Equitable global health research partnerships

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Declaration of own work:

I, Shirine Voller, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

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Abstract

Partnerships have become a ubiquitous model for delivering global health research. Notwithstanding their contribution toward improving health outcomes, partnerships have been scrutinised for how they operate and criticised for perpetuating inequities between stakeholders in low- and middle-income countries and high-income countries. Guidance to inform fair partnership practice has proliferated in recent decades and the emerging movement to decolonise global health has brought momentum for change. Amidst this evolving context, this study sought to summarise the guidance for partnership practice and explore experiences of partnership from the perspective of stakeholders in four sub-Saharan African research institutions.

A scoping review of principles and guidelines for global health research partnerships found considerable convergence on the domains considered to be important for partnerships to strive towards equity. There was also good coherence between the themes identified from this review and two similar reviews published just prior to this review being completed.

Qualitative interviews with researchers and administrators at research institutions in four countries in anglophone eastern and southern Africa found that participants' experiences of partnership with high-income country collaborators were wide-ranging. Guidelines for partnership provided good coverage of the domains considered to be the key determinants of a healthy partnership but were not used to inform partnership practice. Partnerships generated considerable benefits to sub-Saharan African stakeholders and there was some evidence to suggest that they were becoming more equitable. However, participants also continued to experience a range of well-documented inequities and reported new issues arising in situations in which their institution had been the prime recipient of grant funds.

Theories of power provide a useful way to describe and explain some of the experiences reported by study participants. Literature on decolonising global health provides further insights and the momentum of the movement offers potential to achieve further progress towards more equitable research partnerships. Meanwhile, long-term support targeted towards individuals, institutions and national research systems remains essential to fulfil the potential of research led from sub-Saharan Africa.

Acknowledgements

I had long harboured an ambition to pursue a doctorate, but the gulf between the idea of becoming Dr. Voller and the struggle I knew it would take to get there always felt too great to cross. This changed when I discovered the London School of Hygiene and Tropical Medicine (LSHTM) Doctorate of Public Health (DrPH). Its structured format brought the horizon of possibility into range. In 2018 I approached my boss, Prof. Anthony Scott, and asked if he would allow me to study part-time for a DrPH alongside my job. He felt this was the most interesting idea I had had all year! Without his support I would never have registered, and I remain indebted to Anthony for his encouragement and big picture view of the world. Having been given the green light to register, the next challenge was to find supervisors who were willing to take me on. My initial arrangement was stymied when my first supervisor left LSHTM before I had even started. To my great fortune, Dr. Nicki Thorogood had already swept me up from the debris of failed attempts to find a second supervisor and agreed to move into the role of primary supervisor. How then to move forward? I fell back to asking one of the people whom I most respect and admire, Prof. Joanna Schellenberg, who I had dared not ask previously. In her indomitably optimistic way, Joanna also agreed to supervise me and I was 'good to go'. Joanna and Nicki advised me that, given my interest in global health research partnerships, it would be wise to have someone who could comment on these issues from a 'global south' perspective, and I am most grateful to my colleague Dr. Primus Chi who graciously also joined my supervision team. My supervisors have throughout provided me with encouragement, insight and critical feedback that has been invaluable for improving the quality of my work.

I am grateful to the key contacts at each of the four institutions that participated in my study. They gave their time freely and facilitated entry into their organisations. I had no prior relationship with any of them and perhaps their generosity in helping me – for no direct benefit – is also a reflection of the strength of their relationships with my LSHTM colleagues who brokered the introductions. I greatly appreciate my colleagues who were willing to share their contacts and I thank all study participants who gave their time to be interviewed and provided candid and insightful responses to my questions.

While there are many other people who have also helped me along the way, I wish to thank three other individuals whose influence has been fundamental to me reaching this point. Firstly, my parents. They have always celebrated my achievements and encouraged me to make my way independently in the world, albeit not without exasperation at some of my terrible decisions! They remain a constant source of stability and support. Finally, my partner, Mike, who has been my constant companion throughout the perilous DrPH journey and suffered much during the rough

patches. His ability to cut to the chase and identify and critique key issues on any topic within a fraction of the time it takes me to articulate an opinion has at times been most irritating, but only because I wish I could do this better. I deeply appreciate his critical voice as I have had to constantly justify what I think and write, and this thesis is better for it.

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Abbreviations

DrPH	Doctor of Public Health
HIC	High-Income Country
LMIC	Low- or Middle-Income Country
LSHTM	London School of Hygiene and Tropical Medicine
MOU	Memorandum of Understanding
NGO	Non-Governmental Organisation
TOR	Terms of Reference
UKCDR	UK Collaborative on Development Research

Glossary

Term	**Definition**
Decolonisation	*'The dismantling of unjust colonial-rooted methods, biases, and systems to ensure the independence and full agency of all involved organisations, communities, and persons'* (Development Reimagined, 2021, p. 4).
Decolonising Global Health	*'A movement that fights against ingrained systems of dominance and power in the work to improve the health of populations, whether this occurs between countries, including between previously colonising and plundered nations, and within countries'* (Khan et al., 2021, p. 1).
Equality	*'Each individual or group of people is given the same resources or opportunities'* (Milken Institution School of Public Health, 2020).
Equity	Fairness. *'The absence of unfair, avoidable or remediable differences among groups of people, whether those groups are defined socially, economically, demographically, or geographically or by other dimensions of inequality'* (World Health Organization, 2022b). An expanded definition applicable to equity in partnerships is my adaptation of Walster and Walster's (1975, p. 21) definition of an equitable relationship between individuals: '*Two partners are in an equitable relationship when the ratio of one partner's outcomes to inputs is equal to the other partner's outcome/input ratio…Inputs are what a partner perceives as their contribution to the exchange, for which they expect a just return…Outcomes are the partner's 'receipts' from a relationship. They may be positive or negative consequences of one partner's relationship with the other.'*
Equitable partnership	*'Partnerships in which there is mutual participation, mutual trust and respect, mutual benefit and equal value placed on each partner's contribution at all stages of the research process'* (UK Collaborative on Development Research, 2022).

Global health	Efforts to improve health in resource-limited settings in pursuit of achieving health equity. This is my own definition as used in this thesis. A more widely-referenced definition is: *'An area for study, research, and practice that places a priority on improving health and achieving equity in health for all people worldwide'* (Koplan et al., 2009, p. 1995).
Global North, Northern	A collective term for High Income Countries, of a High-income country, referring to the World Bank income group classification (World Bank, 2021).
Global South, Southern	A collective term for Lower- and Middle-Income Countries, of a Low or Middle-income country, referring to World Bank income group classifications.
North-South	*'Geographical division whereby the north represents the richer countries of North America, Europe, Japan, Australia and New Zealand, and the south represents the poorer majority of countries in Africa, Asia and Latin America'* (Binka, 2005, p. 207).
Partnership	Used in this thesis interchangeably with 'collaboration' to describe *'the wide variety of arrangements that link researchers and research institutions in the global North and South'* (Bradley, 2007, p. 5).

A note on language used in this thesis

Concerns in post-colonial studies over how language shapes thinking can be traced back at least as far as Kenyan author Ngũgĩ wa Thiong'o who argued in *Decolonising the Mind* (Thiong'o, 1986) that it is necessary to reject the imposed language of the coloniser and return to using African languages in order that African culture can be re-claimed and re-valued.

His argument re-surfaces through critiques of the 'slippery terminology' (Bradley, 2008, p. 674) that litters the field of global health. Shorthand terms are used for the purposes of classification and comprehension but can create simplistic dichotomies that exacerbate divisions and are a poor reflection of a far more nuanced reality.

Hommes *et al.* (2021) argued that to progress thinking and practice in the decolonising of global health, it is necessary to be aware of, reflect on and change how language is used. They argued, firstly, that the dominance of the English language disadvantages non-native English speakers and reinforces patterns of power and hierarchy. Secondly, they posited that the crude aggregation resulting from convenient collective terms, e.g., South versus North, Low- and Middle- Income Country (LMIC) versus High Income Country (HIC), resource-poor versus resource rich, local versus global, bundles countries and groups within countries into a single identity that fails to capture the diversity which it is necessary to understand to effectively address problems. Khan *et al.* (2022) also drew attention to the problems in how countries and people are classified and published a table of dichotomous terms used in global health along with their etymology and the authors' concerns over their use.

The term 'global health' is itself problematic. Eichbaum *et al.* (2021) described how it is '*fraught with assumptions and asymmetries. Colleagues in LMICs remind us that "global health" is a convenient but artificial construct developed by HICs to describe health care routinely practiced in LMICs'* (p.329). Meanwhile, Khan et al (2022) described how the term 'global' implies *'a world outside rich nations (often seen as the epicentre of everything progressive and 'good'); a world which needs development or health assistance'* (p.1). They were concerned with the unchallenged use of language that carries implicit connotations of hierarchy among the HIC health and development institutions that use it. With some discomfort because I recognise the criticisms levelled above, but for want of a compelling alternative, I use the term 'global health' to describe efforts to improve health in resource-poor settings in pursuit of achieving health equity. Perhaps the 'global' aspect is that global health research has historically brought HIC and LMIC stakeholders together thus creating a 'global' configuration in tackling such health challenges. Three recent definitions respectively describe global health as *'an area for study, research, and practice that places a priority on improving health and achieving health equity for all people world-wide'* (Koplan et al., 2009, p. 1995), '*collaborative trans-national research and action for promoting health for all*' (Beaglehole & Bonita, 2010, p. 1) and '*an endeavour that aims at the worldwide improvement of health*' (Hellowell & Nayna Schwerdtle, 2022, p. 1). While these definitions emphasise the end goal of health equity, they somewhat skirt around making explicit Eichbaum's observation that global health is 'routinely 'practiced in LMICs', which I have tried to incorporate into my working definition.

I used the term 'North-South' in my search string for a scoping review of guidelines for partnerships, and this is the language reflected in the manuscript which forms Chapter 2 of this thesis. I was keen to focus on guidelines that addressed research collaborations between HICs and LMICs, and the term 'North-South' had been widely used as a phrase to describe such relationships and seemed appropriate. However, after conducting the scoping review and spending more time engaging with the issues of partnership, I became increasingly conscious of the implied hierarchy of this terminology and of criticisms surrounding its use (e.g. Demetriodor, 2018). While it is still widely used, both by stakeholders in the ‘global North’ and those in the ‘global South’ - including participants in my qualitative study – I revised my use of language from ‘North-South research partnerships’ to ‘global health research partnerships’. Instead of referring to stakeholders in the ‘global North’ or the ‘global South’, elsewhere in this thesis I use the terms HICs and LMICs, which categorise countries according to financial metrics. This is not to say that this language is unproblematic. Using the term HIC juxtaposed against LMIC has been held up as an example of the *‘artificial and othering dichotomies’* (Hommes et al., 2021, p. 897) that plague the global health discourse and reflect a reductionist and unnuanced mindset. Furthermore, segmenting issues in accordance with national income level may not be the most relevant way to address them (Lencucha & Neupane, 2022).

Another tricky term is ‘sub-Saharan Africa’, often shortened to ‘SSA’. Critics have argued that it is a politically correct substitute for overtly racialised phrases including ‘black Africa’ and ‘Tropical Africa’ but continues to carry an implication of nations in North Africa being more culturally advanced than those south of the Sahara (de Haldevang, 2016). Elsewhere, the prefix ‘sub‘ has been critiqued for inferring ‘subordinate to’ or ‘inferior to’ in addition to its literal meanings of ‘under’, ‘beneath’ or ‘below’ (Mashanda, 2016). The United Nation’s ‘Africa’ region aligns with the geographical boundary of the continent of Africa. In contrast, the World Health Organisation includes a handful of north African nations in its Eastern Mediterranean region (https://www.emro.who.int/countries.html) and separates these from the rest of ‘Africa’. The World Bank differentiates between the ‘Middle East and North Africa’ (MENA) and ‘Africa’, which it also describes as ‘Sub-Saharan Africa’ (https://www.worldbank.org/en/region/afr). Largely similar, though not entirely consistent, categorisations are applied by governments, academic institutions and other transnational organisations. Historian and political scientist Herbert Ekwe Ekwe argued that this naming convention demonstrates collusion with “blatant sophistry and not science” of segregating predominantly Arab nations from the larger part of the continent of Africa (Ekwe Ekwe, 2020).

In the absence of having properly investigated the characteristics that may or may not differentiate sub-Saharan from Northern African nations, or those which might bind sub-Saharan nations together, I have taken a shortcut and used the term sub-Saharan Africa in the way in which the World Bank defines it. This also reflects my experience in terms of where most of the research in Africa that I have come across has taken place. I feel it is more honest to say ‘sub-Saharan Africa’ than ‘Africa’ if I am implicitly excluding countries in Northern Africa. Perhaps a better approach would be to zoom in on smaller regions as, for example, recognised by the African Union: Central, Eastern, Northern, Southern, Western (https://au.int/en/member_states/countryprofiles2), or to invest more effort in identifying which characteristics are relevant to the topic at hand and to categorise by these instead.

It is seductive, and necessary, to use categories for shorthand and to generalise beyond the specific in order to generate meaning, but there is a risk that categorisation can both instil unhelpful divisions and ignore meaningful differences. Through using the terms HIC and LMIC, global North and global South, sub-Saharan Africa and global health in this thesis I have fallen short of the ideals underpinning the use of non-divisive and precise language. I have endeavoured to consider the nuances that lie behind the terminology I use but I accept that my attempts are imperfect, and my choice of language is not value-free.

Chapter 1: Introduction

Rationale for the study

Global health research partnerships set out to advance scientific discovery (Boum Ii et al., 2018), strengthen research capacity (Binka, 2005), inform practice and policy (Rethinking Research Collaborative, 2018) and make progress toward international development goals through addressing the needs of vulnerable populations (Airhihenbuwa et al., 2011; United Nations, 2020). Partnerships have delivered in various ways on all these ambitions. However, collaborations between high-income country (HIC) and low- and middle-income country (LMIC) institutions have received critical attention because of persistent obstacles to achieving mutual benefit (Bradley, 2007) and claims that, as a consequence, partnerships are unfair.

Responses to the recognition of partnership inequities include the creation of guidance to improve how partnerships work and action to address specific issues, such as funding, data ownership and publication. In parallel with corrective action, which has been largely initiated by HICs, many sub-Saharan African research institutions continue to grow in stature which changes the basis of their engagement with HIC partners.

An injection of pace has been brought by the decolonising global health movement, which has come to prominence in the last five years. The movement demands radical reform and a dismantling and rebuilding of the foundations on which global health is built (Chaudhuri et al., 2021). While the colonial history of global health has long been acknowledged, the decolonising global health movement has brought a momentum for change hitherto not seen.

It is in this context of multiple forces for change set against a backdrop of persistent inequalities between sub-Saharan African nations and HICs that this Doctor of Public Health (DrPH) research study was situated. The study aimed to explore how stakeholders in sub-Saharan Africa, whose perspectives have been under-represented in literature on partnerships (Bradley, 2007), experience partnership with HIC research institutions.

Documenting partnership practice is not a new endeavour – there is a substantial body of literature describing the characteristics of successful partnerships as well as the problems and underlying tensions that these arise from. This study aimed to contribute knowledge in two ways: 1.) by summarising the guidance for partnership - which had not previously been synthesised as a body of literature - and 2.) by using this to frame an exploration of sub-Saharan African stakeholders' experience of partnership at a particular point in time in the evolution of global health. As part of this, it sought to find out whether there was any indication of partnerships becoming more equitable and to consider what might be driving, or inhibiting, change. Such an understanding has the potential to inform where to focus future efforts to improve partnership equity.

Aim, objectives and research question

This study aimed to explore how principles of equitable partnership are experienced and operationalised in global health research collaborations, drawing on the experience of stakeholders at research institutions in sub-Saharan Africa that partner with London School of Hygiene & Tropical Medicine as examples.

Its objectives were:

1. To synthesise the academic and practitioner literature on principles and guidelines for equitable global health research partnerships.

2. To explore the perspectives of stakeholders from low- and middle-income country research institutions on partnership with high-income country collaborators, drawing on interviews with staff working at a sample of research institutions in eastern and southern Africa as examples.

The study research question was:

How do stakeholders of health research institutions in sub-Saharan Africa experience partnership with high income country collaborators?

Thesis structure

This thesis integrates one journal manuscript into what is otherwise a traditional-style doctoral thesis comprising a series of chapters followed by references and appendices.

In this introductory chapter I lay out the rationale for the study, map the landscape of global health research partnerships and draw attention to literature on capacity strengthening, power and decolonising global health. These bodies of literatures intersect with and may help explain sub-Saharan African stakeholders' experience of contemporary research partnerships.

