

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: Ethics, research paradigms, doctoral research, Nigeria, positivism, critical realism,

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.

Literature Review

Research Paradigms and Ethical Considerations

Research paradigms serve as foundational philosophical frameworks that shape researchers' perceptions of reality, inform their approaches to knowledge acquisition, and guide the methodological choices they make throughout their studies (Paudel, 2024). In the context of Nigeria, where research frequently grapples with intricate social, economic, and political challenges, a nuanced understanding of these paradigms is imperative for ensuring both ethical compliance and methodological rigor. The four principal components of a research paradigm---ontology, epistemology, methodology, and axiology---are critical in framing the research process (Rehman & Alharthi, 2016; Scotland, 2012).

Ontology pertains to the nature of reality and the assumptions researchers hold about the world they are investigating. In the Nigerian context, ontological considerations may vary significantly across different research domains, influencing how researchers conceptualize the phenomena under study (Ugwu et al., 2021). Epistemology, on the other hand, addresses the nature and scope of knowledge, including the methods through which knowledge is acquired and validated. This aspect is particularly salient in Nigeria, where diverse cultural and social contexts necessitate a careful examination of how knowledge is constructed and understood (Rehman & Alharthi, 2016).

Methodology encompasses the systematic processes employed in conducting research, including the selection of research designs, data collection techniques, and analytical strategies. For instance, a positivist approach may be employed to quantitatively assess the impact of government policies on economic growth, utilizing statistical analyses to derive generalizable conclusions (Ali, 2024). Conversely, an interpretivist approach may be more appropriate for investigating the lived experiences of marginalized communities, employing qualitative methods such as in-depth interviews and focus group discussions to capture the richness and complexity of human experiences (Fard, 2012).

Axiology, the final component, pertains to the role of values and ethics in the research process. Each research paradigm carries distinct ethical implications that doctoral students must meticulously consider when designing their studies. For example, the ethical considerations inherent in a positivist framework may differ markedly from those associated with an interpretivist approach, particularly in terms of issues related to informed consent, participant confidentiality, and the potential for researcher bias (Chilisa & Kawulich, 2012).

Ethical Challenges in Nigerian Doctoral Research

Nigerian doctoral students frequently encounter ethical challenges related to data collection, participant consent, and cultural sensitivity. Ensuring that participants fully understand the research objectives and voluntarily provide informed consent is crucial, particularly in studies involving vulnerable populations. For instance, research on healthcare access in rural Nigeria requires ethical considerations that respect participants' autonomy while addressing literacy barriers and cultural beliefs (Drolet et al., 2023). Furthermore, power dynamics between researchers and participants may influence responses, necessitating ethical practices that uphold fairness and mutual respect (Kivunja & Kuyini, 2017).

The integration of ethical frameworks that align with both global research standards and the Nigerian socio-cultural context is essential for maintaining research credibility. Studies on gender inequality in Nigerian universities, for example, often require researchers to navigate deeply ingrained cultural biases and power imbalances. Ethical integrity in such research involves ensuring confidentiality, minimizing harm, and fostering an environment where participants can express themselves without fear of repercussions (Yakubu et al., 2024). Addressing these ethical concerns requires researchers to be reflexive and adaptable, acknowledging the socio-political influences on their work while upholding rigorous ethical standards.

Moreover, ethical research in Nigeria must prioritize transparency in data collection, analysis, and reporting. Doctoral students may face challenges such as coercion in participant recruitment, misrepresentation of findings, and the potential misuse of data. To mitigate these risks, adherence to ethical guidelines, such as securing institutional ethical approval and engaging in continuous ethical reflexivity, is essential (Potoki, 2016; Ugwu et al., 2021). Upholding these principles not only safeguards research participants but also enhances the reliability and impact of the research outcomes.

By fostering a deep understanding of the ethical dimensions inherent in various research paradigms, Nigerian doctoral students can navigate ethical dilemmas effectively. Ethical adherence ensures the production of high-quality, socially responsible research that contributes to national development while maintaining academic integrity (Pretorius, 2024). Strengthening ethical consciousness within Nigerian doctoral research will promote more meaningful, impactful scholarship that aligns with both academic and societal needs.

Research Paradigms in the Nigerian Context

Positivism

Positivism is a scientific approach to research that emphasizes objectivity, measurement, and generalizability (Foster, 2024; Means & Mowatt, 2024). In Nigeria, positivist research is often used in fields such as economics, engineering, and natural sciences. For example, a positivist study might examine the relationship between oil production and economic growth in Nigeria, or a doctoral student investigating the relationship between employee engagement and productivity in Nigerian manufacturing firms might adopt a positivist approach (Ali, 2024). They could design a quantitative study using surveys to collect data on employee engagement levels and corresponding productivity metrics. By employing statistical analysis, the researcher could identify correlations and potentially establish causal relationships, providing valuable insights for management practices in the sector.

