

PERSPECTIVE PAPER

Ethics and research frontiers: perspectives from seven African scholars

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ABSTRACT

Existing literature has concentrated on ethics and research but there is less attention on ethics challenges and research frontiers from the perspective of African scholars. To explore ethics and research frontiers and specifically to explore ethics challenges and research frontiers in Africa, this paper adopted a scholarly personal narrative method. The application of content analysis deemed sufficient to avail emerged themes. The findings revealed that the scholars from different fields, comprising economics, health, management, medicine, statistics, and tourism, opined that there are ethical challenges in advancing research frontiers in Africa. Some of these challenges include “manipulation of data”, “culture of the community towards research”, “delay of clearance approvals”, “lack of one stop shop for clearance permits”, “transcribing questionnaires”, “consents”, “cultural sensitivity”, “no grants”, “highly competitive grant application”, and “poor collaboration” which prevent the advancing of research frontiers in the continent of Africa. A practical implication is for government bodies and agencies dealing with research issues to improve processes like minimizing delays on clearance approvals and sensitizing the community on the benefits of research and encourage collaboration. Future studies may apply mixed methods to examine the phenomenon of research frontiers in Africa.

KEYWORDS:

Ethics, Research frontiers, African scholars, Africa

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INTRODUCTION

Empowering African scholars is important in shaping research ethics and thus echoes local priorities and global standards on ethical considerations. Likewise, ethical considerations have expanded beyond basic compliance, to contribute to contextual relevance, cultural sensitivity and equity in research partnerships (Ndebele et al., 2024).¹ Following the gradual advancement of African continental research and new frontiers in genomics, artificial intelligence (AI) and big data calls for ethical clarity in privacy, consent and benefit sharing (Mulder et al., 2021).² African scholars need ethical guideline on these emerging fields to ensure that the technology benefits the African population and still respect local values rather than continuing exploitative research practices rooted in colonial histories (Tindana et al., 2020a).³ Similarly, continuing training in research ethics is needed to enable African institutions to independently develop their own ethical standards in line with their local needs (Kamuya et al., 2015).⁴ Furthermore, there is need to establish infrastructure systems that help to manage data ownership, control policy issues and protect local data sovereignty while promoting data sharing for global knowledge advancement (de Vries et al., 2019).⁵

African frontiers drive has led to the establishment of national ethics review boards and increased funding for ethics training programs to promote ethical practices in African research institutions. These efforts have become necessary to guide research agenda, ensure that African voices shape the ethical landscape of research on the continent, and strengthen research integrity and power balance (Mwaka et al., 2023).⁶ The frontier drive addresses relevant issues related to community engagement, power dynamics, data governance and the emerging ethical framework that is tailored to the African context (Kass et al., 2019; Mulder et al., 2021).^{7,2}

The existing African research ethics committees (RECs) have challenges of limited resources, lack of infrastructure amid capacity building, with bioethics signaling the need for further development, reforms and funding (Ali et al., 2020).⁸ The ethics and research frontiers strive on context-specific ethical practices that respect local values and needs of the community

and move towards enhancing the integrity and equity of research conducted to address several significant gaps in the current landscape of ethics and research in Sub-Saharan Africa (SSA). Therefore, the main objective of this paper was to explore ethics and research frontiers and specifically to explore ethics challenges and research frontiers in Africa.

Ethics in Research

In Africa, ethics in research is a critical consideration for scholars. Ethics in research has challenges in Africa such as cultural sensitivity, resource limitations, regulatory frameworks, and international collaborations. For instance, Burgess et al. (2023) and Tindana et al. (2020b)^{9,10} noted that researchers must navigate diverse cultural contexts and norms that may influence ethical considerations. Belaynehe et al. (2024) and Macfarlane (2017)^{11,12} have commonly stated that many African countries lack comprehensive regulatory frameworks for research ethics and thus leading to inconsistencies in ethical practices. In this paper, ethics in research refers to regulatory frameworks to guide research activities.

Research Frontiers

The concept of research frontiers was introduced by Price (1965).¹³ Research frontiers refers to the boundaries and limits to current research in a certain field and that it represents the latest and most advanced knowledge in a field. Bibliometrics are often used to analyse research frontiers in specific subject areas (Shaoxu and Sanmugam, 2024).¹⁴ Generally, there is no consensus on the definition of research frontiers. In this study, the research frontiers in the African perspective includes a program that brings together young scientists, collaborative research projects and initiatives that promote open science.