Chapter 2 is a literature review for which I followed Arksey and O'Malley's (2005) methodological framework for scoping studies to summarise the academic and practitioner literature on principles and guidelines for global health research partnerships. The review was published in the April 2022 edition of *Health Policy and Planning* and is entitled: *What makes working together work? A scoping review of the guidance on North–South research partnerships*. The version included in this thesis is the final unformatted version. A table of themes addressed by different partnership guidelines was published as a supplementary table with the online version of the article and is included after the references at the end of chapter 2. Together, Chapter 1: Introduction and Chapter 2: Scoping review present the literature that informed my primary data collection.

Chapter 3 is the Methods chapter. It describes the approach I took to primary data collection and analysis and includes statements about my philosophical orientation, positionality and reflexivity.

In Chapter 4: Findings I present an analysis of the primary data structured using an analytical framework derived from the scoping review. I follow this with an overarching analysis which tries to make sense of the data set as a whole and describe 'what is going on' in contemporary global health research partnerships from the perspective of stakeholders in sub-Saharan Africa.

Chapter 5 is the Discussion in which I contextualise my findings. I discuss how the findings relate to literature and some recent trends in policy and practice on equitable partnerships, reflect on how theories of power can help to explain the study findings, and consider what implications the movement to decolonise global health might have for the future of partnership work. In the Discussion chapter I also describe the limitations of the study and identify implications for policy and for future research.

Chapter 6 is a short Conclusion to the body of work that is presented in the earlier chapters of the thesis.

References are listed after the Conclusion.

One annex and several appendices follow the reference list. The annex is a journal manuscript based on a complementary analysis of the primary data to that described in the Findings chapter. This manuscript was published in the *International Journal of Equity in Health* in August 2022 and is entitled: *"We should be at the table together from the beginning": perspectives on partnership from stakeholders at four research institutions in sub-Saharan Africa*.

The appendices contain documents that are supplementary to the second journal manuscript and to the chapters of the thesis and they help to illustrate how I went about this DrPH study. They comprise interview topic guides, a participant information sheet, informed consent form, and a data management plan.

Mapping the landscape

The sections that follow map the landscape of global health research partnerships and introduce ideas from two domains of relevant literature: power and decolonising global health.

The emergence of partnership in global health research

Partnership has been framed as an advancement on earlier *modus operandi* for research and development conducted in LMIC countries and is bound up with ideals of reciprocity and equity (Forti, 2005). The term has been associated with a set of idealistic values (Corbin et al., 2012) including responsibility, joint decision making, trust and mutual understanding (Mommers & van Wessel, 2009). Costello and Zumla (2000) differentiated between *partnership* and *semi-colonial* models of research in LMICs. They advocated for the characteristics of the partnership model in which the research agenda is negotiated with 'insiders', integral links exist with national institutions, line management is led nationally, research has a high influence on local policy-makers, dissemination is balanced between international, national and regional journals and national academic infrastructure is strengthened. They contrasted this with the semi-colonial model in which research agendas are dominated by outsiders, only peripheral links are established with national institutions, staff costs are predominantly allocated to international staff and overinflated local salaries, dissemination is focused on international outputs and there is little engagement of local policy-makers. Crane (2010) suggested the emergence of the term partnership in global health was a response to *'post-colonial anxieties'* (p. 81) during a period of concerted efforts to shift the identity of global health away from *'beneficent paternalism'* (Fofana, 2021, p. 1157) at best or colonialist attitudes at worst which characterised international health and, prior to that, tropical medicine. Koplan *et al.* (2009) associated the introduction of the term global health to replace international health with a shift towards a partnership mindset, suggesting that it took place *'in parallel to a shift in philosophy and attitude that emphasises the mutuality of real partnership, a pooling of experience and knowledge, and a two-way flow between developed and developing countries'* (p. 1993) - a direction also noted by Daibes and Sridharan (2014).

Partnership is now a ubiquitous, though not exclusive, model for research conducted in LMICs with the involvement of HIC collaborators.

Types of partnership

In a comprehensive review of 'North-South' partnerships in international development research, Bradley (2007) used partnership as the umbrella term to describe *'the wide variety of arrangements that link researchers and research institutions in the global North and South'* (Bradley, 2007, p. 5). She identified three main types of 'North-South' partnership: partnerships between individual researchers and research teams brought together to carry out a specific project, capacity-building partnerships and research networks. She commented on the dimensions along which partnerships vary: duration, sources of funding, the degree of attention paid to advocacy and policy-making and the nature of interactions between partners. In a related review, Bradley described a broader set of partnership arrangements, including co-authorship, training schemes, institutional twinning arrangements, networks, and the co-management of journals and other publications (Bradley, 2008). Dodson (2017) identified seven variations and decisions that funders make which influence the resultant model of partnership. These were: funding source and lead agency, programme goal, agenda setting, geographical scope, partnership structure, financial and research management structure, and the role of the funder. Bradley's and Dodson's characterisations denote the existence of a *'myriad of partnership modalities'* (Bradley, 2008, p. 9).

A criticism arising from the indiscriminate application of the term 'partnership' to a diverse range of collaborative arrangements is the resultant lack of specificity in identifying and addressing issues particular to certain situations. This in turn has been argued to impede efforts to address inequalities (Crane, 2010; Gautier et al., 2018). Despite this caution, when framing the primary data collection in this study, I used the term 'partnership' in a similarly broad way to Bradley's (2007) definition. I was keen to use participants' understanding of the term but sought to clarify the nature of the relationships that were described. The two main categories of research partnership between sub-Saharan African and HIC partners that I expected to come across, based on my professional experience, were: research projects with a defined start and finish and longer-term inter-institutional collaborative relationships. Through my experience, I have observed that partnership projects often - though not always – arise from within an existing relationship between individuals and institutions.

'North-South' partnership is losing its monopoly in global health research (Kasprowicz et al., 2020). Examples of productive partnerships between LMIC collaborators ('South-South'), driven by LMIC partners ('South-North') and embodying other configurations, e.g. 'South-South-North' (Weinrib & Sá, 2020), 'South-North-South' (Cash-Gibson et al., 2015) and research consortia (Tagoe et al., 2019) point to a future where LMIC research institutions take greater ownership and control of the research agenda (Cochrane et al., 2014; Marjanovic et al., 2013). Nevertheless, partnership between LMICs and HICs is likely to remain a prominent arrangement for global health research for some time to come (Hellowell & Nayna Schwerdtle, 2022). It has been enshrined in a number of leading HIC global health research institutions' strategic plans (Emory University; Harvard Chan School of Public Health, 2017; Liverpool School of Tropical Medicine, 2017; London School of Hygiene and Tropical Medicine, 2016b), implying a commitment from HICs to partnership approaches. Interestingly, from the limited searching that I have done, I have not seen this commitment to partnership similarly reflected in leading LMIC health research institutions' plans.

Critiques of partnership

Partnership has been associated with benefits to LMIC institutions including capacity strengthening, infrastructure investment, access to resources, job creation and funding opportunities. Benefits to HIC partners include capacity development and access to settings in which to conduct research (Crane, 2010; Craveiro et al., 2020; Franzen et al., 2017). Meanwhile a range of intractable problems associated with global health research partnerships have also been identified and debated. It has been argued that the benefits of partnership have been channelled disproportionately to HICs (Boum Ii et al., 2018; Bradley, 2007; Crane, 2010; Eichbaum et al., 2021; Mbaye et al., 2019) and that HIC partners have perpetuated inequalities and sustained exploitative relations with LMIC partners. Critics have cautioned against viewing partnership as a panacea for achieving equality (Citrin et al., 2017). As Crane commented, *'The legacy of colonial-era power relations is an uncomfortable topic in global health, and one which the field seeks to avoid reproducing through the invocation of an ethic of "partnership". However…the espousal of partnership – while a noble aspiration – runs the risk of obfuscating both the enduring and novel forms of inequality that shape the transnational relations of global health'* (Crane, 2010, p. 93).

Structural asymmetries between HIC and LMIC partners have remained central to the challenges of achieving equity and mutual benefit (Jentsch & Pilley, 2003), values which have become part of the normative discourse of partnership (Matenga et al., 2019). HIC partners have been disproportionately advantaged over LMIC collaborators in terms of access to resources, including funding, knowledge, expert networks and education and development opportunities (Bradley, 2007; Gaillard, 1994), and have historically had greater power and influence in all facets of the relationship (Craveiro et al., 2020; Healey-Walsh et al., 2019). Daibes & Sridharan (2014) argued that in order to address inequalities, HIC partners must acknowledge that unequal power relations exist. They called for differences to be openly discussed, in what Gautier (2018) described as '*macro-level'* transfer of knowledge and resources from 'North' to 'South' down to '*micro-level*' differentials in staff employment benefits and living standards (Gautier et al., 2018).

Unequal power relations have also be seen in the way in which the research agenda is set, whereby HIC funders and donors identify research topics (Binka, 2005; Bradley, 2008; Bradley, 2017; Franzen et al., 2017; Viergever et al., 2010) which may not reflect priorities at LMIC partner sites (Boum Ii et al., 2018; Coloma & Harris, 2009; Kunert et al., 2020). LMIC partners have historically had a weak influence on agenda setting, which has been attributed to the imperative to secure resources – and thus the need to be flexible - compounded by having unclear institutional research priorities (Bradley, 2008). Research questions generated locally are more likely to have buy-in from providers and policy-makers, lead to more sustainable solutions than those that are externally imposed (Beran et al., 2017; Dye et al., 2013) and have greater potential to achieve health equity (Sitthi-Amorn & Somrongthong, 2000). A locally generated research agenda has also been argued to be necessary to break out of the colonial paradigm of global health (Abimbola, 2019; Byass, 2013), other aspects of which will be discussed in the section below on decolonising global health (see p.25).

HIC research institutions and funders have historically been dominant in determining who they partner with and what benefits partners receive (Bradley, 2007; Bradley, 2008; White, 2007). HIC grant applicants have been accused of tokenistic involvement of LMIC partners at the application stage if a funding call requires a LMIC collaborator to be named (Beran et al., 2017; Gautier et al., 2018; Murphy et al., 2015), only inviting full engagement once funds have been awarded and the direction and scope of work decided (Forti, 2005). Despite ostensibly pushing for involvement of all partners at proposal stage, funders may exacerbate the tendency toward low involvement of LMIC collaborators by requiring adherence to terms and conditions under tight timeframes which favour HIC partners that already have the necessary research management systems in place to deliver on these requirements (Boum Ii et al., 2018).

HIC dominance has extended to HIC partners typically leading programmes of research, setting ethical standards and managerial rules (Gautier et al., 2018), governing partnerships' administration and budget management (Carbonnier & Kontinen, 2014; Gaillard, 1994; Matenga et al., 2019; Murphy et al., 2015) and in some cases instigating parallel structures that bypass local institutions (Sawyerr, 2004). LMIC partners have been confined to operational roles (Craveiro et al., 2020; Mony et al., 2005) in what has been described as a relational structure of *'subordinate integration'* (Feld & Kreimer, 2019, p. 166). HIC researchers have dominated academic authorship which has been attributed to LMIC researchers' lack of experience in scientific writing compounded by the conventions of academic publishing whereby certain types of contribution are privileged over others (Craveiro et al., 2020; Gautier et al., 2018; González-Alcaide et al., 2020; Mony et al., 2005; Walsh et al., 2016).

Overtly neo-colonial behaviours, including '*mosquito researchers*', '*parasites'* and '*parachutists'* who arrive from HICs, engage minimally with LMIC researchers, take data and samples for analysis and write up their results making little or no efforts to report back to the local community (Binka, 2005; Closing the door, 2018; Craveiro et al., 2020; Edejer, 1999), are rarely reported in contemporary literature on global health partnerships, but partnerships can disguise more '*insidious, subversive ill effects'* (Edejer, 1999, p. 439). These include one-way accountability, transparency and reporting whereby HIC partners, as the prime grant recipients, place extensive demands on sub-contracted partners while having minimal scrutiny of their operations (Harrison, 2002; Matenga et al., 2019).

Further challenges exist due to the way in which global health research has been incentivised and its success judged. Research funds typically operate on short term project lifecycles which prioritise research outputs over fulfilment of principles of partnership, and criteria for academic promotion have historically not been designed to reward long-term commitment between HIC and LMIC partners (Bradley, 2008) nor the policy-oriented, applied research outputs which partnerships may generate (RAWOO, 2001).

Principles and guidelines for partnership

One response to the acknowledgement of partnership inequities has been the development of principles and guidelines to inform how partnerships operate. Guidance on good partnering has proliferated in the fields of global health and development over the past 30 years. In my early reading on global health research partnerships I came across various principles, guidelines, frameworks and tools for partnership, embedded within journal articles and reports and as stand-alone documents, but could not find any synthesis of this material. This informed my decision to conduct a scoping review of partnership guidance as the first objective of this DrPH study in order to establish the level of consensus about what principles partnerships should seek to uphold and what the main areas to address were. As I was nearing the end of the literature search phase of my scoping review, Faure *et al.* (2021) published a scoping review which mapped experiences and perspectives of equity in international health collaborations. Soon after, as I was writing up my review, Monette *et al*. (2021) published a scoping review of guiding principles for global health research partnerships. The parallel thinking that led to three separate groups deciding to conduct similar scoping reviews within a short timeframe suggests demand from potential users for direction as to where to start in navigating the diverse and wide-ranging guidance on partnership. I found it reassuring that while the scope of each review was slightly different, there was considerable overlap in the themes identified. The findings from my scoping review – including a comparison with Faure *et al.* (2021) and Monette *et al*. (2021) - are described in a published paper which is enclosed in Chapter 2: Scoping review.

Capacity strengthening

A persistent challenge in global health is that where the need is greatest, there are often reciprocal constraints on delivering high quality research to inform decisions and action (McKee et al., 2012). The financial, political, environmental and social challenges that are associated with poor health and that constrain health systems and limit healthcare provision also limit capacity for health research (Marmot, 2005).

Capacity strengthening has been positioned as a solution to address this challenge and facilitate more and higher quality health research in LMICs, and this field has burgeoned since the 1990s (Dean et al., 2017; Franzen et al., 2017). Capacity strengthening initiatives have focused on supporting individuals, institutions, and the wider environment (Bowsher et al., 2019; Cole et al., 2014; Marjanovic et al., 2013; Wallis & Bates, 2016) and have addressed the development of research skills (Dean et al., 2017) and the systems that are necessary to manage, support and utilise health research (Consort, 2017a, 2017b, 2017c; Wallis & Bates, 2016; Wallis et al., 2017). An inclusive definition which encapsulates this range of activities describes capacity strengthening as, *'a process of improving individual skills, processes and structures at the organisational level and the networks and context in which the organisation functions'* (Bates et al., 2014, p. 1).

Capacity strengthening is a prominent theme in research partnership guidelines as described in the scoping review in Chapter 2. There has been increasing acknowledgement that capacity strengthening is a bi-directional activity and calls for it to be re-named as mutual learning or capacity exchange to reflect the benefits that HICs derive and break the 'giver-receiver' paradigm that implies a uni-directional flow of expertise from HICs to LMICs (Binagwaho et al., 2013; Binka, 2005; Prasad et al., 2022).

Power

Many of the problems inherent in research partnerships arise from disparities in access to resources between LMICs and HICs. It is not surprising, therefore, that the literature on power in global health partnerships tends to focus on the gap between LMIC and HIC institutions. This gap has been described variously as a power differential, power imbalance and unequal distribution of power, often without further elaboration or interrogation. Sriram *et al.* (2018) suggest that *'analysing and engaging with power has important potential for improving our understanding of the underlying causes of inequity, and our ability to promote transparency, accountability and fairness'* (p. 611). Thus, exploring – at least in a limited way - some theories of power is a useful aid to improving understanding of partnership inequities and how these might be addressed.

A caveat to this brief introduction to power is that the literature on the topic is vast and wide-ranging. My choice of literature is neither complete nor systematically selected. I have been informed through several key texts from the field of global health, and further references arising from these.

Power has been defined as *'The ability to influence and control material, human, intellectual and financial resources to achieve a desired outcome'* (Global Health 50/50, 2020, p. 15). It plays out in a dynamic adjustment of social, economic and political relations between individuals and groups (Global Health 50/50, 2020). Sriram *et al.* (2018) offered a useful overview of dimensions of power (how it is channelled) and sources of power (how it emerges) as a pre-amble to a review of the 'ten best' resources on power. They described the spectrum of views about whether power is channelled through structures, such as organisations and language, individual agency, or both in an intertwined manner, citing Levi-Strauss (power through structure) (Levi-Strauss, 1968) and Giddens (agency and structure are interwoven) (Giddens, 1984). Gramsci developed a theory of hegemonic power whereby the dominant class generate a consensus view within their group and use this to reinforce their position of authority (Gramsci, 1999). Meanwhile, Foucault conceptualised power as inseparable from the creation of knowledge, leading to the creation of truths which shape discourse and behaviour (Foucault, 1994). Discretionary power refers to how implementers determine policy because recipients only experience what implementers choose to enact (Lipsky, 1980). In the context of partnerships, this could be played out through the interpretation and application of principles for partnership to fit with the interests of those who apply them, even if this is not how they were intended. In their taxonomy of power, Barnet and Duvall (2005) identified four dimensions: *compulsory power* – describing the direct control of one actor over another; *institutional power* – referring to actors' indirect control over others; *structural power* – the internal relationships of actors' different structural positions; and *productive power* – the social discourses through which meaning is produced, experienced and transformed. Institutional and structural power have perhaps been the most widely described dimensions in the partnership literature referring to the dominance of HIC research institutions and the structures of partnership that place the lead grant applicant in a partnership – usually the HIC partner – in a dominant position. The relative position of partners reported in the study findings and implications on power are considered in the Discussion chapter.

