socio-Economic Status and undergraduates' Attitude towards Virtual Learning in COVID-19 pandemic era, in a Nigerian Public University

Table 2: Pearson's test of Relationship between Parents' Socio-Economic Status and Undergraduates' Attitude towards Virtual Learning

Variables	N	R	p-value	Remarks
SES	319			
		.230	.001	Significant
Attitude	319			

$\alpha = .05$, $p < .05 r^2 = 0.0529$ (5.3%)

Table 2 shows the Pearson's coefficient of correlation between Parents' Socio-Economic Status and Undergraduates' Attitude towards Virtual Learning. From the table the correlation coefficient (r) = .230, this is an indication of a positive relationship (the higher their SES the better their attitude) between SES and Attitude towards Virtual Learning. The correlation coefficient is significant, testing at .05 alpha levels, because the p-value is less than .05. Therefore, the null hypothesis "There is no significant relationship between Parents' Socio-Economic Status and undergraduates' Attitude towards Virtual Learning in COVID-19 pandemic era, in a Nigerian Public University" is hereby rejected for the alternative hypothesis. This implies that there is a significant relationship between Parents' Socio-Economic Status and undergraduates' Attitude towards Virtual Learning in COVID-19 pandemic era. Parents' Socio-Economic Status accounts for 5.3% (coefficient of determination) of changes in their attitude.

Hypothesis 2: There is no significant difference in the relationship between Parents' Socio-Economic Status and undergraduates' Attitude towards Virtual Learning in COVID-19 pandemic era, in a Nigerian Public University by Age

Table 3: Fisher-Z test of difference in the Relationship between Parents' Socio-Economic Status and Undergraduates' Attitude towards Virtual Learning by Age Brackets

	Less than/= 20yrs			Above 20yrs				
Variables	N	R	Zr	N	r	Zr	Zcal	Decision
SES								Not
	162	.269	.278	157	.205	.213	0.65	Significant
Attitude								

$\alpha = .05$, $0.65 < 1.96$

Table 3 shows the Fisher-Z of difference in the Relationship between Parents' Socio-Economic Status and Undergraduates' Attitude towards Virtual Learning by Age Brackets. From the table the number respondents within the age brackets 20years and below (N) = 162 and above 20 years = 157 their correlation coefficient (r) = .269 and .205 respectively. Bothshow positive relationship between Parents' Socio-Economic Status and Attitude towards Virtual Learning. The calculated Z-value = 0.65, this value is not significant, testing at .05 alpha levels. The calculated Z-value (0.65) falls within the Acceptance Region of the standard normal curve (0.65 <1.96) Therefore, the null hypothesis "There is no significant difference in the relationship between Parents' Socio-Economic Status and undergraduates' Attitude towards Virtual Learning in COVID-19 pandemic era, in a Nigerian Public University by Age" is hereby retained. Hence any observed difference in the relationship between the two variables (SES and Attitude towards Virtual Learning) for respondents within both age brackets is a mere chance occurrence, without any statistical consequence.

3. Discussion of Results

Based on the results of the findings discussion were made:

In response to research question one, which sought to know the attitude of undergraduates towards virtual learning in a Nigeria public University, the attitude of undergraduates towards virtual learning is positive. The undergraduates sampled in the Nigeria public University, generally have positive attitude towards virtual learning. The findings in hypothesis 1 revealed that a significant relationship exist between Parents' Socio-Economic Status and undergraduates' Attitude towards Virtual Learning in COVID-19 pandemic era, in a Nigerian Public University. The findings corroborate with study conducted by Añover & Pellicia, (n.d.) in California State University which revealed that economically disadvantages students are expose to higher chances of experiencing difficulties accessing materials online. The findings of the study also agrees withthe result of a study carried out by the Institute for Fiscal Studies (IFS) and Institute of Education (IoE) in England which showed that children from low socio-economic backgrounds suffered severe deprivation compared to their counterparts from high socio-economic background,

as they had to spend less time learning at home during the lockdown due to the lack of accessibility to digital materials and the non-availability of conducive virtual learning environments (Andrew et al., 2020). This result is also in congruence with the findings of the study carried out by Cuisia-Villanueva and Núñez (2020) to investigate the impact of socioeconomic status on emergency electronic learning during the Corona virus lockdown, which revealed that socioeconomic factors such as accessibility to resources and parental support both affected the students' e-Learning experience. The result of this study, also agrees with the study conducted by (Brown et. al., 2016) which revealed that prospective college students from low-SES backgrounds are less likely to have access to information and communication technological tools, compared to their counterparts from high-SES background who are much likely to access to informational technological resources.

The findings of hypothesis 2 of this study revealed that age does not significantly influence the relationship between parents' socio-economic status and undergraduates' attitude towards virtual learning in COVID-19 pandemic era, in a Nigerian Public University. The result showed that there is no significant difference in the relationship between parents' socio-economic status and undergraduates' attitude towards virtual learning by age and that any difference observed in the relationship between the dependent and independent variables for respondents below 20 years and those at the other divide of 20 years and above, is only an occurrence by chance. This finding is in conformity with the result from the study by Fleming et. al., (2017) which found that age is not a significant factor impacting either future use intentions or satisfaction with e-learning. The result of this study also agrees with the result of the research conducted at the Kyambogo University Uganda, by Ndawula and Ayikoru (2013), which found that there is no significant relationship between age difference and undergraduate students' attitudes towards the academic use of Internet, as the study failed to reject the null hypothesis, and this means that the undergraduate students' attitudes towards the academic use of Internet is not dependent on the age difference. The result also confirms the study of Suri and Sharma (2013), carried out with students of a university in India, and the study of Adewole-Odeshi (2014) on the participation of the students studying at universities in Nigeria which concluded that no difference existed in attitudes towards e-learning in terms of age. However, the result of the study conducted by Peytcheva-Forsyth et. al., (2018) does not agree with the result of this study as their finding revealed otherwise. They found that age difference significantly correlated with computer attitude as younger people tend to be more proactive in using technologies in their learning, which is most likely due to their earlier contact with technology and also to the way they perceive the technology as an instrument both for entertainment and learning.

4. Conclusion

Based on the findings of this study, it can be deduced that undergraduates' attitude towards e-learning is dependent on their parents' socio-economic status as undergraduates from advantaged background tend to have much higher positive attitude towards virtual learning as against their counterparts from socio-economically deprived background who have less positive attitude towards e-learning, which could be pinned down to the high cost of accessing technological learning tools. However, age difference did not show any significant variation in the attitude of both younger and older undergraduates towards virtual learning experience. The younger undergraduates as well as older ones, desire to use e-learning mode on their courses and anxiety is also experienced across all ages used in the experiment.

5. Recommendations

Based on the results of the present study, the following recommendations were suggested:

1) Counselling interventions should be put in place and made effective, to encourage and assist undergraduates develop the right attitude towards virtual learning.
2) Guidance and counselling services should be extended to parents/guardians for them to understand the usefulness of effective communication skills in behaviour modification and use same to assist their children in developing the right attitude towards technological learning.
3) Virtual learning environments, being the inevitable future of education and learning, is in dire need of acceptance by the society as a whole. Essentially, it would require a positive attitude from all quarters of the society for it to hold sway. The government should embark on a nationwide advocacy to create the awareness of the all important virtual learning pedagogy, on why it should be encouraged by everybody.
4) If e-learning would sustain as the learning paradigm of the new era, the activities must commence at the primary school level so that the right attitude towards the nascent learning mode will be developed early in life and ingrained.

5) Finally, the government should work closely with the education managers and the staff union of universities, by meeting with their recommendations and demands to properly revitalise the tertiary institutions system which would further enhance the workability of virtual learning in the universities.

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Relationship Between Mental Health and Out-Of-School Children Problems in Bosso Local Government Area of Niger State, Nigeria

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Abstract. This study examined the relationship between mental health and out-of-school children problem in Bosso Local Government Area of Niger State, Nigeria. The study was guided by two objectives, two research questions, and two null hypotheses. A correlational research design was used. 5,300 Basic Six (6) children across 15 schools in Bosso Local Government Area was the population of the study. Simple random sampling and purposive sampling techniques were used to select the sample and the sample size of 200 children, determined using Taro Yamane 1967 formula as respondents. Mental Health Questionnaires (MHQ) and school attendance registers were used as instruments for data collection. The instrument was validated by two experts who yielded a validity index of 0.85 and 0.79 and a reliability coefficient of 0.76. Percentage and frequency were used to answer the research questions, while Pearson Product Moment Correlation (PPMC) was used to test the null hypotheses at 0.05 significance levels. The findings revealed that there is a significant relationship between depression and out-of-school children problem of Basic 6 children in the Bosso Local Government Area of Niger State. Also, there is a significant relationship between anxiety and out-of-school children problem of Basic 6 children in Bosso Local Government Area of Niger State. The study concluded that there is a significant relationship between mental health and out-of-school children problems of basic 6 children in Bosso Local Government Area of Niger State, Nigeria. The study recommended that schools should implement comprehensive mental health programs to address and mitigate out-of-school children problems. There should also be a collaboration between schools, families, and mental health professionals in order to create a supportive environment that will promote the well-being and academic success of children. Training of teachers and school staff on how to identify and manage mental health issues in school should be enhanced by school authorities.

Keywords: Relationship, Mental Health, Out-of-school children problems, and Out-of- School Children

1. Introduction

Children often face various challenges both in and outside of school that can significantly impact their well-being and academic performance, sometimes leading to dropping out or not attending school regularly. These out-of-school children problems can stem from a range of issues, including family circumstances, socioeconomic factors, and mental health challenges. United Nations Educational, Scientific and Cultural Organization (UNESCO, 2022) stated that in the year 2022, Nigeria has about 20 million out-of-school students (children). The organization also submitted that there are 244 million children and youths between the ages of 6 and 18 worldwide who are still out of school in the year 2023. The organization further revealed that Nigeria, India, and Pakistan have the highest figures of out-of-school

children (students) globally (Jacob, Chinwube & Ayoka, 2022). Nigeria out-of-school children or students' figure has increased between 0.5 million and around 20 million over a decade partly caused by increasing situation of insecurity that can lead to mental health problems for the children in the country. According to United Nations cited in Jacob et al (2022), Nigeria has about 20 million out-of-school children with 33 percent from the North-East which is the highest proportion of out-of-school children, followed by North-Central with 26 percent; North-West with 25 percent, South-South with 24 percent, South-East with 22 percent and the South-West with 19 percent (Thompson, 2023).

According to World Bank (2022), out-of-school children refer to children that are out of school (enrolment and retention) as a result of factors in the school or outside the school environment. In other ward, out-of-school children are the children who are yet to be enrolled in any formal education. The term out-of-school children are a non-attendance or retention of school-age children or students for some established factors. Out-of-school children students are children or students who are officially in the primary or secondary school age range. It is also children or students who are yet to be enrolled in a formal education excluding pre-primary education children. It is important to note that some of them (children or students) may have attended school in the past but dropped out, and some have never or will never go to school. According to Zira and Zumo (2020), out-of-school children are school dropouts, it is when students or children are untimely withdrawn from the school system, that is, is a situation where the children withdraw or drop from school prematurely as a result of mental health or any other factors.

Many factors can lead to out-of-school children problems in Nigeria, among the factors are; the Socio-economic background of parents, socio-cultural norms, mental health, and insecurity among others. Zira and Zumo (2020) state that, the low socio-economic status of parents, low parental education, poor school environment, and mental health are factors that cause out-of-school children problems. Moore, Norman, and Suetani (2022) assert that poverty, depression, anxiety, and school environment are among the factors that can cause out-of-school children problems in children. Therefore, this study is on mental health as a factor that could cause out-of-school children problems for children in our society.

Mental health is the emotional, social, and psychological well-being of children, it affects how the children think, act, and interact and there is a need to motivate them in other to pursue their academic goals. Felman (2024) observed that mental health is how students think, feel, and behave in a given situation. Mental healthcare professionals can help children to manage their conditions such as depression, anxiety, and other mental disorders that can affect their thoughts, feelings, and behaviour which can lead them to out-of-school children problems, mental health could affect a student or children on a day-to-day life, relationship, and physical health.

The mental health of children is a state of mental well-being that enables children to cope with the stress of life, realize their abilities, learn well and work well, and contribute positively to the development of their community. It is an integral component of health and well-being that underpins children's ability to make decisions, build relationships, and shape the world around him or her (Burke, McElroy & Elklit, 2023). Mental health conditions of children or students include mental disorders and psychosocial disabilities as well as other mental states associated with significant distress, impairment in functioning, or risk of self-harm. Students with mental health conditions are more likely to experience low levels of mental well-being which can lead to poor academic performance and out-of-school children problems (WHO, 2022).

Mental health can affect children's lives such as reducing their quality of life, academic performance, physical health, and negative relationships with friends and family members (Campbell, Blank & Croyder, 2022). The mental health of children is a term used to describe the emotional, psychological, and social well-being of children. The quality of children's mental health is often measured by how adaptively they can cope with the everyday stressors of education. World Health Organization (2022) opined that the mental health of children is a state of well-being in which a child realizes his or her abilities, can cope with the normal stresses of life, can perform in class, and achieve education goals. However, poor mental health can affect the energy level of children, concentration, dependability, mental ability, and optimism, hindering school enrolment, retention, performance, and academic achievement. Common mental health problem is associated with anxiety and depression.

Anxiety disorders are one of the most commonly diagnosed mental health problems among children which can lead to out-of-school children problems. It is what children feel; when they are worried, tense, or afraid – particularly about things that are about to happen or that they think could happen in the future.

Anxiety can become a mental health problem if it impacts children's ability to live life and feel uncomfortable with school. An anxiety disorder is a type of mental health condition that causes fear, dread, and other symptoms that are out of proportion to the situation (APA, 2023). There are several types of anxiety such as generalized anxiety disorder, specific phobias, and social anxiety disorder. Generalized anxiety disorder is characterized by excessive, frequent, and unrealistic worry about everyday activities, such as school, health, or chores, causing fear, worry, and a constant feeling of being overwhelmed (National Institute of Mental Health (NIMH), 2023). Specific phobia; is when something causes you to feel fear to anxiety that's so severe, consistency, and overwhelmingly disrupts children's lives. Children with this phobia often avoid new areas and unfamiliar situations such as crowds and places outside of their homes which can prevent the children from going to school. Social anxiety disorder; this condition (formerly known as social phobia) happens when students experience intense and ongoing fear of being punished negatively and/or watched by others in school or society (Mayo, 2023).

Anxiety is a natural biological response to fear or uncertain situations. It involves feeling worried or fearful and often triggers the avoidance of a particular situation. Sometimes, anxiety can become generalized when people or children experience anxiety in many situations, not just uncertain or dangerous ones. In such circumstances, anxiety can become detrimental to well-being as it may lead children to avoid all kinds of situations or social engagements perceived to be too stressful in school. Anxiety becomes an issue when it begins holding the children back from opportunities such as participating in extracurricular activities or social engagements in school. The National Institute of Mental Health reported that approximately 25% of teens between 13 and 19 years old have an anxiety disorder and slightly less than 6% have a severe anxiety disorder (Umar & Haruna, 2021). Children's anxiety manifests in three different forms such as school refusal, test anxiety, and social anxiety. These three branches of children's anxiety can be caused by a number of factors and are usually a sign of a deeper anxiety disorder. Common symptoms of anxiety disorder in children may include excessive worrying, change in sleep pattern, irritability, difficulty in concentrating on school activities, headaches, and stomachaches. If these signs persist and interface with the daily life of children it may lead to out-of-school children problems or not attending school at all and they need to seek the help of professionals. Therefore, anxiety disorder can have a significant impact on children well-being and their educational enrolment and retention. These conditions of anxiety can also affect children's behaviour in the classroom, their academic performance, and social interaction which can lead to out-of-school children problems (Olusegun & Awuya, 2021).

Depression is a mental health disorder characterized by persistently depressed mood or loss of interest in activities, causing significant impairment in the daily life of children. The possible causes of depression include a combination of biological, psychological, and social sources of distress. These factors may cause changes in brain function such as altered activity of certain neural circuits in the brain. Depression is a common mental problems child that varies in severity and duration in its less serious form. It is a temporary reaction to loss, stress, or life challenges. It can be alleviated through the passage of period of time and/or it natural healing effect of social support, daily routines, and simple coping strategies like duration and exercises severe or chronic. Depression usually requires professional help such as Doctors, Psychologists, and counsellors to treat the effect (World Health Organization, 2024).

Psychological symptoms of depressed children include:

- Feeling of emptiness, hopelessness, helplessness, and worthlessness
- Deep sense of sadness
- An ability to experience pleasure
- Irregular eating and sleeping.
- Difficulties with concentration, memory, and decision-making.