However, positivist research in Nigeria must also navigate several ethical challenges to maintain credibility and ensure the validity of findings. One major concern is ensuring data accuracy, which requires researchers to adopt rigorous methodologies, minimize errors, and verify the reliability of their data sources (Ali, 2024; Aliyu et al., 2014). This is particularly important in studies involving sensitive issues such as climate change, public health, or economic development, where inaccurate data can lead to misleading conclusions and flawed policy recommendations.

Another critical ethical consideration is avoiding bias in research design, data collection, and analysis. Researchers must ensure that their sampling methods are representative of the population under study and that data collection instruments are designed to capture unbiased responses (Ugwu et al., 2021; Yakubu et al., 2024). For instance, in a study examining the impact of climate change on agricultural productivity, it is essential to use objective measurements of weather patterns, crop yields, and soil conditions rather than relying on subjective opinions or politically motivated narratives. Transparency in data collection methods is also vital for ethical positivist research. Researchers must clearly document their procedures, disclose any limitations, and ensure that data is collected in an impartial manner (Ali, 2024). This may involve using standardized surveys, validated instruments, and replicable methodologies to enhance the credibility of findings. Moreover, researchers should adhere to ethical guidelines, such as obtaining informed consent from participants, ensuring confidentiality, and avoiding any manipulation of data to support preconceived hypotheses.

Additionally, ethical positivist research must address conflicts of interest and funding biases. Studies funded by organizations with vested interests may face pressure to produce favorable results. To mitigate this, researchers should disclose funding sources, maintain independence in their analysis, and ensure that findings are based purely on empirical evidence (Olaniran & Baruwa, 2020; Ugwu et al., 2021).

Ultimately, upholding ethical standards in positivist research strengthens the reliability and applicability of findings, allowing policymakers, businesses, and other stakeholders to make informed decisions based on objective, well-validated data (Aidonojie et al., 2022; Nnorom, 2025).

Critical Realism

Critical realism serves as a philosophical framework for research that delves deeper than mere surface observations, aiming to reveal the intricate structures and mechanisms that influence social phenomena (Wills, 2023). This approach is particularly pertinent in the context of Nigeria, where multifaceted socio-economic and political challenges, including corruption, poverty, and inequality, continue to endure despite numerous policy efforts (Yakubu et al., 2024).

When applying critical realism to investigate corruption within Nigerian public institutions, it is essential to identify not only the overt signs of corrupt activities but also the foundational systemic, historical, and cultural elements that perpetuate these practices. Researchers may explore the impact of colonial histories, fragile institutional frameworks, patronage systems, and socio-economic pressures that contribute to the normalization of corruption. A critical realist examination of corruption would likely adopt a mixed-methods strategy, combining qualitative data gathered from interviews with public officials, civil society representatives, and anti-corruption specialists with quantitative information regarding bribery occurrences, inefficiencies in the public sector, and economic losses linked to corruption (Abakpa et al., 2017; Bibi et al., 2022). This integrative approach allows for a comprehensive analysis of both statistical patterns and the perceptions, motivations, and structural limitations that foster corrupt practices.

In a similar vein, when tackling issues of poverty and inequality, critical realism empowers researchers to look beyond mere income differences and economic metrics to investigate the mechanisms that perpetuate social and economic marginalization. For example, a study focused on rural poverty in Nigeria might

examine how historical land tenure arrangements, restricted access to education, and governmental wealth distribution policies collectively reinforce cycles of deprivation. Critical realism emphasizes the exploration of underlying causal mechanisms instead of merely concentrating on observable outcomes, thereby offering a more sophisticated and practical comprehension of Nigeria's social issues (Lawani, 2021). The knowledge acquired through this approach can guide the development of more effective policy measures that target fundamental causes rather than superficial symptoms, ultimately fostering more sustainable solutions.

