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## Developing an evidence-base to guide ethical action in Global Challenges Research in complex and fragile contexts

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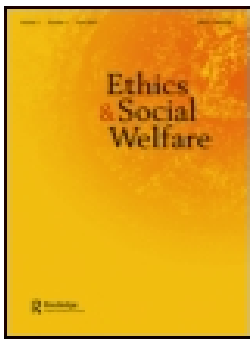
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## Developing an Evidence-base to Guide Ethical Action in Global Challenges Research in Complex and Fragile Contexts: A Scoping Review of the Literature

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### ABSTRACT

The 2030 United Nations Sustainable Development Goals have heightened awareness of the interconnectedness of our global future resulting in new research priorities and corresponding funding to address complex global challenges through partnership. This has generated the potential for powerful new solutions but also for ethical risks within and between disciplinary, geographic and cultural boundaries, in turn necessitating a greater emphasis on equitable partnerships and novel, just, transdisciplinary methodological approaches. Given this changing global research landscape, current ethical frameworks can seem fragmented, incoherent and no longer fit-for-purpose. The objectives of this scoping review were to (i) identify key issues of research ethics and integrity in GCR; and (ii) practices that can help address them. The review yielded 65, which were analysed in depth. Thematic analysis informed the development of a 4-part framework to support ethical action through analysis of ethical dilemmas pre-emptively and dynamically: Place (contextual ethical issues associated with cultural and language differences), People (ethical issues associated with human relationships involving participants and/or the research team), Principles (the worldview and values that influence decision making during the research) and Precedent (the way in which the research provides useful information to solve complex problems in a fragile context).

### KEYWORDS

Ethics; integrity; global research; LMIC countries; scoping review

## Introduction

The United Nations Sustainable Development Goals (SDG's) are a universal call to action to end poverty and protect the planet in acknowledgement that many communities are

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being catastrophically impacted by human action and inaction. The SDGs highlight that improving the prospects of one community, improves the prospects of all – our futures are inextricably intertwined. Nowhere has this been more evident than in the year of COVID-19, a global pandemic being experienced from small remote communities to international capital cities, a zoonotic disease that has forced us to consider an eco-social framework for understanding the downstream journey from habitat destruction to global health crisis (Ahmad et al. 2020; Kenyon 2020), indeed compounding from a pandemic to a syndemic in communities with pre-existing disadvantage (Mendenhall 2020).

These are wicked problems which demand multi-sectoral support, trans-disciplinary approaches and systems thinking to solve (Keenan 2020). The complexity and global impact of problems facing communities around the world, has resulted in increasing collaboration across countries, and across sectors between scientists, practitioners and service providers. This move toward global partnership is of particular importance for lower-middle incomes countries (LMIC) or countries in conflict which face the most serious problems with the least available resource (The Academy of Medical Sciences 2008). It is common to observe in the literature, collaborations between academics from high-income countries (from Europe or North America) and LMIC (Dean et al. 2015). These collaborations cover global problems, from clinical trials to cure diseases (Weigmann 2015), to the evaluation of strategies to prevent the adverse emotional consequences of war or forced displacement (Habib 2019). Due to the seemingly intractable and complex nature of the problems being addressed, this type of research has been called Global Challenges Research<sup>1</sup> (GCR) (UK Research and Innovation 2017).

However, such collaborations bring with them unique challenges. The interconnectedness of different challenges mean that unintended consequences can occur when a seemingly ethical choice for one group may have negative unethical consequences for another. This is further complicated if the risk is protracted and also dynamic. For example, antimicrobial resistance research or COVID-19 pandemic preparedness and response prioritises human health over livelihoods – this is differentially impactful for communities that are reliant on daily earnings for survival.

This growing global research scenario has also resulted in increased awareness of the lack of institutional structures or systems to support, promote or control research integrity and a disparity of ethics training opportunities and resources in LMIC (Bukusi, Manabe, and Zunt 2019). Several authors have noted that the intent to conduct research in an international setting brings with it the researcher's heightened responsibility for maintaining high ethical standards (Harrowing et al. 2010; UNICEF 2015). This is not as straightforward as it appears. For instance, Olsen (2003) outlines two factors which contribute to increased potential ethical difficulties in GCR: the degree of cultural difference between the involved countries and the potential for exploitation of vulnerable participants given the differences in power between high-income countries and LMIC, or even inside the same country in research that includes different cultural groups or minorities. This scenario can replicate international or intercultural power inequalities and colonial legacies (Orr et al. 2019). For example, research is generally financed by rich countries or even multinationals with potential conflicts of interest (Hyder et al. 2013).