Sriram *et al.* (2018) classified sources of power as: *technical expertise*, *political power*, *bureaucratic power*, *financial power*, *networks and access*, and *personal attributes*. Technical expertise describes the power derived from knowledge, skills and information held by individuals (Haas, 1992); political power comes from political authority - the power of the nation state (Mann, 1986); bureaucratic power arises from the authority of bureaucracies and the administrative processes of policy formulation (James, 2011); financial power refers to access to financial resources and using these resources to influence decision-making (Bourdieu, 2008); networks and access generate power through the collective knowledge generated and shared within them (Rhodes & Marsh, 1992) and personal attributes describe the power generated by charismatic individuals, which is mediated by characteristics including gender, race, sexuality and religion (Weber, 1946). I will revisit some of these sources of power in the Discussion chapter in relation to how they manifested in the study findings and how they might explain the relationship between sub-Saharan African and HIC partners.

A theory of power which has particular resonance to the relational dynamics of research partnerships in a changing context is Bourdieu's theory of power and practice (Bourdieu, 1977). This has been applied to excellent effect by Walsh *et al.* (2016) who used its three key tenets of *habitus*, *field* and *capital* to analyse and interpret power dynamics in 'North-South' public health research partnerships in Zambia. Bourdieu's theory will be unpacked further in the Discussion chapter.

A final comment on power is to introduce the notion of the *partnership paradox* in which addressing inequality is both the goal of partnership efforts, yet also serves as an opportunity to be exploited by those holding power (Crane, 2010). Citrin *et al.* (2017) described this paradox as the tension that arises when partnerships *'mirror or reproduce the very cross-national inequities they seek to alleviate. On the one hand, they risk worsening power dynamics that perpetuate health disparities; on the other, they form an essential response to the need for healthcare resources to reach marginalized populations across the globe'* (Citrin et al., 2017, p. 1). Meanwhile Elbers (2012) in his PhD thesis entitled '*The Partnership Paradox'* focused on similar issues in international development, setting out to explore the gap between espoused principles and observed practice of partnership and the forces underlying this gap in the field of 'North-South' NGO relations. The partnership paradox is thus a succinct encapsulation of fundamental contradictions which may help to explain the reticence of those in positions of power in global health to relinquish this power in service of achieving the goals of health equity that their work aspires towards.

Decolonising global health

The colonial origins of tropical medicine as the antecedent to global health are uncontested (Chakrabarti, 2013; Crane, 2010; Farley, 2008; Manton, 2011) and the literature on research partnerships has long acknowledged that it carries the imprint of colonialism. What has changed with the advent of the decolonising global health movement is the nature of the call to action and what this means for the practice of global health research partnerships. Decolonising global health has been defined as *'a movement that fights against ingrained systems of dominance and power in the work to improve the health of populations, whether this occurs between countries, including between previously colonising and plundered nations, and within countries'* (Khan et al., 2021, p. 1). When I began my early forays into the literature on partnerships, the colonial legacy of global health was an ever-present backdrop but was often referred to obliquely or only mentioned in passing. The agenda for decolonisation has snowballed during the three years that I have been working on this study. As an illustration: a search of the database PubMed in June 2022 using the search term 'decolonising/ decolonizing global health' brought back a return of 125 relevant articles, of which all but 20 were published since 2020, and only seven of which were published before 2018.

Notwithstanding the recent surge of attention, the conceptual foundations underpinning the movement to decolonise global health have a much longer history. The introduction of the term 'decolonising' has been attributed to various scholars, one of the earliest being German economist Moritz Julie Bonn in the early 1930s (Wesseling, 1987). As a literal definition, decolonising describes the process by which formerly colonised nations became politically independent (Cambridge Dictionary). Some contemporary writers have distinguished between the observable act of colonisation and the intangible yet powerful force of coloniality. Richardson (2019), for example, defined coloniality as *'the matrix of power relations that persistently manifests transnationally and intersubjectively despite a former colony's achievement of nationhood'* and Fofana (2021) argued that coloniality persists, despite colonisation largely having ended by the late 20th century. Neo-colonialism, a term coined by Nkrumah (1965), has a similar meaning to coloniality. It has been used to describe a situation which *'perpetuates and reinforces the colonialist paradigm of control and influence through unrecognized actions, behaviors, attitudes, and beliefs'* (Eichbaum et al., 2021, p. 329). Its antonym is de-colonialism which seeks to *'interrogate rather than entrench power, and to abrogate structures that perpetuate exploitation and dispossession'* (Fofana, 2021, p. 1163).

An influential early pioneer of decolonising theory in the 1950s was psychiatrist and philosopher Franz Fanon, whose works include *Toward the African Revolution* (Fanon, 1967), a collection of political essays revolving around the liberation of Africa, and *The Wretched of the Earth* (Fanon, 1961) which advocated the necessity for violent struggle to escape oppression. Fanon's texts are widely referenced in global health (Ali & Rose, 2022; Chaudhuri et al., 2021; Gautier et al., 2022; Hirsch, 2021) and, alongside other philosophers, theorists and popular writers such as Wiredu (1998) and Ngugi wa Thiong'o (*Decolonising the Mind* (Thiong'o, 1986)), sowed the seeds from which the movement to decolonise global health has grown.

The germination of the decolonising global health movement has been attributed to university students from high income settings, such as Duke, Harvard, Karolinska and LSHTM (Büyüm et al., 2020; Lawrence & Hirsch, 2020; Oti & Ncayiyana, 2021). It was inspired by the #Rhodes Must Fall radical student campaign which started in March 2015 with the initial goal of decolonising the University of Cape Town (Ahmed, 2020), and has been spurred on by a parallel, broader agenda for colonial legacies in contemporary society to be addressed, including the Black Lives Matter (https://blacklivesmatter.com/) movement.

A number of recent commentaries and editorials have used the COVID-19 pandemic as an illustration of the persistence of the colonial legacy in global health. Editorials in The Lancet Global Health (2020) and BMJ Global Health (Büyüm et al., 2020) lamented the inward focus of HICs during the pandemic. Büyüm *et al.* (2020) described the structural violence that continues to operate within and between countries and disproportionately affects marginalised populations, defining this as *'the discriminatory social arrangement that, when encoded into laws, policies and norms, unduly privileges some social groups while harming others'* (p.1). They argued that health outcomes are mediated by the convergence of global, regional and local systems of oppression that can be traced back to colonial structures and were highlighted during the pandemic. Abimbola *et al.* (2021) called for the power asymmetries and inequalities that COVID-19 brought into the spotlight to be addressed in its wake and, having made similar arguments, Atuire and Bull (2022) offered a three pronged approach to tackle the task of decolonisation, combining elements of hegemony, epistemology and commitment. Chaudhuri *et al.* (2021) claimed that COVID-19 '*illustrated how white supremacy, racism, sexism and capitalism still remain tied as central, rationalising logics for the global health industry'* (p.2) and Fofana (2021) used case studies from the pandemic to illustrate how colonial history continues to shape global health.

Both in the articles using the COVID-19 pandemic as a platform and in other writing on decolonising, there is a good degree of consistency in claims about the effects of colonialism on global health. There is perhaps more divergence around how its legacy should be addressed and commentators occupy a range of ideological positions. Oti and Ncayiyana (2021) commented on this, positioning themselves as pragmatists along a spectrum of actors from conceptual thinkers to pragmatists to sceptics. They promoted a framework developed by the Global Health Decolonisation Movement – Africa (GHDM-Africa) which identified five target stakeholder groups (multi nationals, individual practitioners, funders, academic institutions and publishers) and described common manifestations of coloniality coupled with ways that each stakeholder group should decolonise these manifestations. At the time of writing, the GHDM-Africa website which described the framework in more detail was not functioning, but the article contains a useful summary, including issues that have been previously well-documented, e.g., restrictions on grant eligibility, and the notion of unidirectional flow of expertise from 'North' to 'South'. Khan *et al.* (2021) took an unapologetically practical approach through their roadmap to move from rhetoric to reform. The authors identified three steps for global health practitioners to achieve progress: identifying the mechanisms by which global health actors perpetuate inequity, listing reforms needed to decolonise global health practice, and developing metrics to track progress. Kwete *et al.* (2022) identified three levels at which colonialism remains in global health: *practice-level*, *institutional-level* and *policy-level*, and described solutions applicable at each level, while Demir (2022) outlined three core issues for the decolonialisation of global health education and research: *recognising the legacy of coloniality in health outcomes*, *addressing racial inequalities in health without racialising disease*, and *increasing racial literacy*. This work all falls toward the pragmatist end of the spectrum. Towards the radical end are those who claim that the degree of change that is required can only be achieved through revolutionising the global health system and not by modifying it (Saha, 2019). Hirsch (2021) demanded fundamental change while being sceptical about the possibility of decolonising global health, given the power and vested interests of leading HIC global health institutions. She promoted Fanon's work and called for anger and revolution. Chaudhuri *et al.* (2021), also drawing on Fanon's thinking, advocated a position that *'decolonisation is an entire systemic overhaul only accomplished by the removal of the coloniser or dismantling of structures that preserve power'* (p.1). They unpacked what this would mean in the context of global health and critiqued Khan *et al*.'s (2021) roadmap for not acknowledging the prejudices of white supremacy, racism, sexism and capitalism that underpin the colonial foundations of global health. They posited that without resolving these issues, attempts to secure fundamental and lasting change would have limited success. They also argued that for real progress to be made it is necessary to draw more heavily on social theorists who have explored frameworks for power and oppression. They advocated for attention to be paid to Freire's notion of *alterity* (Freire, 2000) in which diverse voices contribute and are heard with equal merit, Foucault's concept of *biopower* (Foucault, 1979) and Mbembe's notion of *necropower*

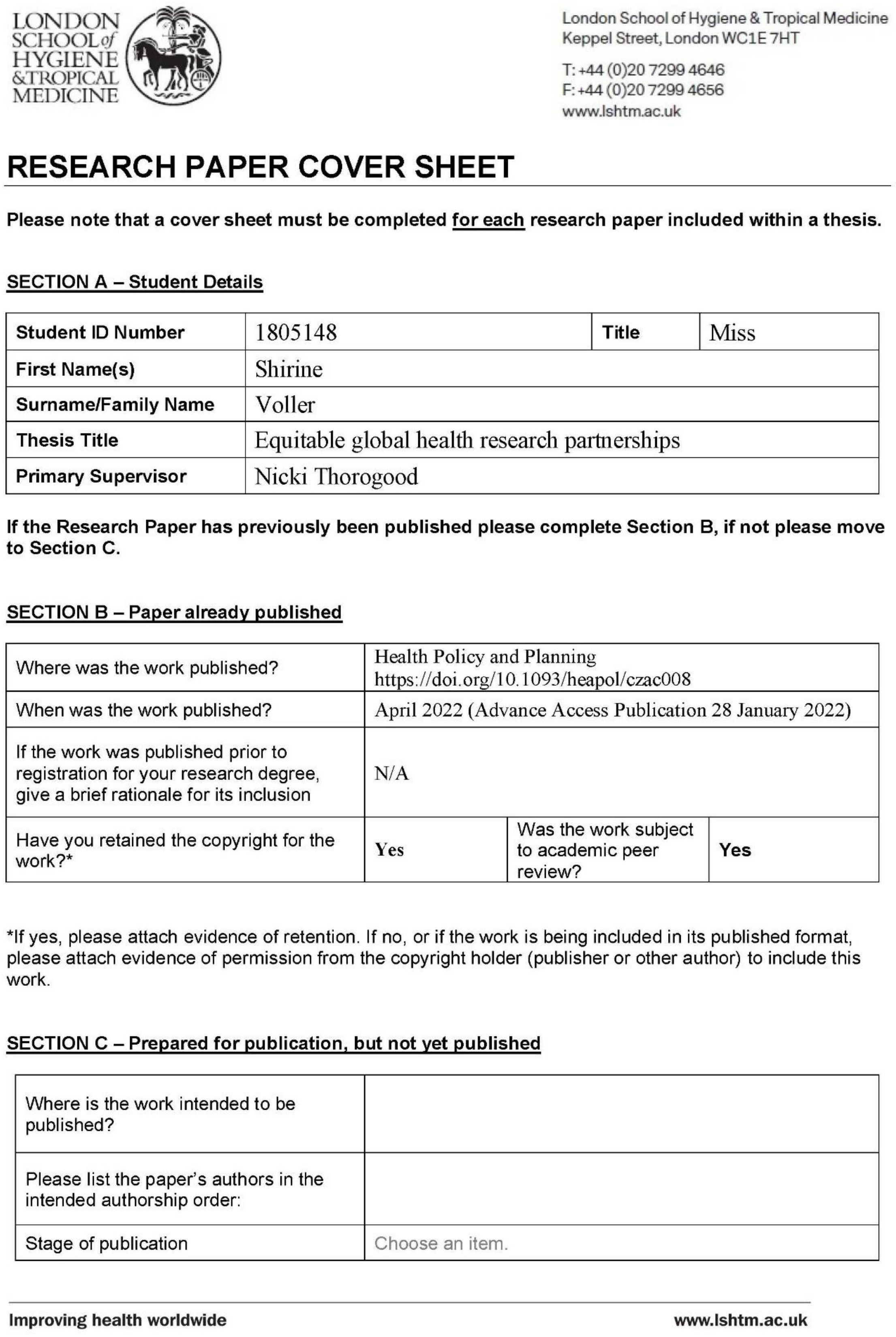
(Mbembe, 2011). These latter two theories both describe the power that governments wield to determine whose lives are worth saving and whose are not.

Another social theorist whose ideas lend insight to an exploration of decolonisation is De Sousa Santos. He described *abyssal thinking* (De Sousa Santos, 2007) as the consequence of modern science claiming a monopoly on the distinction between true and false and argued that this has led to *epistemicide*, the killing of other knowledge systems, particularly non-Western philosophies. Visvanathan (2009) and Hall & Tandon (2017) used the terms *cognitive justice* and *knowledge democratisation* respectively in recognition of the exclusion of non-Western knowledge systems and the need to recognise and value diverse knowledge systems, arguing that this is essential to achieve a fairer and healthier world. Atuire and Bull (2022) also drew attention to the need for the models governing how knowledge is generated and shared to be revisited through what they called *epistemic decolonisation*. This was one of three complementary dimensions that they proposed as a model to decolonise global health. The other two dimensions were *hegemonic decolonisation* - the need for power and decision-making to shift to local actors and *commitmental decolonisation* – the conscious decision to engage local communities and ensure that research is accountable to them.

Defending an evolutionary approach to decolonising global health, Hellowell and Schwerdtle (2022) cautioned against too violent a disruption of the current system. They suggested that not all the ills of global health are attributable to the colonial system and that an overzealous adoption of a decolonising global health mindset might undermine confidence in scientific knowledge, accentuate tensions within and between nations and limit opportunities for changes that redistribute the balance of power.

This section has provided an overview of the burgeoning literature on decolonising global health. I will revisit the implications for global health research partnerships in the Discussion chapter in light of the findings from the primary data collection.

Chapter 2: Scoping review (Paper 1)



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Thesis Title	Equitable global health research partnerships		
Primary Supervisor	Nicki Thorogood		

If the Research Paper has previously been published please complete Section B, if not please move to Section C.

