

Global Principles, Local Realities: Contextualizing Ethics in Developing Countries.

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ABSTRACT

Ethical principles are foundational to biomedical research and clinical practice. However, their practical application in low- and middle-income countries (LMICs) such as Nigeria requires careful contextualization to reflect cultural, social, economic, resources, infrastructure and regulatory realities. This paper examines the tension between universal ethical frameworks, namely respect for persons, beneficence, non-maleficence, and justice, and the practical challenges of applying them in developing world contexts. Key issues include limited resources, weak oversight structures, low research literacy, and cultural norms that emphasize collective decision-making. Practical strategies for bridging global principles with local realities are proposed, including context-sensitive informed consent processes, strengthening local governance and ethics review capacity, equitable research partnerships, post-trial access planning, and culturally responsive community engagement. The discussion highlights the ethical imperatives of addressing systemic inequities, building sustainable capacity, and ensuring that translational science benefits populations equitably. By aligning foundational ethical principles with local realities, LMICs can strengthen both the credibility and the impact of health research in a developing world.

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INTRODUCTION

The globalization of health research has reinforced the importance of applying universal ethical principles in diverse contexts (Lewis et al, 2024). Foundational frameworks such as the Belmont Report and the Declaration of Helsinki articulate respect for persons, beneficence, and justice as non-negotiable cornerstones of research ethics (Nagai et al, 2022). However, in low- and middle-income countries (LMICs), where health systems are often fragile, regulatory oversight is inconsistent, and cultural values shape decision-making in unique ways, the application of these principles requires adaptation (Breneol et al., 2022; Bogale et al., 2024). This paper explores how global ethical principles can be contextualized in LMIC settings, with specific examples from Nigeria. Ethics has many standard definitions but it can be summarized with a phrase "Correct Conduct".

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Ethics grounded in universal principles of good research practices is expected to include ethics of respect and conflict of interest, relationship with participants, informed consent, confidentiality, anonymity, reporting back to the participants, trustworthiness of research, and translation to practice (Varkey, 2020). While ethical principles remain constant, their implementation must consider local realities. These principles may be universal but their applications must fit local realities to have impact. According to Mirza et al (2023), ethics without context can be considered irrelevant. Therefore, there is increasing demand for contextualized application of these principles.

There is a need to explore how global ethical frameworks can be adapted to local contexts to ensure impactful and equitable health research (Oehring and Gunasekera, 2024)

Foundational science may establish core ethical principles but translational science deals with their application in real-world settings (Faupel-Badger et al., 2022; Smith et al., 2024). Ethics is the bridge between foundational and translational science, ensuring that scientific discoveries are implemented in a safe, equitable, and culturally sensitive way (Miteu, 2024).

Universal ethical frameworks emphasize beneficence (doing what is right, doing good or promoting good), non-maleficence (doing no harm or preventing harm), Justice (equal care, ensuring fair distribution of research benefits and burdens, veracity (remaining honest at all times), autonomy (ensuring others have the right to make their own decisions, fidelity (remaining loyal and faithful), accountability (being responsible for all actions) and transparency (ensuring trust through openness) (Varkey, 2021). These principles remain foundational, but their operationalization often faces constraints in LMIC contexts.

Local Realities in Developing Countries

LMICs present unique contextual challenges because the local realities create tensions between principles and practice (Hasan et al., 2021; Gülpınar et al., 2025). The following are local realities that may pose significant challenges:

Cultural and Social Realities

- **Language and Communication:** Significant differences in language and communication styles can make it difficult to obtain truly informed consent and convey complex information accurately.
- **Cultural Norms and Beliefs:** Community values and beliefs influence perceptions of health, illness, and research participation, potentially affecting the appropriateness and acceptance of research.
- **Community Engagement:** Lack of robust community engagement can lead to research that does not respect the sociocultural context or the lived experiences of vulnerable populations.

Resource and Infrastructure Realities

- **Limited Resources:** Insufficient healthcare infrastructure, resources, and access to services can complicate risk-benefit assessments and raise ethical questions about the standard of care participants receive.
- **Quality of Informed Consent:** Time constraints, high patient loads, and limited

access to information can impede the quality of informed consent processes in emergency and primary care settings.