The current paper responds to the World Health Organization (2015) call to action to develop capacity in culturally sensitive ethical review and draws together international GCR experience to provide the necessary evidence-base to underpin an

operationalisation framework to guide future practice. Two review questions were formulated to inform a future-focused framework for guiding ethical practice in GCR: What are the key issues of research ethics and integrity in GCR that have arisen in the last 10 years? What are the good practices that can help solve ethical challenges in GCR?

## Methods

Prior to the scoping review, a protocol was developed describing the criteria of the review and its steps (Guerra, Anderson, and Reid 2019). The PRISMA Extension for Scoping Reviews (PRISMA<sub>ScR</sub>) was adopted (Tricco et al. 2018). Key searches were conducted across multiple academic databases that reflect the multidisciplinary nature of GCR (Scopus, Web of Science, MEDLINE, EMBASE, psycINFO, CAB Abstracts, Global Health, Philosopher's Index, and ProQuest Dissertations and Theses Global). The search strategy was refined to include only the title of empirical papers to improve the specificity of the search (i.e. reduce false positives). This is because the term 'ethics' is ubiquitous in peer-reviewed publications due to the requirement for referencing.

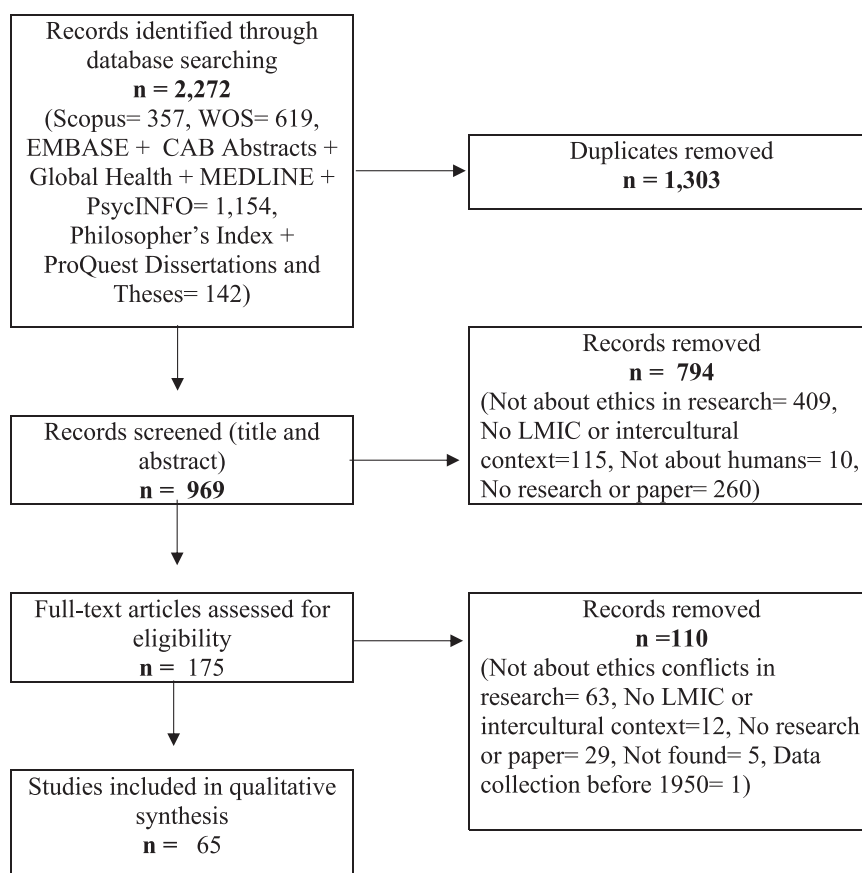
The search words included global or intercultural research, ethics, integrity, and a list of vulnerable contexts and countries, included LMIC, other low-income countries and the least developed countries (Development Assistance Committee (DAC) 2018) (for more detail see Guerra, Anderson, and Reid 2019).

Given the preliminary state of this area of investigation, the inclusion criteria were broad; specifically, this study included peer-reviewed empirical studies or dissertations published in any language captured in these academic databases from 2009 to July 2019. We considered as empirical research all studies that describe any scientific method to collect and analyse data (qualitative, quantitative, mixed approach, systematic reviews<sup>2</sup> or case studies), and shows results according to that method.

