

## Ethical Considerations in Doctoral Research in Nigeria: Exploring Research Paradigms and Their Implications

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### Abstract

*Ethical considerations are paramount in doctoral research, particularly in Nigeria, where research is increasingly recognized as a driver of national development. This study explores the ethical dimensions of five dominant research paradigms—positivism, critical realism, postmodernism, interpretivism, and pragmatism—and their implications for doctoral research in Nigeria. Each paradigm carries distinct ethical implications, influencing methodological choices, data collection, and the interpretation of findings. Positivism emphasizes objectivity and transparency, while critical realism requires reflexivity and inclusivity. Postmodernism challenges conventional truths and biases, interpretivism prioritizes cultural sensitivity and confidentiality, and pragmatism advocates for methodological flexibility and practical relevance. Nigerian doctoral researchers often face ethical challenges related to informed consent, cultural sensitivity, and power dynamics, particularly when working with vulnerable populations. This study highlights the importance of aligning research paradigms with ethical responsibilities to ensure methodological rigor, credibility, and societal impact. By integrating ethical considerations into paradigm selection, doctoral candidates can produce high-quality, socially responsible research that addresses Nigeria's complex socio-economic and political challenges. The study concludes with recommendations for enhancing ethical frameworks, strengthening institutional review boards, and fostering inclusivity in research. It calls for the development of contextual ethical guidelines that reflect Nigeria's socio-cultural realities, alongside training programs in ethical reflexivity and paradigm selection. These measures aim to improve the ethical integrity and methodological rigor of doctoral research in Nigeria, contributing to both academic scholarship and national development.*

**Keywords:** Critical Realism, Doctoral Research, Ethics, Nigeria, Positivism, Research Paradigms.

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### 1. Introduction

Doctoral research represents the pinnacle of academic inquiry, demanding intellectual rigor, methodological precision, and adherence to ethical principles. In Nigeria, where research is increasingly recognized as a catalyst for national development, ethical considerations are crucial for ensuring the credibility, relevance, and societal impact

of scholarly investigations. Research paradigms provide essential theoretical frameworks that influence the selection of methodologies, data collection techniques, and ethical guidelines (Kankam, 2019). The choice of an appropriate paradigm—whether positivism, interpretivism, critical realism, pragmatism, or postmodernism fundamentally shapes the research design, methodological choices, and interpretation

of findings (Chilisa & Kawulich, 2012; Pretorius, 2024).

Given the diversity of disciplines in Nigerian doctoral research, including business, social sciences, health, and technology, the alignment of research paradigms with both research objectives and ethical responsibilities is essential. For instance, positivism is well suited to quantitative research, such as economic modeling or consumer behavior analysis, due to its emphasis on statistical rigor and objectivity (Ali, 2024). Conversely, interpretivism is more appropriate for examining social issues like cultural identity or leadership, where in-depth qualitative insights are required (Fard, 2012). Ethical imperatives such as informed consent, confidentiality, and researcher transparency are paramount, particularly when engaging with vulnerable populations or marginalized groups. Addressing power imbalances and ensuring equitable participation are critical components of ethical research practice (Drolet et al., 2023).

Despite the significance of ethical adherence in Nigerian doctoral research, many researchers struggle with comprehending and applying appropriate paradigms, leading to methodological inconsistencies and ethical challenges (Desmennu & Owoaje, 2018; Omoya et al., 2024). Such difficulties may result in flawed research designs, inaccurate data interpretations, and potential ethical violations, ultimately diminishing the quality and societal relevance of academic contributions. A systematic analysis of the five dominant research paradigms---positivism, critical realism, postmodernism, interpretivism, and pragmatism---reveals distinct ethical implications. While positivism emphasizes reliability and transparency (Ali, 2024), critical realism requires ethical reflexivity and inclusivity (Sim et al., 2024). Similarly, postmodernism challenges conventional truths and

researcher biases (Ugwu et al., 2021), interpretivism prioritizes cultural sensitivity and confidentiality (Fard, 2012), and pragmatism necessitates ethical flexibility in balancing qualitative and quantitative approaches (Elgeddawy & Abouraia, 2024; Kaushik & Walsh, 2019).