Sometimes depression in children includes irritation, anxiety, and anger. In its most serious form, depression can be accompanied by self-destructive intentions as a way to escape from the emotional pain. Research shows that depression can be treated by both psychotherapy and medication (Anima & Obika 2020).

Depression is classified as a mood disorder in children. It is described as the feeling of sadness, loss, or anger that interfaces with children's daily activities in school or home. It is an ongoing problem that consists episodes during which the symptoms last for at least two weeks.

According to the American Psychiatric Association (APA, 2018), depression is a common and serious medical illness that negatively affects how children feel, think, and act. It leads to a variety of emotional and physical problems thereby decreasing children's interest in school activities once. Depression can affect

any child regardless of social status, age, ethnic group, socio-economic status, and parental upbringing among others. Every child at some points has experienced a sad mood, the short period of sadness is not uncommon, and a child's struggle with the pressures of school and home activities such as homework, tests, and examinations among others will lead to sadness. The nine symptoms of depression include; a sad depressed mood, loss of interest and pleasure in regular activities, loss or increase in weight and appetite, loss of energy, negative self-concept and feelings, worthlessness and guilt, difficulty in concentration, and recurrent thoughts of death. In schools, the symptoms are more of somatic life, social withdrawal, and irritability manifesting in behaviours, life fearlessness, and physical complaint and clinging behaviours which can lead to poor academic performance and out-of-school children problems (withdrawal from school). Therefore, the main objective of the study is to examine the relationship between mental health and out-of-school children problem in Bosso local government area of Niger state.

1.1 Statement of Problem

The growing prevalence of mental health issues among children has become a critical concern for educationists, parents, and policymakers. The mental health of children refers to children's emotional, psychological, and social well-being, it encompasses how children think, feel, and behave in their daily lives, and it includes their ability to handle stress relate to other children, and make decisions. Mental health can be a result of depression and anxiety which can lead to out-of-school children problems for children. The problem of the study is to examine the relationship between mental health (anxiety and depression) and out-of-school children problems of children in Bosso Local Government Area of Niger State, Nigeria.

1.2 Objectives of the study

Assess the relationship between depression, mental health and out-of-school children problem in Bosso Local Government Area of Niger State.
Examine the relationship between anxiety, mental health and out-of-school children problems in Bosso Local Government Area of Niger State.

1.3 Research Question

The study was guided by the following research questions:

- What is the relationship between anxiety, mental health and out-of-school children problem in Bosso Local Government Area of Niger state, Nigeria?
- What is the relationship between depression, mental health and out-of-school children problems in Bosso Local Government Area of Niger State, Nigeria?

1.4 Statement of Hypothesis

The following hypotheses were formulated to guide the study:

H_{01}: There is no significant relationship between anxiety, mental health and out-of-school children problem in Bosso Local Government Area of Niger State, Nigeria
H_{02}: There is no significant relationship between anxiety, mental health and out-of-school children problem in Bosso Local Government Area of Niger State, Nigeria?

2. Conceptual Review

According to the World Health Organization (2024), mental health is a state of complete well-being. According to World
Health Mental Report (2022), mental health is a state of mental well-being which enable people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community. The report further highlighted that, mental health is an integral component of health and well-being that underpins our individual and collective abilities to make decisions, build relationships and shape the world we live in. Mental health enables people live harmoniously with themselves and others while making appropriate choices and decisions since most of their psychosocial, economical and biological needs are met, such individuals experience lesser strain and pressure which are part of the precursor of mental health issues or challenges.

The American College Health Association (2022) asserted that survey on mental health, over the years, has increasingly become prevalent in efforts to understand its many components and impacts on individuals. Mental health is a crucial contributor to the global disease burden and is expected to increase annually over the next decades. According to estimates by the WHO (2024), mental health illnesses account for 30% of the nonfatal disease burden worldwide and 10% of the overall disease burden, including death and disability.

According to the United Nations, out-of-school children refer to children who are yet to be enrolled in any formal education, excluding pre-primary education. The age range for out-of-school children is 6-11 years. Out-of-school children are school-age children that are supposed to be in schools but are not in schools due to parental and governmental failures to provide accessible quality education for them. Out-of-school children are young children in the age group of 1 to 12 that are roaming the street without access to a functional educational system (Ojelade, Aiyedun & Aregebesola, 2019). Out-of-school children are the children whom the government and the parents have failed to provide quality basic education for. The term "out-of-school children" is a non-attendance of the school of school-age children for some established factors.

2.1 Causes of Out-of-School Children in Nigeria

There are many factors responsible for out-of-school children in Nigeria. Some of the factors include; poor funding of education, corruption, poor implementation of Child Rights law, insecurity problems, Lack of political will to address the problems, high rate of poverty, and high fertility rate (Raliyat, Umma, & Aisha; 2022; Ogunode & Stephen, 2021; Ololube, 2016; Ogunode, Josiah & Ajape, 2021; Vanguard newspaper, 2020; Ahmed, 2022; Ogunode, Ahaotu & Obi, 2021; Deji, 2022; Punch, 2022; Ogunode, 2020; World Bank, 2011; and Ayoko, 2022).

2.2 Empirical review

Oyeyemi, Chukwudum, & Okenwa (2025) surveyed mental health and out-of-school problems among adolescents in Lagos State, Nigeria. They argued that mental health and out-of-school problems are related to an individual's social and physical health and is of global priority. According to the survey, mental health is the complete physical, social, and mental well-being of an individual. Adolescence, including the ages between 10 and 19 years, is the phase in which changes in mental health usually occur. Half of all mental health disorders begin by the age of 14 years, but most cases are not detected or treated at all. Two research questions were formulated to guide the study. Survey was used to conduct the study. The target population of the study comprised of adolescents in Ajeromi-Ifelodun Local Government Area of Lagos State. One hundred (100) copies of questionnaires were randomly distributed to the respondents and retrieved for data analysis. A self-developed questionnaire was used for the study. The bio-data of the respondents were analyzed using simple percentage and frequency counts, while the stated research questions were analyzed using mean and standard deviation. The findings of the study include: the level of awareness of mental health and out-of-school problems among adolescents in Lagos State on the high side; there are prevalence of mental health and out-of-school problems among adolescents in Lagos State. Recommendations made include; teachers should ensure a friendly teaching and learning environment coupled with low threat in order to motivate students and foster stress-free learning. Teachers should ensure the usage of appropriate teaching strategies and techniques, enhance more collaborative relationship with their students and also provide basic facilities in schools including a serene atmosphere for learning; Secondary school authorities and teachers in Lagos should ensure comprehensive monitoring of adolescents within the ages of 12-15 years with utmost priority due to the prevalence of mental health issues among them, and also take stringent punitive measures in addressing truancy and bullying from senior students.

Also, Prendergast and Lynch (2025), assessed the relationship between mental health and academic performance of final year undergraduate students at a University. They asserted that mental health is a major issue that can have a negative impact on students and their academic performance; notably, 31.4% of students' report symptoms of mental health issues in the past year. However, a knowledge gap exists around mental health issues and academic performance in the Caribbean and even more so in Jamaica. The study's objective was to note the impact of mental health issues on academic performance, how a college/university engages students who suffer from these issues and the administration's perception of its effectiveness. The researcher utilized the single case holistic case study and the qualitative methods of focus group discussion, interviews and document analysis. The study found that the demanding requirements of the final year, the culture shock of the classroom environment, challenges associated with the transition to online learning and the looming transitions after university impacted students' mental health and academic performance. Universities must develop effective strategies to address and mitigate these impacts, especially during the final year. Four major strategies found include seminars, guidance counsellor support, advocacy from student leadership and social gatherings. The study found mixed perceptions of the effectiveness of the strategies employed. This indicates the need for further evaluation and assessment to determine the actual impact of these strategies on students' well-being and academic performance. The findings of the study,

however, have important implications for campus mental health strategies and initiatives.

2.3 Theoretical framework

The theoretical framework adopted for this study is Modified labelling theory: The theory was propounded by Bruce Link and his colleague in 1989. According to the modified labelling theory of mental disease, when an individual is given a mental illness diagnosis, cultural stereotypes of people with mental illnesses become personally relevant and encourage unfavourable self-evaluations. Researchers investigate the impact of the psychiatric diagnosis on this procedure. It aims to balance the meanings attached to self-identities "myself as I really am" and reflected assessments "myself as others view me" with respect to stigma feelings. Studies about mental health and the stigma attached to it have utilized the modified labelling theory. Mehdi studied how epilepsy-related stigma affects the lives of women with the condition. The data was analyzed from a sociological standpoint using the Modified Labelling Theory. Similar methods have been employed in other studies to mediate the relationships between the variables like rejection, stigma management and social support. The modified labelling theory was created to explore the impact of stigma resulting from mental illness. Still, the structure of the theory has been adapted to other negatively stereotyped ideas that could lead people to adopt stigma management methods. The theory has thus been used to explain behaviour in groups such as those living with mentally challenged persons, smokers and parents of children living with disabilities. As it relates to this study, the issue of stigmatization after being aware of mental health issues could trigger negative behaviour in relationship and interaction like rejection, stereotyping and stigmatization of students. Hence; possibilities of absenteeism and abscondment from schools.

3. Research Methodology

A correlational research design was adopted for the study. Correlational design is a method used to study the relationship between two or more variables. The design was chosen to establish the relationship between mental health and out-of-school children problems in Bosso Local Government Area of Niger State. The population of the study was 5,200 Basic six (6) children and the sample size of 200 children was used for the study as respondents. Sample random sampling and purposive sampling techniques were used to select the sample size. Mental health questionnaire (MHQ) and school register attendance were used as instruments for data collection. The instrument (MHQ) was validated by two (2) experts who yielded validity indices of 0.85 and 0.79 and reliability indices of 076 respectively. Percentage and frequency were used to answer the research questions, while the Pearson Product Moment Correlation (PPMC) statistical method was used to test the relationship of the Null hypotheses at 0.05 significance levels.

4. Results

Research Question 1: What is the relationship between anxiety, mental health and out-of-school children problems of children in Bosso Local Government Area of Niger state, Nigeria?

Table 1: Descriptive statistics relationship between anxiety, mental health and out-of-school children problems in Bosso Local Government Area of Niger state, Nigeria?

S/N	Items	1st		2nd	
		Yes (%)	No (%)	Yes (%)	No (%)
1	Over the past two weeks, do you often feel worthless and hopeless in school?	60.5%	39.5%	68.0%	32.0%
2	Have you experienced a loss of interest or pleasure in academic activities in school?	69.0%	31.0%	69.5%	30.5%
3	Do you often feel tired or have a lack of energy, even when you engaged in academic activities?	83.0%	17.0%	77.0%	23.0%
4	Have you experienced difficulty in concentrating on academic tasks such as homework and class assignment	94.5%	5.5%	95.0%	5.0%
5	Do you often experience intense feelings of sadness, anxiety and anger in school?	75.0%	25.0%	82.0%	18.0%

Source: *Field Survey, 2026*

Table 1 presented above addressed the research question one; the table includes two sets of responses, which represent different time points. The responses to items 1, 2, 3, 4, and 5 were analyzed, which are indicative of anxiety, mental health. In the first set of responses to item 1 shows that 60.5% of children often experience the feeling of worthless, anxiety, and hopeless in school. This percentage increased to 65% in the second set. For item 2, 69% experienced a lot of interest in academic activities in school, the item 3 shows 83 and 77% in both first and the second set. Item 4 shows 94 and 95% of the respondents' experience difficulty in concentration in academic task, lastly, item 5 shows

75% and 82% respondents experience intense feeling of sadness, anxiety and anger in school, therefore, data shows a high prevalence of anxiety, mental health problem among the sampled children, with a majority responding "Yes" to most items. These high percentages show a strong relationship between anxiety-related mental health issues and potential out-of-school children problems.

Research Question 2: What is the relationship between depression, mental health and out-of-school children problems of children in Bosso Local Government Area of Niger State, Nigeria?

Table 2: Descriptive statistics relationship between depression, mental health and out-of-school children problem in Bosso Local Government Area of Niger State, Nigeria?

S/N	Items	1st		2nd	
		Yes (%)	No (%)	Yes (%)	No (%)
6	Do you find it challenging to regulate your emotions, such as feeling overwhelmed or unable to cope during stressful situations in school?	92.5%	7.5%	93.5%	6.5%
7	Have you noticed changes in your mood, such as feeling consistently weak in the school?	73.0%	27.0%	75.0%	25.0%
8	Have you noticed changes in your self-esteem or confidence levels, such as feeling in academic activities?	83.5%	16.5%	86.0%	14.0%
9	Do you often experience intrusive or distressing thoughts about academic activities?	89.0%	11.0%	92.0%	8.0%
10	Have you noticed changes in your behavior patterns, such as increased procrastination, avoidance, or withdrawal from social interactions in school?	66.5%	33.5%	83.0%	17.0%

Source: *Field Survey, 2026*

The table 2 above addresses the question 2 which deal with items 6, 7, 8, 9, and 10 which are indicative of depressive symptoms. In the first set of responses, item 6 shows that 92.5% children feeling overwhelmed or unable to cope during stressful situation in school, which increased to 93.5% in the second set. Item 7 indicates that 73% children have a loss of in feeling consistently weak in the school, with a slight increase to 75% in the second set. Item 8 revealed that 83% children often feel tired or lack energy in academic activities in the first set, which increased slightly to 85% in the second set. Item 9 shows 89 and 92% of children experience intrusive or distressing thoughts about academic activities. Item 10 shows 66.5% and 83% noticed changes in your behavior patterns, such as increased procrastination, avoidance, or withdrawal from social interactions in school. These indicated high percentages of strong relationship between depression-related mental health and out-of-school children problems.

Test of Hypothesis

H_{o1}: There is no significant relationship between anxiety, mental health and out-of-school children problems of children in Bosso Local Government Area of Niger State, Nigeria?

Table 2: Correlation between Anxiety and Out-of-School Children Problems

Variable	Mean	Standard Deviation	Correlation Coefficient (r)	p-value
Anxiety Score	6.365	1.818	0.8925	< 0.0001
Out-of-School Children problem Score	6.385	1.748		

Source: *Field Survey, 2026*

Table 2 shows that the Pearson correlation coefficient (r) between anxiety scores and out-of-school children problem scores is 0.8925, with a p-value < 0.0001. This indicates a strong positive correlation between anxiety and out-of-school children problems. The relationship is statistically significant at the 0.05 level. This indicates that there is a strong, positive relationship between anxiety levels and out-of-school children problems among children in Bosso Local Government Area of Niger State.

H_{02}: There is no significant relationship between depression, mental health and out-of-school children problems in Bosso Local Government Area of Niger State, Nigeria?

Table 3: Correlation between Depression and Out-of-School Children Problems

Variable	Mean	Standard Deviation	Correlation Coefficient (r)	p-value
Depression Score	7.315	1.829	0.9897	< 0.0001
Out-of-School Children Problem Score	6.385	1.748		

Source: Field Survey, 2026

Table 3 shows that the Pearson correlation coefficient (r) between depression scores and out-of-school children problem scores is 0.9897, with a p-value < 0.0001. This indicates a very strong positive correlation between depression and out-of-school children problems. The relationship is statistically significant at the 0.05 level. This implies that there is a very strong, positive relationship between depression levels and out-of-school children problems in Bosso Local Government Area of Niger State.

5. Discussion of Findings

The finding of hypothesis one revealed that there is a strong, positive relationship between anxiety levels and out-of-school children problems in Bosso Local Government Area of Niger State. As anxiety levels increase, the likelihood or severity of out-of-school children problems also increases. The finding is in line with the study of Umar and Haruna (2021) children's anxiety manifests in three different forms such as school refusal, test anxiety, and social anxiety. These three branches of children's anxiety can be caused by a number of factors and are usually a sign of a deeper anxiety disorder. Common symptoms of anxiety disorder in children may include excessive worrying, change in sleep pattern, irritability, difficulty in concentrating on school activities, headaches, and stomachaches. Also, Olusegun and Awuya (2021) found that anxiety disorder can have a significant impact on children well-being and their educational enrolment and retention. These conditions of anxiety can also affect children's behaviour in the classroom, their academic performance, and social interaction which can lead to out-of-school children problems.

The finding of hypothesis two implies that there is a very strong, positive relationship between depression levels and out-of-school children problems in Bosso Local Government Area of Niger State. As depression levels increase, the likelihood or severity of out-of-school children problems also increases. The finding of American Psychiatric Association (2018) unveiled that depression is a common and serious medical illness that affects how children feel, think, and act. It leads to a variety of emotional and physical problems thereby decreasing children's interest in school activities once.