Contrary to usual practice in reviews, we included non-English publications. This is an important, but often overlooked, consideration in the context of global research so translation was undertaken where required. We included papers about ethics conflicts in GCR conducted in LMIC, countries in crisis, or conducted in developed countries but with populations of cultural minorities, foreign people (e.g. refugees) or which provided data about ethics conflicts associated with cultural factors.

We were interested in scoping the empirical research in which the explicit objective was to analyse ethics conflicts in GCR. Hence, we excluded grey literature without peer review, professional opinions (letters, notes, and essays), editorial publications, conferences abstracts and books or book chapters or empirical research which just include an ethical reflection as a part of its discussion. We also excluded papers that did not have a focus on research ethics or did not focus on projects with human participants from LMIC and/or vulnerable contexts.

Studies yielded in the search were imported into EndNote where duplicates were identified and removed. Two researchers reviewed titles and abstracts independently and removed irrelevant studies. Inter-observer reliability was evaluated using Cohen's Kappa ( $k = .86$ ). Full texts of the remaining studies were assessed against the inclusion and exclusion criteria by both reviewers ( $k = .99$ ). The selected papers were analysed thematically by two reviewers ( $k = .82$ ) in search of the most common ethical issues and



**Figure 1.** Flow chart detailing the scoping review search strategy.

recommendations to address those (Braun and Clarke 2006). During inter-rater assessment, any differences were solved by discussion. Figure 1 details the scoping review search strategy.

### **Thematic analysis procedure**

A descriptive-analytical method was followed in order to chart key themes across the reviewed articles. Charting was an iterative process at the beginning of the data extraction stage (Arksey and O'Malley 2005). Our descriptive-analytical procedure employed a mixture of structural and descriptive theming and coding in a two-cycle analysis. Structural codes were developed a-priori based on our research objectives and following a deductive approach, whilst descriptive theming and coding was approached inductively generating data-driven codes. The codes were subsequently thematically analysed and axially categorised (Saldaña 2013) in an iterative, cyclical process based on Braun and Clarke's (2006) descriptions. Our intention was to map the available literature regarding research ethics in LMIC and to provide a detailed overview without being restricted by the design of the studies reviewed. The analytical approach privileged breadth of the

extant literature as appropriate to the needs of our enquiry. Our results section, therefore, provides an overview of the areas of ethical dilemmas extracted from extant literature without delving into each article or commenting on its methodological quality.

## Results

The scoping review yielded 65 papers. Table 1 shows the papers grouped by continent where the research took place. The following section describes the analysis of the selected papers, including their general characteristics, the most prevalent ethical issues, and potential strategies for addressing them.

### General descriptive results

In total, 95.4 per cent of papers were written in English, 3.1 per cent in French and 1.5 per cent in Spanish. The majority of papers adopted a qualitative approach (40 per cent), a single case analysis (29.2 per cent), or quantitative approach (21.5 per cent). Less frequently approaches included literature reviews (6.2 per cent) and mixed-method approaches (3.1 per cent). All selected papers considered ethical issues in GCR, although the vast majority of them were developed in the context of health studies (61.5 per cent) followed by childhood research (7.7 per cent). Less frequent were papers focusing on principles of research (6.2 per cent), mental health (4.6 per cent), migration (4.6 per cent), social sciences (3.1 per cent), education (3.1 per cent), poverty (3.1 per cent), disability (1.5 per cent), food and nutrition (1.5 per cent), gender-based violence (1.5 per cent) and natural disasters (1.5 per cent).