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Where was the work published?	Health Policy and Planning https://doi.org/10.1093/heapol/czac008		
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What makes working together work? A scoping review of the guidance on North–South research partnerships

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Abstract

At their best, research partnerships provide a mechanism to optimise each partner's strengths, make scientific discoveries and achieve development goals. Each partner stands to gain from the relationship and perceives it to be fair. However, partnerships between institutions in the global North and the global South have been beleaguered by structural inequalities and power imbalances and Northern stakeholders have been criticised for perpetuating paternalistic or neo-colonial behaviours. As part of efforts to redress imbalances and achieve equity and mutual benefit, various principles, guidelines, frameworks and models for partnership have been developed. This scoping review maps the literature and summarises key features of the guidelines for North-South research partnerships. The review was conducted between October 2020 and January 2021. Three academic journal databases and Google were searched and additional resources were identified through a hand search of reference lists and expert recommendation. Twenty-two guidelines were identified published between 1994 and 2021 and originating predominantly in the fields of international development and global health. The themes addressed within the guidelines were aggregated using NVivo qualitative analysis software to code the content of each guideline. Topics featuring most prominently in the guidelines were: partner roles, responsibilities and ways of working; capacity

strengthening; motivation and goals; resource contributions; agenda setting and study design; governance structures and institutional agreements; dissemination; respect for affected populations; data handling and ownership; funding; and long-term commitments. The current study reinforces many of the themes from two recent scoping reviews specific to the field of global health, but gaps remain, which need to be addressed: Southern stakeholders continue to be under-represented in guideline development and there is limited evidence of how guidelines are used in practice. Further exploration is needed of Southern stakeholder priorities and whether and how guidelines are operationalized.

Key messages

- There are many sources of guidance for North–South research partnerships, predominantly from the fields of global health and international development.
- There is high concordance within existing guidance on the themes and principles for achieving equity in North–South research partnerships.
- Stakeholders from the global South are under-represented in guideline development, and more work is needed to understand all partners' priorities for partnership.
- There is limited evidence of whether and how guidelines are used in practice.

Introduction

Partnership is seen as an important mechanism for improving health and achieving development goals (United Nations, 2020). It is often associated with a set of values such as responsibility, joint decision-making, trust and mutual understanding (Mommers and van Wessel 2009; Corbin *et al.,* 2012) and has been characterised as a 'cooperation strategy…governed by a comprehensive and inclusive perspective…and promoting synergetic actions and initiatives' (Forti, 2005, p. 32). Costello and Zumla (2000) advocated for an emerging model of partnership research in low and middle income countries over its predecessor, which they termed the 'semi-colonial' model. They described partnerships as having, amongst other characteristics, a jointly negotiated research agenda, integral links with national institutions, nationally led line management, strong influence on local policy makers, dissemination balanced between international, national and regional journals and a role in strengthening national academic infrastructure. They contrasted this with the semi-colonial model in which the research agenda is dominated by outsiders, only peripheral links are established with national institutions, dissemination is focused on international outputs and there is little engagement of local policy makers (p.828). Notably, even while promoting the emerging model of partnership, the language that Costello and Zumla used was entrenched in assumptions: 'local' and 'national' were used to refer to low- and middle-income country (LMIC) institutions, while ‘international’ largely referred to high-income country (HIC) institutions. These, among other terms, remain prevalent in the discourse of global health (itself a questionable term), which matters because language both influences and reveals attitudes towards colonial roots (Hommes *et al.,* 2021). The terms North and South are also imperfect and crude but remain sufficiently widespread that they were felt to be appropriate to use in this scoping review.

Examples of ‘mosquito researchers’ and ‘parachutists’ (Edejer, 1999, p. 2) from the global North, who take data and samples for analysis and writing up and make little effort to share results with the community in which the research was conducted, (Edejer, 1999; Binka, 2005; Craveiro *et al*., 2020) are, thankfully, rarely reported in recent literature. However, partnerships are not a panacea and can disguise ‘insidious subversive ill effects’ (Edejer, 1999, p. 439). These include one-way accountability, transparency and reporting whereby Northern partners, often the prime grant recipient, place extensive demands on sub-contracted partners while having less scrutiny of their own processes of operation (Harrison, 2002; Matenga *et al*., 2019).

Northern partners are often disproportionately advantaged over their Southern collaborators in terms of access to resources, including funding, knowledge, expert networks and education and development opportunities, and typically have greater power and influence in all facets of the relationship (Healey-Walsh *et al.*, 2019; Craveiro *et al.*, 2020). Unequal power relations have also be seen in the way in which research agendas are set, whereby Northern funders and donors frame research topics (Binka, 2005; Viergever *et al.,* 2010; Franzen *et al.,* 2017; Bradley, 2017), which may not reflect priorities at Southern partner sites (Coloma and Harris, 2009; Kunert *et al.,* 2020). An imperative to secure funds compounded by unclear institutional research priorities have been cited as factors contributing to the weak position in agenda setting that Southern partners have historically occupied (Bradley, 2008). Northern research institutions and funders have also been dominant in determining which partners to approach and what benefits they receive (Bradley 2008; 2007; White, 2007). In some instances, Southern partners are involved in a tokenistic way at the application stage if a funding call requires a Southern collaborator to be named (Murphy *et al.,* 2015; Gautier *et al.,* 2018), and may only be invited on board, and even then may not feel fully involved, once the direction and scope of work have been decided (Forti, 2005). Unequal power dynamics extend to Northern partners frequently leading programmes of research, setting ethical standards and managerial rules (Gautier *et al.,* 2018), governing the partnership’s administration and budget management (Gaillard, 1994; Carbonnier and Kontinen, 2014; Murphy *et al.,* 2015; Matenga *et al.,* 2019) and even instigating the creation of parallel structures that bypass local institutions (Sawyerr, 2004). Southern partners may be confined to operational roles (Mony *et al.,* 2005) such as fieldwork coordinators (Craveiro *et al.,* 2020) in what has been described as a relational structure of ‘subordinate integration’ (Feld and Kreimer, 2019, p. 166). The dominance of Northern researchers in academic authorship has been attributed to their senior positions in the partnership hierarchy and Southern researchers’ lack of experience in scientific writing compounded by the conventions of academic publishing whereby certain types of contribution are privileged over others (Mony *et al.,* 2005; Walsh *et al.,* 2016; Gautier *et al.,* 2018; Craveiro *et al.,* 2020; González-Alcaide *et al.,* 2020).

Further challenges exist due to the way in which global health research is incentivised, and its success judged. Research funds typically operate on short term project lifecycles which attribute value to research outputs over the fulfilment of principles of partnership, and criteria for academic promotion do not explicitly reward long-term commitment between Northern and Southern partners (Bradley, 2008), nor the policy-oriented, applied research outputs often arising from partnerships (RAWOO, 2001). More diverse indicators of success are increasingly being applied, including sustainability of interventions and investment in research capacity development (Edejer, 1999), and there is some evidence that traditional hierarchies of authorship are shifting to award greater recognition to the contribution of those leading field research activities (White, 2020).

In sum, a range of structural inequalities and historical legacies in the relationship between the global North and South (Bradley, 2007; Craveiro *et al.,* 2020) remain central to the challenges of realizing partnership ideals of equity and mutual benefit (Jentsch and Pilley, 2003). Critics have argued that the benefits of partnership have been channelled disproportionately to the global North (Bradley, 2007; Crane, 2010), and there is a need to redress the balance. Furthermore, the philosophical underpinnings of global health are increasingly being scrutinized. There are calls for a fundamental re-formulation of the systems, structures and attitudes that sustain global health, and growing pressure to decolonize the field (Abimbola *et al.,* 2021, Chaudhuri et al., 2021; Hirsch, 2021). As these discussions gain momentum and stimulate change within the system of global health, efforts also are being made at an operational level to work towards equity through the development and application of principles and guidelines for partnerships.

For practitioners working in global health who want to assess and improve their partnership practice, navigating the guidance on partnerships can be overwhelming. This scoping review aims to offer assistance by identifying, characterizing and summarizing a broad range of published guidance on North-South research partnerships, searching beyond the field of global health to accommodate guidance from other fields. It includes principles for how partners should behave, guidelines for operationalizing research partnerships, and frameworks and models which characterize the components of equitable North-South research partnerships. Empirical studies yield valuable lessons for practice and are essential to illustrate the challenges that project teams face and strategies employed in pursuit of fulfilling partnership goals but were outside of the scope of this review.

This review seeks to complement the findings of two scoping reviews specific to global health, which were published in early 2021 (Faure *et al.,* 2021; Monette *et al.,* 2021) when our review was completed, and explores whether extending the search beyond global health to other fields of research yields fresh perspectives on effective partnership working.

The review is intended to help practitioners navigate the extensive guidance available and identify what to focus on to improve how the North-South partnerships they are involved in work. Practitioners from the global South are particularly encouraged to critique the review's findings and consider whether there are gaps in the existing guidance that need to be addressed.

Methods

Scoping reviews typically seek to achieve some or all of the following objectives: to identify the types of evidence available in a given field; to clarify key concepts or definitions in the literature; to examine how research is conducted on a certain topic or field; to identify key characteristics relating to a concept as a precursor to a systematic review and to identify and analyse knowledge gaps (Munn *et al.*, 2018). Our scoping review substantially addresses the following objectives: 'to identify the types of available evidence in a given field' and 'to identify key characteristics or factors related to a concept'. In both objectives, we aim to look beyond the global health literature to also explore evidence in other fields (e.g. international development), hence consolidating evidence on equity in partnerships that can be utilized beyond the field of global health. Scoping reviews are also used to report on evidence that informs practice and in emerging fields of study (Munn *et al.,* 2018). Since the field of research partnership guidelines spans the academic and practitioner domains and attention on North-South partnerships has grown in recent decades, this reinforced the utility of the scoping review methodology.   The steps of Arksey and O'Malley's methodological framework for conducting scoping reviews (Arksey and O'Malley 2005) were broadly followed:

Step 1: identifying the research question

The question addressed by the review was *'What are the characteristics of the principles, guidelines, frameworks and models which have been developed to guide the operationalization of North-South research partnerships?'*

Steps 2 and 3: identifying relevant studies and study selection

Relevant studies were identified by searching three academic journals databases, PubMed, Scopus and Web of Science, between 26 October and 16 November 2020 applying the search string:

(North-South) AND research AND (Partnership OR Collaboration) AND (guideline OR principle OR framework OR model).

No date filters were applied to the search. Titles and abstracts were screened for relevance and a check was made on whether the article was freely available in full text and whether it was written in English. Once articles had been discarded that did not satisfy these requirements and duplicates were removed, the remaining articles were read in full to identify principles, guidelines, frameworks and models for partnerships (hereafter referred to collectively as 'guidelines') either directly or from references cited within the article. Guidelines were included where they were derived from a broad body of experience, evidence or both. Guidelines were excluded where they emerged as lessons learned from an empirical study of an individual project partnership. Write-ups of individual project partnerships are valuable for illustrating challenges faced and strategies successfully used by stakeholders to achieve the goals of their partnership and can generate valuable guidance, which may be generalizable to other situations but fell outside the scope of this review. A complementary search to the database search was conducted in Google in December 2020. The top 100 hits, not including sponsored links, were reviewed for relevance. Duplicates were removed, and the full text of the remaining publications was reviewed to identify guidelines for inclusion.

In Arksey and O'Malley's methodological framework (Arksey and O'Malley 2005), *Consultation* is included as an optional sixth step, while in this review, it was incorporated as part of the study identification and selection process.

Step 4: charting the data

A data charting form was developed to extract data about descriptive characteristics of each guideline and guideline content. The form included fields for: output type, field of research or implementation, target audience and methodology by which guideline was developed and key features of the guideline.

Step 5: collating, summarising and reporting results

Two steps were followed in collating, summarising and reporting the results. Firstly, descriptive characteristics were extracted and listed in the data charting form. An iterative process of deriving categories for each characteristic was undertaken whereby data from the data charting forms were aggregated in an excel spreadsheet and categories developed from the data for each characteristic of interest. Secondly, guidelines were uploaded in full text into NVivo to facilitate inductive coding of the topics addressed by the guidelines. Once all guidelines had been coded, the codes were reviewed, revised and organised within NVivo.

Results

Identifying guidelines

The database searches returned a total of 1224 articles. One thousand one hundred and forty-seven articles were discarded at the title and abstract review stage because they were not relevant, were not available in full text or were not available in English. Of the remaining 77 articles, 24 were duplicates and were removed, leaving 53 unique articles across the three databases. Two guidelines were identified directly from these articles, and a further nine from reference lists.

The Google search yielded 47 relevant publications. Once duplicates were removed, 32 unique publications remained, from which five new guidelines were identified. A further six guidelines were identified from wider reading and recommendations during December 2020 and January 2021.

In total, 224 documents were selected for consideration in the review. Figure 1 depicts the identification and selection process, while Table 1 lists the guidelines selected for inclusion.

Figure 1. Modified PRISMA (Page *et al.,* 2021) flow diagram depicting scoping review study identification and selection

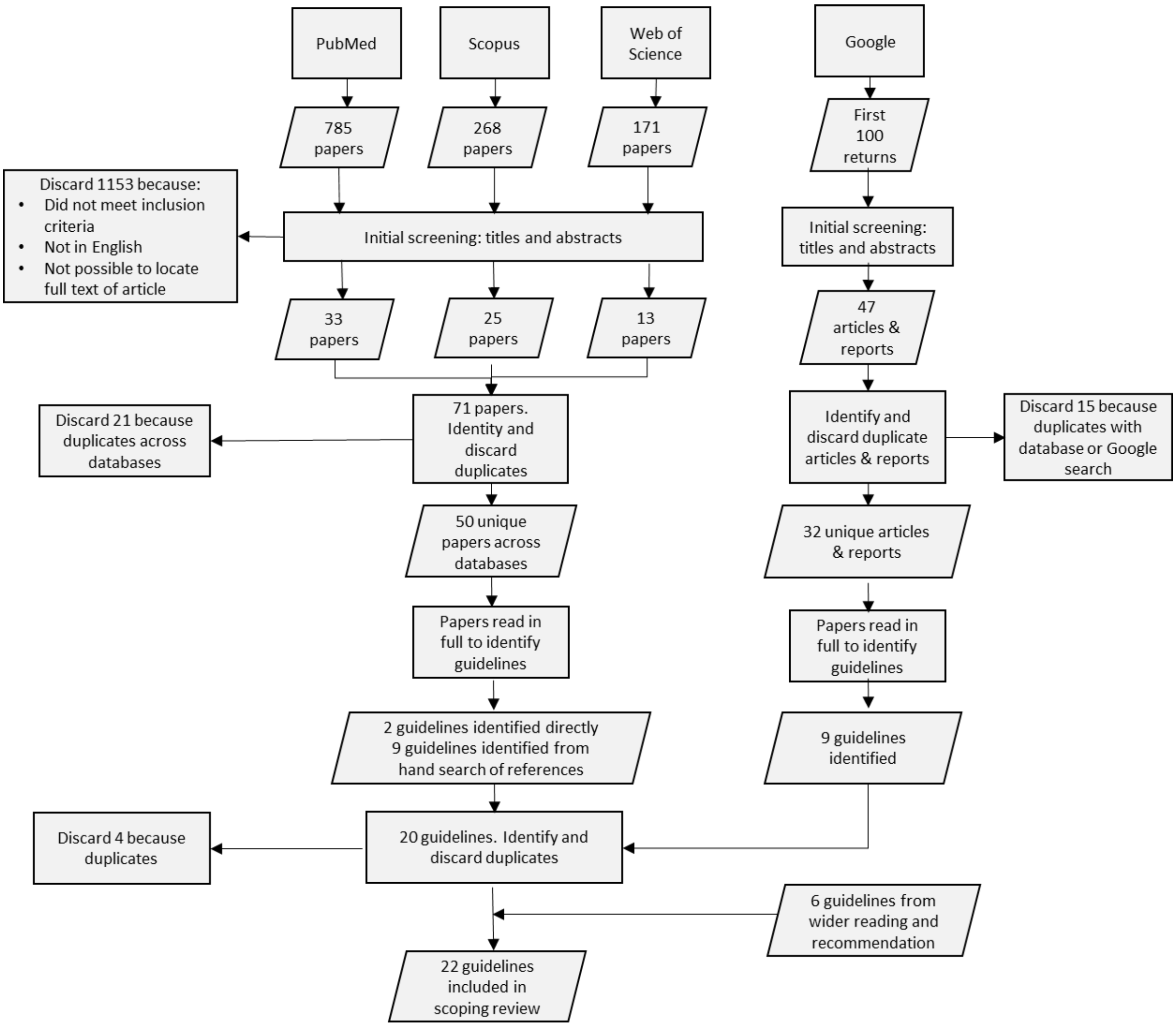

Table 1. Partnership guidelines included in the scoping review

	Author & date of publication	**Guideline name**	**Publication type**	**Field**
1	Afsana *et al.*, 2009	Partnership Assessment Toolkit	Toolkit	Global Health
2	Alba *et al.*, 2020	Bridging research integrity and global health epidemiology (BRIDGE) guidelines	Journal article	Global Health
3	Association of Universities and Colleges of Canada, 2013	Three sets of characteristics of effective and innovative partnerships	Report	International development
4	Canadian Coalition for Global Health Research, 2015	CCGHR principles for global health research	Guideline	Global Health
5	Carbonnier and Kontinen, 2014	North-South Research Partnership, Academia meets Development	Policy brief/ report	International development
6	Cornish, Fransman and Newman, 2017	Rethinking research partnerships	Toolkit	International development
7	Costello and Zumla, 2000	Moving to research partnerships in developing countries	Journal article	Global health
8	Dodson, 2017	10 ways in which funders can influence equitable partnerships	Report	International development
9	Ecosystem Services for Poverty Alleviation (ESPA), 2018	Three constituent factors of equitable partnerships	Policy brief	International development

10	Faure *et al.*, 2021	10 key areas for developing equitable international collaborations	Journal article	Global Health
11	Gaillard, 1994	Charter of North South partners	Journal article	International development
12	Kennedy *et al.,* 2006	10 Steps in the process of ethical research collaboration across ethnically and culturally diverse communities	Journal article	Midwifery
13	Larkan *et al.*, 2016	Attributes and derived core concepts for successful research partnerships in global health	Journal article	Global Health
14	Leffers and Mitchell, 2011	Conceptual Model for Partnership and Sustainability in Global Health	Journal article	Global Health
15	3rd World Conference on Research Integrity, 2013	Responsibilities of Individual and Institutional Partners in Cross-Boundary Research Collaborations	Guideline	No discipline specified
16	Newman and Fransman, 2019/ Rethinking Research Collaborative, 2018	8 principles for fair and equitable research partnerships	Journal article and linked report	International development
17	Overseas Development Institute (ODI), 2005	5 characteristics of successful North South Partnerships	Guideline	International development
18	RAWOO, 1999	3 principles for a fruitful partnership	Report	International development
19	Research Fairness Initiative, 2018	3 domains, 5 topics per domain, 3 indicators per topic	Toolkit	Global health
20	Stöckli *et al.*, 2018	11 principles & 7 questions	Toolkit	International development
21	Taylor and Berg, 2019	7 steps for developing trust	Journal article	Global health
22	Trust, 2018	Global Code of Conduct for Research in Resource-Poor Settings	Guideline	Research

Publication date

The earliest guideline was published in 1994 and the most recent in January 2021. The majority of guidelines (*n*=15) were published or last updated in the decade 2011-2020; more than twice as many as were published in the previous decade (*n*=7). Only two guidelines were published before 2000.