6. Conclusions

Based on the findings of this study, it was concluded that:

Both anxiety and depression show strong positive relationship with out-of-school children problems. Therefore, the study concludes that mental health has a positive relationship with out-of-school children problems in primary school in Bosso local government area of Niger State, Nigeria.

7. Recommendations

The study recommended that schools should implement comprehensive anxiety, mental health programs to address and mitigate out-of-school children problems of children, and also there should be collaboration between schools, families, and mental health professionals in order to create a supportive environment that will promote the well-being and academic success of children.

Training of teachers and school staff on how to identify and manage depression, mental health issues in school should be enhanced by school authorities.

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Part Four

Human Resource Management

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Investigating Job-Level Disparities and Generational Differences in Perception and Utilization of Workplace Counselling Services in Nigerian Organizations.

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Abstract. Evaluating workplace counselling requires clear planning about its goals, timing, methods, and responsibility. Counsellors face ethical challenges, needing to balance the interests of employees and organizations through careful and skilled mediation. This paper seeks to investigate job-level disparities and generational differences in the factors influencing the likelihood of accessing workplace counselling and the perception of the adequacy and availability of workplace counselling in Nigerian organizations. A descriptive survey research design was adopted for the study with a non-probability/convenient sample of 257 comprising 80 junior-level, 60 middle-level and 117 senior-level employees with age range from 25 to 45 years and above in organizations in the South West geo-political regions of Nigeria. A questionnaire constructed by the researchers was used to gather data from respondents. Four hypotheses were tested using the Analysis of Variance (ANOVA) at 0.05 level of significance. The findings revealed a statistically significant difference in factors influencing the likelihood of employees accessing workplace counselling based on their job level; suggesting that higher job levels (middle and senior-level) 69% of respondents are likely to access workplace counselling. No statistically significant difference was found in employees' perceptions of the adequacy and availability of workplace counselling in Nigerian organizations based on their job level. A statistically significant difference was observed in employees' perception of the adequacy and availability of workplace counselling based on their age. This distinct generational divide in perceptions, specifically highlighted the 35–44 age group 34% of respondents as the primary source of statistical significance. No statistically significant difference was found in the factors influencing the likelihood of accessing workplace counselling based on age of respondents. Recommendations include more enlightenment campaigns to address the factors preventing the general population from accessing counselling services. To also encourage management of organizations on the provision and maintenance of adequate and beneficial counselling to their employees.

Keywords: Accessibility, Adequacy and availability, Employee perception, Generational differences, Job-level disparities, Workplace counselling.

1. Introduction

In contemporary organizational settings, employee well-being has become a central concern for employers striving to improve productivity, job satisfaction, and overall organizational effectiveness. According to Li et al. (2025), workplace well-being strongly supports sustainable innovation, while digital capability enhances its impact by improving collaboration, autonomy, and knowledge access. Together, well-being and digital capacity promote ethical, value-driven innovation which enhance employee well-being and productivity through holistic workplace practices that support emotional intelligence, spirituality, restoration, motivation, and work–life balance. Inclusive organizational policies, meaningful work, supportive culture, and opportunities for rest and development are key to sustaining employee engagement and performance (Mohamad & Abiddin, 2024).

The historical development of workplace wellbeing, shows how wellbeing initiatives have consistently functioned as managerial interventions aimed at shaping employees into productive workers. Workplace counselling generally involves short-term support for work-related and personal issues that affect job performance and well-being, with positive effects on workplace behaviour. While internal, external, and employee assistance programme models are most common, other models remain under-researched. As policy increasingly prioritizes employee well-being, workplace counselling is well placed to support this goal. Although research shows that healthy employees are generally more engaged and productive, sickness absence rates suggest workplace well-being remains inadequate. The 2017 "*Thriving at Work"* report revealed that mental health issues at work are more severe than once believed and demand urgent action. While policies increasingly emphasize quality work, further research is needed to determine the most effective workplace mental health strategies. (Bajorek, & Bevan, 2020). Workplace counselling is important in promoting employee mental health and organizational productivity. Counselling helps reduce stress, enhance wellbeing, and improve performance, although there are challenges and strategies for effective implementation (Bhatt & Seeta, 2025).
Although the justifications and methods have changed over time, wellbeing has remained a tool for regulating work and legitimizing organizational involvement in employees' lives (Wallace, 2022). Modern workplaces are growing more complex and demanding, employees are increasingly confronted with a range of stressors, including excessive workloads, job insecurity, interpersonal tensions, and challenges in balancing work and personal life. When these pressures are insufficiently managed, they can adversely affect employees' mental health, work performance, and organizational commitment. In response, organizations worldwide are placing increasing emphasis on supportive interventions, such as workplace counselling, to foster psychological well-being and sustain optimal performance. Bosede (2024) opined that employee well-being, specifically physical, mental, and intellectual health has a significant positive effect on organizational performance. Strengthening these well-being dimensions contributes to improved institutional effectiveness. Employees' well-being is strongly shaped by physical and social workplace conditions, intrinsic job characteristics, autonomy, and managerial support. Improving these environmental and organizational factors enhances employee engagement, retention, and overall organizational performance (Dumitriu et al., 2025).

Employee well-being and employee experience are conceptually distinct but closely interconnected in practice. Although Human resource (HR) professionals recognize their differences, organizational initiatives often address both simultaneously, mainly focusing on skills development, physical health, and working conditions (Molek-Winiarska, Bereś, & Drzewiecki, 2024). Workplace counselling encompasses professional psychological support services offered within or facilitated by organizations to assist employees in addressing personal, emotional, and work-related challenges. Empirical evidence suggests that effective counselling practices contribute to reduced stress levels, improved coping mechanisms, enhanced morale, and positive organizational outcomes. Employee well-being; covering physical, mental, and emotional health plays a vital role in improving engagement, performance, and organizational effectiveness. It highlights the importance of leadership support, work–life balance, and proactive well-being programs in creating a healthy and productive workforce (Syed, 2024).

In many developed economies, workplace counselling has become an essential element of human resource management and employee assistance programmes. Nevertheless, the level of systematic implementation and utilization of these services differs considerably across countries and organizational environments. Leaders in the counselling profession have as far back as 2017 identified several areas expected to evolve over the next decade. However, workplace counselling was not listed among these emerging areas, as it has already been well established and practised for decades in other parts of the world. However, workplace counselling is still at a developmental stage in Nigeria. Most organisations both local and multinational do not have designated workplace counsellors. The few organisations where some form of workplace counselling exists are negligible when compared to the many without such services. Even in these organisations, it is uncertain whether workplace counselling is being practised in line with established professional standards (Ahimie & Agbogidi, 2017). This situation appears not to have experienced much change over the years.

Issues concerning job-Level disparities can lead to dissatisfaction in work places and require counselling interventions. job-Level disparities are largely explained by job complexity and development opportunities, though some health, social care, and protective service roles are seen as especially socially useful across classes (Williams, Gifford, & Zhou, 2022). Job-related factors influenced performance

more than personal traits, and it is importance to foster satisfaction, enhance workplace productivity and guide organizational policies (Gazi, Yusof, Islam, Amin, & Senathirajah, 2024). Job inequality affects wages, employment opportunities, hours, and job security, driven by factors such as technological change, skill demand, labour market institutions, and contract regulation (Giupponi & Machin, 2024). Perceptions of workplace inequality and unfair resource distribution reduce job satisfaction and employees' sense of dignity. This can occur through organizational dehumanization, which increases self-objectification, highlighting the negative psychological impact of economic disparities at work (Sainz, Moreno-Bella, & Torres-Vega, 2023). Corpuz (2023) argues that employee well-being in universities is challenged by heavy workloads, burnout, and poor work–life balance. It emphasizes the need for supportive organizational cultures, flexible work arrangements, and comprehensive well-being policies to improve staff satisfaction, productivity, and institutional effectiveness. Employee well-being, especially job satisfaction and work engagement positively influences organizational effectiveness, while burnout has a negative effect. Managing employee well-being is therefore critical for improving organizational performance (van der Merwe & Olivier, 2024).

There is no disputing the fact that counselling is beneficial across all generation because each generation comes with its own peculiarities. These appear to be more pronounced during the work life of individuals. Today's workforce includes four generations; Baby Boomers, Generation X, Millennials, and Generation Z; each shaped by distinct social, political, and technological contexts. These differing environments influence their workplace values, expectations, and motivations in adulthood. Childhood experiences and societal conditions shape long-term value development. It is important for employers to understand generational influences to create inclusive and effective workplace environments (Johns Hopkins University, 2022). Generational experiences and cultural contexts shape workplace technology behaviours and there is the need for adaptive management strategies, continuous training, and cross-generational collaboration to enhance productivity and workplace effectiveness (Shaik, Yadav, Rashid, & Choudhary, 2024). While some cohort differences appear in work values, satisfaction, and turnover intentions, core motivations are largely similar across generations. It is important to integrate lifespan and social constructionist perspectives to guide against generational stereotyping in organizational practice (Yusof, Zawawi, Ahmad Khan, & Anuar, 2025). Uncritical use of generational categories can lead to oversimplification and stereotyping.

Scholars and practitioners need to apply generational concepts cautiously and focus on understanding individual differences rather than relying on broad generalizations (Cho, Rodriguez, & Ardichvili, 2025). Clear generational differences were found in a 12-year longitudinal study that examined whether value differences are driven by generational membership or changes with age. Over time, most value changes occurred primarily among Millennials, while older generations showed little to no change. Some values (e.g., achievement, conformity) remained stable, whereas others increased (e.g., security) or decreased (e.g., power). Overall, value differences reflect both generational effects and developmental changes, with change most evident in younger adults (Leijen, van Herk, & Bardi, 2022). For the first time, five generations—Traditionalists (1925–1945), Baby Boomers (1946–1964), Generation X (1965–1980), Millennials (1981–2000), and Generation Z (2001–2020)—are working side by side. Each generation is shaped by distinct historical events, values, and communication styles, which influence how they respond to leadership, motivation, and organizational change. Employers must understand these generational differences to effectively recruit, manage, engage, and retain a multigenerational workforce (Bourne, 2026).

Comprehensive wellness programmes in high-pressure workplaces improve productivity, reduce absenteeism and stress, enhance job satisfaction and health, and increase employee retention. Investing in holistic wellness initiatives benefits both employees and organizational performance (Soans & Naik, 2024). Workplace counselling improves employee performance by enhancing financial stability, reducing emotional stress, boosting morale, and fostering better communication and problem-solving skills (Motsomotso, 2025). Graupner (2025) highlights a decade of progress in workplace counselling, showing that multilevel training for industrial psychologists improves their ability to address employee mental health at individual, group, and organizational levels.

1.1 Statement of the Problem

Within the Nigerian context, the nature of work is shaped by rapid economic transformation, high unemployment, increasing job demands, and widespread socio-economic uncertainty. Employees in Nigerian organizations are frequently exposed to distinct stressors, such as prolonged working hours, inadequate remuneration, employment instability, and

limited institutional support for mental health concerns. Despite the prevalence of these challenges, workplace counselling remains largely underdeveloped and insufficiently utilized in many organizations. Factors such as cultural attitudes toward counselling, limited awareness, a shortage of trained professional counsellors, and weak organizational policies further constrain the effective adoption of counselling services.

A considerable number of organizations in Nigeria lack formalized workplace counselling programmes, while others regard employees' psychological concerns as personal issues that fall outside the scope of organizational responsibility. In instances where counselling services are available, they are often insufficiently funded, poorly structured, or inadequately staffed. Moreover, factors such as social stigma, low levels of awareness, and apprehension regarding confidentiality further contribute to the underutilization of these services. Consequently, employees may be discouraged from seeking professional support, allowing manageable concerns to develop into more severe mental health and performance-related problems.

A previous study on the Awareness, Accessibility and Utilization of Mental Health care Services among Youths in Lagos State, Nigeria revealed that of respondents a significant difference 96.2% awareness of mental health services; 64.2% accessibility to mental health services but a 26.4% utilization of mental health services from professional counsellors. A significant gender difference was observed in the level of awareness and utilization of mental health services. There is also a significant difference in the level of awareness and utilization of mental health services due to age of respondents (Ahimie, 2023). In the absence of a systematic evaluation of existing counselling practices, organizations risk neglecting a critical mechanism for improving employee health, satisfaction, and overall organizational effectiveness. Accordingly, this study seeks to investigate job-level disparities and generational differences in the perception and utilization of workplace counselling services in Nigerian Organizations.

1.2 Research Objectives

The aim of the study is to:

- Identify the significant difference in the factors influencing the likelihood of accessing workplace counselling among employees across different job levels.
- Ascertain the significant difference in how employees perceive the adequacy and availability of workplace counselling based on their job level.
- Determine the significant difference in how employees perceive the adequacy and availability of workplace counselling in Nigerian organizations based on their age.
- Assess the significant difference in the factors influencing employees' likelihood of accessing workplace counselling based on age.

1.3 Research Questions

- Is there any difference in the factors influencing the likelihood of accessing workplace counselling among employees across different job levels?
- What is the difference in how employees perceive the adequacy and availability of workplace counselling based on their job level.
- How do employees perceive the adequacy and availability of workplace counselling in Nigerian organizations based on their age?
- Is there any difference in the factors influencing employees' likelihood of accessing workplace counselling based on age.

1.4 Research Hypotheses

- There is no significant difference in the factors influencing the likelihood of accessing workplace counselling among employees across different job levels.
- Employees' perceptions of the adequacy and availability of workplace counselling do not differ significantly based on their job level.
- There is no significant difference in how employees perceive the adequacy and availability of workplace counselling in Nigerian organizations based on their age.
- The factors influencing employees' likelihood of accessing workplace counselling do not differ significantly based on their age.

2. Literature Review

Over the years authors have been consistent in creating awareness and advocating the need for workplace counselling. Walton (2003) found that while employees in a UK profit-making organization were generally aware of and positive about workplace

counselling through an Employee Assistance Programme (EAP), actual use of the service was low. Carroll (2010) wrote extensively on these topics; Understanding workplace counselling; Models of workplace counselling; Workplace counselling today: Trends and debates; The impact of organizations on workplace counselling; Setting up counselling in the workplace; An integrative model of individual employee counselling; Evaluating workplace counselling; Ethical issues in workplace counselling; Training for workplace counsellors and Supervising workplace counsellors. The study of Aydogdu and Uzel (2010) found that employees university employees recognized the potential benefits of Employee Assistance Programmes (EAPs) and suggested universities could gain from implementing structured workplace counselling services to support staff well-being. Torun (2013) found that employees in Turkey generally viewed counselling positively and valued its potential benefits, but raised concerns about confidentiality, trust, and counsellor competence. Cultural, ethical, and organizational factors were identified as important in encouraging employees to use these services.

The findings of Hazele (2016) indicate that teachers' and head teachers in Zambia view counselling as highly beneficial, improving decision-making, motivation, job satisfaction, mental well-being, and reducing absenteeism and work-related stress. However, structured workplace counselling programmes were largely absent, with existing practices embedded in managerial duties and limited to specific issues like HIV/AIDS. About 30% of teachers reported never having received any counselling. Migwe, Gachunga, and Iravo (2017) found a positive relationship between counselling and employee performance, suggesting that counselling significantly enhances work effectiveness and productivity. Omoegun, Nwadinigwe, and Ahimie (2018) highlighted the benefits of counselling, such as enhancing productivity and well-being, while noting challenges like low awareness and limited-service delivery. The authors recommended that professional associations increase awareness and promote workplace counselling in Nigerian organizations. Omoegun, Nwadinigwe, and Ahimie (2018) identified key barriers to effective implementation, including low awareness, lack of trained counsellors, organizational resistance, and cultural factors, and highlighted lessons from other countries to improve service delivery.

Chari (2018) found that both users and non-users in a South African organisation saw counselling as valuable, but stigma and confidentiality concerns discouraged some employees. Factors affecting uptake included access to information, workplace culture, counsellor roles, and the impact on personal well-being. The study of Krekel et al (2018) revealed strong evidence that higher employee well-being leads to increased productivity and improved firm performance. McLeod and Henderson (2018) reported that workplace counselling can effectively reduce work-related stress and absenteeism. Elder, Agee, and Adamson (2018) reported that contemporary workplaces often expose professionals to stress, burnout, and challenges affecting personal and professional well-being.