**Table 1.** Papers grouped by continent: where data were collected or where participants were located.

Continent (n)	
Africa (36)	Addissie et al. (2014); Adeleye and Ogundiran (2013); Akpabio and Esikot (2014); Amugune and Verster (2016); Anane-Sarpong et al. (2018); Ateudjieu et al. (2010); Brear (2018); Bwakura-Dangarembizi et al. (2012); Chantler et al. (2013); Coleman et al. (2015); Embleton et al. (2015); Folayan et al. (2015); Gebremariam et al. (2018); Gogognon and Godard (2015); Gogognon, Hunt, and Ridde (2012); Haintz, Graham, and McKenzie (2015); House, Marete, and Meslin (2016); Hunt, Gogognon, and Ridde (2014); Jegede (2009); Kiragu and Warrington (2013); Koen, Wassenaar, and Mamotte (2017); Kombe (2015); Mamotte (2012); Molyneux et al. (2009); Molyneux et al. (2016); Moodley et al. (2014); Mootz et al. (2019); Motari, Ota, and Kirigia (2015); Nuwagaba and Rule (2015); Ogundele et al. (2014); Okoli (2015); Ogunrin, Daniel, and Ansa (2016); Ogunrin, Taiwo, and Frith (2019); Rennie et al. (2017); Simwinga, Porter, and Bond (2018); Tindana et al. (2014).
Asia (13)	Ayesha (2017); Ayoub, Qandil, and McCutchan (2019); Ball and Beazley (2017); Brahme and Mehendale (2009); Chansamouth et al. (2017); Chenneville et al. (2016); Chiumento et al. (2016); Deolia et al. (2014); Gopinath et al. (2014); Lambert et al. (2019); Pratt et al. (2014); Rachmawaty (2017); Dayal et al. (2018).
Latin America (5)	Camp et al. (2009); Campbell-Page and Shaw-Ridley (2013); Hirsh-Adler and Navia-Antezana (2017); Pyles 2015; Sibbald et al. (2016).
North America (2)	Burnette et al. (2014); Sylvestre et al. (2018).
Europe (1)	Heikkilä (2016).
Oceania (1)	O'Neill et al. (2017).
More than one continent (5)	De Vries et al. (2014); DiStefano et al. (2013); Hyder et al. (2014); Kelley et al. (2016); Landram (2018).
Not specified (2)	Denburg et al. (2012); Kronick, Cleveland, and Rousseau (2018).

Note: In the non-LMIC (North America, Europe and Oceania) and 'Not specified' categories, papers were included for review if the sample included Indigenous samples and migrants or refugees.

In most papers, the first author had institutional affiliation in Africa (38.5 per cent) or North America (35.4 per cent), less frequently in Asia (12.3 per cent), Europe (9.2 per cent), Oceania (3.1 per cent) and Latin America (1.5 per cent). Regarding the continent in which the study was conducted (or from which the participants were originally from, or in which the data were extracted), the majority corresponded to Africa (55.4 per cent) followed by Asia (20 per cent), and Latin America (7.7 per cent). A number of the studies considered participants from at least 2 continents (7.7 per cent), Indigenous or immigrant communities from North America, Europe or Oceania (6.1 per cent), with the remaining articles not specifying the country. In 62.7 per cent of papers, the first author had institutional affiliation in the same continent in which the research was conducted. In the remaining articles (37.3 per cent), authors from North America or Europe led research conducted in Africa, Asia or Latin America.

### **Key issues of research ethics and integrity**

The thematic analysis yielded 19 ethical challenges across 4 themes that provide guidance for researchers and institutions in preventing, monitoring and addressing ethical dilemmas: Place, People, Principles, and Precedent (see [Table 2](#)).

#### **Place**

'Place' characterised contextual ethical issues associated with the interaction between researchers and participants with different cultural backgrounds living in different contexts, and often with different languages (66.2 per cent papers). This theme could be further refined into consideration of both challenges and opportunities in (i) culture and communication and (ii) in-country training and capacity building in research ethics.

Culture and communication challenges included ethical risks in specific elements of research implementation, such as the difficulty of designing and carrying out research with methods compatible with the local culture (Chansamouth et al. 2017; Gebremariam

**Table 2.** Ethical issues: themes, subthemes and prevalence.

Themes	Subthemes	%
Place	Culture, language and communication	43.1
	Lack of ethics training	29.2
	Ethics is not a priority	3.1
People	Relations with participants	43.1
	Recruitment and informed consent	52.3
	Compensation/Payment	18.5
	Confidentiality	15.4
	Relations with the community	36.9
	Relations with leaders, institutions	21.5
	Financing sources	4.6
	Relations with partners	13.8
	Risks for the research team	10.8
Principles	Positionality and role conflict	12.3
	Risk / Benefit	43.1
	Consideration of children and vulnerable people	29.2
Precedent	Flexibility in the field	10.8
	Data validity	16.9
	Applicability/ dissemination results	9.2
	Data use / storage	10.8



et al. 2018; Pratt et al. 2014); to broader issues of colonialist practices linked to historical experiences and power imbalances (Anane-Sarpong et al. 2018; Simwinga, Porter, and Bond 2018). This finding is perhaps not surprising given rising concerns about the need to decolonise academia and research methodologies in LMICs (Barnes 2018; Ndlovu-Gatsheni 2019). Key challenges included privileging of some methodologies over others without due consideration of contextual or place-based suitability, for example in places where there are political conflicts, economic crisis or vulnerability (Chiu-mento et al. 2016; House, Marete, and Meslin 2016). Cultural aspects were considered to affect the establishment of relationships with various research actors across the different stages of the research process (Heikkilä 2016; Hirsh-Adler and Navia-Antezana 2017). Opportunities lie in training and capacity building and also require systemic change to prioritise context in research design, partnership, funding, reporting and accountabilities (Dayal et al. 2018; Sylvestre et al. 2018).