Theory

Western research ethics principles, particularly the four pillars of autonomy, beneficence, non-maleficence, and justice, have historically underpinned ethical standards globally (Beauchamp and Childress, 1979).¹⁵ However, African scholars have highlighted that these principles require adaptation to resonate with the continent's social and cultural values, which prioritise collective welfare over individual autonomy (Emanuel et al., 2004; Molyneux et al., 2004).^{16,17} African ethical

theory has integrated local philosophies, with *Ubuntu* serving as a foundational concept. *Ubuntu*-based ethics promote community consent, which aligns with African communal traditions, challenging Western-centric views that prioritise individual consent (Ndebele et al., 2024).¹ Postcolonial and decolonial perspectives critique Western-dominated research paradigms, which have often disregarded African autonomy and prioritised Western objectives over local needs (Nyika et al., 2009).¹⁸ Decolonial ethics advocate for fair, respectful partnerships with international collaborators, addressing issues of exploitation and intellectual property rights that have historically disadvantaged African institutions (Chilengi, 2009).¹⁹

Community engagement practices have been refined, incorporating advisory boards, participatory research methods, and local collaboration strategies to deepen community involvement and enhance ethical integrity (Tindana et al., 2015).²⁰ Therefore, in summarizing the theoretical framing, the theory of research ethics in Africa has matured over the past two decades, with African scholars and communities developing frameworks that reflect the continent's social, cultural, and historical contexts. Ethical theories like *Ubuntu*, justice-based frameworks, and decolonial approaches underscore the need for research that respects local values, fosters equitable partnerships, and ensures the ethical treatment of African populations. As the African research landscape continues to grow, ethical frameworks will need to adapt to address emerging challenges in technology, globalisation, and social change. Continued investment in capacity-building, equitable partnerships, and locally relevant ethical guidelines will be crucial to fostering a research environment in Africa that promotes social justice, respects cultural diversity, and ensures scientific integrity.

Ethics and Research Frontiers in Africa

The estimated total investment in research ethics capacity development in Africa alone between 2002 and 2013 exceeded US\$ 19 million (Ndebele et al., 2024).¹ These investments have targeted training for existing RECs and establishment of new RECs in countries or regions without functional research ethics. Mokgatla et al. (2018)²¹ describes the mapping of RECs in Africa through MARC (Mapping African Research

Ethics Capacity) project and that top 11 countries by the number of RECs listed were South Africa (30), Nigeria (25), Egypt (23), Uganda (9), Cameroon (8), Ethiopia and Sudan (7 each), Tanzania (5), Botswana, Burkina Faso, and DRC (4 each).

In reference to RECs in Africa, the study by Cengiz et al. (2023)²² aimed to provide a broad overview of REC members' awareness and perceptions of big data governance in SSA. A descriptive cross-sectional survey was conducted from April to July 2022 and findings showed that awareness of data governance laws, policies and guidelines varied across the subcontinent as well as a quarter of respondents (25%) indicated that national regulations on the transborder flow of research data are inadequate while institutional policies on research data protection were also regarded as being inadequate. There is a strong need for capacity development in the review of data-intense research protocols on the subcontinent.

There are existing studies on ethical-legal requirements for adolescent self-consent to research. For instance, Munung et al. (2022)²³ as the SickleInAfrica consortium conducted a thematic analysis of a sample of research ethics guidelines and procedures in African countries to identify guidance for assent requirements in health research. The findings revealed that 12 out of 24 African countries specified as the age group for which assent is required. The minimum age for written assent varied across the countries. Five countries, Algeria, Botswana, Cameroon, Nigeria and The Democratic Republic of Congo require consent from both parents or family council in certain circumstances. Botswana, Nigeria, South Africa and Uganda have specified assent/consent requirements for research with emancipated minors. South Africa and Algeria require re-consent at onset of adulthood. Five countries (Botswana, Cameroon, Nigeria, South Africa and Tanzania) specified conditions for waiving assent requirements.

Many low- and middle-income countries (LMICs) countries have limited regulatory and governance structures for biobanking and data sharing Nansumba et al. (2020)²⁴, and very few research institutions in these countries have formal data sharing policies. Other LMICs need to strengthen their research ethics

(Kamuya et al., 2013).²⁵ For about a decade, the Human Heredity and Health in Africa (H3Africa) consortium has engaged in research on the African continent to generate data and samples that could be used to improve global health (Jegade et al., 2023).²⁶ The study by Jegede et al. (2023)²⁶ explored African research participants' perspectives. The study was conducted at existing Stroke Investigation Research and Education Network (SIREN) sites in Nigeria and Ghana. Using an exploratory design, the data was collected using an interview guide. Results revealed that stroke genomics and neurobiobanking research in Africa require researchers' direct attention to ethical issues. Hence, this paper explored ethics and research frontiers, particularly ethics challenges and research frontiers, in Africa.