Muhammad and Muhammad (2021) highlight the role of employee counselling in managing stress among Nigerian public servants and recommends establishing counselling units, improving infrastructure, ensuring stable power supply, and providing living wages to reduce workplace stress. Moralo and Graupner (2022) opined that industrial psychologists play a key role as workplace counsellors, helping employees cope with changes in the modern work environment, especially those driven by technology and the Fourth Industrial Revolution. Anyim, Ikeije, and Ekwoaba (2022) highlight that workplace counselling can help employees manage stress and socio-psychological challenges during post-work transitions, such as layoffs, redundancies, resignations, or retirement. Counselling, often provided through Employee Assistance Programs (EAPs), acts as a support mechanism to reduce trauma, family disruption, and other negative outcomes associated with sudden job loss or organizational change. Prudenzi et al. (2024) developed MENTOR, an early workplace intervention to help employees with mental health conditions remain productive and engaged. Bhatt and Seeta (2025) emphasize that workplace counselling is essential for supporting employee mental health and enhancing productivity.

Oluwasanmi et al. (2025) found that employee mental health significantly influences performance in Nigerian public and private organisations. Better psychological, emotional, social, and occupational well-being was linked to higher task, adaptive, and contextual performance. The study recommends that organisations implement mental health initiatives, wellness programs, safe work environments, and routine mental health assessments to enhance productivity. Chepchumba, Chepkilot, and Jeptepkeny (2025) examined the impact of employee counselling programs on performance in tea factories in Kericho County, Kenya. Using surveys and correlation analysis, the study found that counselling positively and significantly influenced employee performance,

explaining about 13% of its variance. The authors recommended regular evaluation of counselling programmes to enhance employees' mental well-being and align them with organizational goals. Kanikwu et al. (2026) examined university staff's awareness, attitudes, and use of counselling services at Edo State University, Nigeria. While most staff had positive perceptions of counselling and recognized its benefits for stress management and career support, actual utilization was low (13.3%). The study highlights a gap between knowledge and use, emphasizing the need for better visibility, communication, and trust in counsellor competence to improve staff well-being.

3. Research Methodology

A non-probability convenience sampling technique, specifically accidental/volunteer sampling was employed for this study. The survey targeted organizations within the South-West geopolitical zone of Nigeria, with the aim of obtaining a sufficiently large and heterogeneous sample of respondents. However, 257 comprising 80 junior-level, 60 middle-level and 117 senior-level employees in responded to the questionnaires providing the best information for the study. The age range of respondents was 25 – 45 years and above. Descriptive statistics indicated that junior-level employees constituted 31% of the sample, middle-level employees constituted 23% while senior-level employees accounted for 46%. Employees within the age range of 25-34 represented 26% of the respondents, those in the age range of 35-44 represented 34% while employees who are 45 years and above made up 40%. The Researchers' developed Questionnaire on Workplace Counselling in Organizations in Nigeria (QWCON) was distributed electronically to a wide range of work settings in order to collect data from respondents across diverse organizational contexts. The responses obtained were analyzed using the One-Way analysis of Variance (ANOVA). Post hoc analysis was computed where a significant difference was observed in the result.

4. Results

Hypothesis 1: There is no significant difference in the factors influencing the likelihood of accessing workplace counselling among employees across different job levels.

Table 1: Descriptive and One-Way ANOVA showing the difference in factors influencing the likelihood of accessing workplace counselling based on job level

Job Level	*N*	*Mean*	*Std. Dev.*		
Junior Staff	80	22.16	2.52		
Middle-level Staff	60	24.82	2.18		
Senior Staff	117	24.79	2.59		
Total	257	23.98	2.76		
	Sum of Squares	*df*	*Mean Square*	*F*	*Sig.*
Between Groups	382.33	2	191.17	31.10	0.000
Within Groups	1561.53	254	6.15		
Total	1943.86	256			

The descriptive section of the analysis presented in Table 1 reveal that Middle-level Staff have the highest mean score (M = 24.82, SD = 2.18), closely followed by Senior Staff (M = 24.79, SD = 2.59). Junior Staff recorded the lowest mean score (M = 22.16, SD = 2.52). To determine if the observed differences between these means are statistically significant, a One-Way Analysis of Variance (ANOVA) was computed. The result shows an F-ratio of 31.10 with a p-value (Sig.) of .000. Since the p-value ($p < .001$) is less than the conventional alpha level of 0.05, the null hypothesis is rejected. It was concluded that there is a statistically significant difference in factors influencing the likelihood of accessing workplace counselling based on their job level. A post hoc analysis was computed to determine the pair that was significant and the result presented in Table 2.

Table 2: Post-Hoc Test comparison of factors influencing the likelihood of accessing workplace counselling based on job level

(I) J_Level	*(J) J_Level*	*Mean Difference (I-J)*	*Sig.*
Junior Staff	Middle-level Staff	-2.65*	0.000
	Senior Staff	-2.62*	0.000
Middle-level Staff	Junior Staff	2.65*	0.000
	Senior Staff	0.03	0.939
Senior Staff	Junior Staff	2.62*	0.000
	Middle-level Staff	-0.03	0.939

*. The mean difference is significant at the 0.05 level.

Analysis in Table 2 clarifies that this statistical difference is driven exclusively by junior-level employees, whose likelihood of accessing workplace counselling are significantly lower than those of both Middle-level and Senior-level employees (p = .000). Conversely, there is no meaningful difference in the likelihood of accessing workplace counselling between Middle and Senior staff (p = .939), suggesting that higher job levels are likely to access workplace counselling.

Hypothesis 2: Employees' perceptions of the adequacy and availability of workplace counselling do not differ significantly based on their job level.

Table 3: Descriptive and One-Way ANOVA showing the difference in employees' perceptions of the adequacy and availability of workplace counselling based on their job level.

Job Level	*N*	*Mean*	*Std. Dev.*		
Junior Staff	80	18.11	6.59		
Middle-level Staff	60	18.10	3.77		
Senior Staff	117	18.26	5.07		
Total	257	18.18	5.33		
	Sum of Squares	*df*	*Mean Square*	*F*	*Sig.*
Between Groups	1.59	2	0.796	0.028	0.973
Within Groups	7260.17	254	28.583		
Total	7261.77	256			

In Table 3 the descriptive statistics show remarkably similar mean scores across all three groups with Junior Staff (M = 18.11; SD = 6.59), Middle-level Staff (M = 18.10; SD = 3.77) and Senior Staff (M = 18.26; SD = 5.07). The ANOVA results show an F-ratio of 0.028. Since the p-value (0.973) is significantly higher than the standard alpha level of 0.05 (p > .05), we fail to reject the null hypothesis. It was concluded that there is no statistically significant difference in employees' perceptions of the adequacy and availability of workplace counselling based on their job level.

Hypothesis 3: There is no significant difference in how employees perceive the adequacy and availability of workplace counselling in Nigerian organizations based on their age.

Table 4: Descriptive and One-Way ANOVA showing the difference in employees' perception of the adequacy and availability of workplace counselling based on their age

Age Range	*N*	*Mean*	*Std. Dev.*		
25-34	67	17.42	4.25		
35-44	87	19.89	5.99		
45 and above	103	17.23	5.05		
Total	257	18.18	5.33		
	Sum of Squares	*df*	*Mean Square*	*F*	*Sig.*

Between Groups	384.210	2	192.105	7.095	0.001
Within Groups	6877.557	254	27.077		
Total	7261.767	256			

The descriptive section in Table 1 shows that the *35–44* age group has the highest mean score (M = 19.89, SD = 5.99). This is followed by the *25–34* age group (M = 17.42, SD = 4.25), while the *45 and above* age group recorded the lowest mean score (M = 17.23, SD = 5.05). The One-Way Analysis of Variance (ANOVA) results reveal an F-ratio of 7.095 with a p-value (Sig.) of .001. Since the p-value (0.001) is less than the alpha level of 0.05 ($p < .05$), the null hypothesis is rejected. Thus, there is a statistically significant difference in how employees perceive the adequacy and availability of workplace counselling based on their age. A post hoc analysis was computed to determine the pair that was significant.

Table 5: Post-Hoc Test comparison of the difference in employees' perception of the adequacy and availability of workplace counselling based on age

(I) Age	*(J) Age*	*Mean Difference (I-J)*	*Sig.*
25–34	35–44	-2.46715*	0.004
	45 and above	0.1849	0.821
35–44	25–34	2.46715*	0.004
	45 and above	2.65205*	0.001
45 and above	25–34	-0.1849	0.821
	35–44	-2.65205*	0.001

*. The mean difference is significant at the 0.05 level.

The pairwise comparison reveals a distinct generational divide in perceptions, specifically highlighting the 35–44 age group as the primary source of statistical significance. Employees in this group have a significantly more positive perception of the adequacy and availability of workplace counselling compared to both the younger 25–34 age group (Mean Diff = 2.47, p = .004) and the older 45 and above group (Mean Diff = 2.65, p = .001). Conversely, there is no statistically significant difference between the youngest and oldest cohorts (p = .821), indicating that their lower perception levels are statistically equivalent.

Hypothesis 4: The factors influencing employees' likelihood of accessing workplace counselling do not differ significantly based on their age.

Table 6: One-Way ANOVA showing the difference in factors influencing employees' likelihood of accessing workplace counseling based on age

Age Range	*N*	*Mean*	*Std. Dev.*		
25-34	67	24.09	1.10		
35-44	87	24.13	3.06		
45 and above	103	23.78	3.21		
Total	257	23.98	2.76		
	Sum of Squares	*df*	*Mean Square*	*F*	*Sig.*
Between Groups	6.924	2	3.462	0.454	0.636
Within Groups	1936.936	254	7.626		
Total	1943.860	256			

The descriptive results indicate that mean scores are remarkably consistent across all age groups. Employees aged *35–44* recorded a mean of 24.13 (SD = 3.06), followed closely by the *25–34* age group with a mean of 24.09 (SD = 1.10), and the *45 and above* group with a mean of 23.78 (SD = 3.21). The One-Way Analysis of Variance (ANOVA) yielded an F-ratio of 0.454 with a p-value (Sig.) of 0.636. Since the p-value (0.636) is significantly greater than the alpha level of 0.05 ($p > .05$), we fail to reject the null hypothesis. It

was concluded that there is no statistically significant difference in the factors influencing the likelihood of accessing workplace counselling based on age.

5. Summary of Findings

- There is a statistically significant difference in factors influencing the likelihood of employees accessing workplace counselling based on their job level; suggesting that higher job levels are likely to access workplace counselling.
- There is no statistically significant difference in employees' perceptions of the adequacy and availability of workplace counselling in Nigerian organizations based on their job level. The result revealed a remarkably similar mean scores across all three groups.
- There is a statistically significant difference in how employees perceive the adequacy and availability of workplace counselling based on their age. There is a distinct generational divide in perceptions, specifically highlighting the 35–44 age group as the primary source of statistical significance.
- There is no statistically significant difference in the factors influencing the likelihood of accessing workplace counselling based on age. The results indicate that mean scores are remarkably consistent across all age groups.

6. Discussion of Findings

The result of hypothesis one revealed a statistically significant difference in factors influencing the likelihood of employees accessing workplace counselling based on their job level; suggesting that higher job levels are likely to access workplace counselling. This is in line with the findings of Abraham et al. (2025) that although workplace-based mental health interventions such as mindfulness, yoga, lifestyle programmes, and institutionally integrated wellness initiatives can improve well-being, reduce burnout, and enhance coping; success is aided by leadership support, peer networks, and flexible delivery. However, barriers include stigma, workload, and digital challenges. Culturally adapted, sustainable, and multilevel strategies are recommended for effective mental health support. Another study revealed an awareness and accessibility of mental health services among youths who represent a higher percentage of higher job level cadre. However, utilization of mental health services from professional counsellors is low among this group (Ahimie, 2023). A study by Lomotey (2025) revealed that counselling lowers stress, strengthens coping skills, and improves engagement, productivity, and retention. However, stigma, limited awareness, and resource gaps restrict its effectiveness, highlighting the need for stronger organizational support and culturally responsive programmes. The study of Igbomor and Olisemenogor (2023) however, revealed an insignificant effect of Employee Assistance Programmes (EAPs) including counselling, wellness, and financial management programmes on employees' organizational commitment among bank employee.

The result of hypothesis two revealed that there is no statistically significant difference in employees' perceptions of the adequacy and availability in Nigerian organizations based on their job level. The result revealed a remarkably similar mean scores across all three groups. While leaders in the counselling profession have as far back as 2017 identified several areas expected to evolve over the next decade, workplace counselling was not listed among these emerging areas, as it has already been well established and practised for decades in other parts of the world. However, workplace counselling is still at a developmental stage in Nigeria. Most organisations both local and multinational do not have designated workplace counsellors. The few organisations where some form of workplace counselling exists are negligible when compared to the many without such services. Even in these organisations, it is uncertain whether workplace counselling is being practised in line with established professional standards (Ahimie & Agbogidi, 2017). This situation appears not to have experienced much change over the years.

The findings of hypothesis three revealed a statistically significant difference in how employees perceive the adequacy and availability of workplace counselling based on their age signifying a distinct generational divide in these perceptions. Janani and Elaiyaraja (2025) investigated workplace differences among Generation X, Millennials, and Generation Z employees using data from 148 respondents. While all groups valued work–life balance and job security, they differed in learning attitudes, problem-solving styles, and perceptions of growth. The study concludes that generational diversity fosters innovation and productivity and offers guidance for inclusive HR practices (Janani & Elaiyaraja, 2025). Haynes (2011) examines how shifting workforce demographics influence workplace expectations across generations. He argues that corporate real estate managers must recognize varying generational needs and design inclusive work environments that accommodate all age groups. The study highlights the importance of aligning workplace strategies with generational

preferences to enhance organizational effectiveness (Haynes, 2011).

The result of hypothesis four revealed that there is no statistically significant difference in the factors influencing the likelihood of accessing workplace counselling based on age. The results indicate that mean scores are remarkably consistent across all age groups. This finding is in contrast with the findings of Bennett, Pitt, and Price (2012) explored the presence of four generations in the workplace that creates diverse perspectives, expectations, and values regarding work and life. The study emphasizes the need to understand these generational differences to manage workplace dynamics effectively (Bennett, Pitt, & Price, 2012). Dias (2025) explained that today's workplaces include multiple generations with differing values, expectations, and work styles shaped by shared life experiences. While Baby Boomers, Generation X, Millennials, and Generation Z display distinct priorities, from recognition and autonomy to purpose, diversity, and flexibility, there is considerable overlap within groups. Understanding these differences is essential for improving collaboration and productivity (Dias, 2025). The study of Abraham et al. (2025) also revealed that many participants felt unsafe disclosing mental health concerns and were dissatisfied with institutional support. The study emphasizes the need for culturally responsive, integrated strategies combining counselling services and systemic workplace reforms to improve staff wellbeing (Abraham et al., 2025).

7. Conclusion

This study examined whether job level and age significantly affect employees' likelihood of accessing workplace counselling and their perceptions of its adequacy and availability in Nigerian organizations. The findings reveal that job level significantly influences the likelihood of accessing counselling, with employees in higher positions more inclined to utilize such services. This may be attributed to greater awareness, autonomy, or reduced stigma among senior staff. However, job level does not significantly affect perceptions of counselling adequacy and availability, as views were largely consistent across hierarchical categories. In terms of age, a significant difference was found in perceptions of adequacy and availability, particularly among employees aged 35–44, indicating a generational variation in outlook. Nonetheless, age does not significantly influence the factors determining the likelihood of accessing counselling, as motivations and barriers appear similar across age groups. Overall, the study highlights that organizational hierarchy shapes utilization patterns, while age influences perceptual differences. It recommends targeted strategies to encourage uptake among lower-level employees and generationally responsive approaches to improve perceptions of counselling services.

8. Recommendations

- Because senior staff are more likely to use counselling services, organizations should create focused initiatives to encourage participation among lower-level employees through awareness programmes and easier access procedures.
- Since perceptions of service adequacy are similar across job levels, organizations should ensure clear, transparent, and consistent communication about counselling services, including confidentiality and access processes.
- Given generational differences in perceptions—especially among employees aged 35–44—organizations should tailor counselling outreach and support strategies to address the specific needs of different age groups.
- Periodic surveys and feedback mechanisms should be used to better understand age-related perception gaps and to align counselling services with employees' evolving expectations.
- Overall, these recommendations emphasize more enlightenment campaigns to address the factors preventing the general population from accessing counselling services. To also encourage management of organizations on the provision and maintenance of adequate and beneficial counselling to their employees.