- **Vulnerable Populations:** LMICs often have populations with intersecting vulnerabilities, such as poverty, displacement, or specific health conditions, which requires careful consideration to ensure fair and ethical treatment.

Regulatory and Research Realities

- **Power Imbalance:** Ethical dilemmas can arise from existing power dynamics between researchers and community members, as well as between patients and local healthcare providers
- **Blurred Roles:** In emergency care research, the line between clinician and researcher can blur, creating conflicts of interest and ethical challenges in how patient care is delivered.
- **Local Regulations:** Understanding and adhering to local legal and regulatory frameworks is crucial, as these may differ significantly from international standards.
- **Funding and Sustainability:** Research funding in LMICs can be tied to external interests, creating potential ethical issues regarding data ownership, the relevance of research to local needs, and potential for exploitation

In Nigeria, researchers face enormous challenges due to underfunded systems, limited oversight capacity, low public research literacy, the influence of cultural and traditional norms, overstretched Research and Ethics Committees (RECs), lack of readiness for emergencies and reliance on “quick solutions”, variable access to standard of care, reliance on political and community leaders for rate limiting decisions (Ajuzieogu, 2025). These realities can complicate the direct application of global ethical standards. However, it should be noted that the local realities only require adaptation, not abandonment of the universal principles.

Tensions Between Principles and Practice

Autonomy vs. collective norms:

There is always a challenge balancing individual consent with community expectations. Ethical tensions often arise between autonomy (desire to be self-directed) and communal decision-making. Hierarchical and communal context increases the complexity in the physician-patient relationship and influences patients' decision-making (Susilo et al., 2019)

Standard of care vs. resource limitations:

Ethical tensions often arise between global standards and what is locally available. The following are examples standards expected what may be obtainable due to resource limitations.

Expected standards	Possible realities
Designing studies to minimize risks and maximize benefits to participants	Inadequate funding may limit sample size, study design rigor, or ability to provide follow-up care
Providing informed consent with clear explanations and ensuring understanding	Limited availability of trained staff or translated materials can reduce participant comprehension
Offering appropriate compensation or reimbursement for participants' time and expenses	Financial constraints may lead to token or no compensation, risking inequity or exploitation
Ensuring confidentiality and secure data handling	Lack of modern data management systems or cybersecurity tools can increase risk of breaches
Providing access to interventions shown to be beneficial after research	Scarcity of resources may prevent long-term continuation of effective interventions
Using evidence-based methods to ensure valid, reliable findings	Poor laboratory infrastructure, inadequate equipment, or stock-outs of consumables reduce study validity
Sharing research findings with participants and communities	Resource limitations can prevent community engagement sessions, dissemination meetings, or plain-language reports

Justice vs type of research

The ethical principle of justice requires that research participants and their communities have fair and equitable access to the benefits derived from research. Justice and fair benefit-sharing thus extend beyond recruitment equity to include access to interventions and outcomes after a study concludes (Pratt et al, 2020). When research is designed without consideration for post-intervention access, the ethical requirement of justice is not fulfilled. In practice, this principle is frequently compromised (Wolf, 2024). Many studies are designed primarily to suit local logistical realities or to address narrow scientific questions, with little attention to ensuring that participants or their communities can benefit from the findings once the research is completed (Wolf, 2024). Yet, the design of a study not only determines its scientific validity and capacity to answer a research question but also its ethical impact in terms of who ultimately gains from the research. Different categories of research are driven by distinct questions: basic research asks *"how does this work?"*; mechanistic and translational studies examine *"can the mechanistic effect be measured reliably, and could it translate to humans?"*; intervention development and optimization studies ask *"can modification enhance impact or adherence?"*; efficacy trials explore *"does it work compared to appropriate controls?"*; effectiveness and pragmatic trials inquire *"is it still effective in real-world conditions?"*; and dissemination and implementation studies address *"how can we facilitate uptake of findings in various settings?"* (Khan et al., 2024; Lim, 2024)

However, regardless of the research type, ethical justice requires that post-intervention access be deliberately built into study design. Without such foresight, participants may contribute to the generation of knowledge from which they are ultimately excluded, thereby undermining the very principle of justice that ethical research seeks to uphold.