METHODS

The study applied the Scholarly Personal Narrative (SPN) as a methodology approach for purposes of capturing the views of 7 African Scholars as collaborators in research from different disciplines. Ng and Carney (2017)²⁷ commented that the use of SPN is of value to scholars across disciplines and can be applied to analyze their experiences. In addition, Ng and Carney (2017)²⁷ applied SPN in their education study and noted that SPN provides researchers with a platform to discuss agendas and practices in a way that makes conceptions of the classroom and education more transparent. The sample selection of 7 African Scholars was deliberate and applied purposive sampling because the scholars are collaborators and researchers from different African countries being Botswana, Nigeria, Tanzania and Uganda.

The application of content analysis was deemed sufficient in this paper to avail the emerged themes to serve as narratives to address the posed question "What are the ethical challenges in advancing research frontiers in your field?" As collaborators, the use of Zoom Workplace enabled the collection of narratives where each scholar provided their opinions on the posed question of this paper which was written down and analyzed using content analysis. The use of content analysis has been applied in other studies such as Kleinheksel et al. (2020).²⁸ Therefore, this study also

deployed content analysis to code, interpret and summarize the narratives.

RESULTS

The findings revealed that the African scholars in this paper were from different fields, comprising economics, health, management, medicine, statistics, and tourism who opined that there are ethical challenges in advancing research frontiers in Africa. Further findings show that some of these challenges are "manipulation of data", "culture of the community towards research", "delay of clearance approvals", "lack of one stop shop for clearance permits", "transcribing questionnaires", "consents", "cultural sensitivity", "no grants", "highly competitive grant application", "poor collaboration" and "inability of the government, private sector and community to utilize most of the research findings to impact life changes and improve the society" which prevent the advancing of research frontiers in the continent of Africa. These opinions are further elaborated as the Scholars stated that:

"Approval of clearances need to be one stop centre. Also, the users of research findings need to increase so that all entities such as the government, the private sector and community at large can utilize the findings for improvements and developments of the society" (R1)

"When using secondary data there is a number of missing observations. When you run observations on this data, you do not get results that you want. You have to do a lot of manipulations so that you get what you want though this may not be what the data says" (R2)

"Obtaining ethical clearance is a challenge in the sense that sometimes...it takes time to get clearance, with missing clearance approval you cannot get on with your work. I think that if we can have a standard way of obtaining this

clearance then it can help us but if there are delays then many potential researchers may not go for clearance” (R3).

“In **ethical clearance**, there is a lot of work and yet the clearance takes 3 months or more. Getting the clearance is difficult. Some organizations have made it mandatory to get ethical clearance. You need to pay for the clearance and this is difficult and therefore, this makes us shift to secondary data of literature review. This is good but we still need to collect primary data to do our research. I think, we need to present this challenge to ASFI so that ASFI can help us to do more studies. Challenges in **transcribing a questionnaire** due to some communities having different languages. Therefore, transcribing in multiple languages is not an easy thing” (R4)

“**Cultural sensitivity** and respect. In many African countries, and if you are not a Professor, basically you are not doing anything. So, seniority matters. On informed consent: this is basically the same from all areas, if you are a junior then it is difficult unless you have published articles. Confidentiality and privacy: we have a challenge of protecting participants data in content and context. Benefit to local communities and this is a challenge. Also, **ethical review process** which is a challenge” (R5)

“Issue of clinical trials: Any clinical trials are a challenge because there are different authorities that you have to pass through for a permit. If it is TFDA or TBS, there is a lot of back and forth for permit process and you may delay the project. The system for permit is not harmonized. There is **no one focal**

point for clearance permits. Issue of **consent** especially dealing with adolescents. For example, if you have an adolescent that comes for interview and the challenge is getting consent from the elder. For instance, other communities have misinformation and therefore, there is a need to create more resources to sensitize the community to avoid misinformation. Especially when there is not enough knowledge within the community, there is a lot of time used and this causes constraints of resources and time” (R6)

“Both local and national challenges exist for ethical considerations in advancing the frontiers of research such as database, no local support, **no grants, highly competitive grant application**, availability of data (that is getting data from the participants, collecting data is difficult because the community does not understand), high cost of health care reduces the number of participants for us to even get meaningful data. **Collaboration is poor**. I must say ASFI is helping us collaborate. Also, **Government inability to implement our research findings** which in turn negatively impacts on quality and life changing research. In my field, you cannot invent a new technique as we see in other disciplines. Research with no previous peer review cannot get ethical clearance. We are only spoon fed. Implementation like putting it to use as in changing how things were done before” (R7)

DISCUSSION

This paper explored the ethical frontiers in research and identifies the challenges that African scholars encounter in advancing research across various fields. These challenges highlight systemic and contextual barriers that hinder progress. Participants in this study

pointed out a wide range of issues, including data manipulation, cultural sensitivity, clearance approvals, and the underutilization of research findings.