Ethical considerations in critical realist research extend beyond conventional research ethics, highlighting the necessity of amplifying the voices of marginalized populations and ensuring that research outcomes facilitate significant social transformation (Ubi et al., 2020). As critical realism aims to reveal the underlying structures and mechanisms that shape social realities, the ethical obligations encompass both the methodology employed in research and the application of its findings. A primary ethical concern involves fostering inclusivity and representation. Researchers are required to actively engage with marginalized communities, including women, low-income groups, and ethnic minorities, to ensure their viewpoints are accurately represented (Mislay & Amania, 2025; Ubi et al., 2020). This necessitates the use of participatory research methodologies that empower participants, rather than merely treating them as subjects of inquiry. For example, in conducting research on gender-based violence (GBV) in Nigeria, it is essential for researchers to establish safe environments where survivors can share their experiences confidentially and with respect. This may involve employing trauma-informed interviewing techniques, guaranteeing anonymity, and providing referrals to support services as needed (Drolet et al., 2023).

Another significant ethical consideration is the prevention of harm and exploitation. Since critical realist research often addresses sensitive topics such as corruption, inequality, or systemic violence, researchers must remain vigilant regarding the potential risks faced by participants (Olaniran & Baruwa, 2020; Ubi et al., 2024). In the context of GBV research, for instance, subjecting survivors to repeated inquiries about their traumatic experiences without appropriate ethical protections could result in emotional distress. Researchers are obligated to secure informed consent, offer psychological support when necessary, and ensure that participation is entirely voluntary and free from coercion (Drolet et al., 2023). Furthermore, ethical critical realist research should aim to promote social justice and foster positive change. The findings should transcend academic discourse and actively inform policy and advocacy initiatives.

Postmodernism

Postmodernism challenges traditional notions of truth and reality, emphasizing the role of power, language, and culture in shaping knowledge (Stewart et al., 2021). In Nigeria, postmodernist research can be used to explore issues such as identity, ethnicity, and cultural heritage. For example, a postmodernist study might examine how Nigerian literature reflects the country's colonial history and its impact on contemporary society.

Ethical considerations in postmodernist research include acknowledging the researcher's biases and ensuring that the research process is inclusive and participatory. For instance, in a study on the representation of women in Nigerian media, researchers must ensure that their analysis reflects diverse perspectives and challenges dominant narratives (Kalilu & Oladugbagbe, 2022).

Interpretivism

Interpretivism is a research paradigm that seeks to understand the subjective experiences and meanings individuals assign to social phenomena (Fard, 2012). This approach is particularly valuable in disciplines such as sociology, anthropology, and education, where researchers aim to explore complex human interactions, cultural practices, and social realities. Unlike positivist approaches that prioritize objectivity and quantification, interpretivism emphasizes deep, context-specific insights gained through qualitative

inquiry (Fard, 2012). In Nigeria, interpretivist research is widely applied to investigate issues related to identity, migration, education, and cultural practices. For instance, a study examining the experiences of Nigerian students studying abroad may adopt an interpretivist perspective, using qualitative methods such as in-depth interviews, focus groups, and narrative analysis (Fard, 2012). These methods enable researchers to capture participants' lived experiences, uncover personal meanings, and provide a holistic understanding of their realities.

Given its emphasis on subjectivity, interpretivist research requires careful ethical considerations. Researchers must ensure that participants' voices are authentically represented, their privacy is safeguarded, and their cultural contexts are respected (Fard, 2012). In studies involving sensitive topics, such as religious beliefs or social identity, ethical principles such as informed consent, confidentiality, and participant autonomy are crucial to maintaining research integrity and trustworthiness (Drolet et al., 2023). By fostering a deeper appreciation of individuals' perspectives, interpretivist research contributes to a more nuanced understanding of Nigerian society. The insights gained through this paradigm not only enrich academic scholarship but also inform policies and interventions that address social issues in culturally meaningful ways (Fard, 2012).

Ethical considerations in interpretivist research are essential to maintaining the integrity and credibility of the study. Researchers must ensure that participants' voices are accurately represented, avoiding misinterpretation or selective reporting that could distort their perspectives (Fard, 2012). This is particularly important in studies exploring deeply personal or culturally sensitive topics, where participants' lived experiences and viewpoints must be conveyed with authenticity and respect. Privacy protection is another fundamental ethical principle in interpretivist research. Researchers must take appropriate measures to anonymize participants' identities, especially in studies involving sensitive issues (Fard, 2012). For example, in research examining the impact of religious beliefs on healthcare decisions in Nigeria, participants may share personal or controversial opinions. To prevent potential harm or social repercussions, researchers must implement strict confidentiality protocols, such as using pseudonyms and securely storing data (Drolet et al., 2023).