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Work-Life-Balance and Performance among Female Employees in Law Firms in Lagos State, Nigeria

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Abstract. Grounded in Border Theory, Boundary Theory, Spill-over Theory, and Inter-role Conflict Theory, this study examined the impact of work-life balance practices (leave policy, welfare policies, family responsibilities, and flexible working arrangements) on the performance of female lawyers in selected law firms in Lagos State, Nigeria. Adopting a positivist philosophy and survey research design, data were collected from 226 female legal practitioners drawn from a target population of 520 across eight purposively selected firms using proportionate sampling. Descriptive statistics, correlation, and simple linear regression analyses were employed to test the hypothesized relationships. The findings revealed a strong and statistically significant relationship between work-life balance practices and employee performance ($R^2 = .844$; Adjusted $R^2 = .839$; $F = 166.040$, $p < .05$), indicating that the model explained over 84% of the variation in performance. Leave policy ($\beta = .691$, $p < .001$), welfare policies ($\beta = .327$, $p < .001$), and family responsibilities ($\beta = .217$, $p < .001$) exerted positive and significant effects on performance, whereas flexible working arrangements were not statistically significant ($p > .05$). The Durbin-Watson statistic (2.871) confirmed the absence of serial correlation. The study recommends automation of leave administration, equitable and performance-linked welfare packages, and the design of context-sensitive work-family policies that accommodate diverse family systems rather than adopting a one-size-fits-all approach.

Keywords: Employee performance, female lawyers, legal firms, work-life balance practices, Nigeria

1. Introduction

Work and family represent two fundamental and interconnected domains in individuals' lives, and the ability to manage responsibilities in these domains has become an important concern for employees and organizations alike. Rapid changes in the nature of work, technological connectivity, and evolving social expectations have intensified the difficulty of balancing professional and personal roles. As a result, work-life balance (WLB) has gained increasing attention in human resource management research and practice. Scholars argue that effective work-life balance policies help employees harmonize their work and personal responsibilities, thereby enhancing psychological wellbeing, job satisfaction, and organizational commitment (Allen *et al.,* 2024). Empirical evidence also suggests that organizations that implement supportive work-life initiatives experience improved employee performance and reduced turnover intentions (Pujowati & Aswan, 2025).

The challenge of maintaining work-life balance is particularly evident in professional service sectors such as the legal profession. Legal practice is typically characterized by long working hours, demanding workloads, strict deadlines, and high expectations for productivity. These pressures often create significant work-family conflict and occupational stress among legal professionals. Research indicates that excessive job demands and time pressure are among the strongest predictors of employee burnout and reduced wellbeing in knowledge-intensive occupations (Kasperczuk *et al.,* 2025). Within the legal profession, such pressures may contribute to high attrition rates, especially among female professionals who frequently experience additional family and caregiving responsibilities. Consequently, organizations are increasingly encouraged to adopt supportive work policies that enable employees to better manage the interface between their work and family roles.

In response to these challenges, organizations have adopted various work-life balance initiatives aimed at supporting employees' personal and professional needs. Contemporary literature identifies several key mechanisms through which organizations promote work-life balance, including flexible working arrangements, leave policies, dependent-care assistance, and employee welfare programmes (Alsulami *et al.,* 2022). However, scholars note that many organizations still implement these practices in a limited or fragmented manner, often focusing mainly on flexible scheduling while neglecting broader welfare and family-supportive initiatives that are essential for sustainable work-life integration.

Recent studies conducted in Africa and Nigeria have begun to highlight the growing importance of work-life balance initiatives in shaping employee outcomes. For example, Akinwale and George (2022) found that flexible work arrangements significantly improved job satisfaction and performance among employees in Nigerian service organizations. Similarly, Olatunji et al. (2023) reported that family-supportive organizational practices were positively associated with employee engagement and reduced work-family conflict among professionals in Nigeria. In another study, Okeke and Onyekwelu (2024) observed that welfare policies and supportive workplace practices significantly enhanced employee commitment and productivity within Nigerian organizations. These findings suggest that work-life balance initiatives can play a crucial role in improving both employee wellbeing and organizational effectiveness in developing economies.

Despite these growing insights, empirical research on work-life balance within the Nigerian legal profession remains limited. Much of the existing literature on work-life balance, particularly studies focusing on female legal professionals, has been conducted in Western contexts. Consequently, there is insufficient empirical evidence explaining how specific work-life balance initiatives influence employee performance within Nigerian legal firms. Given the demanding nature of legal practice and the increasing participation of women in the profession, there is a need to examine how structured work-life balance initiatives affect female employees' performance. Accordingly, the following questions are posed with the aim of providing practical recommendations for improving human resource practices in the sector: *What is the effect of leave policy on the performance of female employees in law firms in Lagos State, Nigeria? To what extent does flexi-time affect the performance of female employees in law firms in Lagos State, Nigeria? How do welfare policies impact the performance of female employees in law firms in Lagos State, Nigeria? What is the effect of family responsibilities on the performance of female employees in law firms in Lagos State, Nigeria?*

2. Literature Review

2.1 Employee Performance

Employee performance has continuously gained immense attention since a few decades ago and is frequently highlighted in society. Performance is a metric used by successful businesses to measure their work accomplishments. An organization's performance could be viewed from quality-of-service delivery, level of productivity, internal business process in terms of efficiency and effectiveness in the utilization of resources, employee job satisfaction, and motivation. According to Silitonga and Sadeli (2020), employee performance is frequently interpreted as representative of the organization's performance and has a direct impact on the organization's image. Khan and Mashikhi (2017) stated that performance has been considered as the ultimate outcome of an organization as well as an employee. Creativity, innovation, and a higher level of commitment among employees are the sources of organizational success and glory. A study by Prange and Pinho (2017) mentioned that, since human resources are an important factor in any organization, organizational productivity and efficiency depend on the performance of its employees. Enhanced capabilities, knowledge, and skills are the foundation for the organization's competitive advantage in today's global market (Rodriguez & Walters, 2017). Since the survival of the organization will depend on their ability to provide the employees with the necessary actions, managers of organizations should consider meeting employees' mental and physical requirements and enhancing employees' personal and occupational performance using a variety of means and methods (Abdulkhaliq & Mohammadali, 2019).

2.2 Work-life Balance (WLB)

Work-life balance (WLB) has evolved from being viewed primarily as an individual effort to manage competing responsibilities to a strategic organizational practice that supports employee wellbeing and administrative effectiveness. In this context, *work* refers to activities requiring physical or cognitive effort performed to achieve organizational objectives, while *balance* denotes the ability to maintain stability between professional and personal life domains (Allen *et al.,* 2024). In recent years, balancing work and family demands has become increasingly challenging

due to demographic and workplace changes such as rising workforce participation, particularly among women, the growth of dual-earner households, and longer working hours. These changes have intensified role pressures and increased concerns about managing competing work and family responsibilities (Kossek & Lee, 2022). Consequently, organizations are increasingly encouraged to adopt supportive work-life balance practices to help employees effectively integrate their professional and personal roles while enhancing job satisfaction, wellbeing, and performance (Pujowati & Aswan, 2025).

2.3 Work-Life Balance Practices

While there are many definitions as to what creates a work-life balance practice, the word ordinarily represents one of the following: administrative provision for indigent care, personal or family leave and supple work options. Hence, these practices encompass family leave plans (adoption, compassionate and parental leave), on-site crèche and eldercare facilities, work from home identified as telework, compressed work week, which include working four days' worth of hours, while the fifth day is taken as off day, division of a full time job between employees (job sharing), flexible work hours (flexi-time), which empowers employees to vary their commencement of work and when they are going to finish, provided a certain number of hours is worked (Abioro *et al.,* 2018). This study, however, focuses on the impact of these work-life balance practices (specifically leave policy, flexi-time, welfare policies, and family responsibilities) on female employees' performance in law firms in Nigeria.

Leave Management

Leave management is the process involved in the requisitioning, granting or denying staff time off from work taken into consideration the effects on the institution and also ensure that records on same are kept (Bourdeau *et al.,* 2019; Kim & Ryu, 2017). This may include managing leave related to annual leave, personal or family member sickness, childbirth, and any other event that could give rise to the absence of the employee. Organizations sometimes underrate the effect that employee absence from work can have on productivity. As inferred by (Kocak *et al.,* 2018) and (Zhang *et al.,* 2017) the average cost of staff absenteeism is estimated at 36% of employees' salary, while absenteeism may give rise to 19% daily net lost in productivity. The indirect cost of employee absenteeism includes the interruption of work, overtime payments, engagement of temporary or casual workers, stakeholder's dissatisfaction, as well as employee turnover (Memon *et al.,* 2020). Based on the foregoing, the study hypothesizes that:

H_{01}*: There is no significant relationship between leave policy and performance of female employees in law firms in Lagos State, Nigeria.*

Flexible Working Arrangements

Flexible working arrangements relates to an organization working arrangement in terms of working time, working location and pattern of working (Chukwudi *et al.,* 2022). Flexible working arrangements like flexible part time, shift work, compressed work hours and job sharing are often used to help employees in balancing their family and work-life during 'core hours' which is usually fixed or a period between the latest permissible starting time and earliest permissible finishing time (Kipkoech, 2017). Recent studies indicate that contemporary flexible and hybrid work arrangements increasingly grant employees greater autonomy over when and where they perform their tasks, replacing rigid work schedules with flexible systems that allow work to be carried out from multiple locations such as home, co-working spaces, cafés, or shared office environments like hot-desking (van der Lippe, den Dulk, & Begall, 2024; Wontorczyk & Roznowski, 2022). Sometimes, flexible working arrangements help to increase job satisfaction and maintain work-life balance but often contribute to work augmentation and work-life conflicts (Chukwudi *et al.,* 2022). In light of this, the study hypothesizes that:

H_{02}*: Flexible working arrangements have no significant effect on performance of female employees in law firms in Lagos State, Nigeria.*

Welfare Policies

Employee welfare refers to organizational efforts aimed at improving the overall wellbeing and quality of life of employees within and beyond the workplace. It encompasses a broad range of provisions designed to create favourable working and living conditions for employees in relation to their economic, social, and work environments. In modern human resource management, welfare programmes constitute an important component of the total reward system alongside basic pay and performance incentives, and may include both legally mandated benefits and voluntary organizational initiatives such as health services, safety measures, and social security provisions. Adequate earnings, safe and humane working conditions, and access to welfare benefits are widely recognized as critical factors that enhance employees' quality of work life, job satisfaction, and productivity (Armstrong & Taylor, 2023; Dessler,

2024). The desire for better employees' performances is what prompted their hiring in the first place. As a result, it is in any organization's best interest to shape the appropriate methods to increase employees' performances by the thoughtfulness of incentives owing to employees in the form of welfare packages (Akintoye & Ofobruku, 2022). On this basis, the study hypothesizes that:

H_{03}: Welfare policies have no significant impact on performance of female employees in law firms in Lagos State, Nigeria.

Family Responsibilities

Increasing workforce participation among women, the rise of dual-earner households, single-parent families, and growing elder-care responsibilities have significantly reshaped the work–family interface in contemporary societies. These demographic changes mean that many employees simultaneously manage multiple caregiving roles alongside their professional responsibilities, which can intensify work-family conflict or, in some cases, create positive spillover between the two domains because work and family boundaries are often flexible and interconnected (Allen *et al.,* 2024; Kossek & Lee, 2022). Empirical studies also indicate that factors such as heavy workloads, cultural expectations, family obligations, and organizational support systems strongly influence employees' ability - particularly that of women professionals - to balance work and family responsibilities, with important implications for job performance and overall wellbeing (Adisa *et al.,* 2023; Shockley *et al.,* 2023). In line with the foregoing, the study hypothesizes that:

H_{04}: There is no significant relationship between family responsibilities and performance of female employees in law firms in Lagos State, Nigeria.

3. Empirical Review on Work-Life Balance and Employee Performance

Empirical research consistently demonstrates that specific work-life balance initiatives influence employee performance, although effects are often context-dependent. Regarding leave policies, recent studies indicate that access to structured leave arrangements, such as parental and family leave, reduces burnout, enhances wellbeing, and improves job commitment and productivity. For instance, Adisa et al. (2023) found that employees with supportive leave provisions exhibit higher engagement and better task performance, while Allen et al. (2024) emphasized that leave policies contribute significantly to organizational commitment and reduced absenteeism.

Flexible work arrangements, including flextime and hybrid schedules, are also positively associated with employee performance. Shockley et al. (2023) reported that flexible scheduling reduces work-family conflict and improves employee engagement and productivity, while Pujowati and Aswan (2025) found that hybrid and remote work models allow employees to manage competing work and family demands more efficiently, enhancing overall performance.

Welfare policies remain another significant determinant of employee performance. Comprehensive welfare initiatives, including health benefits, employee assistance programs, and safe working condition, have been shown to improve job satisfaction, motivation, and commitment. In the Nigerian context, Okeke and Onyekwelu (2024) found that organizations providing robust welfare support experience higher employee productivity and reduced turnover. Similarly, Kasperczuk et al. (2025) emphasized that welfare programs contribute to sustainable employee performance by addressing both social and psychological needs.

Lastly, family responsibilities continue to shape work outcomes, especially for female employees. The increasing participation of women in the workforce, coupled with dual-earner households and caregiving duties, intensifies the challenges of balancing work and family roles. Kossek and Lee (2022) note that supportive organizational policies can mitigate the negative effects of family demands on job performance, and Shockley et al. (2023) confirm that family-supportive practices significantly reduce work-family conflict and enhance employee engagement.

4. Theoretical Framework

The theoretical foundation of this study is anchored on Border Theory, Boundary Theory, Spill-over Theory, and Inter-role Conflict Theory, which collectively explain the dynamics between work and family domains and their implications for employee outcomes. Border Theory, advanced by Sue Campbell Clark (2000), conceptualizes work and family as distinct domains separated by temporal, physical, and psychological borders, arguing that the permeability and flexibility of these borders determine the ease with which individuals transition between roles. Complementing this perspective, Boundary Theory, associated with Zerubavel (1996) and further developed by Ashforth et al. (2000), emphasizes how individuals cognitively construct and manage boundaries between life spheres, influencing role segmentation or integration. While Border Theory focuses specifically on work–family interfaces, Boundary Theory provides a broader cognitive lens for

understanding how individuals categorize and navigate social roles. Spill-over Theory, articulated by scholars such as Jeffrey H. Greenhaus and Gary N. Powell and elaborated by Arnold B. Bakker and others in later literature, posits that experiences, emotions, skills, and behaviors in one domain transfer to another, either positively or negatively, thereby linking satisfaction or strain across work and family spheres. In contrast, Inter-role Conflict Theory, originally conceptualized by Jeffrey H. Greenhaus and Nicholas J. Beutell (1985), explains work-family tension as arising from incompatible role demands, particularly where time, strain, or behavioral expectations in one role hinder performance in another. Synthesized together, these theories provide a comprehensive framework for this study by explaining how structural boundaries, cognitive categorizations, emotional transfers, and incompatible role pressures interact to shape work-life balance and, ultimately, employee performance.

5. Research Methodology

This study adopted a positivist philosophy and a deductive approach, employing a survey research design. The population comprised all female legal practitioners in eight purposively selected private law firms (Wale Babalakin & Co, Aluko & Oyebode, Templars, Banwo & Ighodalo, G. Elias, George Etomi & Partners, Udo Udoma & Belo-Osagie, and Aelex Legal) selected based on staff strength and accessibility. From a total workforce of 1,272 employees, an estimated 520 were female lawyers, forming the target population. Using the Taro Yamane (1967) formula at a 95% confidence level and 5% margin of error, a sample size of 226 was derived and proportionately allocated across the firms. Respondents were randomly selected within each firm based on gender. Data were collected through a structured 39-item questionnaire divided into two sections: demographic characteristics (gender, age, experience, educational qualification, and status) and study variables. The independent variables (leave policy, flexible work arrangements, welfare policy, and family responsibilities) were measured on five-point Likert scales, while employee performance (dependent variable) was adapted from Kasau (2017) and similarly measured.

Instrument validity was ensured through expert review to establish internal and content validity. Reliability was tested using Cronbach's alpha, with all constructs exceeding the 0.70 threshold (leave policy = 0.801; flexible work arrangements = 0.854; welfare policy = 0.775; family responsibilities = 0.911; employee performance = 0.865), confirming internal consistency. A pilot study involving five law firms preceded the main survey. Primary data were collected over a two-week period, with the assistance of research aides and in collaboration with HR and administrative heads of the firms. Data analysis involved descriptive statistics to summarize sample characteristics, correlational analysis to determine the strength and direction of relationships, and simple linear regression to test the functional relationship between work-life balance practices and employee performance. The results are presented in the next section.