Field of origin

Most guidelines for research partnerships originated from and were targeted towards two broad fields: International development (*n*=10) and global health (*n*=10). Two guidelines emerged from the field of research integrity and ethics (3rd World Conference on Research Integrity, 2013; Trust, 2018).

Output type

Guidelines were published in a variety of forms. The predominant output type was academic journal articles (*n*=9). Other output types were reports (*n*=4), guidelines (*n*=4), toolkits (*n*=4), websites (*n*=3) and policy papers (*n*=2). In several cases guidelines were substantiated by a package of supporting information or in multiple formats. For example, the Swiss Commission for Research Partnerships with Developing Countries (KFPE) 11 principles and seven questions guide (Stöckli *et al.,* 2018) existed as a downloadable pdf supported by web-based resources, and the Council on Health Research for Development's Research Fairness Initiative (RFI) (2018) offered three versions of the

RFI guide on its website alongside examples of institutional self-assessments and links to supporting resources and additional information. Newman *et al.* (2019) described eight principles for fair and equitable research partnerships in the Institute for Development Studies bulletin, which were also detailed in a report by the Rethinking Research Collaborative (2018). The Bridging Research Integrity and Global Epidemiology (BRIDGE) guidelines featured in two journal articles (Alba *et al.,* 2020, a,b) and a website provided supporting material.

Target audience

About a quarter (*n*=5) of guidelines did not explicitly describe their target audience. Where one or more audiences were specified, the most common categories were researchers (*n*=12), funders (*n*=11) and a catch-all category of 'all other stakeholders' (*n*=8). INGOs, health professionals, government agencies, policy makers, civil society, research administrators and students were each mentioned in between one and four guidelines. Only two guidelines were targeted towards a narrow audience: Dodson (2017) focused on the role of funders in equitable and effective international development collaborations while Kennedy *et al.* (2006) designed their guideline for midwives, although the authors commented that it could be used by researchers in other fields. No guidelines explicitly articulated a distinction between audiences in the global North and the global South.

How guidelines were developed

A range of research methodologies and consultative techniques were used to inform guideline development. Half (*n*=11) of guidelines were informed by existing literature. Faure *et al.* (2021) used a scoping review to identify 10 key areas for equitable partnership, drawing largely on qualitative empirical studies, while other authors used a literature review in combination with empirical research. For example, Alba *et al.* (2020, b) drew on the literature from two domains: best practices in epidemiology and research fairness to develop provisional guidelines which they tested and refined using a Delphi consultation to create the BRIDGE guidelines. The Association of Universities and Colleges of Canada (AUCC) developed an analytical framework (Association of Universities and Colleges of Canada, 2013) based on literature, which informed the design of data collection and analysis tools that they used to assess a number of partnership case studies. Two guidelines used the KFPE principles (Stöckli *et al.,* 2018) as a starting point: Costello and Zumla (2000) used them to inform a checklist of questions to consider, and Migot-Adholla and Warner (2005) integrated them with personal experience to identify five characteristics of successful partnerships. Most guidelines (*n*=15) were developed using multiple methods, while seven guidelines were developed based on a single method.

A third of guidelines (*n*=8) used round table discussions and workshops to generate data, and over a quarter (*n*=7) used interviews. All five studies that employed surveys did so in combination with at least one other data collection method. Four guidelines documented their use of stakeholder consultation (Research Fairness Initiative 2018; Stöckli *et al.,* 2018, Trust, 2018; Taylor and Berg 2019). In four guidelines, the authors described drawing on their personal experience as practitioners (Costello and Zumla 2000; Migot-Adholla and Warner 2005; Leffers and Mitchell 2011; Taylor and Berg 2019) and in two guidelines documents pertaining to particular North-South partnerships were analysed (Gaillard, 1994; ESPA Directorate, 2018). Two guidelines were developed using a grounded theory approach: Leffers and Mitchell (2011) interviewed 13 global health nurse experts and compared empirical findings with themes from the literature to develop a model of partnership and sustainability in global health, while Larkan *et al*. (2016) used a questionnaire and consultative meetings to develop a unifying framework for partnership.

Stakeholders from the global North featured more prominently as participants in the research and consultations, which led to guideline development than stakeholders from the global South (see Table 2). Ten guidelines were developed predominantly or exclusively drawing on Northern stakeholders as participants, while only two were developed predominantly or exclusively drawing on Southern stakeholders as participants. In almost a third of guidelines (*n*=7) it was not clear from the methods described within the guideline what the balance was of Northern and Southern participants who contributed to guideline development.

Table 2. Geographic location of participants contributing to guideline development

Stakeholder geographic location	Number of guidelines
More Northern than Southern	7
Not specified	6
Equal balance of Northern & Southern	3
All Northern	3
All Southern	1
Mix of Northern & Southern – balance unspecified	1
More Southern than Northern	1

Guideline structure

A number of guidelines were structured as representations of the research partnership lifecycle. For example, the Canadian Coalition for Global Health Research's Partnership Assessment Toolkit (Afsana *et al.,* 2009) comprised four phases: *Inception*, *Implementation*, *Dissemination* and '*Good endings and new beginnings*'. The AUCC organised their guideline (Association of Universities and Colleges of Canada, 2013) into items under three headings: *foundational principles*, *sustaining* *processes* and *results and activities,* and the Research Fairness Initiative (2018) identified five topics and three indicators per topic within the domains of *fairness of opportunity* before research starts, *fair process* during research and *fair sharing of benefits, costs and outcomes* at the end of a research partnership. In the Rethinking Research Partnerships report (Cornish *et al.,* 2017) the authors highlighted six phases and structured the report into chapters around these: *understanding the context, establishing the partnership, sustaining the partnership, designing and implementing research, communicating and ensuring impact* and *beyond the partnership,* while Alba *et al.*'s (2020a) guidelines comprised six standards, or phases, of the research process. The phases were: *study preparation*, *protocol development*, *data collection*, *data management*, *data analysis* and *dissemination and communication.* The KFPE principles (Stöckli *et al.,* 2018) partially mapped onto the research partnership lifecycle. The principles were: *set the agenda together, interact with stakeholders, clarify responsibilities, account to beneficiaries, promote mutual learning, enhance capacities, share data and networks, disseminate results, pool profits and merits, apply results,* and *secure outcomes.* Each principle was accompanied by a description of the issues within the principle, the main challenges in upholding it and a checklist of steps to follow when applying the principle.

Taylor and Berg's guideline for partnership (Taylor and Berg 2019) focused on trust, and they articulated seven steps to developing trust. Whilst not mapped directly to the research lifecycle, these steps offered a set of consecutive instructions to follow. Kennedy *et al.* (2006) also used the concept of steps, describing 10 steps in the process of ethical research collaboration across ethnically and culturally diverse communities.

Guidelines were further categorised as *values-based*, *activity-based* or *combined values- and activity-based*. An example of a values-based guideline was the Global Code of Conduct for Research in Resource-Poor Settings (Trust, 2018), which was organised into four domains: *fairness*, *respect*, *care* and *honesty* with four to eight articles within each domain. The Canadian Coalition for Global Health Research (2015) also followed a values-based approach. The authors identified six principles, all linked to a core concept of equity. These were: *authentic partnering, inclusion, shared benefits, commitment to the future, responsiveness to the causes of inequity* and *humility*. Newman *at al.'s* eight principles for fair and equitable research partnerships (Newman *et al.,* 2019) were predominantly values-based and addressed the following issues: *put poverty first, critically engage with context(s), redress evidence hierarchies, adapt and respond, respect diversity of knowledge and skills, commit to transparency, invest in relationships* and *keep learning.*

Activity-based guidelines were organised around concrete actions or topics. For example, the Netherlands Development Assistance Research Council (RAWOO, 1999) proposed three conditions for a fruitful partnership: *a broad based consultative process should precede any programme*, *the Northern partner should be prepared to relinquish control and accept considerable Southern partner autonomy* and *capacity strengthening should be a specific aim of the partnership*. The KFPE principles (Stöckli *et al.,* 2018), Dodson's guidelines for funders (Dodson, 2017) and the Overseas Development Institute guidelines (Migot-Adholla and Warner 2005) were also categorised as activity-based. The Montreal Statement on Research Integrity (3rd World Conference on Research Integrity, 2013) organised its largely activity-based guideline into four areas of responsibility: *general collaborative responsibilities*, *responsibilities in managing the collaboration*, *responsibilities in collaborative relationships* and *responsibilities for outcomes of research.* The statement listed 20 responsibilities divided across these four areas.

Guidelines that combined values and activities included Costello and Zumla (2000) who highlighted the importance of *mutual trust and shared decision-making, development of national research capacity, national ownership* and *emphasis on getting research findings into policy and practice* and Larkan *et al.* (2016) who derived seven core concepts from a set of attributes for successful global health partnerships. These were: *focus, values, equity, benefit, leadership, communication* and *resolution*. Faure *et al.'s* 10 key areas for developing equitable international collaborations (Faure *et al.,* 2021) and Gaillard's charter of North-South partners (Gaillard, 1994) also combined values and activities.

One guideline was a model for understanding partnership (Leffers and Mitchell 2011). This conceptual model for partnership and sustainability in global health integrated partner factors or characteristics, key components and processes for partnership development and factors affecting sustainability.

Key areas of attention for North-South partnerships

The topic areas that partnerships should focus on are summarised in Table 3 below, ranked in order of the number of guidelines which included a particular area. A total of 21 topic areas were included in two or more guidelines. Supplementary Table S1 shows which topics were included within which guidelines. The top 11 topic areas are discussed below.

Table 3. Topics addressed by partnership guidelines

Ranking	Topic	# Guidelines
1	Roles, responsibilities & ways of working	18
2	Capacity strengthening	15
3	Motivation & goals	14
=3	Resource contributions	14
5	Agenda setting & study design	11
=5	Governance structures, institutional agreements	11

7	Dissemination	10
=7	Respect for affected populations, including local relevance	10
=7	Data handling and ownership	10
10	Funding	8
=10	Long term commitments	8
12	Acknowledging power dynamics and inequalities	7
=12	Trust	7
14	Monitoring & evaluation	6
=14	Ethical approvals	6
=14	Shared benefits	6
17	Justification for research	5
18	Appreciation of context	4
19	Administrative support	2
=19	Closure plans	2
=19	Leadership	2

The topic *roles, responsibilities and ways of working* was present in 18 of the 22 guidelines. This topic encompassed several sub-topics, including *processes to support regular, open and transparent communication between partners* (*n*=8) and a *commitment to transparency* (*n*=5), particularly around finance and administration. Several guidelines described the importance of *jointly agreed mechanisms for conflict resolution (n=5)*, while *decision-making* (*n*=5), *accountability* (*n*=3) and the *role of brokers* to represent constituent organisations within a partnership and the partnership as a whole (*n*=3) were also highlighted.

Capacity strengthening was the second most prominent topic, featuring in 15 of 22 guidelines. Guidelines differentially emphasized whose capacity was to be strengthened and how, with attention drawn to individual, institutional and systemic or national capacity, and focusing both on capacity for research and for research management, including budgeting, contracting and ethics. Some guidelines framed the provision of resources and expertise to support the development of the weaker partner as a fundamental responsibility of the stronger partner in order for partners to collaborate on a more equal playing field. Other guidelines presented capacity strengthening as bi-directional and talked about mutual learning and growth.

The topic *motivation and goals* was addressed in 14 guidelines. Guidelines emphasised the importance of discussing and legitimizing each partner's respective interests and priorities as well as identifying mutual benefits and shared goals for the partnership. Balancing individual and joint objectives was seen to be important for the sustainability of a partnership and for developing trust.

The topic r*esource contributions* was also addressed in 14 guidelines. Guidelines emphasised the need to discuss and agree what resources each stakeholder would commit to the partnership, and for different types of contribution to be recognised and valued. Several guidelines highlighted the relationship between costs and benefits and suggested that the benefits accrued by each partner should be in proportion to the costs of participating in the partnership.

Agenda setting and study design were combined into a single topic that was represented in half (*n*=11) of the guidelines. This topic emphasized the importance of the research agenda being set jointly, all partners being involved in proposal writing, and agreement being reached on study design, especially in multi-sectoral research studies.

The topic g*overnance structures and institutional agreements* was closely aligned with *roles, responsibilities and ways of working,* but was classified as a separate topic because of the number of guidelines (*n*=11) that specifically mentioned the need for partnership arrangements to be documented in a formal agreement and enacted through governance structures. The types of agreement described included memoranda of understanding, codes of conduct, terms of reference and research agreements.

The topic *dissemination* was identified in 10 guidelines. Issues addressed included the obligation on partnerships to make research findings available in a format appropriate to the audience and for a wide range of audiences to be considered in dissemination plans, including the populations involved in and affected by the research. This topic also included the issue of authorship, and the need for expectations and opportunities for authorship to be clear and agreed on by all partners.

The topic *respect for affected populations, including local relevance* was identified in 10 guidelines. The topic overlapped with *dissemination* but went further to include the expectation that research results should be not only be made available in the public domain, but partners should push for translation of findings into policy and practice. This topic also addressed the imperative for research only to be done where there was buy-in from and relevance to the communities in which it was planned to take place and where it addressed a priority health issue in the country or region.

A number of issues involving research data collection, management, storage, sharing, use and ownership were reflected within the topic *Data handling and ownership* and featured in 10 guidelines. Many of the issues pertained to the need for clear and jointly agreed plans between partners for all data-related issues, with particular emphasis on data ownership and use.

Funding featured as a topic in eight guidelines and covered a range of issues, including the need to secure long-term, core funding to achieve sustainability whilst recognising the typically short, e.g. 3-5 years, time horizon of individual research grants, and recognizing the differential funding opportunities available to partners in the global North and global South. Knock-on issues included how funds were channelled to each partner, the need for funds to be fairly distributed between partners, the need for funds to adequately cover the costs of engaging in research and the need to consider the implications of funder-specific rules and requirements on project feasibility. The topic *long-term commitments* was addressed by eight guidelines. As with the topic of funding, several guidelines linked long-term commitments to sustainability and to the elevation of relationships above individual projects toward institutional relationships. The time required to establish and build meaningful relationships at an individual and institutional level was also captured within this topic.

Ten other topics were identified in two or more guidelines. These were: acknowledging power dynamics and inequalities (*n*=7), trust (*n*=7), monitoring and evaluation (*n*=6), ethical approvals (*n*=6), shared benefits (*n*=6), justification for research (*n*=5), appreciation of context (*n*=4), administrative support (*n*=2), closure plans (*n*=2) and leadership (*n*=2).

Comparison of topics across disciplines

The topics identified were compared by discipline to establish whether guidelines from the discipline of global health had a substantially different emphasis compared with international development. Table 4 shows the topics disaggregated by discipline. Topics are emboldened where they were more than twice as prevalent in guidelines from one of the disciplines compared to the other. The two guidelines from the field of research integrity and ethics were included in the comparison table, but no attempt was made to compare them against the other disciplines due to the small sample size.