Training and capacity building in research ethics appear to be insufficient due to the different problems that local researchers must face (economic, political, and social) (Ayesha 2017; Pyles 2015). The reviewed articles suggested local researchers did not have enough training and ethics committees were working with limited resources (Akpabio and Esikot 2014; Kombe 2015). Conversely, the final sub-theme reflects the suggestion that research ethics were not always considered a priority by researchers or institutions especially when working with limited resources (Chenneville et al. 2016; Dayal et al. 2018; Ogunrin, Taiwo, and Frith 2019). These issues, training and capacity building, were seen to constrain and hinder dialogue between researchers from different cultural contexts throughout the entire research process. Table 2 shows the percentage of the reviewed papers that cover each of the subthemes listed above.

### *People*

The majority of papers (76.9 per cent) characterised ethical challenges arising from interpersonal or inter-group difference or conflicts; and highlighted the challenge of developing relationships across the research process. There were 10 common considerations identified which highlighted the complexity of the context – that there are different actors involved, each with a different background, different interpretations of reality, and different expectations about the research. These factors are summarised in Table 2 and include: Relations with participants, recruitment and informed consent, compensation/payment, confidentiality, relations with the community, relations with leaders/institutions, financing sources, relations with partners, risks for the research team, and positionality and role conflict.

The most prevalent consideration was the researcher's relationship with participants. This spanned all aspects of the research process (see Table 2) and included ethical concerns regarding how to engage with participants (and potential participants) in a respectful way, whilst taking into account different culture and language and recognising resilience and potential vulnerability (Haintz, Graham, and McKenzie 2015; Molyneux et al. 2016). Ethical issues in the recruitment and informed consent process also featured prominently in the papers – the main dilemma was how to avoid taking advantage of vulnerability or power differentials (Gebremariam et al. 2018; Kelley et al. 2016). A specific and recurring difficulty related to choosing the best recruitment method to respect autonomy and the specific cultural context whilst considering practical elements, for

example, low levels of literacy. A related ethical issue was the relevance and risks associated with participant compensation, including payment for time and resources invested in participating in the study (Coleman et al. 2015; Embleton et al. 2015). The specific issue underpinning this dilemma was whether payment could act as a form of coercion or exploitation given the economic need of the community, or whether this was a valid way to show respect and gratitude and reasonably compensating disadvantaged groups to support inclusivity in recruitment.

Another important sub-theme was confidentiality and / or maintenance of anonymity of participants. Of major concern was the ability to ensure confidentiality in small communities where inhabitants know each other, or when community leaders induce some community members to participate (Burnette et al. 2014). The reviewed articles highlight the potential risks associated with identification of participants within the community (stigma) including to local leaders or authorities which may result in repression and / or ostracism (Dayal et al. 2018; Koen, Wassenaar, and Mamotte 2017; Mootz et al. 2019).

Three further areas were considered to influence connections at the community and institutional level: relationship of the research team with the community; relations with community leaders or institutions; and sources of financing. Across these three areas, ethical dilemmas related to how to involve the community in research in a fair and respectful way and how to ensure that research offers benefit to the community (Chantler et al. 2013; DiStefano et al. 2013; Rennie et al. 2017); how to make community involvement in research decisions compatible with individual freedoms of participants and the validity of the data obtained (Landram 2018; Simwinga, Porter, and Bond 2018); and ethical issues in the institutions (Universities, NGOs, and Government) being associated with a dominant western perspective and frequently not compatible with research in fragile settings (e.g. as the bureaucracy of western institutions affects the relationship with local stakeholders) (Ball and Beazley 2017; Embleton et al. 2015). Several of these ethical dilemmas were seen through the lens of concerns regarding research financing and the potential conflict of interest regarding expenses that may be deemed inappropriate from the western perspective but may be seen as compatible with the cultural and institutional practices of the study context (Sylvestre et al. 2018).