This study examines the ethical dimensions of research paradigms and their implications for doctoral research in Nigeria, offering a structured framework to navigate these challenges. By integrating ethical considerations into paradigm selection, doctoral candidates can enhance methodological rigor, ensure responsible research practices, and produce scholarship that advances knowledge while addressing critical societal issues. Strengthening ethical awareness and methodological integrity will not only improve the credibility of Nigerian doctoral research but also contribute to national development through impactful, socially responsible academic endeavors.

## **2. Literature Review**

This literature review looks at the theoretical bases of research paradigms and their moral consequences for doctoral research, focusing on the Nigerian academic system in particular. The review is set up to give a complete picture of how philosophical frameworks and ethical issues come together in research practice, using a variety of academic viewpoints and real-world examples.

### **2.1 Research Paradigms and Ethical Considerations**

Study paradigms are basic philosophical frameworks that determine how researchers see the world, what methods they choose, and what ethical duties they have during the study process (Creswell & Poth, 2018; Guba & Lincoln, 1994). These paradigms are all-inclusive belief systems that include ontological assumptions about the nature of reality,

epistemological positions about how knowledge is gained and verified, methodological approaches to inquiry, and axiological considerations about the role of values and ethics in research (Denzin & Lincoln, 2018; Scotland, 2012).

Paradigmatic understanding is important for more than just choosing a method, especially in complex social and cultural settings like Nigeria, where research often deals with a wide range of social, economic, and political problems (Tashakkori & Teddlie, 2010; Ugwu et al., 2021). Lincoln and Guba (2000) stress that paradigms are not just ideas that academics come up with; they are real frameworks that affect every part of the research process, from identifying research problems to interpreting and applying the results.

### **2.1.1 Ontological Foundations and Ethical Implications**

Ontology is the study of the nature of reality and existence. It sets the basic ideas that academics use in their work (Creswell & Poth, 2018). When it comes to research in Nigeria, ontological issues are even more complicated because of the mix of indigenous knowledge systems, colonial legacies, and modern global academic norms (Chilisa & Kawulich, 2012; Smith, 2012). For example, researchers looking into traditional healing techniques have to find a balance between Western scientific paradigms that focus on measurable, objective reality and indigenous worldviews that include spiritual and community aspects of healing (Dei, 2013; Ugwu et al., 2021).

The ontological decisions we make have a significant impact on ethics because they decide whose voices are heard, whose realities are acknowledged, and how knowledge is built and made official (Smith, 2012). Creswell and Poth (2018) say that researchers need to carefully look at their ontological assumptions to make sure that their work doesn't

unintentionally leave out or misrepresent the communities they study.

### **2.1.2 Epistemological Considerations in Knowledge Construction**

Epistemology is the study of the most basic concerns regarding what knowledge is, where it comes from, and how it can be shown (Guba & Lincoln, 1994). Different epistemological viewpoints have different ethical and methodological responsibilities. Researchers who follow positivist epistemologies, which stress objective, value-free information, must stay completely impartial and use strong controls to reduce prejudice (Tashakkori & Teddlie, 2010). Critics contend that assertions of value-neutrality may obscure intrinsic power dynamics and cultural prejudices (Lincoln et al., 2011; Smith, 2012).

On the other hand, constructivist epistemologies recognise that knowledge is subjective and socially produced. This means that researchers need to think about their role in creating knowledge and make sure that they accurately represent the views of the people they are studying (Denzin & Lincoln, 2018). In Nigeria, this could mean recognising other methods of knowing, such as oral traditions, indigenous knowledge systems, and community-based understanding (Chilisa & Kawulich, 2012; Dei, 2013).

### **2.1.3 Methodological Frameworks and Ethical Practice**

Methodology includes the planned methods and steps used in research, which directly connect philosophical ideas to real-world research choices (Scotland, 2012). Choosing a methodology has important ethical effects since it affects how participants are involved, how data is gathered and analysed, and how results are understood and shared (Creswell & Poth, 2018).

Mixed-methods approaches are becoming more common in doctoral research, but they come with their own set of ethical problems. Researchers must ensure that

the ethical requirements of both the quantitative and qualitative parts are followed and that the findings are integrated in a way that makes sense (Tashakkori & Teddlie, 2010; Johnson & Onwuegbuzie, 2004). Mixed-methods techniques can give us a complete picture of Nigeria's complicated socioeconomic problems by taking into account different types of knowledge and experience (Aliyu et al., 2014; Potokri, 2016).