The top three topics identified overall: roles, responsibilities and ways of working, capacity strengthening and motivation and goals, featured equally prominently in guidelines from the fields of global health and international development. Two topics featured more prominently in guidelines from international development compared to global health: resource contributions and shared benefits. In contrast, eight topics featured more prominently in guidelines from global health compared to international development: governance structures and institutional agreements; respect for affected populations; data collection, management, storage, sharing, use and ownership; acknowledging power dynamics and inequalities; trust; ethical approvals; justification for research and administrative support.

Table 4. Topics by discipline

Topics addressed by partnership guidelines	**Number of guidelines addressing each topic**			
	Total	**Global health**	**Int dev**	**Integrity & ethics**
Roles, responsibilities & ways of working	18	8	8	2
Capacity strengthening	15	7	7	1
Motivation & goals	14	6	6	2

Resource contributions	14	**4**	**9**	1
Agenda setting & study design	11	4	7	0
Governance structures, institutional agreements	11	**7**	**3**	1
Dissemination	10	5	3	2
Respect for affected populations, including local relevance	10	**7**	**2**	1
Data handling and ownership	10	**6**	**2**	2
Funding	8	4	3	1
Long term commitments	8	3	5	0
Acknowledging power dynamics and inequalities	7	**5**	**2**	0
Trust	7	**5**	**1**	1
Monitoring & evaluation	6	2	3	1
Ethical approvals	6	**4**	**1**	1
Shared benefits	6	**1**	**3**	2
Justification for research	5	**3**	**1**	1
Appreciation of context	4	2	2	0
Administrative support	2	**2**	**0**	0
Closure plans	2	1	1	0
Leadership	2	1	1	0

Comparing the findings with reviews specific to global health partnerships

Topics identified from this scoping review were compared with the topics identified in scoping reviews from the field of global health conducted by Faure *et al.* (2021) in October-November 2019 and Monette *et al.* (2021) in February 2020. These scoping reviews included 11 and 9 resources, respectively, while the current study included 22 guidelines. There was strong overlap in the themes identified across all three reviews. The 10 topics identified in Faure *et al.'s* review were also reflected within the top 12 topics of this review, while of the 18 principles which featured in at least two of Monette *et al*.'s sources, 14 were also identified in this review (see Table 5).

Table 5. Comparison of themes between three scoping reviews on North-South research partnerships

Rank	**This review**	**Faure *et al*., Jan 2021**[1]	**Monette *et al*., Mar 2021**[2]
1	Roles, responsibilities & ways of working	Communication (10)	Define Roles (2); Communication (2); Transparency (2)
2	Capacity strengthening	Capacity building (2)	Capacity Building/Strengthening (3); Mutual learning (2)
3	Resource contributions		
4	Motivation & goals		
5	Agenda setting & study design		Agenda Setting (3)
6	Governance structures, institutional agreements	Research agreement (5)	Accountability (3)
=6	Dissemination	Authorship (3)	
8	Respect for affected populations, including local relevance	Local health priorities (6); Recognition of stakeholders (9)	Engage stakeholders (2); Actionable Research (2)
=8	Data collection, management, storage, sharing, use and ownership	Sample ownership (4)	Data Access (2)

10	Funding	Funding (1)	
=10	Long term commitments		Sustainability (3)
12	Acknowledging power dynamics and inequalities	Acknowledging inequalities (8)	
=12	Trust	Trust (7)	Trust (2)
14	Monitoring & evaluation		
15	Ethical approvals		
=15	Shared benefits		Mutual Benefits (6)
17	Justification for research		
18	Appreciation of context		Understand the Context (2)
19	Administrative support		
20	Closure plans		
=20	Leadership		

Discussion

The current study summarized and reported on the key features of principles, guidelines, frameworks and models for North-South research partnerships drawn from the academic, policy and practitioner domains. It endorses and extends the findings of two scoping reviews specific to global health which were published in early 2021 (Faure *et al.,* 2021; Monette *et al.,* 2021). The recent publication of these reviews and the trend indicated by the publication dates of guidelines included in the current study are consistent with the growing momentum in global health to address issues of inequity between Northern and Southern stakeholders and to improve how research partnerships work.

In contrast to Faure *et al.'s* (2021) and Monette *et al.'s* (2021) reviews which focused on global health, the current study did not limit the search to any particular discipline. However, despite this, two fields strongly dominated the search results: global health and international development. This cannot be explained by selection bias alone since, although one of the databases searched specializes in health, the other two and Google have broad coverage. A possible interpretation is that practitioners and researchers in these fields are more acutely aware than those from other fields of the colonial roots of their disciplines and the need to challenge the systems and structures that perpetuate inequities.

A quarter of guidelines did not specify their target audience. A further third included a broad category of 'all other stakeholders' to mop up unspecified audiences alongside major stakeholder groups such as researchers and funders. Imprecision in defining who the guidelines were designed for may reflect the broad applicability of principles of partnership, but in some cases may imply a lack of critical engagement in how guidelines are operationalized in a real-world context. This would be consistent with claims that imprecision in defining partnership has contributed to a lack of progress in addressing partnership inequities (Crane, 2010; Gautier *et al.,* 2018) No guideline overtly distinguished between Northern and Southern audiences. In so doing, they avoided engaging with the intractable issues of imbalances in power, control, access to resources and capacity (Healey-Walsh *et al.,* 2019; Craveiro *et al.,* 2020), which have underpinned the development of many guidelines.

All guidelines were evidence-informed. Half drew on existing literature, including other guidelines. Two thirds combined multiple methods of research and consultation. More Northern participants were consulted during guideline development than Southern participants: this is consistent with the broader partnership discourse in which Southern perspectives on partnerships are under-represented (Bradley, 2007). A limitation of the review was that only English language publications were included, which may exacerbate the over-representation of Northern stakeholder perspectives.

The structure of guidelines varied considerably. Several guidelines used a lifecycle concept to highlight issues to be addressed during different phases of a partnership from initiation through to conclusion. Guidelines were mapped along a continuum from *values-based* to *activity-based*. Values-based guidelines emphasised relational constructs such as fairness, respect, inclusion and humility while *activity-based* guidelines were organized around concrete topics and actions. Faure *et al.* (2021) applied a similar distinction in their review of equity in international health collaborations describing these dimensions as *relational* and *structural*. While values-based guidelines may be more flexible and can be adapted to a wider variety of partnership arrangements, the strength of activity-based guidelines is that they address concrete issues and can be followed as a set of instructions for good practice. A number of the guidelines occupied the middle ground and combined values-based and activity-based components, enabling users to exploit the advantages of each.

A number of guidelines revolved around equity, or fairness, as a central construct, a finding also reflected in Monette *et al.* (2021) scoping review which described equity as ‘a shared vision, fundamental goal, or encompassing value’ (p.9). Some guidelines referred to equity interchangeably with equality. This risks downplaying important structural imbalances often existing between Northern and Southern partners (Boum Li *et al.,* 2018) since while partnerships may strive to be equitable, partners often do not have equal opportunities, resources and capacities. Whilst several guidelines embraced the construct of equity as a normative position, that is, for it to be right that partnerships are fair, there was little discussion about whether equitable partnerships deliver 'better' outcomes. Alba *et al.* (2020) addressed the issue to some extent in their guideline for bridging research integrity with standards of global health epidemiology, but further exploration of whether fairer leads to better is needed and requires interrogation of what 'good' research is and whose opinions on this matter.

To summarize the content of the 22 guidelines included in this scoping review presented a challenge due to the volume of material and the diverse structure and style of the various guidelines. The summarizing process risked losing specificity through the abstraction of concepts. Nevertheless, the structured process that was followed of coding the content of guidelines and organizing codes resulted in an interpretable set of topics. A further step was taken to disaggregate the topics by the two major disciplines which contributed guidelines to the scoping review: international development and global health. A comparison of the topics covered in guidelines from these disciplines showed that the three most prevalent topics were addressed equally by both fields. After this, there were some differences in the emphasis of guidelines from global health and international development, but rather than focus on the differences, the authors suggest that there is greater value in pooling the guidance from the two disciplines.

A comparison of the topics, combined across disciplines, from this review with the themes identified in reviews by Faure *et al.* (2021) and Monette *et al.* (2021) identified substantial overlap. Faure *et al.'s* scoping review focused on experiences and perspectives of equity in international health collaborations and included qualitative empirical studies, opinion pieces and editorials. The authors reflected in their discussion on the need to expand the review of the literature to encompass frameworks and guidelines. The current study sought to address this issue by seeking out principles, guidelines, frameworks and models of partnership. The scoping review by Monette *et al.* (2021) published in March 2021 sought to elicit the principles of 'good' global health research partnerships. It was informed by nine documents, six of which were also included in this review. The concordance of themes from across these three complementary reviews form a solid base from which to focus efforts to improve how partnerships work. However, there is a risk that guidance becomes self-referencing and fails to identify blind spots arising from the under-representation of Southern stakeholder perspectives in guideline development. Further, while the number of separate guidelines addressing a particular topic area provides an indication of its importance, individual guidelines typically presented topics as a package and not hierarchically. Further work is needed to explore the interplay between topics, whether some matter more than others and how this varies from the perspective of different stakeholder groups. This would be valuable for focusing efforts where partnership resources and time are limited and to provide leverage in negotiating funder and institutional policies toward more equitable partnership arrangements. Other issues to explore in future studies include: how Southern institutions can best advocate for equity in partnerships, what else funders should do to promote fairness and how best to share exemplars of good partnership practice.

Conclusion

There is no shortage of guidance for North-South research partnerships, and considerable agreement on the key areas where attention needs to be paid in order for partnerships to be fair. However, Northern perspectives dominate the guidance and further exploration of what matters to Southern stakeholders is needed. Work to explore how guidelines are used, whether they make any difference and to examine the relationship between the quality of partnerships and the quality of research generated would take the field forward.

Furthermore, challenges to the foundations of global health, an increase in funding channelled directly to the global South and the maturation of world-class Southern research institutions coalescing with truly global challenges, such as COVID-19 and climate change, are likely to stimulate new partnership dynamics to take hold.

Supplementary data

Supplementary data are available at *Health Policy and Planning* online.

Data availability

The data underlying this article are available in the article and in its online supplementary material.

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Data collection: S.V.

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Supplementary table 1: Topics addressed by each partnership guideline

	Roles, respons-ibilities & ways of working	**Capacity strengthening**	**Resource contributions**	**Motivation & goals**	**Agenda setting & study design**	**Governance structures, institutional agreements**	**Dissemination**	**Respect for affected populations, including local relevance**	**Data handling and owner-ship**	**Funding**	**Long term commit-ments**	**Acknow-ledging power dynamics & inequal-ities**	**Trust**	**M&E**	**Ethical approvals**	**Shared benefits**	**Justification for research**	**Appreciation of context**	**Admin support**	**Closure plans**	**Leader-ship**
Rank	1	2	3	=3	5	=5	=7	=7	=7	10	=10	12	=12	14	=14	=14	17	18	=19	=19	=19
Count	18	15	14	14	11	11	10	10	10	8	8	7	7	6	6	6	5	4	2	2	2
Afsana et al, 2009	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓			✓	✓					✓	
Alba et al, 2020		✓			✓	✓	✓	✓	✓						✓		✓				
Association of Universities and Colleges of Canada/IDRC 2013	✓	✓	✓	✓	✓							✓	✓								✓
Canadian Coalition for Global Health Research, 2015	✓						✓	✓	✓		✓	✓	✓			✓		✓			
Carbonnier & Kontinen, 2014				✓	✓						✓					✓					
Cornish, Fransman & Newman, 2017	✓	✓	✓	✓	✓		✓		✓	✓		✓		✓	✓			✓		✓	
Costello & Zumla, 2000	✓	✓				✓		✓					✓								
Dodson, 2017		✓	✓		✓					✓								✓			
Ecosystem Services for Poverty Alleviation (ESPA), 2018	✓		✓	✓	✓											✓					
Faure et al, 2021	✓	✓	✓			✓	✓	✓	✓	✓		✓	✓								
Gaillard, 1994	✓	✓	✓	✓	✓		✓			✓	✓			✓							
Kennedy et al, 2006	✓		✓	✓		✓	✓	✓	✓	✓		✓		✓	✓		✓				

Larkan et al, 2016	✓		✓	✓		✓						✓	✓						✓		✓
Leffers & Mitchell, 2011	✓	✓		✓																	
Montreal Statement on Research Integrity, 2013	✓		✓	✓		✓	✓		✓				✓	✓		✓	✓				
Newman & Fransman, 2019/ Rethinking Research Collaborative, 2018	✓	✓	✓	✓		✓		✓			✓							✓			
Overseas Development Institute (ODI), 2005	✓	✓		✓		✓					✓										
RAWOO, 1999	✓	✓		✓	✓																
Research Fairness Initiative, 2018	✓	✓	✓		✓	✓		✓	✓	✓	✓	✓			✓		✓		✓		
Swiss Commission for Research Partnerships with Developing Countries (KFPE), 2018	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓		✓	✓				
Taylor & Berg, 2019													✓								
TRUST, 2018	✓	✓	✓				✓	✓	✓	✓					✓	✓					

Chapter 3: Methods

This chapter focuses on the methods used to address the second objective of my study, which was *to explore the perspectives of stakeholders from low- and middle-income country research institutions on partnership with high-income country collaborators, drawing on interviews with staff working at a sample of research institutions in eastern and southern Africa as examples.* In this chapter, I present my philosophical orientation, positionality and reflexivity and describe the data collection and data analysis methods used. In the next paragraph, I briefly explain the link between objective 1 and objective 2 of the study.

I started the study with a broad look at the literature on global health research partnerships for orientation with current issues and debates on the topic. It became clear that there had been a variety of attempts to crystallise the elements of effective partnership and principles and guidelines had been developed to improve how partnerships work. At the time, in mid-2020, I found no synthesis of these guidelines which prompted my decision to organise the evidence base as the first objective of the study. The first study objective was thus *to synthesise the academic and practitioner literature on principles and guidelines for equitable global health research partnerships.* This was done by conducting a scoping review of the literature. The methods used for the scoping review are described in detail in Chapter 2: Scoping review and are not repeated here.

The second objective of the study was informed by the themes identified from the scoping review conducted under objective 1.

Philosophical orientation

Objective 2 set out to explore study participants' reported personal experiences of partnerships. The type of study (exploratory), the findings as projected representations of reality (reported), and the subjective and individual nature of these reports (personal experiences) contextualised to a phenomenon with observable characteristics (partnership) are consistent with a critical realist ontology and constructionist epistemology.

Ontology is concerned with the nature of being (Moon & Blackman, 2014). Researchers may identify with a position along a spectrum from realism, which states that one reality exists that can be studied and understood, independent of human experience (Moses & Knutsen, 2014) to relativism, where reality is a construct of the individual mind and there is no single independent reality. Moon and Blackman (2014) describe these ontological positions in relation to an individual's confidence about the certainty of there being a single reality. In this study, I consider that global health research partnerships have certain characteristics that exist independently of an individual's understanding, for example, a legal contract, a budget, a health-related purpose. However, the meaning that any individual attaches to the partnership, for example, how well it is working and whether or not it is fair, is individually constructed. As such, I position myself part-way along the spectrum from realism to relativism at the point of critical realism (O'Mahoney, 2016). This philosophical position was first described by Bhaskar in 1975 in his *Realist Theory of Science* (Bhaskar, 1975) and it posits that independent entities exist but how they are understood is not singular or fixed.

Epistemology is concerned with all aspects of the validity, scope, and methods of acquiring knowledge (Moon & Blackman, 2014) and can be understood by considering the relationship between subject and object. As with ontology, epistemology can be considered along a spectrum. At one end is objectivism, which promotes the existence of an objective reality in an object independent of the subject. At the other is subjectivism, which argues that meaning exists within the subject and the subject imposes this meaning on an object (Crotty, 1998). Between these two poles is constructionism, which posits that individuals construct meaning about an object or phenomenon and this meaning is based on their cultural, historical and social perspectives (Crotty, 1998). In this study, I consider that the phenomenon of *partnership* in global health research, while definitionally ragged around the edges, exists as an entity independent of those observing it, but that the way in which people relate to and conceptualise it is influenced by their position in any given situation and their history, culture and social standing (Creswell & Creswell, 2017). Furthermore, what an individual reports at any one point in time is influenced by many factors, including recent experience and the circumstances under which they are reporting, which suggests that this knowledge is not absolute or fixed, but a representation of the 'truth' at a particular point in time and space. Thus I have adopted a constructionist epistemology.