Additionally, ethical interpretivist research requires obtaining informed consent, ensuring that participants fully understand the study's purpose, their role, and their right to withdraw at any stage (Fard, 2012). Given the interactive nature of qualitative research, building trust and fostering a respectful researcher-participant relationship is crucial. Researchers must be mindful of power dynamics, particularly when working with vulnerable groups, and ensure that participation is voluntary and free from coercion (Drolet et al., 2023). By upholding these ethical standards, interpretivist research can generate meaningful, credible insights while safeguarding the dignity and rights of participants. Adhering to these principles not only strengthens the research's validity but also enhances its societal impact by producing ethically responsible and culturally sensitive scholarship (Fard, 2012).

Pragmatism

Pragmatism is a research paradigm that prioritizes practical solutions and the flexible use of multiple methods to address research questions effectively (Kaushik & Walsh, 2019). Unlike paradigms that strictly adhere to either qualitative or quantitative approaches, pragmatism encourages methodological pluralism, allowing researchers to select the most suitable techniques to generate meaningful and applicable findings. This approach is particularly valuable in addressing real-world challenges where diverse perspectives and data sources are necessary to develop well-rounded insights (Kaushik & Walsh, 2019). In Nigeria, pragmatic research is widely applied in fields such as entrepreneurship, innovation, and economic development. For instance, a study examining the factors influencing the success of small and medium-

sized enterprises (SMEs) may adopt a mixed-methods approach, combining surveys and statistical analysis with qualitative interviews (Aidanojie et al., 2022; Kaushik & Walsh, 2019). This methodological flexibility enables researchers to capture both numerical trends and in-depth personal experiences, ensuring that findings are not only comprehensive but also practically relevant for policymakers and business stakeholders.

Ethical considerations in pragmatic research involve ensuring methodological rigor, transparency, and the responsible integration of multiple data sources (Kaushik & Walsh, 2019). Researchers must uphold ethical standards in both qualitative and quantitative data collection by securing informed consent, maintaining confidentiality, and ensuring the accurate representation of participants' responses. Given that pragmatic studies often involve interdisciplinary collaboration and applied research, ethical reflexivity is essential to balance objectivity with contextual sensitivity (Foster, 2024). By embracing pragmatism, Nigerian researchers can produce impactful studies that bridge the gap between theory and practice. This paradigm supports evidence-based decision-making, fostering innovative solutions to societal challenges while maintaining ethical integrity (Aliyu et al., 2014; Kaushik & Walsh, 2019). Through its adaptable and outcome-oriented approach, pragmatism contributes to knowledge advancement and sustainable development across various sectors.

Ethical considerations in pragmatic research emphasize the importance of ensuring that studies are relevant to local contexts and contribute to practical solutions (Yakubu et al., 2024). Researchers must design their studies in a way that addresses real-world challenges, making their findings both applicable and beneficial to the communities they investigate. This requires engaging with stakeholders, understanding societal needs, and ensuring that the research outcomes have meaningful implications for policy and practice (Kaushik & Walsh, 2019; Nnorom, 2025). For example, in a study examining the impact of technology adoption on Nigerian SMEs, ethical responsibility extends beyond data collection to the effective dissemination of findings (Kaushik & Walsh, 2019). Researchers must ensure that their insights are accessible to key stakeholders, including policymakers, business owners, and entrepreneurs, who can apply the results to enhance decision-making and economic development. This may involve presenting findings in clear, non-technical language, using diverse communication channels, and fostering collaborations that facilitate the implementation of research recommendations.

Additionally, ethical pragmatic research demands methodological rigor and transparency in integrating multiple research methods (Olaniran & Baruwa, 2020). Researchers must uphold principles such as informed consent, confidentiality, and data integrity while ensuring that both qualitative and quantitative findings are accurately represented. Ethical reflexivity is crucial in balancing the pursuit of practical outcomes with maintaining research objectivity and fairness (Ubi et al., 2020). By adhering to these ethical considerations, pragmatic research in Nigeria can generate actionable insights that contribute to sustainable development. Ensuring that studies are not only methodologically sound but also socially and economically impactful strengthens the role of research in fostering innovation, policy reform, and community empowerment.

Conclusion and Recommendations

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. 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.

Implications for Doctoral Research in Nigeria

Understanding research paradigms is essential for Nigerian doctoral students, as it helps them align their research designs, methodologies, and ethical standards with their research objectives (Pretorius, 2024). For example, a student studying the impact of climate change on Nigerian agriculture might choose a positivist paradigm to quantify the relationship between variables (Ali, 2024), while a student exploring the cultural significance of traditional Nigerian festivals might opt for an interpretivist approach (Aliyu et al., 2014). By selecting the appropriate paradigm, doctoral students can ensure that their research is methodologically sound, ethically compliant, and relevant to the Nigerian context. This not only enhances the credibility of their research but also contributes to the advancement of knowledge and the development of practical solutions to societal challenges.

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