#### **2.1.4 Axiological Dimensions and Value-Laden Research**

Researchers are starting to realise that all research is based on values, which is why axiology, the study of values and their function in research, is becoming more popular (Lincoln et al., 2011). Researchers must examine their attitudes, biases, and assumptions and consider how these affect their research design, data collection, and interpretation (Guba & Lincoln, 1994).

In Nigerian schools, axiological issues are especially hard to deal with because of the mix of traditional values, religious views, political ideology, and academic demands (Rehman & Alharthi, 2016). Researchers need to be honest and respectful of other points of view in dealing with these different value systems (Ugwu et al., 2021). For instance, when studying gender roles in Nigerian society, researchers must take into account traditional cultural values, religious teachings, modern gender equality movements, and feminist academic theories, while ensuring their results are accurate and respectful of all points of view (Chilisa & Kawulich, 2012).

#### **2.2 Ethical Challenges in Nigerian Doctoral Research**

Particular ethical problems in Nigerian doctoral research come from the clash of global academic standards with local social and cultural realities, lack of resources, and limits of institutions (Olaniran & Baruwa, 2020; Yakubu et al., 2024). To make the right ethical

frameworks and support systems for doctoral researchers, it is important to understand these problems.

##### **2.2.1 Informed Consent and Cultural Sensitivity**

Getting meaningful informed consent is one of the most significant ethical problems in Nigerian doctoral research, especially when working with people from different backgrounds who may have different levels of literacy, different cultural views on research, and complicated power dynamics with academic institutions (Drolet et al., 2023; Marshall & Rossman, 2016). The way that people in the West usually get informed consent, which stresses individual freedom and written records, may not fit with the way that many Nigerian communities make decisions as a group (Chilisa & Kawulich, 2012).

When doing research with vulnerable groups like rural communities, women in patriarchal countries, or ethnic groups who are not well represented, you need to pay extra attention to cultural norms and community gatekeepers (Smith, 2012). For example, getting permission from traditional leaders, religious leaders, and community elders may be necessary before getting meaningful consent from people in rural Nigerian communities (Dei, 2013; Olaniran & Baruwa, 2020).

Language obstacles make the informed consent procedure much harder because many people who might want to participate may not speak English well, which is the primary language of academic research in Nigeria (Yakubu et al., 2024). Researchers need to ensure that permission processes are conducted in the right local languages and that translations accurately explain the goal, risks, and benefits of the research (Marshall & Rossman, 2016).

##### **2.2.2 Power Dynamics and Researcher Positionality**

Researchers and participants in Nigeria typically have complicated power

dynamics that are influenced by education levels, socio-economic status, gender, ethnicity, and religious affiliation (Lincoln et al., 2011; Smith, 2012). Doctoral researchers, who are usually educated urban elites, may face significant power differences when working with people who live in rural areas, have less education, or are poor (Chilisa & Kawulich, 2012). These differences in power can affect the quality of the data, the replies of the participants, and the general validity of the research results (Denzin & Lincoln, 2018). People may give answers that they think researchers want to hear, keep sensitive information to themselves, or feel compelled to participate even if they do not want to (Drolet et al., 2023). To deal with these problems, researchers need to be reflexive all the time, be aware of their position, and use methods to reduce power differences (Lincoln et al., 2011).

In Nigeria's patriarchal society, gender dynamics might make things more complicated. For example, male researchers may have trouble getting female subjects, while female researchers may have trouble in some cultural or religious settings (Marshall & Rossman, 2016; Olaniran & Baruwa, 2020). When working in these gendered areas, you need to be very careful about following cultural standards while also ensuring the research is honest and the participants are safe.

### **2.2.3 Privacy and Confidentiality in Public Places**

In Nigeria, where community relationships and social networks are closely linked (Chilisa & Kawulich, 2012), maintaining confidentiality may be challenging. In tiny communities, it might not be possible to be completely anonymous, and participants might be able to be recognised even if researchers try to keep their identities secret (Yakubu et al., 2024).

In some cultures, privacy may have a different meaning than in others. For

example, some groups may value shared knowledge and collective decision-making over individual privacy (Dei, 2013; Smith, 2012). Researchers have to deal with these cultural differences while also ensuring participants' safety from any harm that could come from taking part (Drolet et al., 2023).

When internet access is spotty and participants may not be comfortable with digital technology, collecting and storing digital data might be even harder (Olaniran & Baruwa, 2020). To keep data safe and protect participants' privacy, you need to be very aware of the limits of technology and the cultural environment.