Positionality and reflexivity

My philosophical position in this study is interpretivist, a position that acknowledges that a researcher's experience, biases and perspectives influence data collection and analysis (Patton, 2014). With an educational background in the natural sciences and having been embedded for the last six years in a health sciences department that is heavily positivist in outlook, it has been a challenging journey towards this position, but one which feels congruent with my area of research interest. In the interpretive tradition, a researcher's understanding of the world is accessed through ideas and subjective experiences, the researcher is not objective nor do they remain completely outside of having an influence on the topic of inquiry (*The SAGE Handbook of Qualitative Methods in Health Research*, 2010). The researcher brings embedded values to their stance, and cannot, nor should they aim to, detach these from the research endeavour since *'to do so entails leaving the web of ideas that allow them to recognise and understand the facts in the first place'* (*The SAGE Handbook of Qualitative Methods in Health Research*, 2010, p. 134).

I fully acknowledge that I am influenced by my background as a privileged white female with European heritage and by my professional and personal experience of working in global public health. I have worked for London School of Hygiene and Tropical Medicine (LSHTM) since 2011. I have spent the last six years living in Kilifi in coastal Kenya and working as an employee of LSHTM based at the Kenya Medical Research Institute-Wellcome Trust Research Programme (KWTRP). This experience has had a profound impact on how I understand my position within the world, and within global health. At work, I am in a senior administrative position within KWTRP as Programme Manager and Department Manager in the Epidemiology and Demography Department. KWTRP is run largely by Kenyans but has obvious vestiges of the British university system and of the UK-based Wellcome Trust's policies and in how it is structured and organised. I am responsible to a Kenyan Head of Department and line managed by a British professor and I line manage a team of KWTRP operational and administrative staff and LSHTM staff in Ethiopia and London. I have experienced privilege as a consequence of my senior role at KWTRP and because of my 'insider-outsider' position: I have access to KWTRP's systems and resources as a regular member of staff but I am not obligated to follow all KWTRP rules and regulations due to my employment being through LSHTM. I have seen such arrangements for other expatriate staff working in health research institutions in sub-Saharan Africa although they would be considered highly irregular in a HIC academic context. While I have tried to contribute meaningfully to KWTRP as an institution and to the community of colleagues with whom I work, it has also been with huge personal reward, both at work and outside of work. The opportunity to live in Kenya on a UK salary has catapulted me into a socioeconomic stratum that I would never reach on the same salary in the UK. This is not to say that I have had an exclusively advantaged position. Salaries of similarly qualified staff employed by KWTRP are equivalent to mine, and while my role is fully supported within the Epidemiology and Demography department, it is not recognised institutionally. I have no formal legitimacy to engage with KWTRP central administration and operations and I have felt prejudiced against and disadvantaged as I have tried to navigate the foreign culture in which I am immersed.

I recall a colleague exclaiming, when she saw me eating lunch at the restaurant around the corner from work: *'People like you don't come to places like this!'*. In her observation, she succinctly and eloquently encapsulated my experience of being a privileged outsider in Kenya.

Alongside working at KWTRP, which is a world class research institution with great depth of resources and experience, I have worked with colleagues at Haramaya University in Ethiopia since the initiation of a collaboration with LSHTM in 2015 which has become known as the Hararghe Health Research partnership. This partnership has grown into an active research collaboration with a very small team in London and over 150, mostly Ethiopian, staff in Harar where there is now an internationally accredited laboratory, facilities for conducting advanced clinical investigations and a strong community engagement programme. However, Harar is in a very poor region of Ethiopia and remains heavily resource constrained. The engagement between Haramaya University and LSHTM has been an experience of partnership development in practice, and I have become increasingly aware of the assumptions that I have brought into the relationship.

The experience of working with KWTRP and Haramaya University has also had a strong influence on my realisation of the diversity of capacity in research institutions in sub-Saharan Africa and it has afforded me a glimpse of how HIC institutions operate as seen from a sub-Saharan African institutional perspective. This experience, along with the day-to-day challenges of trying to manage grants when faced with internal and external bureaucracy, set up systems to improve research management processes and represent sub-Saharan African institutions in interactions with HIC partners are all factors that have contributed to my interest in improving how research partnerships work. I was keen through this study to broaden and deepen my appreciation of how stakeholders in sub-Saharan African research institutions experience partnership with HIC research institutions. I acknowledge that I will have filtered information through the lens of my own experience, but I hope that the experience of living and working in Kenya has elevated my sense of self-awareness in relation to issues of partnership and contributes constructively to my reflexivity and positionality.

Data collection methods

In congruence with the study's ontological and epistemological underpinning, and acknowledging my interpretivist stance, I used qualitative semi-structured interviews to collect data. Other studies investigating global health research partnerships have used a range of research designs and methods, with qualitative methods running as a consistent thread through these studies. For example, Leffers and Mitchell (2011) used in-depth interviews in a grounded theory study design to develop a conceptual model for partnership and sustainability while Matenga et al (2019) conducted in-depth interviews informed by a model of collaborative function to explore Zambian stakeholders' experience of partnership.

A data management plan for the study was developed in advance of data collection. An updated version of the plan reflecting minor adjustments to how data was collected, stored and managed is attached at Appendix A.

Sample selection - institutions

I identified key informants to interview from a sample of research institutions in sub-Saharan Africa that collaborate with LSHTM. Given the large number of institutions with which LSHTM collaborates, on a pragmatic level it was helpful to narrow the potential sample from which to select. The justification for focusing on institutions located in sub-Saharan Africa was that this region remains the poorest geographic region of the world: sub-Saharan Africa received one third of all development assistance in the form of loans, grants, equity investments and guarantees development from the World Bank in 2020 (The World Bank, 2021). Yet sub-Saharan Africa remains under-represented in receiving funding for health research: based on data from 11 major US and European funders, direct recipients of biomedical research grants from Africa (including upper middle-income country recipients) represented only 0.9% of global grant recipients in 2019 (World Health Organization, 2022a). Partnership with high-income country partners remains a prominent model for research financing ("Developing partnerships," 2015). Examples from sub-Saharan Africa are widely referenced in the literature on global health research partnerships, more so than other LMIC geographies, and I considered that this would be beneficial for contextualising the research findings. Furthermore, my experience of living and working in sub-Saharan Africa is substantially greater than in other low- and middle-income regions, which I felt would support my ability to interpret the findings.

I identified institutions to invite to participate from the list of partners of the Global Health Department at LSHTM. I had been collaborating with the Global Health Department on an initiative to improve how the department engaged with its partners. My hope was that because of this, staff in the department would be supportive and would help facilitate contact with partner institutions. A limitation of this approach was that there may have been less diversity in some partner characteristics, for example, the type of health research that partners engaged in, because the research focus of a single LSHTM Department is narrower than the whole of LSHTM.

I filtered the list of the Global Health Department's partners using data from LSHTM's research management system. To be considered, an institution had to meet the following inclusion criteria:

1. Located in a country where English is an official language - since my language proficiency did not stretch to other languages and I did not have funds for interpreters and translation

2. Active partner – defined as having at least one ongoing research agreement with the department
3. Primary institutional focus on research, rather than implementation or advocacy.

The sampling approach was purposive with the intention of achieving diversity across the institutions sampled in terms of geographic location, type of institution (e.g. University, non-governmental organisation (NGO), independent research institute, national public health research institute), maturity as a research institution (for which the duration of the collaboration with LSHTM was used as a proxy), and scale of research activities (for which the size of the grant portfolio with LSHTM was used as a proxy). Selecting institutions in different geographical locations was intended to reduce the potential cultural bias of any single country. Seeking diversity in type of institution, institutional maturity and scale of research activities was intended to incorporate differences in domains that may affect partnership equity. For example, universities typically operate under considerable institutional bureaucracy which affects organisational agility when working in partnership, while smaller and newer organisations may have more limited capacity which can contribute to power differentials in partnerships. Discipline and type of research were not included as selection criteria because I assumed that institutions would conduct research across a range of disciplines and types.

I generated a shortlist of institutions to approach purposively which represented diversity across the above-mentioned variables. I divided the shortlist into two groups: group 1 and group 2. I approached institutions in group 1 first with the intention of reaching out to group 2 if I was not able to generate enough interest from group 1.

I approached each institution through the LSHTM principal investigator of a grant held with that institution. Once an introduction had been made, I followed up with the key contact for the institution. I provided details about my study to enable the key contact to decide whether they were able to support me to pursue my research. During initial discussions I also established what institutional and national approvals would be required. I began the process of identifying institutions in March 2021 and approached three institutions in April and one each in May, July and August 2021. The engagement process varied for each institution. I was able to engage two institutions early on, initiate the necessary approval processes and start data collection by June 2021. For two of the institutions approached I was unable to secure the necessary support to proceed. In one of these cases, I spoke to six different people in trying to establish the appropriate entry point to the organisation and received conflicting advice exacerbated by a complicated institutional governance structure. I did finally reach the person who was probably the appropriate gate-keeper to the organisation but, after an initial conversation, my subsequent attempts to progress the relationship failed. The second ‘failed entry’ followed a similar trajectory: I was passed to different sections of the institution, and while each person I interacted with was helpful and polite, they were not able to permit access. In the end, I reached the appropriate entry point, but was stalled by a moratorium on all external research until exam season had passed and was advised to re-initiate contact after this. The likelihood of successfully gaining access seemed low, particularly now that I was several steps removed from any personal relationship with LSHTM, and I decided not to pursue this institution any further. These ‘failed entries’ were time-consuming and frustrating, but also instructive. I became humbler in my requests for help and realised that, while the study mattered to me, there wasn’t much in it for the people I contacted and they were helping me out of good will and perhaps courtesy, or possibly obligation, toward the LSHTM investigator. The experience also made me open to including one institution with strong links to a different department of LSHTM which one of my supervisors had worked closely with. I included this institution because it had characteristics that were different to the institutions I had already engaged with and it added diversity to the sample.

I had a plan to broaden the sampling approach to include institutions that partnered with any department of LSHTM in the event that I was unable to engage enough institutions through the Global Health Department. I integrated data from three lists in preparation for this possibility:

1. Institutions with which LSHTM had a Memorandum of Understanding (MOU) or other Agreement (though not legal contracts for the purposes of transferring funds for research activities) (*n*=103)
2. Institutions that the LSHTM Strategic Research Office considered to be strategic partners but with which LSHTM did not have an MOU (*n*=37)
3. Institutions named in the Africa Partnerships Review (London School of Hygiene and Tropical Medicine, 2016a) (*n*=31).

After consolidating and refining these lists to remove high-income country institutions and duplicates, 60 unique institutions remained. Of these, 37 were institutions based in sub-Saharan Africa, in 15 different countries. Ultimately, this list was not required, but the exercise of generating it made me reflect on the extent to which LSHTM depends on partner institutions in other countries and how wide-ranging these institutions are.

The final sample comprised four institutions in four countries in eastern and southern Africa: Malawi, Tanzania, Uganda and Zambia. One was a small NGO, one an independent research institute and two were Universities. Two of the institutions had collaborated with LSHTM for over 20 years, while two had become partners within the last five years. The size of the active grant portfolio with LSHTM varied from under £100,000 to over £1 million across the four institutions.

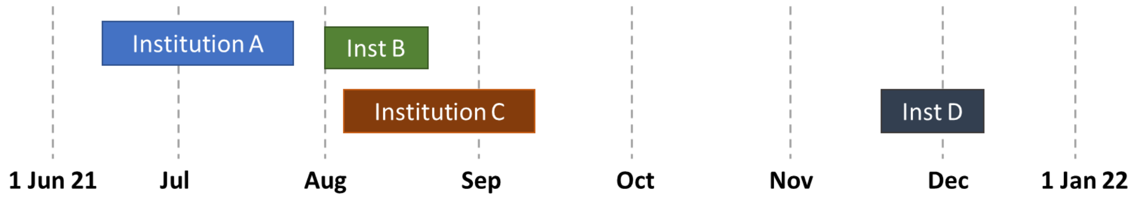
Sample selection – individuals

Having secured an institution's participation, I asked the key contact for a list of colleagues in academic and research administration roles at varying levels of seniority who had experience of working in partnerships with high income country research institutions. The rationale for including stakeholders representing academic and administrative perspectives was that the dimensions of equitable partnership described in published guidelines are relevant both to the systems and processes of research management and to the processes of research. The rationale for including stakeholders at different levels of seniority was because of the different positions in a partnership's hierarchy that these participants would likely occupy, potentially leading to different experiences of partnership.

I started by contacting individuals on the list provided by the key contact. For two of the participating institutions, to supplement the initial list I used a snowballing approach (Frey, 2018) to identify additional participants by asking early interviewees to suggest names of one or two more colleagues.

In order for individuals to decide whether or not to participate in the study, I sent each potential interviewee an introductory email with the participant information sheet as an attachment (Appendix B). Of those approached, eight individuals either failed to respond, declined the invitation, or it was not possible to schedule a convenient time for an interview. For those who agreed to be interviewed, I followed up by sending the informed consent form (Appendix C) which participants were asked to initial, sign and return for countersignature before the interview. In total, I conducted between four and six interviews per institution and 20 interviews in total over a six-month period. I conducted the first interview on 16 June 2021 and the last on 7 December 2021. Since institutions were engaged in a staggered manner and it took varying amounts of time to gain entry and secure approvals, interviews were conducted with participants from each institution largely sequentially though there was some overlap between institution B and C. Figure 2 shows this sequencing of interviews. Conducting interviews with participants from one institution over a relatively short period of time was helpful for building up a mental picture of the organisation and contextualising participants' responses. It also allowed me to cross-reference examples of particular issues or partnerships described by one participant in interviews with another.

Figure 2. Sequencing of interviews



Data collection procedures: Semi-structured interviews

Interviews were semi-structured and were informed by a pre-existing framework of topics which had been identified as being important in relation to the functioning of research partnerships – see Chapter 2: Scoping review. Green and Thorogood (2018) characterise semi-structured interviews as those in which *"the researcher sets the agenda in terms of the topics covered, but the interviewee's responses determine the kinds of information produced about those topics, and the relative importance of each of them"* (Ch. 5, p. 3). There was also scope within each interview for participants to talk about other issues of importance to them within the broad frame of research partnerships. This part of the interview was more like an in-depth interview in which the interviewee determines and describes the issues that matter to them (Green & Thorogood, 2018).

I developed two interview topic guides: one was a detailed topic guide informed by the scoping review of principles and guidelines for research partnerships conducted under objective 1 of this study and described in Paper 1. It included prompts on topics which the review had identified as being important for good partnership functioning. These were: partner roles, responsibilities and ways of working, capacity strengthening, motivation and goals, resource contributions, agenda setting and study design, governance structures and institutional agreements, dissemination, national relevance, data handling and ownership, and funding. The second topic guide was less detailed and contained broad questions about participants' experience of partnership. The topic guides are available at Appendix D and Appendix E.

I piloted the topic guides with a small number of stakeholders who were known to me and were not affiliated with any of the institutions included in the study. I refined the topic guides after piloting and continued to refine how I used them as I proceeded with interviews. The staggered process of engaging institutions was helpful as it allowed time for reflection on early interviews, and I was able to improve my interviewing skills as I went along. Having said this, even the early interviews yielded rich data from participants and had the benefit of all topics being 'fresh'. In later interviews, I had to be mindful to pay close attention to responses that seemed repetitive and ensure that I listened closely to what participants said in case they revealed a new perspective on a familiar topic.

My intention had initially been to use the detailed topic guide with participants who were closely involved in a partnership with LSHTM and the broader topic guide with participants who were less involved in this partnership. However, I found that most participants had a wealth of experience across different partnerships and participants were encouraged to reflect on their experiences of partnership with any HIC partner, i.e., LSHTM provided the entry point into each organisation, but the scope of interviews covered participants' experience with any HIC partner. The conversation was richer when participants illustrated issues drawing on a range of examples and made comparisons between situations that they had been involved in. As such, for most interviews I asked broad questions first about, for example, the benefits of partnership, challenges, what worked well and where there was room for improvement, and followed up with prompts on specific issues, such as funding, governance structures, data sharing and authorship, if these issues had not already come up earlier in the interview. The topic guides were also used flexibly to suit participants' varying experience of different aspects of partnership.

Interviews were conducted in English. All participants had sufficient fluency to understand the interview questions, though some required occasional re-phrasing of a question or an example to illustrate the issue I was trying to get at. I was aware that comprehension was only one factor influencing participants' responses and that other factors may have influenced what they said and how, including cultural norms about the formality of language and how participants perceived me and the purpose of my research. I acknowledge my limited ability to comprehend and influence these factors. I tried to put participants at ease and encourage them to talk openly by explaining that the study was for research purposes only and was not part of any audit or evaluation and I would not be sharing information with anyone at LSHTM who was involved with the individual or their institution.