Manipulation of data presents a significant ethical concern, often stemming from missing observations in secondary data. As one scholar stated, “When you run observations on data, you do not get the results you want. You have to do a lot of manipulation...even though this may not reflect what the data actually says.” This practice, while attempting to address data gaps, compromises the integrity of research findings and undermines the reliability of conclusions, which can lead to incorrect policy decisions and interventions. A common theme among all respondents is the challenge of delays and complexities in obtaining ethical clearance. Scholars expressed frustration with the lengthy and intricate approval processes, which often take three months or more. Financial burdens associated with these clearances are also significant. Additionally, the absence of a centralized “one-stop shop” for ethical approvals and permits represents a systemic issue that hampers research efficiency. Participants emphasized the need for harmonized systems to streamline the approval process. These delays discourage researchers, especially those who are early in their careers, from pursuing primary data collection, forcing them to rely on secondary sources.

Addressing these systemic issues requires coordinated efforts from governments, academic institutions, and international organizations. Moreover, investing in digital platforms for ethical clearance applications could effectively eliminate many of the associated problems, according to Emanuel et al. (2004).¹⁶ In addition, cultural sensitivity influences the conduct of research in Africa. Scholars noted challenges such as the translation of questionnaires into multiple languages and navigating hierarchical societal structures that privilege seniority over merit. For example, gaining informed consent in communities where traditional authority figures hold sway can be challenging, as noted by one of the respondents. Addressing these issues requires cultural competency training for researchers and proactive engagement with local communities. Thus, conducting community sensitization programs to educate participants about the purpose and benefits of research is key to the

success of any research according to Molyneux et al. (2004).¹⁷

Funding remains a critical barrier to advancing research in Africa. Respondents pointed out the lack of local support and the highly competitive nature of international grant applications. Without adequate funding, researchers face limitations in conducting fieldwork, hiring assistants, and accessing advanced technologies. Additionally, poor collaboration between academia, government, and the private sector limits the implementation of research findings. Respondents emphasized the underutilization of research output by key stakeholders, leading to a disconnect between research and societal impact. Therefore, African governments and private sectors within the continent should make efforts to allocate dedicated funding for research.

Ethical issues in clinical trials have been a significant concern, particularly regarding the fragmented permit systems and the complexities involved in obtaining consent, especially from adolescents. These challenges align with findings from Nyika et al. (2019)¹⁸, who observed that obtaining ethical clearance for clinical trials in Africa often requires navigating multiple authorities, resulting in delays and increased costs. Moreover, securing informed consent and ensuring participant confidentiality are critical ethical requirements that pose challenges in many African research settings. Participants have expressed difficulties in protecting their data and maintaining privacy, especially in culturally sensitive environments. This observation is consistent with the arguments made by Kass et al. (2019)⁷, who emphasize that ethical practices in African research must strike a balance between international standards and local cultural norms. To address these challenges, there is a need for tailored guidelines that respect local contexts while upholding ethical standards.

The African Science Frontiers Initiatives (ASFI) has been commended for its efforts in fostering collaboration and addressing various challenges within the scientific community. However, respondents emphasized the need for ASFI to advocate for reforms, such as establishing centralized clearance systems and increasing funding opportunities. The ethical

challenges faced by African researchers are complex and varied. These include procedural inefficiencies, cultural complexities, funding shortages, and limited collaboration. To address these issues, systemic reforms are needed. This includes harmonizing clearance processes, improving funding mechanisms, promoting cultural sensitivity, and enhancing collaboration among stakeholders. By investing in these areas, Africa can advance its research capabilities and ensure that scholarly efforts lead to meaningful benefits for society.

The practical implication is for government bodies and agencies dealing with research to put efforts in improving processes like minimizing delays on clearance approvals and sensitizing the community on the benefits of research and encourage collaboration. Future studies may explore mixed methods by applying qualitative and quantitative approaches to examine the phenomenon of research frontiers in Africa.

CONFLICT OF INTEREST

There are no conflicts of interest.

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AUTHORS' CONTRIBUTIONS

Kezia H. Mkwizu¹ (conceptualization, participated in interview, methodology, analysis, results, conclusion, editing and reviewing the entire paper); Isabella Sylvester Swai² (literature review, and participated in interview); Olusegun S. Ewemooje³ (participated in interview and the discussion of results); Joel Wadri Demah⁴ (theory, and participated in interview); Margaret Adebimpe OKE⁵ (literature review, and participated in interview); Chinenye Mercy Nwankwo⁶ (introduction, and participated in interview); Joseph Asuquo⁷ (literature review, and participated in interview).

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