### **2.2.4 Ethical Standards and Limited Resources**

Doctoral researchers sometimes cannot put in place full ethical precautions since they do not have enough money (Potokri, 2016). Travel expenditures for follow-up visits, translation services, paying participants, and secure data storage systems can all put a strain on research funds that are already tight (Yakubu et al., 2024). However, not having enough resources does not mean you can lower your ethical standards; you need to develop innovative solutions and seek assistance from your organisation. Many Nigerian institutions' Institutional Review Boards (IRBs) may not have enough resources, skills, or knowledge to oversee ethics (Olaniran & Baruwa, 2020) fully. This condition makes it much more important for each researcher to ensure they follow the rules of ethics, and they may need to seek additional guidance on this from foreign partners or professional organisations (Yakubu et al., 2024).

### **2.3 Cultural Competence and Ethical Reflexivity**

Researchers in Nigeria's diverse society need to keep learning and being aware of their own biases in order to become culturally competent, particularly when working with individuals from diverse ethnic, religious, or regional backgrounds



(Chilisa & Kawulich, 2012). To do ethical research, you need to know about the local customs, religious practices, social hierarchies, and ways of talking to each other (Dei, 2013). Ethical reflexivity is constantly looking at your assumptions, biases, and how they affect the research process (Lincoln et al., 2011). Nigerian doctoral researchers could look at how their education, social status, ethnic identity, and religious views affect their research methods and their interactions with participants (Denzin & Lincoln, 2018).

Combining indigenous knowledge systems with Western academic frameworks both helps and hurts ethical research practice (Smith, 2012). Researchers must honour traditional knowledge while adhering to international academic standards, necessitating meticulous navigation of possibly contradictory value systems and methodological frameworks (Chilisa & Kawulich, 2012).

Nigerian doctoral researchers can create research practices that are more robust, culturally sensitive, and ethically sound by recognising and dealing with these complex ethical issues. These practices will help both academic knowledge and societal development while respecting the rights and dignity of all research participants (Marshall & Rossman, 2016; Yakubu et al., 2024).

### 3. Methodology

This study employed a systematic literature review to examine the ethical dimensions of various research paradigms (positivism, critical realism, postmodernism, interpretivism, and pragmatism) within the framework of Nigerian doctoral research. This method was selected for its capacity to thoroughly analyse existing literature, identify patterns, and synthesise findings, in accordance with established guidelines (Booth et al., 2016; Snyder, 2019). A

qualitative interpretive approach was utilised to analyse data, facilitating a comprehensive examination of the intricate relationship between research paradigms and ethical considerations within Nigeria's distinct socio-cultural and academic context (Braun & Clarke, 2019; Thomas & Harden, 2008). This methodology facilitated a systematic and analytical assessment of the manifestation of ethical issues within various research frameworks.

A systematic literature search was performed utilising primary databases such as Scopus, Web of Science, PubMed, and JSTOR, along with supplementary resources including Google Scholar, African Journals Online (AJOL), and repositories from Nigerian universities. Combined search terms related to research paradigms, ethics, doctoral research, and the context of Nigeria or developing countries, utilising Boolean operators to enhance result specificity. The inclusion criteria emphasised peer-reviewed publications in English from 2010 to 2024, specifically examining research paradigms and ethics within doctoral contexts. Conversely, the exclusion criteria removed non-peer-reviewed sources, studies centred on undergraduates, and papers with methodological flaws. The selection process adhered to PRISMA guidelines, involving the screening of 1,247 articles, reduce to 935, and the inclusion of 103 articles following title/abstract screening, full-text assessment, and reference list evaluations.

Data extraction and thematic analysis followed a standardised framework that included bibliographic details, study characteristics, paradigm focus, ethical considerations, and relevance to the Nigerian context. The six-phase thematic analysis process proposed by Braun and Clarke (2019) was utilised, encompassing familiarisation, coding, theme development, refinement, definition, and

report writing. Quality assurance was upheld via inter-rater reliability (Cohen's kappa = 0.84), independent screening, and quality evaluations employing CASP, JBI, and SANRA checklists. Ethical principles, including intellectual honesty and transparency, were maintained, despite limitations such as language bias, restricted temporal scope, and potential gaps in literature specific to Nigeria. Data management was conducted utilising Excel and NVivo 12, incorporating secure storage and backup protocols to maintain integrity.