6. Results and Discussion

6.1 Descriptive Results

Of the 226 questionnaires administered, only 128 (57% response rate) were retrieved and used for analyses. This section provides descriptive analyses of the study's sample. The demographic variables of respondents examined in this study include age, years of experience, highest educational qualification, and hierarchical level. The result is as presented in Table 1:

Table 1: Respondents' Demographic Distribution

Variable	Category	Frequency	Percent	Cumulative Percent
Age	16 - 25	80	62.5	62.5
	26 - 35	44	34.4	96.9
	36 - 45	4	3.1	100.0
	Total	128	100.0	
Years of Experience	1 – 5	80	62.5	62.5
	6 - 10	48	37.5	100.0
	Total	128	100.0	
Highest Educational Qualification	BL	105	82.0	82.0
	LL.M	23	18.0	100.0
	Total	128	100.0	
Hierarchical Level	Associate	124	96.9	96.9
	Senior Associate	4	3.1	100.0
	Total	128	100.0	

Source: *Researchers' Fieldwork (2025)*

6.2 Descriptive Statistics of Employee Performance

Each item in the variables presented in Table 4.3 was structured in 5-point Likert scale of 1-5 with 1 being Strongly Disagree, 2 is Disagree, 3 represents Neutral, 4 is Agree, and 5 is Strongly Agree. Responses on each item on the questionnaire are based on a midpoint average of 3.0 at which response would be regarded as agreement or disagreement. A mean score of magnitude above 3.0 would therefore indicate agreement while a mean score of below 3.0 signifies disagreement. The calculated values are scored as follows: between 1.0 – 1.4 is scored as very low, 1.5-2.4 is low, 2.5 – 3.4 is moderately high, 3.5 – 4.4 is high, and 4.5 and above is very high (SERAP, 2018). The results are shown as follows:

Table 2: Descriptive Analysis of Employee Performance

S/N	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean
6	I have absolute understanding of my roles and responsibilities in this firm.	70 (54.7%)	58 (45.3%)	0 (0%)	0 (0%)	0 (0%)	4.55
7	I am able to carry out my responsibilities and tasks effectively and efficiently.	70 (54.7%)	58 (45.3%)	0 (0%)	0 (0%)	0 (0%)	4.55
8	My performance is often affected by multiple family responsibilities.	23 (18%)	65 (50.8%)	18 (14.1%)	22 (17.2%)	0 (0%)	3.70
9	I feel motivated to render more services to this firm after I return from every leave	23 (18%)	83 (64.8%)	22 (17.2%)	0 (0%)	0 (0%)	4.01
10	I come up with creative solutions to new problems at work	23 (18%)	88 (68.8%)	17 (13.3%)	0 (0%)	0 (0%)	4.05
11	I usually feel efficient every time I am allowed the flexibility of deciding my work schedule.	42 (32.8%)	86 (67.2%)	0 (0%)	0 (0%)	0 (0%)	4.33
12	I am able to set priorities at work	68 (53.1%)	60 (46.9%)	0 (0%)	0 (0%)	0 (0%)	4.53
13	I continually seek new challenges at work	63 (49.2%)	65 (50.8%)	0 (0%)	0 (0%)	0 (0%)	4.49
14	I find myself often complaining about non-work and work related issues at work	23 (18%)	0 (0%)	25 (19.5%)	63 (49.2%)	17 (13.3%)	2.60
Overall mean							4.09

Source: *Researchers' Fieldwork (2025)*

Table 2 above shows the performance of employees in the sampled law firms in the following order: I have absolute understanding of my roles and responsibilities in this firm ($\overline{X}$ = 4.55); I am able to carry out my responsibilities and tasks effectively and efficiently ($\overline{X}$ = 4.55); I am able to set priorities at work ($\overline{X}$ = 4.53); I continually seek new challenges at work ($\overline{X}$ = 4.49); I usually feel efficient every time I am allowed the flexibility of deciding my work schedule ($\overline{X}$ = 4.33); I come up with creative solutions to new problems at work ($\overline{X}$ = 4.05); I feel motivated to render more services to this firm after I return from every leave ($\overline{X}$ = 4.01); My performance is often affected by multiple family responsibilities ($\overline{X}$ = 3.70); and I find myself often complaining about non-work and work related issues at work ($\overline{X}$ = 2.60). The overall mean score of 4.09 shows that there is high level of employee performance in these law firms.

Table 3: Descriptive Statistics of Leave Policy

S/N	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean
15	My firm observes the leave policy in the employment agreement.	110 (85.9%)	18 (14.1%)	0 (0%)	0 (0%)	0 (0%)	4.86
16	There is paid maternity/paternity leave in this firm.	88 (68.8%)	18 (14.1%)	17 (13.3%)	5 (3.9%)	0 (0%)	4.48
17	This firm allows me to take time off for further studies	88 (68.8%)	40 (31.3%)	0 (0%)	0 (0%)	0 (0%)	4.69
18	This firm offers sick leave which helps me to take care of my emotional, mental, and physical health.	88 (68.8%)	35 (27.3%)	0 (0%)	5 (3.9%)	0 (0%)	4.61
19	This firm offers annual leave which helps me in reducing work-induced stress.	93 (72.7%)	35 (27.3%)	0 (0%)	0 (0%)	0 (0%)	4.73
20	My firm usually gives me additional leave to prolong my annual leave.	46 (35.9%)	17 (13.3%)	0 (0%)	18 (14.1%)	47 (36.7%)	2.98
Overall mean							4.39

Source: *Researchers' Fieldwork (2025)*

The overall mean score of 4.39 shows that the leave policy rate of these law firms is high. Meaning that leave policy is given top priority at these law firms.

Table 4: Descriptive Statistics of Flexible Work Arrangements

S/N	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean
21	In this firm, employees who use flex-time are as much likely to advance their careers as those who do not use flex time.	9 (7%)	66 (51.6%)	36 (28.1%)	0 (0%)	17 (13.3%)	3.39
22	My work schedule mostly allows me opportunities to attend appointment and special events in my family.	9 (7%)	58 (45.3%)	61 (47.7%)	0 (0%)	0 (0%)	3.59
23	Sometimes I can work while at home through telecommunication	5 (3.9%)	88 (68.8%)	35 (27.3%)	0 (0%)	0 (0%)	3.77
24	I can decide the start and finish times for specific tasks assigned	5 (3.9%)	59 (46.1%)	47 (36.7%)	17 (13.3%)	0 (0%)	3.41
25	In this firm, it is quite easy to leave during the workday to take care of personal or family matters	4 (3.1%)	37 (28.9%)	48 (37.5%)	39 (30.5%)	0 (0%)	3.05
26	Employees are often expected to take work home at night and/or on weekends.	47 (36.7%)	59 (46.1%)	0 (0%)	22 (17.2%)	0 (0%)	4.02
Overall mean							3.54

Source: *Researchers' Fieldwork (2025)*

The overall mean score of 3.54 shows that flexible work arrangements is perceived as high in these law firms.

Table 5: Descriptive Statistics of Welfare Policy

S/N	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean
27	My firm makes available childcare facilities for nursing mothers.	0 (0%)	4 (3.1%)	17 (13.3%)	67 (52.3%)	40 (31.3%)	1.88
28	My firm makes regular (yearly/biannually) arrangements for holiday (fully or partly paid).	4 (3.1%)	0 (0%)	107 (83.6%)	0 (0%)	17 (13.3%)	2.80
29	Professional counseling services are available to employees.	0 (0%)	0 (0%)	106 (82.8%)	22 (17.2%)	0 (0%)	2.83
30	My firm ensures that breastfeeding mothers enjoy flexible working arrangements to take care of their babies.	0 (0%)	64 (50%)	47 (36.7%)	17 (13.3%)	0 (0%)	3.37
31	Management in this firm are sympathetic toward employees' child care responsibilities	0 (0%)	106 (82.8%)	5 (3.9%)	17 (13.3%)	0 (0%)	3.70
32	In this firm, employees who participate in available work–family programs (e.g., job sharing, part-time work) are viewed as less serious about their careers than those who do not participate in these programs.	0 (0%)	27 (21.1%)	101 (78.9%)	0 (0%)	0 (0%)	3.21
Overall mean							2.96

Source: *Researchers' Fieldwork (2023)*

With an overall mean score of 2.96, welfare policies in these law firms can be considered moderately high.

Table 6: Descriptive Statistics of Family Responsibilities

S/N	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean
33	In my firm, employees are encouraged to strike a balance between their work and family lives.	0 (0%)	45 (35.2%)	36 (28.1%)	47 (36.7%)	0 (0%)	2.98
34	This firm is supportive of employees who want to switch to less demanding jobs for family reasons.	0 (0%)	22 (17.2%)	106 (82.8%)	0 (0%)	0 (0%)	3.17
35	In this firm, there is hardly any resentful when women take extended leave to care for newborn or adopted children.	0 (0%)	27 (21.1%)	101 (78.9%)	0 (0%)	0 (0%)	3.21
36	In the event of a conflict, management of this firm understands when employees have to put their family first.	0 (0%)	44 (34.4%)	66 (51.6%)	18 (14.1%)	0 (0%)	3.20
37	Executives of this firm are sensitive to employees' family and personal concerns.	0 (0%)	44 (34.4%)	37 (28.9%)	47 (36.7%)	0 (0%)	2.98

S/N	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean
38	My firm makes provision for family leaves to attend to family issues.	0 (0%)	44 (34.4%)	84 (65.6%)	0 (0%)	0 (0%)	3.34
							3.15

Source: *Researchers' Fieldwork (2025)*

Table 6 shows that the overall mean score for family responsibility is perceived as moderately high at 3.15.
Estimation and Interpretation of Research Model

Correlation Analysis

The background behavioural pattern in the data generated for the study was examined using the bivariate Pearson correlation coefficients which were conducted on the data for all variables in the study. Table 7 shows the Pearson correlation coefficients among study variables.

Table 7: Pearson Correlation Coefficients among the Study Variables

Variables		EPRF	LPOL	FLWK	WPOL	FRES
Employee Performance (EPRF)	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	128				
Leave Policy (LPOL)	Pearson Correlation	.649**	1			
	Sig. (2-tailed)	.000				
	N	128	128			
Flexible Working Arrangements (FLWK)	Pearson Correlation	.664**	.577**	1		
	Sig. (2-tailed)	.000	.000			
	N	128	128	128		
Welfare Policy (WPOL)	Pearson Correlation	.652**	.374**	.752**	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	128	128	128	128	
Family Responsibilities (FRES)	Pearson Correlation	.073	.285**	.153	.083	1
	Sig. (2-tailed)	.411	.001	.085	.352	
	N	128	128	128	128	128

**. Correlation is significant at the 0.01 level (2-tailed).

Source: *Researchers' Fieldwork (2025)*

Table 7 above shows the Pearson's correlation coefficients between each pair of variables. According to Bryman and Cramer (1997), the Pearson's correlation coefficient (r) should not be more than 0.80; otherwise the independent variables that show a relationship in excess of 0.80 may be suspected of having multicollinearity. However, Table 7 revealed that none of the correlation coefficients is up to 0.80.

Table 8: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.919[a]	.844	.839	.1919293	2.871

a. Predictors: (Constant), FRES, WPOL, LPOL, FLWK

b. Dependent Variable: EPRF

Source: *Researchers' Fieldwork (2025)*

Table 9: ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	24.466	4	6.116	166.040	.000[b]
	Residual	4.531	123	.037		
	Total	28.997	127			

a. Dependent Variable: EPRF

b. Predictors: (Constant), FRES, WPOL, LPOL, FLWK

Source: Researchers' Fieldwork (2025)

Table 10: Regression Table

Coefficients[a]

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.437	.188		2.329	.022		
LPOL	.691	.050	.691	13.882	.000	.513	1.950
FLWK	.099	.058	.113	1.708	.090	.288	3.475
WPOL	.327	.062	.289	5.268	.000	.423	2.362
FRES	.217	.039	.229	5.592	.000	.758	1.319

a. Dependent Variable: EPRF

Source: *Researchers' Fieldwork (2025)*

7. Discussion of Findings

By developing a conceptual model based on boundary theory, border theory, spill-over theory, and inter-role conflict theory, this study found that work-life balance practices (leave policy, welfare policies, and family responsibilities) can be linked to female employees' performance in law firms in Nigeria. Specifically, the leave policy, welfare policies, and family responsibilities were found to have significant impact on female employees' performance in law firms in Nigeria. The R-squared value of 0.844 is the strength of the model. It indicates a goodness of fit since it indicated all the elements of work-life balance (leave policy, flexi-time, welfare policy, and family responsibilities) jointly explained over 84.4% of the systematic variation in female employees' performance. The R-squared value after adjustment for the degree of freedom was 0.839 in the regression model. This indicates that work-life balance practices when grouped together explained approximately 84% of systematic variations of female employees' performance at law firms in Nigeria. The Durban-Watson statistics of 2.871 reveals the absence of first order serial correlation. The F-statistic of 166.040 is significant at $p<0.05$ ($p=0.000$). These results indicate that there is a statistically significant relationship between the dependent and independent variables of the study. Based on the regression analysis, when all factors of work-life balance (leave policies, flexible work arrangements, welfare policies, and family responsibilities) are held constant at zero, female employees' performance would be 437.

The results also indicate that when all other independent variables are held at zero, a unit increase in leave policies will lead to a .691 increase in female employees' performance; a unit increase in flexible working arrangements will not affect female employees' performance, a unit increase in welfare policies will lead to a .327 increase in female employees' performance, and a unit increase in family responsibilities will lead to a .217 increase in female employees' performance. This infers that leave policy contributes most to the female employees' performance followed by welfare policies. At 5% level of significance and 95% level of confidence, leave policies had a 0.000 level of significance, flexible working arrangements showed a 0.090 level of significance, welfare policies showed a 0.000 level of significance and family responsibilities showed a 0.000 level of significance; thus, the most significant factors are leave policy, welfare policies, and family responsibilities.

The findings of this study are in agreement with the findings of Adisa, Aiyenitaju, and Adekoya (2023); Allen et al. (2024); and Raj (2017) whose studies reported a positive relationship between leave policy and employees' performance. However, the findings of this study are in disagreement with the findings of Kasau (2017) whose study revealed a negative relationship between leave policy and employees' performance. In addition, the result showed that there is no significant relationship between flexible working arrangements and female employees' performance. The findings of this study disagree with the findings of Pujowati and Aswan (2025) and Shockley et al. (2023) whose studies showed that there exists a positive correlation between FWAs and individual employee performance. Also, this study revealed a positive significant relationship between welfare policies and female employees' performance. This result agrees with the findings of Kasperczuk et al. (2025) and Okeke and Onyekwelu (2024) whose studies found that organizations providing robust welfare support

experience higher employee productivity and reduced turnover. However, the findings of this study are in disagreement with the findings of Kasau (2017) whose study revealed a negative relationship between welfare policies and employees' performance. Lastly, the results of this study revealed a positive relationship between family responsibilities and female employee's performance. This finding is in agreement with the findings of Kossek and Lee (2022) and Shockley et al. (2023) whose studies affirm that family-supportive practices significantly reduce work-family conflict and enhance employee engagement.

The significant relationship between work-life balance practices and female employees' performance can be explained by a number of theories as stated in the theoretical framework of this study. According to the border theory, the ease and limit in which people switch between family lives and work lives can affect the degree of synthesis and regulate the ease of conversions between the family and work resulting in situations where experiences in one domain significantly affects experiences in the other. The spill-over theory further explains the results of this study. As Bello and Ibrahim (2020) stated, family and work functions as an entity in spill over theory. The authors believe that what happens at home affects the happenings at work. Individuals transfer skills, emotions, attitudes, and behaviours that they form in their family role into work roles and vice versa.

The insignificant relationship found between flexible working arrangements and female employees' performance may be because in Nigeria, and especially for law firms, employers hardly practice flexible work arrangements. Lawyers in Nigeria often face demanding work schedules and long working hours. They are expected to dedicate a significant amount of time and effort to their cases, clients, and profession. Also, the nature of the legal profession requires lawyers to meet strict deadlines, conduct extensive legal research, draft legal documents, and represent their clients in court. These demands can result in lawyers working late nights, weekends, and even sacrificing their personal lives for the sake of their careers. This blur between work time and home time in the legal profession may be the cause of the insignificant relationship between flexible work arrangements and female employees' performance because whether there is flexible working arrangement or not, their performance is not affected.