An additional three areas were considered to relate to the extended research team. The first of these related to the challenge of building equal partnerships in the context of power differences between developed countries that finance research, and LMIC where the 'problems' to be solved are considered to exist (Coleman et al. 2015; Gogognon and Godard 2015; Hunt, Gogognon, and Ridde 2014). The remaining two areas of concern related to positionality and possible role conflicts of the research team (objectivity of researchers) (Kiragu and Warrington 2013; Nuwagaba and Rule 2015; Pyles 2015), and risks for the research team (from physical risk – for example in war zones; to emotional burnout working with vulnerable population) (Chiumento et al. 2016; Okoli 2015). Across these three areas, ethical dilemmas related to how the researchers' cultural / value biases potentially affect the way they approach the research and research participants; how to reconcile the role of (and in some research, the requirement for) the impartial objective researcher with a research context, and a research participant group experiencing vital need; and a concern with health and wellbeing of the research team in contexts of political instability, extreme deprivation, and potentially traumatising situations.

### **Principles**

A total of 55.4 per cent of all papers covered concerns regarding the worldview and values that potentially influence decision – making during the research process. Consideration was given to: Risks and benefits; consideration of children and other vulnerable populations; and the importance of flexibility.

The first of the areas highlighted concern for the balance between risk and benefit for the different actors in various stages of the research process, including participants, community, society, and the scientific community (Anane-Sarpong et al. 2018; Gogognon, Hunt, and Ridde 2012; Lambert et al. 2019). The ethical conflicts highlighted were multiple and varied, although a key theme running through them related to contexts of economic inequality and political instability and highlighted a key requirement for contextualised ethical consideration – what may be beneficial in one research setting may be detrimental in another.

The second of the sub-themes highlighted a requirement for researchers to consider potential vulnerability or barriers to gaining informed consent, the possibility of damage associated with participation in the investigation, and local and international legal regulations for protecting vulnerable groups, which included concerns about assessing vulnerability and how to act in cases of observing serious violation of their rights (Bwakura-Dangarembizi et al. 2012; Kiragu and Warrington 2013).

The final area, flexibility, was highlighted as a key area for consideration and spoke to the importance of in-the-moment situated ethical responses to unexpected conflicts that can appear continuously during the research process. There was visible tension in the literature between dilemmas that required researchers to make quick decisions in the field and the compatibility of this requirement with the bureaucracy of some ethics committees (Campbell-Page and Shaw-Ridley 2013; Molyneux et al. 2016).

### **Precedent**

Researchers in 30.8 per cent of papers discussed the importance of considering how their research may serve as a precedent for future policies, interventions, or other research that impacts the population. There were three recurrent considerations: Validity of data and study design; applicability of data; and data use and storage.

Validity of data relates to an ethical requirement to generate valid data, both in research and ecological terms, where language and culture barriers could pose difficulties for generating culturally compatible instruments, preventing researchers from understanding contextual aspects of the data (House, Marete, and Meslin 2016; Molyneux et al. 2009; O’Neill et al. 2017). The second of the sub-themes highlighted a requirement for research to be useful both for the community in which it was conducted but also for the results to be communicated to participants and communities in a respectful and understandable way (Coleman et al. 2015; Lambert et al. 2019). Data use and storage was a concern centred on key issues regarding who owns data, how to deal with issues of consent in secondary analysis, sharing data with research teams unknown to the community, and how these dilemmas could be engaged with in manner respectful to the participants and the community (De Vries et al. 2014; Moodley et al. 2014). The overarching ethical conflict connecting these three issues is a concern regarding the future impact of the research (even years after the investigation is finished), with the papers highlighting

tension related to 'legacy issues' in the subsequent use of the data or information reported by the research.

## Discussion

This study identifies key emerging issues for research ethics and integrity in the new GCR landscape and provides an evidence-based for designing policies and practices that can help address them. The results of the scoping review revealed complex ethical challenges in all phases of the research process from conceptualisation, through data collection, analysis, reporting and in 'legacy issues' that may occur long after a project has been completed. What is clear is that in the GCR context, ethics cannot be treated simply as an administrative 'hurdle' to jump, a moment in time for reporting, but must be seen as an ongoing dialogue that is critical to the health and success of the project (Harrowing et al. 2010; Orr et al. 2019).