#### **4. Results and Discussion**

The systematic literature review analyzed 1,247 papers, narrowing down to 103 that met inclusion criteria, encompassing ethical issues across five research paradigms in Nigerian doctoral research. The distribution of articles by paradigm was relatively balanced, with positivism (27.2%) and interpretivism (24.3%) comprising the largest shares, followed by pragmatism (18.4%), critical realism (16.5%), and postmodernism (13.6%). Geographically, 31 articles (30.1%) focused exclusively on Nigeria, while others addressed broader African contexts (23.3%), developing countries (18.4%), or international perspectives (28.2%). The publication timeline shows growing scholarly attention to ethical considerations, with 67% of the studies published between 2018 and 2024, reflecting an increasing interest in ethics within diverse research paradigms.

##### **4.2 Results of Thematic Analysis**

The thematic analysis identified six primary themes related to the ethical environment in doctoral research across various paradigms. Focusing on ethical frameworks specific to paradigms, the findings reveal distinct ethical considerations per research orientation rather than a universal approach.

##### **4.2.1 Theme 1: Ethical Frameworks Specific to Paradigms**

In the positivist paradigm, impartiality, transparency, and methodological rigor are emphasized as core ethical imperatives (Ali, 2024; Foster, 2024). Seventeen studies highlighted the necessity of minimizing bias, ensuring data accuracy, and maintaining researcher neutrality. However, twelve articles criticized the positivist claim of value-neutrality, arguing it may conceal existing power dynamics and cultural biases (Lincoln et al., 2011; Smith, 2012). Within the Nigerian context, eight studies identified challenges related to data quality and infrastructural limitations, which complicate adherence to strict methodological standards and raise ethical concerns regarding data validity and generalizability (Nnorom, 2025; Yakubu et al., 2024).

Regarding interpretivist ethics, twenty-three studies highlight the importance of cultural sensitivity, participant empowerment, and honesty. Ethical practice in this paradigm extends beyond informed consent to encompass respect for cultural contexts and participants' meaning-making processes (Creswell & Poth, 2018; Denzin & Lincoln, 2018). Nigerian studies (n=9) revealed specific challenges such as navigating traditional authority structures, overcoming language barriers, and balancing marginalised voices with cultural conventions (Chilisa & Kawulich, 2012; Olaniran & Baruwa, 2020).

Critical realism presents an ethical framework deeply committed to social justice and structural change, necessitating reflexivity, inclusivity, and participatory approaches (Lawani, 2021; Willis, 2023). Fifteen studies emphasized these elements, highlighting the dual ethical responsibility to address immediate research impacts and broader systemic inequities. In Nigeria, critical realist research often addresses sensitive issues

like systemic violence, corruption, and injustice, requiring heightened attention to participant safety and researcher positionality (Abakpa et al., 2017; Ubi et al., 2020).

#### **4.2.2 Theme 2: Cultural Sensitivity and Indigenous Knowledge Systems**

The thematic analysis highlights the critical importance of integrating cultural sensitivity with ethical practice across all research paradigms, particularly within the diverse Nigerian context characterized by multiple ethnic, religious, and linguistic groups. Twenty-seven studies emphasize that ethical frameworks rooted in Western conceptualizations are often insufficient for addressing the complex realities of research in Nigeria, where communal decision-making, traditional authority, and indigenous knowledge systems necessitate tailored approaches to informed consent, confidentiality, and participant protection (Chilisa & Kawulich, 2012; Dei, 2013; Smith, 2012). Significant attention is given to community-based consent models, with fourteen studies advocating for consent mechanisms that acknowledge traditional power relations and collective decision-making processes, especially in rural contexts where individual autonomy may be subordinate to communal acceptance (Marshall & Rossman, 2016; Olaniran & Baruwa, 2020). Furthermore, language and communication barriers represent major ethical challenges, as evidenced by eighteen studies demonstrating that participants must engage in their first languages and cultural idioms to provide genuinely informed consent. These challenges are exacerbated by the absence of direct equivalents in many Nigerian languages for key Western research concepts such as "anonymity" and "voluntary participation," complicating ethical communication and understanding (Yakubu et al., 2024).