Strategies for Contextualizing Ethics

To reconcile global principles with local realities, several strategies are proposed:

1. Context-sensitive informed consent – The use of simplified language, local translations, visual aids, and ongoing consent processes supported by community advisory boards is recommended. Community engagement is essential before individual consent. Informed consent should be in plain language and the local language, supported with illustrations if needed (Twimukye et al, 2024). Consent should be a continuous conversation, a process, not a one-time signature. It must be free, prior before it is truly informed consent
2. Strengthening governance – Research Ethics Committees (RECs) can be strengthened through structured capacity building, mentorship with experienced RECs, and fostering collaboration with regulators (Wilkinson et al. 2021). There is need to develop standard review timelines and provide conflict-of-interest (Financial, Professional, Personal, Academic/Research) management using the principle of Transparency. Accountability, Proportionality and Fairness (Periera, 2013).

Systems should utilize locally relevant Standard Operating Procedures (SOPs) and researchers should engage regulators and ministries early to align studies with national priorities and ethical requirements.

3. Equitable partnerships – Fair authorship, shared leadership, and capacity-building commitments in collaborations should be ensured (Morton, 2021). Extractive research must be avoided. This refers to any funding, commissioning, conducting, production, and dissemination of research or knowledge that fails to uplift, represent, or reflect the experiences of racially, socially, and economically marginalised communities but serves the income generation interests of academics, institutions and industry, as well as prioritises the perspectives of public and private corporations, governmental and non-governmental agencies (Williams, 2023). Research partnerships must benefit local institutions. Any Memorandum of understanding (MoU), research collaboration and partnership agreement must guarantee training, equipment, data access, and career development. It must include fair authorship, leadership roles for local scientists, budget allocations for local capacity building as well as technology and knowledge transfer (Zaman et al., 2020). In equitable partnerships characterized by fairness, respect, care and honesty, elements of co-creation, communication, commitment and continuous review must be present.
4. Post-trial access and benefit-sharing – There should be planning for affordability and budgeting for continued care. Every research must include plan for eventual local production of any research benefit, plan to promotes equity in access to benefits, plan to encourage wider uptake of research products, plan to ensure sustainability, plan to support public health goals and plan to achieve global health targets (Kwan et al., 2022). The research benefits should get to community level and lead to system strengthening
5. Data governance & Data privacy- Data should be collected only for defined purposes and stored securely. Data governance agreements should protect participant privacy and ensure local institutions maintain control over how data is shared and used (Jones et al., 2023). Agreements

should protect communities & enable local analysis.

6. Cultural & social considerations –Ethical research appropriate for our local realities must acknowledge and respect cultural beliefs while upholding human rights (FasterCapital, 2024). Engaging cultural mediators and community leaders can build trust and improve acceptance of research activities. Such cultural and social considerations should include language and communication, social norms and etiquette, cultural values and beliefs, religion and holidays, local regulatory and legal framework, consumer behaviour, market entry partnerships and continuous adaptation. Communities should be allowed to shape their priorities.

How can we measure ethical success after taking local realities into consideration?

Indicators of ethical success include

- strong local leadership
- measurable capacity building
- availability of post-intervention benefits
- community satisfaction.

These should be tracked alongside scientific outcomes i.e. ethics key performance indicators should be included in project frameworks

Recommendations

Constraints like inadequate funding, political instability, and competing priorities can hinder ethical research. They stress transparency and incremental gains. Recognizing these challenges allows for realistic planning. Researchers should integrate ethics from the onset. Institutions should invest in governance structures. Funders should request for and support capacity building and post-intervention access plans. REC requirements should be standardized. National frameworks for post-intervention access should be developed. Special funding should be dedicated for ethics capacity development.

CONCLUSION

Ethics in LMICs must go beyond compliance with international standards to meaningful contextualization that reflects local realities. By adapting global principles to cultural, social, and systemic contexts, developing countries can enhance the credibility, relevance, and fairness of health research. Contextualized ethics is essential to ensure that foundational science translates into equitable health outcomes in a developing world. Ethics,

therefore, is not a barrier but a catalyst for translational impact.

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Conflicts of interest

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