While circumstances in each project are unique and idiosyncratic, it also became clear that the nature of ethical challenges cluster around considerations of *context* and that this can be helpfully and pro-actively analysed and understood through consideration of: Place, People, Principles and Precedents. This context-focussed, 4P's framework is a simple and accessible approach that can provide a helpful place-based rubric for building a GCR ethics strategy for research teams – providing guidance at all stages of the research journey, from pre-emptive consideration of potential ethical challenges at the initial stages, to choosing the right research team and matching with the right local partners, through to looking for potential solutions to ethical challenges once they have occurred.

More broadly, foregrounding context when undertaking research in LMIC's inevitably speaks to the sector-wide challenges in developing ethical research in asymmetrical power relationships and of the increasing call to decolonise academia and academic research (Barnes 2018; Ndlovu-Gatsheni 2019). The neglect of the local context in LMIC projects is arguably an axiomatic barrier to conducting ethical research. The dominance of Euro-centric and American-centric scholarship in LMICs, including the question of 'who finances GCR' raises foundational challenges. On the one hand, if the major GCR funders are based in America and Europe (see Head et al. 2017) and are operating within an environment that observes or is driven by certain norms, objectives and regulations (viewed as 'agendas in the global North') (Clapman 2020), then researchers in LMICs may feel pressured, or simply acculturated, to adjusting their approach to accommodate the latter or decline participation in such funding and collaborative research opportunities. On the other hand, there is an increasing call for stakeholders and researchers within and outside LMICs to consider ethics as a contextual conversational space that offers stakeholders an opportunity to better understand and respect the differing people and places involved in the research and to be responsive to contextual differences (Gebremariam et al. 2018). Nevertheless, there are risks in doing so. Indeed, this review highlight the difficulties associated with a number of cultural and idiomatic barriers that hinder the development of research which, if not taken seriously, can become an important source of ethical misconduct (Molyneux et al. 2009; Sylvestre et al. 2018; O'Neill et al. 2017). When working across cultures, there is the potential for breaching expectations and indeed, regulations, on both sides.

If the risks of conducting research in LMIC and fragile contexts are considerable, then this is matched by the potential opportunity that is afforded disadvantaged, vulnerable or fragile communities for finding answers to vexing and wicked problems. It is imperative that the ethical demands of GCR research do not become prohibitive for funders, institutions, researchers or communities, lest these communities become excluded from opportunities to address local problems and from the UN SDGs agenda. Being part of the conversation and an active participant in decision making is key (Brear 2018; Rennie et al. 2017; Simwinda, Porter, and Bond 2018). The answer emerging from this scoping review seems to lie in transparency and a commitment to foregrounding context in research. This requires purposeful contextual consideration and clarity of analysis, hence the utility of a simple rubric such as the 4P's in which challenges can be systematically identified and addressed through consideration of People, Place, Principles and Precedents. This simple step can provide a layer of accountability to encourage, enable and support ethical practice (Table 3).

There seems to be consensus in the literature that the solutions to ethical challenges in GCR require deep engagement of researchers and institutions with the notion of contextual sensitivity and the need to privilege culture, the community, and local partners at all stages of the research journey. Deep engagement is more than implementing generic cultural training. There is increasing recognition that cultural training per se does not ensure cultural sensitivity in practice (Hirsh-Adler and Navia-Antezana 2017; Kempf and Holtbrügge 2020). The decolonising of research must occur both at the level of institutions

**Table 3.** Practices for Engaging with Ethical Challenges in LMIC.

**What works? Practices for Engaging with Ethical Challenges in LMIC**

Operationalising ethical research requires sharing 'what works'. In considering the Contextual 4P's of People, Place, Principles and Precedents, our analysis identified a number of potential strategies being successfully used to address ethical issues – all are focused on addressing context, that is, to decolonising the research process. These strategies include:

Developing individual and institutional competencies

- (I) Undertake preliminary work to understand the culture, values, and language of the community in which the research is being carried out, in advance of commencing research (Hirsh-Adler and Navia-Antezana 2017; Gebremariam et al. 2018; Lambert et al. 2019). This was reported as important in 43 per cent of reviewed papers. The 4P's rubric provides a starting point for this analysis.
- (II) Undertake and/or deliver culturally relevant and culturally sensitive research ethics training and strengthen local and international ethical committees (Dayal et al. 2018). Reported in 34 per cent of papers. The 4P's rubric provides a helpful training architecture.
- (III) Develop institutional protocols that reflect the need for flexibility in responding to ethical conflicts in the field, with particular importance placed on cultural sensitivity and less reliance on western principles and practices (Haintz, Graham, and McKenzie 2015; Sylvestre et al. 2018).
- (IV) Prioritise informed consent process in contexts with multiple barriers such as power differentials and cultural contexts which do not recognise individual freedoms. A key requirement here is for researchers to continually assess participants understanding of the research requirements across all phases and to clarify if consent continues to be offered, rather than seeing consent as a one-off binary choice (Landram 2018).
- (V) Consider contextual relevance of methodologies. This means not privileging traditional Western methodologies when they do not suit a cultural context (Coleman et al. 2015; Embleton et al. 2015).