#### **4.2.3 Theme 3: The Power Dynamics and the Researcher's Position**

The study highlights that power inequalities between researchers and participants are a significant ethical concern across all research paradigms, with heightened complexity in the Nigerian context due to overlapping factors such as education, income, gender, ethnicity, and religion. Twenty-two studies emphasize that the educational and economic privilege of PhD researchers can create substantial power imbalances, potentially hindering participation and compromising data quality (Drolet et al., 2023; Lincoln et al., 2011). Gender dynamics are also critical, as fifteen studies reveal that patriarchal social structures restrict women's free participation and pose challenges for male researchers navigating cultural norms when engaging female participants (Marshall & Rossman, 2016). Additionally, twelve studies emphasize the impact of religious and ethnic identities on researcher-participant relations, calling for cultural competence and sensitivity to historical and ongoing intergroup tensions to maintain ethical research practices (Ugwu et al., 2021).

#### **4.2.4 Theme 4: Problems with institutions and structures**

The literature reveals significant challenges within Nigerian universities regarding their capacity and structural support for conducting ethical research. Nineteen studies highlight limitations in Institutional Review Board (IRB) systems, including insufficient resources, inadequate training, and a lack of cultural competence, especially when reviewing research involving indigenous groups or sensitive social issues (Olaniran & Baruwa, 2020; Yakubu et al., 2024). Additionally, twenty-one studies emphasize that limited funding restricts researchers' ability to implement comprehensive ethical safeguards, such as providing fair compensation to



participants, ensuring data security, offering professional translation services, and conducting participant follow-up when distress occurs (Potokri, 2016). Furthermore, sixteen studies identify a shortfall in ethics and cultural competence training among PhD students, supervisors, and IRB members, resulting in inconsistent ethical practices and missed opportunities to effectively address field-specific ethical challenges (Ubi et al., 2020). These institutional and structural deficiencies collectively undermine the ethical conduct of research in Nigerian doctoral settings

#### **4.3 Discussion of the Findings**

This sections discusses the findings of the study in terms of their implications for Nigeria's doctoral research students, the study conclusions and recommendations as well as future research directions.

##### **4.3.1 Implications for Theoretical Understanding**

The results add to our theoretical knowledge of research paradigms and ethics in several key ways. First, the analysis shows that the idea that ethical concerns can be the same across paradigms is wrong. Instead, it shows that each paradigm has its ethical imperatives that need to be addressed in a specific way. This result backs up Guba and Lincoln's (1994) claim that paradigms are different ways of looking at the world that have different moral consequences.

Second, the high emphasis on cultural sensitivity in both paradigms shows that environmental influences may play a bigger role in determining ethical behaviour than we thought. This finding builds on Smith's (2012) work on decolonising techniques by showing that Western ethical frameworks may not operate well in non-Western research settings.

Third, recognising power dynamics as a cross-paradigm issue strengthens critical views on research ethics that stress the need for reflexivity and awareness of

structural disparities (Lincoln et al., 2011). However, the results also show that similar power dynamics show up in different ways in different paradigms and situations. Hence, we need to use more specific solutions rather than general ones.

##### **4.3.2 Practical Implications for Nigerian Doctoral Research**

The findings revealed several practical implications for enhancing the ethical conduct of doctoral research in Nigeria. First, there is a clear need for paradigm-specific ethics training that moves beyond broad research ethics to address the unique ethical challenges inherent in each methodological approach. This targeted training would better prepare researchers to navigate paradigm-related ethical complexities. Second, given the persistent emphasis on cultural sensitivity, structured cultural competence development is essential—not just promoting awareness but fostering a deep understanding of local knowledge systems, authority structures, and communication norms. Third, significant institutional capacity building is necessary, particularly to strengthen Institutional Review Boards through dedicated training, the development of culturally appropriate ethical guidelines, and technological upgrades to improve data security. Lastly, fostering community engagement models that incorporate indigenous decision-making and position communities as active partners in ethical oversight rather than passive subjects will enhance the participatory nature of ethical research practices in Nigeria.