8. Conclusion and Recommendation

Every individual is an integral part of the family in particular and the society in general. Work and family are commonly regarded as the two most important and closely intertwined domains in people's lives. This study established a strong and statistically significant relationship between work-life balance practices and the performance of female employees in selected Nigerian law firms. With an R^2 of 0.844 (adjusted R^2 = 0.839), the study demonstrated substantial explanatory power, indicating that leave policy, welfare policies, flexible work arrangements, and family responsibilities jointly accounted for over 84% of the variation in performance. Theoretically, the results are consistent with propositions from Border Theory and Spill-over Theory, which explain how permeability between work and family domains allows experiences in one sphere to influence outcomes in the other. The insignificance of flexible working arrangements appears context-specific, reflecting the demanding structure of the Nigerian legal profession where long hours and rigid deadlines limit the practical impact of flexible scheduling on performance.

Below are the study's recommendations:

Employers need to pay more attention to the bottlenecks associated with the administration of leave. One of the obvious ways to enhance the leave management practices is to invest in automation. That way, it reduces bureaucracies, errors and speeds up the processing of staff leave. Again, a well-structured leave roster that evenly distributes staff leave over the twelve months of the year will be useful to ensure that the work of the institution runs smoothly throughout the year and also avoid work overload on the remaining staff.

Employers of law firms should grant welfare package of value. This will go a long way in motivating the employees to get committed, because it is found that it is not just about welfare package, but a package that means something to the prospective recipient. As such, employers must follow the tenets of equity and fair welfare. If the welfare package is transparently structured in such a way that your level of output determines how bumper your package will be, it will go a long way in motivating the employees to put more effort in their work. It is also necessary for the employees to know that they deserve their welfare. When employees are aware of what is due to them as welfare package, they can press for it and peacefully get it without necessarily begging for it.

As the COVID-19 pandemic illustrates vividly, work-family conflicts affect the well-being of everyone. A key implication from this study is that, when designing work-life balance policies and procedures to ease

employees' work-family conflict, it is important to consider the employees' specific family contexts, since these contextual factors from the family system affect employees' performance. It requires that managers recognize the relevance and impact of the family system so that they could better understand the potential family issues of their employees and better assist them. For example, the birth of a child may not only mean that the employee may need more time at home, or that it may distract the employee from work, but also that the new addition to the family could change the family's bonds between members and the family values, which could affect female workers' career aspirations

Moreover, when designing work-family policies, it also helps when managers understand the complexity and idiosyncrasy of each employee's respective family system, so that they could accommodate more family situations and even customize the policies according to the employees' unique family backgrounds. The one-size-fits-all approach to work-family policies may not be the best approach. Instead, policies with built-in flexibility and consideration of unique family contexts may satisfy more employees. For example, if money is a big concern versus time, organizations could have policies to trade holiday time for more pay, or vice versa.

9. Suggestion for Future Studies

Obviously, leave management has cost implications for law firms. Future research may consider the cost implications of leave management practices to law firms. This study is limited by focusing on female employees in law firms in Nigeria only; future studies may adopt all employees in the different industries with various backgrounds of age, religions, and family orientation.

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Theoretical Perspectives on Psychometric Assessment as a Strategic Mechanism in Personnel Selection and Recruitment

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Abstract. Psychometric testing has gained prominence as an objective and standardized tool for informing selection decisions, limited scholarly work has integrated its use within broader strategic human resource management (SHRM) frameworks. This paper examines the strategic role of psychometric assessment in personnel selection and recruitment through a synthesis of established theoretical perspectives. The study adopts a qualitative theoretical methodology, drawing exclusively on secondary data from peer-reviewed journal articles, theoretical models, and existing empirical studies in organizational psychology, human resource management, and decision-science literature. Findings indicate that the strategic value of psychometric assessment can be explained through multiple theoretical lenses. Human Capital Theory positions psychometric tools as mechanisms for identifying and developing high-value human resources. Person–Environment Fit Theory reinforces the role of assessments in achieving optimal alignment between candidate attributes and job requirements. Decision-Making Theory highlights how psychometric instruments reduce cognitive biases and enhance the consistency of hiring decisions. Meanwhile, the Resource-Based View and Strategic HRM Theory conceptualize psychometric systems as organizational capabilities that provide competitive advantage when integrated into long-term talent strategies. The study concludes that psychometric assessment functions not merely as an evaluative tool but as a strategic mechanism that supports workforce planning, enhances decision quality, and contributes to sustainable organizational performance. The paper recommends that organizations adopt a multi-theoretical approach when designing selection systems, invest in assessor training to ensure proper test administration and interpretation, and consistently evaluate the fairness, relevance, and predictive validity of instruments used. Future research should empirically test the integrated theoretical model proposed in this study and explore contextual variations across industries and cultures.

Keywords: Theoretical Perspectives, Psychometric Assessment, Strategic Mechanism, Personnel Selection, Recruitment.

1. Introduction

Psychometric assessment has become an integral component of contemporary personnel selection and recruitment processes, reflecting a broader trend toward evidence-based human resource management (HRM). Over the past decade, organizations have faced heightened pressures to make reliable, fair, and strategically aligned hiring decisions, leading to increased reliance on standardized measurement tools such as cognitive ability tests, personality inventories, situational judgment tests, and aptitude assessments (Schmidt & Hunter, 1998; Salgado et al., 2003; Chamorro-Premuzic & Winsborough, 2015). Rapid technological advancements including AI-enabled testing platforms and automated scoring algorithms have further strengthened the adoption of psychometric methods by improving scalability,

accuracy, and predictive power (Landers & Behrend, 2022). Although the practical benefits of psychometric testing are well documented, the existing literature has remained disproportionately focused on predictive validity and operational utility, with comparatively limited attention to the theoretical frameworks that explain why and how psychometric assessments contribute strategically to organizational effectiveness (Ployhart & Weekley, 2010; Woods et al., 2020).

The growing strategic orientation of HRM underscores the need to examine how psychometric assessment functions beyond mere selection efficiency. Strategic HRM theorists argue that talent acquisition must align with long-term organizational goals, competitive pressures, and dynamic workforce requirements (Wright & McMahan, 2011; Jiang & Messersmith, 2018). Within this context, psychometric tools operate not only as diagnostic instruments but also as strategic mechanisms that shape competency pipelines, enhance decision quality, minimize hiring errors, and support organizational agility (Ulrich, 2013; Cascio & Aguinis, 2019). Moreover, the strategic use of psychometrics is becoming increasingly important as organizations grapple with talent scarcity, remote work, and globalized labor markets, necessitating tools that ensure consistency and fairness across diverse applicant pools (Nikolaou, 2021).

Several foundational theories provide insight into the strategic significance of psychometric assessment. Human Capital Theory posits that individuals possess knowledge, skills, and abilities that contribute to firm productivity, making structured and validated assessment critical for identifying high-value talent (Becker, 1993; Nyberg et al., 2018). Person–Environment Fit Theory emphasizes the alignment between individual characteristics and job or organizational demands, arguing that better fit leads to higher performance, enhanced engagement, and reduced turnover (Kristof-Brown et al., 2005; Yu, 2021). Decision-Making Theory further underscores the role of psychometric testing in reducing cognitive bias, improving information processing, and ensuring more consistent selection outcomes by limiting subjective judgment (Kahneman & Tversky, 1979; Highhouse, 2008). Additionally, the Resource-Based View (RBV) positions well-designed selection systems including psychometric tools as strategic capabilities that yield sustained competitive advantage when they are valuable, rare, and difficult to replicate (Barney, 1991; Wright et al., 2014).

Despite these theoretical connections, the strategic role of psychometric assessment remains insufficiently conceptualized. Much of the empirical literature emphasizes short-term predictive outcomes rather than exploring how psychometric assessments integrate into broader strategic talent management frameworks. There is also a lack of theoretical clarity regarding the mechanisms through which psychometrics enhances organizational capabilities, reduce risk, and support long-term workforce planning (Sackett et al., 2021). Consequently, a gap persists in understanding how psychometric assessment operates not just as a measurement instrument but as a strategic mechanism within talent acquisition and organizational development.

This study addresses this gap by providing a comprehensive theoretical analysis based on secondary data drawn from contemporary and classical research in industrial–organizational psychology, human resource management, and strategic management. By synthesizing these theoretical perspectives, the study develops a broader conceptual understanding of psychometric assessment as both a scientific measurement tool and a strategic organizational resource with implications for competitive advantage, workforce optimization, and long-term organizational success.

1.1 Objective of the Study

The primary objective of this theoretical paper is to examine and synthesize the theoretical foundations that explain how psychometric assessment functions as a strategic mechanism in personnel selection and recruitment. In line with this objective, the study is organized into five thematic sections. Section One introduces the introduction, and outlines the objective of the study. Section Two discusses literature review, and major theoretical perspectives that inform the strategic use of psychometric tools, including Human Capital Theory, Person–Environment Fit Theory, Decision-Making Theory, the Resource-Based View, and Strategic Human Resource Management. Section Three examines the critical challenges associated with psychometric assessments, such as issues of validity, reliability, cultural bias, ethical concerns, and misinterpretation. Section Four highlights the key considerations that organizations must address to ensure fair, accurate, and contextually relevant application of psychometric instruments. Finally, Section Five presents the implications of these theoretical insights for strategic HR practice and offers directions for future research.

2. Literature Review

This section presents a comprehensive review of recent and foundational literature on psychometric assessment, focusing on developments between 2018

and 2024. It synthesizes current empirical findings, theoretical perspectives, and scholarly debates to establish the conceptual basis for understanding psychometric assessment as a strategic mechanism within personnel selection and recruitment.

2.1 Concept of Psychometric Assessment

Psychometric assessment refers to the systematic measurement of psychological attributes including cognitive abilities, personality traits, attitudes, and behavioral tendencies using standardized instruments grounded in statistical and theoretical principles (Anastasi & Urbina, 1997). These assessments are designed to produce reliable and valid scores that reflect an individual's psychological characteristics, enabling objective comparison across individuals.

In organizational settings, psychometric assessments serve as evidence-based tools for predicting job performance, cultural fit, leadership potential, and other work-related outcomes (Chamorro-Premuzic & Furnham, 2010). They typically include tests of cognitive ability, personality inventories, situational judgment tests, emotional intelligence scales, and work-sample tasks. A distinguishing feature of psychometric instruments is their emphasis on standardization, norming, reliability, and validity to ensure fairness and accuracy in decision-making (Kaplan & Saccuzzo, 2018).

2.2 Concept of Selection

Selection is the process by which organizations choose from a pool of applicants the individuals who possess the knowledge, skills, abilities, and other characteristics (KSAOs) necessary to perform a job effectively (Gatewood et al., 2016). It involves a systematic evaluation of candidates using various assessment tools, including interviews, application forms, psychometric tests, background checks, and work samples.

The purpose of selection is to identify candidates who demonstrate the highest likelihood of performing successfully and contributing positively to organizational goals. Effective selection processes are guided by principles of job relevance, reliability, validity, equity, and compliance with legal and ethical standards (Cascio & Aguinis, 2019). When executed properly, selection enhances organizational productivity, reduces turnover, increases job satisfaction, and ensures a fair and defensible hiring process.

2.3 Concept of Recruitment

Recruitment refers to the organizational processes involved in attracting, identifying, and encouraging potential candidates to apply for available job positions (Breaugh, 2013). It encompasses strategies such as job advertising, employer branding, digital recruitment platforms, employee referrals, and campus outreach programs. Recruitment aims to generate a sufficiently qualified pool of applicants from which the organization can make informed selection decisions.

Effective recruitment is strategic and aligned with organizational goals. It requires identifying labor market conditions, defining job requirements, communicating organizational values, and utilizing appropriate channels to reach diverse applicant groups (Noe et al., 2021). A strong recruitment function enhances organizational competitiveness by ensuring access to high-quality talent and supporting workforce diversity and inclusion.

2.4 Evolution of Psychometric Assessment in Modern Recruitment

Psychometric assessment has a long and evolving history, tracing back to the early 20th century when pioneers such as Alfred Binet and Lewis Terman developed standardized intelligence tests to measure cognitive abilities (Gronlund, 1998). Initially, psychometric tools were largely focused on general intelligence and aptitude, with personality assessment emerging later through frameworks such as the Minnesota Multiphasic Personality Inventory (MMPI) and the Big Five personality traits (Costa & McCrae, 1992). Over time, psychometrics expanded from purely clinical or educational applications to organizational contexts, particularly for employee selection and talent management.

Over the past decade, psychometric assessment has undergone significant transformation, driven by technological advancements and an increasing demand for objective, data-driven hiring processes. Earlier assessment models centered primarily on cognitive and personality testing; however, recent developments include gamified assessments, digital simulations, and AI-assisted scoring mechanisms (Chamorro-Premuzic et al., 2020). These innovations have increased the scalability, precision, and accessibility of psychometric methods, particularly in large-scale recruitment (Anderson et al., 2020). Technology-enhanced assessments have also improved predictive validity and user engagement when designed and validated appropriately (Sackett et al., 2021). Furthermore, post-pandemic shifts toward remote and hybrid work environments have accelerated the adoption of digital psychometrics, necessitating tools that provide consistent measurement across geographically diverse applicant pools (Nikolaou, 2021). Collectively, these historical and contemporary developments highlight the continuous interplay between psychometric theory,

methodological innovation, and evolving workforce needs.

2.5 Strategic Importance of Psychometric Assessment in Personnel Selection and Recruitment

In today's dynamic and competitive business environment, organizations strive to acquire and retain the best talent to achieve strategic objectives. Human capital is recognized as a core driver of organizational performance, and the process of selecting the right employees has become increasingly critical. Psychometric assessment has emerged as a strategic tool in personnel selection and recruitment, providing an evidence-based approach to evaluating candidates' abilities, personality traits, and potential for success. Given the above, the following points highlight the strategic importance of psychometric assessment in selection and recruitment:

1. Objective and Evidence-Based Decision Making

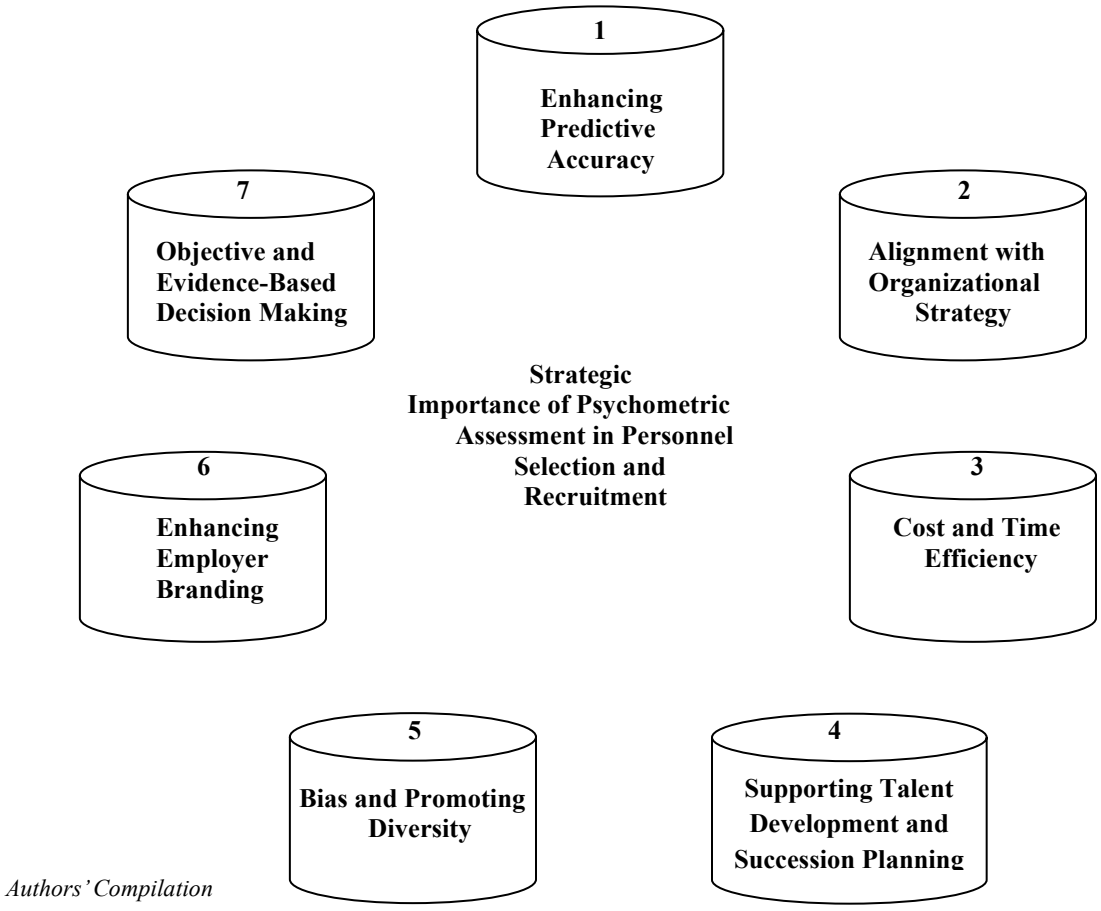
Traditional recruitment methods, such as interviews and resumes, often rely on subjective judgments and may be prone to biases. Psychometric assessments offer an objective measure of a candidate's cognitive abilities, behavioral tendencies, and emotional intelligence. By providing standardized and validated data, these assessments help HR professionals make informed, fair, and consistent decisions, reducing the risk of poor hires.