Foregrounding local partnerships

- (VI) Work closely with local research partners to develop more comprehensive understanding of the language and cultural context; and to re-iteratively review progress and impact as the project unfolds (Chiumento et al. 2016; Folayan et al. 2015; Mootz et al. 2019).
- (VII) Encourage and integrate community participation from the outset and at all stages of the investigation (Anane-Sarpong et al. 2018; Rennie et al. 2017; Simwinda, Porter, and Bond 2018).
- (VIII) Allow time for the development of mutual trust and negotiation of potential methodological and relational barriers (Gogognon and Godard 2015; Hirsh-Adler and Navia-Antezana 2017).

and researchers, by re-evaluating the value of Indigenous knowledges and Indigenous ways of knowing including the positioning of the researcher relative to the research (Datta 2018). At the same time, the literature offers proposals for a solution at the level of procedures that ensure compliance with ethical standards from improvements in training to the protocolisation of procedures such as the request for informed consent (Dean et al. 2015). Some changes are required at the structural level, for example, providing more training in GCR to the ethics committees of Western universities, making deadlines and resources more flexible to allow for a closer approach to the context before doing the research (Bukusi, Manabe, and Zunt 2019; Pratt et al. 2014).

The reviewed papers also highlight the importance of relationships in guiding and sustaining ethical practice. Most prevalent in the literature is the concern for the participants and the community in which the research is conducted, but potential ethical conflicts are also recognised in the political and economic relations linked to the research, as well as with ethical conflicts within the team and in partnership building. Strong relationships are critical to being able to question assumptions and continual re-calibration of the research process to address emerging circumstances.

## Limitations

The literature review yielded 969 relevant papers after duplicates were removed, highlighting the concern of authors around the world regarding this topic. We note that this review excluded even more reports not published in peer reviewed journals (e.g. NGO reports). We included 65 peer-reviewed papers for analysis. However, despite this relatively high number, and the meritorious information provided by the papers, most of the papers address ethical conflicts more deeply than possible solutions. Given the importance of this topic and the increasing momentum toward GCR, generating culturally sensitive empirical research on the ethics of research in this context remains a priority and a challenge for GCR researchers (World Health Organization 2015).

We are also mindful that our focus on empirical works accessed on the aforementioned databases could be restrictive, and may omit some important works on ethics produced in LMICs. Giving the potential importance of this uncaptured literature in LMICs, we agree that efforts must be made to collate these local works in LMICs and make them available (see for instance Macleod 2018). Aside from providing an additional pool of existing works, such collation and visibility within and outside LMICs will support the decolonisation of research ethics and ethics research.

## Conclusion

This scoping review has made visible key issues related to ethical conflicts in GCR in the last 10 years and highlights additional training needs and the need for reiterative review of research practices to ensure contextual attunement.

Drawing together the combined experiences and wisdom of researchers in this review has provided an evidence-base to guide ethical practice. The context-focused 4P's rubric is a simple analytical architecture that supports prospective consideration of common issues experienced by researchers across diverse GCR contexts and supports a reflective process for analysing key elements of ethical challenges once they have occurred. Such accessible

tools can prevent researchers from being overwhelmed by the risks associated with GCR and encourage, enable, and support the next generation of young researchers to join the 'global academic village' in addressing the pressing issues captured in the UN SDGs.

## Notes

1. The Independent Commission for Aid Impact (2017) categorises the challenges of the GCR into three broad themes: (i) Equitable access to sustainable development, (ii) Sustainable economies and societies and (iii) Human rights, good governance and social justice – with each of these broad themes further subdivided into several interconnected domains (for a details overview, please see: <https://icai.independent.gov.uk/wp-content/uploads/ICAI-GCRF-Review.pdf>).
2. Even though some scoping reviews tend to eliminate other systematic reviews to avoid double counting of data, we decided to include it as our intention was to consider the analysis of the authors of those reviews, not to repeat the individual results of the papers included in them.

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