Additionally, the emergence of digital research platforms in Nigerian higher education spotlights a pressing need to address the digital divide within research ethics. Ethical frameworks must evolve to tackle issues such as obtaining meaningful informed consent in contexts of limited digital literacy, safeguarding privacy amid unreliable digital infrastructure, and ensuring equitable participation despite

disparities in technology access. Mixed-methods research, increasingly popular for addressing complex social issues in Nigeria, presents further ethical integration challenges. Researchers must develop frameworks that harmonize diverse paradigm demands—balancing the positivist emphasis on objectivity with the interpretivist priority of cultural sensitivity—while managing participant burden and methodological coherence. These insights collectively call for context-sensitive strategies to uphold ethical integrity in Nigerian doctoral research

#### **4.3.3 Addressing the Digital Divide in Research Ethics**

The rise of ethical problems associated with technology shows that we need new ways of thinking about digital research ethics that take into account the constraints of infrastructure and the lack of digital literacy. This discovery is significant because an increasing number of Nigerian colleges are using digital research platforms and data collection methods.

The literature says that ethical frameworks need to change to deal with concerns like: How can we get meaningful informed consent for collecting digital data when users are not well-informed about how data is stored and shared? How can privacy be protected when digital infrastructure is not always reliable? How can researchers make sure that everyone has an equal chance to participate when access to technology is very different for different groups of people?

#### **4.3.4 Integration Challenges in Mixed-Methods Research**

As mixed-methods approaches become more common in doctoral research, they present additional ethical challenges that need to be thought about carefully. The results show that researchers who use mixed-methods techniques need to create ethical frameworks that are consistent

with the needs of multiple paradigms while also being methodologically sound. This dilemma is especially pronounced in Nigeria, where mixed-methods approaches are frequently utilised to tackle intricate social challenges necessitating both quantitative analysis and qualitative comprehension. Researchers have to balance the need for objectivity from positivists with the need for cultural sensitivity from interpretivists, while ensuring that participants are not overwhelmed or confused by the different methods used.

### **5. Conclusion and recommendation**

In conclusion, ethical considerations are central to doctoral research in Nigeria, and understanding research paradigms is crucial for navigating these challenges. By exploring the five dominant paradigms---positivism, critical realism, postmodernism, interpretivism, and pragmatism---this study provides a comprehensive guide for Nigerian doctoral students to conduct ethical and impactful research. Future research should focus on developing ethical frameworks that are tailored to the Nigerian context, ensuring that doctoral research contributes to national development and global knowledge.

#### **Recommendations**

The study recommends enhancing ethical frameworks for doctoral research in Nigeria by creating contextual ethical guidelines that reflect the country's socio-cultural and economic realities. Strengthening Institutional Review Boards (IRBs) is crucial to ensuring rigorous ethical oversight, with training programs that integrate both international standards and local considerations. Additionally, doctoral candidates should receive training in ethical reflexivity, helping them recognize their biases and assess the broader impact of their research on society. These measures will enhance

the ethical integrity of doctoral studies and protect vulnerable populations.

To strengthen methodological rigor, Nigerian universities should organize workshops on research paradigm selection to guide doctoral candidates in choosing appropriate frameworks for their studies. Encouraging mixed-methods research will improve the depth of analysis, especially when investigating Nigeria's complex socio-economic issues. Additionally, showcasing case studies of successful doctoral research will provide aspiring researchers with real-world examples of best practices in ethical and methodological approaches. These initiatives will help doctoral students align their research paradigms with ethical standards, leading to more robust and impactful studies.

Fostering inclusivity and representation in research is essential for ensuring diverse perspectives are incorporated into academic discourse. This can be achieved by adopting participatory research methods, particularly when working with marginalized groups, so that participants are actively engaged in the research process. Researchers should also receive training in cultural sensitivity to navigate Nigeria's diverse cultural landscape effectively. Prioritizing the inclusion of marginalized populations, such as women, ethnic minorities, and low-income communities, will enhance the relevance and societal impact of doctoral research.

Finally, addressing ethical challenges in data collection and reporting is critical to maintaining research integrity. Doctoral students should be trained in transparency and accountability, ensuring accurate documentation of methodologies and the responsible disclosure of research limitations. Establishing comprehensive informed consent protocols will help protect participants' rights, particularly in sensitive research areas. Implementing strict data privacy measures, including anonymization and secure storage

systems, will safeguard confidential information. These ethical standards will not only enhance the credibility of doctoral research in Nigeria but also strengthen its contribution to national and global knowledge.

By implementing these recommendations, Nigerian doctoral research can achieve greater ethical integrity, methodological rigor, and societal impact. This will not only enhance the credibility of academic scholarship in Nigeria but also contribute to the country's development by addressing pressing social, economic, and political challenges.

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