2. Enhancing Predictive Accuracy

One of the key advantages of psychometric assessments is their ability to predict job performance and cultural fit. Cognitive ability tests, personality inventories, and situational judgment tests have been shown through research to correlate with job performance, learning potential, and team compatibility. By leveraging these tools, organizations can better predict which candidates are likely to succeed in their roles, thereby improving overall workforce productivity and reducing turnover costs.

3. Alignment with Organizational Strategy

Recruitment is not just about filling vacancies; it is about acquiring talent that aligns with organizational goals and culture. Psychometric assessments can evaluate candidates' values, work styles, and motivational drivers, ensuring that new hires complement the company's strategic objectives. This alignment supports long-term organizational effectiveness by fostering a workforce that is capable, adaptable, and engaged.



Authors' Compilation

4. Cost and Time Efficiency
Hiring the wrong candidate can be costly, both financially and in terms of lost productivity. Psychometric assessments streamline the recruitment process by quickly identifying top talent and filtering out unsuitable candidates. This reduces the time spent on interviews and background checks, ultimately lowering recruitment costs and accelerating the onboarding of high-potential employees.

5. Supporting Talent Development and Succession Planning
Beyond recruitment, psychometric assessments provide valuable insights into employees' strengths, weaknesses, and developmental needs. Organizations can use these insights for training, career development, and succession planning. This proactive approach ensures that employees are placed in roles where they can maximize their potential, contributing to both individual growth and organizational success.

6. Reducing Bias and Promoting Diversity
By relying on standardized assessment tools, organizations can minimize the influence of unconscious bias in hiring decisions. Psychometric assessments focus on measurable traits and competencies rather than demographic factors, thereby promoting a fair and inclusive recruitment process. This contributes to building diverse teams, which have been shown to enhance creativity, problem-solving, and overall business performance.

7. Enhancing Employer Branding
Organizations that adopt scientific and transparent recruitment methods are perceived as professional and credible employers. Psychometric assessments signal to candidates that the organization values merit, fairness, and employee potential. This can enhance employer branding, attract top talent, and increase candidate engagement during the recruitment process.

Taken together, psychometric assessments play a strategically significant role in personnel selection and recruitment. By providing objective, reliable, and predictive insights into candidates' abilities and personalities, these tools enable organizations to make better hiring decisions, reduce costs, enhance workforce performance, and align human capital with organizational strategy. In an era where talent is a key competitive advantage, integrating psychometric assessment into recruitment processes is no longer optional it is a critical component of strategic human resource management.

3. Research Methodology

This review employed a systematic narrative approach to examine the theoretical perspectives underpinning the use of psychometric assessment as a strategic mechanism in personnel selection and recruitment. A narrative review design was considered appropriate because the aim was to synthesize conceptual and empirical literature rather than conduct statistical aggregation, allowing for an in-depth exploration of theories such as Human Capital Theory, Person–Environment Fit Theory, Decision-Making Theory, the Resource-Based View, and Strategic Human Resource Management. The study relied exclusively on secondary data sourced from peer-reviewed journal articles, academic textbooks, professional guidelines, and empirical studies accessed through databases such as Google Scholar, PsycINFO, JSTOR, ScienceDirect, EBSCOhost, and Web of Science. Inclusion criteria focused on literature published between 1960 and 2024 that discussed theoretical frameworks relevant to psychometric testing, addressed its use in recruitment, or examined issues such as validity, fairness, reliability, and strategic HR alignment. Sources lacking theoretical grounding, methodological rigor, or relevance to organizational contexts were excluded.

4. Theoretical Perspectives Underpinning the Use of Psychometric Assessment in Personnel Selection.

The use of psychometric assessments in personnel selection is underpinned by multiple theoretical perspectives that provide both a conceptual and practical rationale for their adoption. Human Capital Theory positions employees as strategic assets whose skills, knowledge, and abilities contribute directly to organizational performance (Becker, 1964). Within this framework, psychometric tools serve as mechanisms for identifying high-potential talent and informing development initiatives, thereby enhancing the value of human capital over time. Cognitive and personality assessments enable organizations to pinpoint individuals with the capacity to learn quickly, solve complex problems, and assume leadership responsibilities, while also supporting personalized training and succession planning.

Person–Environment (P–E) Fit Theory emphasizes that optimal performance, job satisfaction, and retention occur when there is alignment between individual attributes and job or organizational demands (Kristof, 1996). Psychometric assessments operationalize this alignment by measuring candidates' cognitive abilities, personality traits, and

motivational drivers to match job requirements. For example, ability tests evaluate problem-solving and learning potential, whereas personality inventories assess compatibility with organizational culture and team dynamics. High P–E fit, facilitated through psychometric assessment, has been consistently linked to improved performance and reduced turnover.

Decision-Making Theory highlights the importance of rational, evidence-based choices and the risks posed by cognitive biases (Kahneman & Tversky, 1979; March, 1994). In personnel selection, hiring managers may be influenced by subjective judgments, heuristics, or first impressions. Psychometric instruments reduce these biases by providing standardized, objective data, ensuring consistency across candidates, and supporting defensible and equitable hiring decisions. The structured nature of psychometric assessments enhances the reliability of selection decisions, thereby increasing their predictive validity for job performance.

From a strategic perspective, the Resource-Based View (RBV) conceptualizes human resources as valuable, rare, inimitable, and non-substitutable assets that can provide sustainable competitive advantage (Barney, 1991). Psychometric assessment systems can be considered organizational capabilities that identify and cultivate unique talent. When integrated into HR strategy, these tools not only support the acquisition of high-potential employees but also contribute to the long-term development and retention of human capital, strengthening the firm's strategic position in the marketplace.

Finally, Strategic Human Resource Management (SHRM) Theory posits that HR practices, including selection and assessment, should align with organizational strategy to optimize performance outcomes (Wright & McMahan, 1992). Psychometric assessments support this alignment by targeting competencies critical to achieving strategic objectives, informing succession planning, and shaping talent pipelines. When used within a strategic framework, psychometric tools enhance workforce effectiveness and ensure that recruitment decisions contribute to broader organizational goals.

In synthesis, these theoretical perspectives collectively reinforce the strategic importance of psychometric assessment in personnel selection. Human Capital Theory and RBV emphasize the identification and development of valuable employees as organizational assets. P–E Fit Theory ensures optimal alignment between candidate attributes and job demands. Decision-Making Theory underlines the role of assessment in reducing biases and improving consistency, while SHRM Theory integrates these practices into long-term organizational strategy. Together, these frameworks provide a robust conceptual and empirical rationale for using psychometric assessments as a central component of effective, strategic talent management.

5. Challenges of Psychometric Instruments in Personnel Selection and Recruitment

Despite the strategic relevance of psychometric assessments, their application in personnel selection and recruitment is not without challenges. These challenges often relate to issues of validity, cultural appropriateness, ethical considerations, practical constraints, and candidates' perceptions. Understanding these limitations is essential to ensuring that psychometric tools are applied responsibly and effectively in organizational contexts.

Validity and Reliability Issues: One major challenge in the use of psychometric instruments is ensuring adequate levels of validity and reliability. A test must consistently measure what it intends to measure (reliability) and accurately predict job performance or relevant traits (validity). In practice, however, some tests particularly those not standardized on the target population may lack predictive validity, leading to incorrect hiring decisions (Sackett et al., 2008). Moreover, outdated or poorly normed instruments may compromise fairness and accuracy, limiting their usefulness in dynamic workplaces.

Cultural Bias and Contextual Relevance: Psychometric instruments are often developed in Western contexts, which may not fully align with the cultural norms, values, or linguistic nuances of non-Western populations. Cultural bias may occur in both test content and interpretation, resulting in unfair outcomes for minority groups or candidates from diverse cultural backgrounds (Bartram, 2013). For organizations operating in multicultural settings such as many African, Asian, and Middle Eastern environments this presents significant barriers to the equitable use of psychometric tools. Localization, revalidation, and adaptation of tests become necessary to reduce cultural bias.

Legal and Ethical Concerns: Organizations must navigate several legal and ethical issues when deploying psychometric instruments. Ethical concerns arise around informed consent, privacy, confidentiality of results, and ensuring that assessments are not discriminatory (American Psychological Association, 2020). In many jurisdictions, employment laws mandate that selection tools demonstrate job relevance and avoid adverse impact against protected groups.

Failure to comply may expose organizations to legal risks, litigation, or reputational damage. Ethical practice requires transparency, fairness, and adherence to professional guidelines.

Misuse and Misinterpretation of Test Results: Another challenge involves the potential misuse or misinterpretation of psychometric test results. Assessment outcomes should be interpreted by trained professionals who understand psychometrics and organizational needs. However, in many organizations particularly those with limited HR expertise tests may be administered or interpreted by personnel without adequate training, leading to erroneous decisions (Furnham, 2008). Over-reliance on test scores, ignoring contextual factors, or using a single test as the sole basis for selection can also compromise decision quality.

Financial and Logistical Costs: Implementing psychometric testing can be costly, especially for small or resource-constrained organizations. Expenses may include test licensing fees, professional administration, training assessors, or purchasing scoring software. Additionally, conducting assessments may require significant time investment, which can slow down the hiring process (Arnold et al., 2016). While the long-term benefits often outweigh costs, financial constraints remain a barrier to widespread adoption in developing economies.

Candidate Acceptance and Resistance: Candidates' perceptions of psychometric assessments can also influence their effectiveness. Some candidates view tests as intrusive, stressful, or irrelevant to their abilities, leading to resistance or negative attitudes toward the hiring organization (Nikolaou et al., 2015). Poorly communicated testing processes may reduce candidate engagement or cause anxiety that negatively affects performance. Transparency about the purpose, fairness, and relevance of assessments can help address concerns and enhance acceptance.

6. Critical Considerations Associated with Using Psychometric Tools.

The use of psychometric tools in personnel selection and organizational decision-making requires careful attention to several critical considerations to ensure fairness, accuracy, and ethical compliance. These considerations are essential because inappropriate application or interpretation of psychometric assessments can undermine the validity of selection outcomes, create legal liabilities, and compromise organizational integrity. The following subsections outline key issues that must be addressed when employing psychometric instruments in professional settings:

Standardization and Norming: Standardization refers to administering and scoring a test in a consistent manner to ensure comparability of results across candidates. For a psychometric instrument to be meaningful, it must be standardized on a representative sample and possess appropriate norms that reflect the characteristics of the target population (Kaplan & Saccuzzo, 2017). When organizations use tests standardized on populations that differ significantly from their workforce (e.g., cultural, linguistic, or educational differences), the validity and fairness of interpretations may be compromised. Therefore, ensuring that tests have updated norms appropriate for the local context is a critical prerequisite.

Fairness and Absence of Bias: Fairness is fundamental to ethical and legal compliance in personnel selection. Psychometric tools must minimize adverse impact, stereotyping, or discriminatory outcomes. Cultural or linguistic biases in test content can disadvantage certain groups, leading to inequitable hiring decisions (Bartram, 2013). Organizations must evaluate fairness metrics, conduct differential item functioning analyses, and ensure that assessments comply with equal opportunity regulations. Fairness also requires that all candidates have equal access to practice materials, instructions, and reasonable accommodations where necessary.

Administration Protocols: Proper administration is key to ensuring reliability and comparability of assessment results. Psychometric tools must be administered under standardized conditions consistent timing, instructions, testing environments, and scoring procedures (Cohen & Swerlik, 2018). Deviations in these protocols can introduce error, inflate anxiety, or advantage some candidates unfairly. Administrators must be trained professionals who understand test procedures, confidentiality requirements, and ethical guidelines. Poor administration increases the likelihood of invalid results and misinformed hiring decisions.

Ethical Use and Compliance with Professional Guidelines: Ethical considerations are integral to the use of psychometric assessments. Organizations must adhere to professional standards such as the American Psychological Association's Ethical Principles of Psychologists and Code of Conduct (APA, 2020). Ethical use entails obtaining informed consent, ensuring confidentiality, using tests only for appropriate purposes, and restricting access to qualified professionals. Misuse for example, using clinical tools for non-clinical purposes or selecting tools outside their validated scope poses ethical risks and may lead to legal consequences.

Contextual Relevance and Job Relatedness: Psychometric assessments must be demonstrably relevant to the specific job role for which they are used. Contextual relevance enhances both predictive validity and acceptance by stakeholders. Instruments that do not align with job competencies may lead to poor selection decisions and challenge the legal defensibility of the process (Schmidt & Hunter, 1998). Conducting job analysis and competency mapping ensures that the chosen assessments measure attributes that are directly linked to job performance and organizational needs.

Interpretation Accuracy and Expertise: Accurate interpretation of psychometric results requires expertise in test theory, statistics, and applied psychology. Misinterpretation can lead to erroneous hiring decisions, labeling, or inappropriate developmental recommendations (Furnham, 2008). It is essential that trained professionals evaluate test scores within the broader context of candidate information including interviews, work samples, and background data. Psychometric test scores should inform not replace holistic decision-making. Over-reliance on numerical scores without contextual judgment increases the risk of false positives or false negatives.

From the above, the responsible use of psychometric tools in personnel selection depends on careful attention to standardization, fairness, administration procedures, ethical requirements, contextual relevance, and expert interpretation. Addressing these considerations enhances the accuracy, fairness, and overall effectiveness of the assessment process and promotes evidence-based decision-making within organizations.

7. Implications for Theory and Practice

The use of psychometric assessments in personnel selection has important implications for both theory and practice. Theoretically, these tools strengthen existing psychological frameworks such as Trait Theory and Person–Job Fit Theory by providing empirical evidence that individual differences predict workplace performance. They also encourage further refinement of theories by highlighting cultural variations and contextual factors that influence test outcomes. Practically, psychometric assessments enhance the fairness, accuracy, and efficiency of recruitment decisions by reducing subjective bias and supporting evidence-based hiring. They help organizations align talent acquisition with strategic goals and encourage compliance with ethical and legal standards. However, their effective use requires proper training, ethical administration, and contextual adaptation to ensure relevance and minimize bias. Overall, psychometric tools bridge theory and practice, improving both scientific understanding and organizational decision-making.

8. Conclusion

Psychometric assessments have become an integral component of modern personnel selection and recruitment, offering organizations a scientific and objective means of evaluating candidates' abilities, personality traits, and behavioural tendencies. When properly designed, standardized, and ethically administered, these tools significantly enhance the accuracy, fairness, and predictive value of selection decisions. However, their use is accompanied by important considerations, including issues of validity, cultural bias, ethical responsibility, administration quality, and interpretation accuracy. Addressing these challenges is essential to ensuring that psychometric assessments contribute positively to organizational performance and uphold principles of equity and merit-based recruitment. Ultimately, psychometric tools bridge theoretical knowledge and practical application, supporting evidence-based human resource practices and advancing scholarly understanding of individual differences in the workplace.

9. Recommendations

Based on the findings, the following recommendations are proposed to enhance the effective and responsible use of psychometric assessments in personnel selection and recruitment:

- Organizations should adopt psychometric instruments that are culturally and linguistically validated for the populations they assess. Localization helps minimize cultural bias, improves test fairness, and ensures that assessment results accurately reflect candidates' abilities.
- Human resource professionals and assessors should receive continuous training in test administration, interpretation, and ethical practices. Properly trained personnel are better equipped to utilize assessment tools effectively and avoid misinterpretation or misuse.
- Organizations must comply with ethical standards, such as those outlined by the American Psychological Association (APA), and relevant national labour regulations. This includes securing informed consent, safeguarding confidentiality, and ensuring

that assessments are used only for their intended purposes.

- Psychometric assessments should be integrated into a broader selection framework that includes structured interviews, competency tests, work samples, and reference checks. A multi-method approach increases predictive validity and reduces the risk of biased selection decisions.
- Assessment tools should be periodically reviewed, updated, and revalidated to reflect evolving job requirements, cultural contexts, and technological developments. Regular evaluation ensures sustained accuracy and relevance.
- Organizations should provide clear communication regarding the purpose, relevance, and fairness of psychometric assessments. Transparency promotes trust, reduces anxiety, and improves candidates' overall perceptions of the recruitment process.

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