Despite such assurances, it remained the case that I am an LSHTM staff member as well as student and LSHTM was the lead HIC institution in the partnerships which facilitated my entry into the participating institutions. Given this asymmetrical power relationship, participants may have felt an obligation toward agreeing to be interviewed, and the dynamics may have affected participants' responses during interviews. Interviews were almost all conducted voice-only, for reasons described below. As such, visual clues were not available to most participants, or to me, to inform assumptions about the other person, or to influence how rapport developed through the interview. It would be interesting to explore how the interview relationship is affected by having or not having a face to put to the name and voice.

I noticed that during introductions, I was keen to emphasise that I had been working at KWTRP in Kenya for six years, and that my role was as a research manager. My experience of living and working in Kenya felt like a way to establish credibility and to indicate that I understand the issues of operating in a resource-constrained setting and as both the recipient of contracts issued by HIC partners and as the lead partner.   My experience as a research manager felt useful in demonstrating that I am familiar with the systems and processes which underpin grant management. Furthermore, I know what it is like to be a member of professional services staff in an academic institution, and I am aware of the subservience that is sometimes required when working with academic colleagues. This helped me to try to be humble in my interactions with all participants. I conducted all interviews using the web-based Zoom platform (Zoom.us licenced education version).   Since this was a self-funded DrPH, I did not have funds for travel. Even if funding had been available – and I did consider the feasibility of combining work travel with DrPH research 'add-on' travel to minimise cost - since the period of data collection coincided with tight domestic and international travel restrictions due to the COVID-19 pandemic, it is highly likely that no travel would have been possible anyway. I used the voice-only function of Zoom to minimise any potential cost to the interviewee and to reduce interruptions and degradation of call quality where internet connectivity was poor. Two interviewees switched on their cameras, and in those cases I did the same, but all other interviews were conducted voice-only. This was the standard practice followed at my place of work, KWTRP, for virtual one-to-one and group meetings during the pandemic and – also prior to the pandemic – for communicating with colleagues in Ethiopia. As such, it felt appropriate for the conduct of my study. I found that not seeing participants helped me to listen intently to what they said and how they said it and to take notes without worrying about maintaining eye contact and providing visual encouragement. That is not to say that this was a better approach than using video, or to face-to-face interviews. Methodological guidance in qualitative research has previously emphasised the value of face-to-face interviews because the visual cues of being in the same space allow for good communication (Fielding & Thomas, 2008) and help in establishing rapport (Fontana & Frey, 1998). In their scoping review of collected accounts of health and illness experience, Davies et al. (2020) found that online methods compared to face-to-face resulted in shorter participant responses, less contextual information being obtained, and lower relational satisfaction and consensus development. It should be noted that their source documents were all from the pre-pandemic era, and this is worth being aware of given the sweeping and radical changes in communication that COVID-19 precipitated.

Carter et al. (2021) described three kinds of adaptation that are required in the shift from in-person to online qualitative research: adaptation to ethical challenges, adaptation to a new technological environment, and adaptation to a new social environment. Ethical challenges include the potential for invasion of privacy, the loss of embodied care, how consent is taken, and the security of how data is collected and stored. Using the audio-only function of Zoom reduced the potential invasion of privacy for participants who took the interview in a private space, such as their home. The opportunity to demonstrate embodied care - which means the use of ordinary actions to demonstrate presence and care - was difficult to achieve virtually. Spending time at the start of the interview on introductions, respecting the time that participants had available for the interview, and inviting comments and questions at the end were efforts in the direction of demonstrating care. Regarding consent, I sent the participant information sheet and informed consent form to participants in advance. I countersigned and returned the informed consent form before the interview and reiterated at the start of each interview participants' right to withdraw from the study and asked if they had questions before commencing the interview. Where participants consented to the interview being recorded, I used the Zoom recording and auto-transcription functions to record and generate a preliminary transcript from each interview. I considered that Zoom's Privacy and Security statement (https://explore.zoom.us/docs/ent/privacy-and-security.html) provided adequate assurance about data encryption and secure storage of audio recordings and transcripts.

With respect to adaptation to a new technological environment, Carter et al. (2021) describe the need to ensure that participants have access to hardware, are familiar with the platform, have a stable internet connection and have the necessary access to help to address technological issues. Since participants were all professionals with experience of international partnerships and the initial mode of contact was through email, I assumed that all had access to computing hardware. I offered participants alternatives to Zoom, in case they preferred a different platform (though all were happy to use Zoom). Participants selected the time and date for the interview, which meant that they were able to locate themselves somewhere where they expected to have reasonable internet and, fortunately, only one interview was hampered by an unstable connection.

Adaptations to a new social environment include managing interruptions, unpredictability and the varied level of comfort that participants have with online interactions (Carter et al., 2021). The participants in my study were all adept at interacting online and adhered to meeting conventions, such as keeping time and identifying a suitable location in which to conduct the interview. One participant was travelling back from a field visit during the interview but managed the background noise level and quality of connection despite this potential complication.

Recent work on the use of online video technology for qualitative research interviews (De Villiers et al., 2022) used a conceptual framework combining two theories from the field of management. These theories offer insight into the factors that have potential to affect the richness of qualitative research evidence acquired using different communication tools. Information Richness Theory (Daft & Lengel, 1986) highlights the capacity for immediate message feedback, diversity of cues, personalisation and variety of language, while Channel Expansion Theory (Carlson & Zmud, 1999) looks at four aspects of participants' experience: experience of the communication channel, the discussion topic, the context of communication and other participants. While there were no 'other participants' in my study since interviews were conducted one-on-one, other components of these theories are relevant and helpful for reflecting on the richness of data collected. For example, as noted above, participants had good experience of online meeting technologies including Zoom and were selected because of their experience of working in global health research partnerships, so were familiar with the discussion topic. Zoom allowed for immediate feedback to participants as interviews were synchronous, and I tried to personalise each interview by listening to what participants said and taking this into account in my responses and follow-up questions.

A final reflection on the use of online interviews is that even without the constraints imposed by time, budget and COVID-19 travel restrictions, there were two additional arguments to conduct data collection remotely. Firstly, travel opportunities are often the prerogative of HIC researchers making flying visits to 'the field'. Given my research topic of equity in partnerships, it was useful not to be enticed into reinforcing this stereotype. Secondly, the environmental impact of flying to up to four countries to conduct a small number of interviews is considerable. Had travel been an option, I would have had to consider carbon footprint as a factor when planning my study, and it would have been difficult to justify the benefits over the costs.

Interviews typically lasted for 45-60 minutes and all were conducted in English. After each interview I wrote field notes to capture my immediate reactions, note down issues that had surprised or interested me and remind myself of quotes which I had found particularly striking. My field notes also included comments on how I felt the interview had gone and what I might do differently in later interviews. I listened back to the audio-recording as soon after the interview as possible – in most cases within 48 hours – and corrected errors in the auto-transcript to produce a final version. This was a verbatim transcript, written using conventions described in Green & Thorogood (2018). I removed individuals' names from the transcript at this point. Only the audio-recording and a password-protected participant masterfile retained participants' names. This is not full anonymisation since I knew whom I had interviewed, and the descriptive nature of the transcripts had the potential to lead to the identification of participants and other individuals. To ensure that confidentiality was maintained, transcripts were kept securely and were accessed only by me and, occasionally, by my supervisors. Whilst not achieving full anonymisation, removing names from transcripts was, however, the first step towards ensuring that no participant or other individual would be identifiable when data were used in the thesis. The participant masterfile included a unique reference for each interviewee and their contact details. Quotes used in the Findings chapter incorporate the reference for each interviewee and a role descriptor, e.g. *A02_EMR* indicates that the quote was from participant two from institution A who was an early-mid career researcher (EMR). *C03_SA* indicates a quote from participant three from institution C who was a senior administrator (SA).

Data analysis

Interview transcripts were analysed following a thematic content analysis approach which incorporated four steps: 1. Familiarisation with the data, 2. Identifying themes, 3. Coding the data, 4. Organising codes and themes (Green & Thorogood, 2018). I transcribed all interviews myself and the act of listening back to the interview recording and doing the transcription formed part of the familiarisation process. I transcribed each interview as soon after conducting it as possible to support recall and start the process of reflecting on the data. Each interview transcript was accompanied by field notes, also produced as close to the time of interview as possible, which captured my initial reflections on the interview. Participant demographic data including institutional affiliation, job role, gender and years of work experience in current organisation were documented and subsequently summarised (see Table 7 in the Findings chapter).

In step 2, themes were identified from segments of the data that characterised what the segment was about. In my first round of analysis, I annotated each of the first 11 transcripts by hand and wrote a descriptor for each segment. Some themes identified were repetitions of themes found in earlier transcripts whilst others were novel, though by the end of the 11 transcripts, there was high repetition of themes identified in earlier transcripts.

In step 3, segments were refined into codes. I used NVivo (Release 1.6 1121) to organise the analysis. A provisional coding structure from the hand-annotated transcripts was set up in NVivo, and I coded the initial batch of transcripts using this, adding new codes and re-organising codes where they were too broad, too narrow or seemed to work better with a different name. I realised while working through this process that many of the codes corresponded with themes from the literature on partnerships, both those describing data where participants had given a response to a question directing them towards a specific theme, e.g. funding, dissemination, and when participants were responding to open questions. At this point I decided to re-code the initial batch of transcripts and code the remaining nine transcripts deductively using the topics identified from the scoping review of principles and guidelines for partnership described in paper 1. I also coded the data using the broad categories of benefits of partnership, problems, areas to improve on and fairness. I saved the inductively- and deductively-coded versions of the dataset as separate files in NVivo with their own date stamp and title to support the final step of the analysis.

In Step 4, organising codes and themes, I made comparisons between interview transcripts and generated meaning from across the data set. During this step I also re-read the transcripts from each institution as a group and wrote a summary of the key themes emerging from each institution. The process of writing the results section of the manuscript which forms Paper 2, included as an Annex to this thesis, involved both working with the coded data set and returning to the transcripts to make sense of and contextualise the data in an iterative manner. This was a valuable part of the analysis.

A note on scheduling and sampling

Ideally, I would have analysed each interview before conducting the next. However, given the need to schedule interviews in advance, respect the commitment given by participants to make time for an interview, and to progress data collection in a timely manner, I took a pragmatic approach whereby I conducted interviews in batches. I used the process of listening back, transcribing, reflecting and making notes to learn and adapt how I conducted later interviews. There was not a pre-determined sample size for the study and my plan had been to interview stakeholders from at least four and up to six institutions if my preliminary analysis suggested that there was low convergence on themes or insufficient diversity in partner type or experiences and additional examples would add richness to the study. By the time of conducting interviews in the fourth institution, there was good convergence on themes and I considered the data from 20 interviews would be adequate.

A sample of four research institutions in anglophone eastern and southern Africa is clearly not representative of all research institutions in sub-Saharan Africa, let alone other low- and middle-income country regions. However, within the scope of feasibility for this DrPH study, I felt that the richness achieved by conducting interviews with multiple stakeholders from a small number of institutions would yield greater insight and contextual understanding than interviewing fewer individuals from a larger number of institutions. On a pragmatic level, given the effort required to initiate contact, gain access and secure approval to conduct interviews in each institution, conducting multiple interviews within each institution involved in the study reduced the burden of interview ‘set-up’ and allowed more effort to be spent on the interviews themselves.

Ethics and consent to participate

Ethical approval was obtained from the LSHTM observational ethics committee (reference number 25762). Institutional approval for the study was granted by all participating institutions, including institutional and national research ethics approval where required. This was applicable only in Zambia, where approval was sought from the University of Zambia Biomedical Research Ethics Committee (reference number 2128-2021) and National Health Research Authority (reference number NHRA0000010/20/11/2021). There was discussion with all four participating institutions about the approvals that should apply to this study. Three of the institutions determined that since the study was not health-related, the interviews were conducted remotely and on condition of full LSHTM ethics approval, institutional review board and national ethics approval were not required.

Written informed consent was obtained from all participants prior to their participation in the study. All study participants were informed as part of the consenting procedure that their personal details would be kept confidential. They were also informed that they would not be identifiable from the data they provided while their institution would be named in the thesis and any associated research outputs (see Participant Information Sheet at Appendix B). A report of the study findings was shared with all participants, and the key contact who had facilitated access to each institution was invited to contribute as an author to Paper 2. For those key contacts who opted into co-authorship (- not all did), their participation in the study was not anonymous. However, efforts were made to ensure that no data segment used as a quote in the thesis or in paper 2 could be linked to a specific individual. Furthermore, all co-authors were asked to confirm that they had read and were satisfied with the version of the paper accepted for publication.

Chapter 4: Findings

The first objective of the study was: *to synthesise the academic and practitioner literature on principles and guidelines for equitable North South research partnerships.* This objective was addressed by conducting a scoping review which was published in the journal *Health Policy and Planning* and is included as Chapter 2 of this thesis. The findings from objective 1 are not repeated here since they are described in detail in the paper. The findings from the scoping review did, however, inform how I analysed and presented the findings for objective 2, and this is discussed below.

This chapter focuses on the findings from the qualitative primary data collection conducted to address objective 2 of the study. Objective 2 was: *to explore the perspectives of stakeholders from low- and middle-income country research institutions on partnership with high-income country collaborators, drawing on interviews with staff working at a sample of research institutions eastern and southern Africa as examples.* In presenting these findings, I first provide a description of the study population. I then present a thematic analysis of the findings as they relate to key areas for effective partnership. The key areas were identified from the literature as described in Chapter 2: Scoping review. I end the chapter with an overarching analysis which takes a step back and attempts to describe 'what is going on' in contemporary global health research partnerships.

Paper 2, included as an Annex to this thesis and published in the *International Journal for Equity in Health* in August 2022, also reports the findings from the qualitative primary data collection. For the analysis in Paper 2 I organised the findings under broad headings of *benefits of partnership*, *what makes partnerships work well*, *problems in partnerships* and *perspectives on fairness*. The analysis in Paper 2 complements the analyses presented in this chapter and can be read as supplementary material.

Study participant characteristics

I interviewed between four and six individuals in each of the four institutions that participated in the study (see Table 6). The total study population was 20 participants. Participants were classified according to their primary affiliation as a researcher or an administrator (which included senior management). Researchers were specialists in a range of disciplinary areas, while administration roles included staff working in finance, the grants and contracts office, quality assurance, compliance and the executive function. I had hoped to interview an approximately equal number of research and administration staff. However, the final participant list comprised five staff in administration roles and 15 researchers. Participants were identified using the contact list provided by the key contact in each institution and supplemented, where I needed to identify additional participants, by snowballing. There are several possible reasons for the bias in the split between research and administration staff: possibly the institutional contact was selective in favour of researchers in choosing who they put forward as potential participants. Alternatively, researchers may be more likely to have opportunities to engage with HIC partners than administrators and thus meet the study inclusion criterion of having experience of working with HIC partners. Another possibility is that there are more researchers than administration staff employed in research institutions and this was reflected by the proportion of participants put forward and interviewed in each category. I was not able to ascertain which of these, or potentially other reasons, led to the uneven split between the number of research and administration staff included in the study population.

Six participants were female while 14 were male. Gender was not used as a selection criterion and the unequal distribution of participants may reflect bias in the research sector at large towards employment of more men than women. Alternatively, there may be other reasons similar to those that may have led to unequal numbers of research and administration staff being included in the study.

In terms of seniority, 12 participants were in junior or mid-career roles, while eight were at a senior stage in their careers. Career stage was assigned as *Senior* where a participant held a position at Assistant Director or Director Level or Professor on the academic career path or had more than 15 years of experience within the organisation. Career stage was assigned as *Early- or mid-career* for all other participants, i.e. those whose job level and experience did not meet the threshold for Senior.

Participants were also classified according to the type of institution that they worked for. Nine participants were employed by a university, six worked for an independent research institute and five worked in the NGO sector.

Participant characteristics are summarised in Table 7.

Table 6. Participants per institution

Institution	Number of participants interviewed
A	5
B	4
C	6
D	5

Table 7. Participant characteristics

Gender		
	Female	6
	Male	14
Role type		
	Management/administration	5
	Research	15
Career stage		
	Early or mid-career	12
	Senior	8
Institutional affiliation		
	Research institute	6
	NGO	5
	University	9

Note on HIC collaborators named during data collection

Since naming HIC collaborators may potentially risk participants being identifiable due to having long-standing relationships with some of these collaborators, HIC institutions that were used as examples during interviews are not identified by name in this thesis. Participants drew on experiences of partnership with a range of institutions in Canada, Norway, Spain, Sweden, Switzerland, UK and USA. A total of 22 HIC research institutions were named during interviews, of which half (*n*=11) were in the USA and five were in the UK.

Thematic analysis: findings in relation to principles of partnership

The scoping review of principles and guidelines for 'North-South' research partnerships described in Chapter 2 generated a list of topics that partnerships should pay attention to. I used the top 10-ranked topics from the review (see Table 8) as the framework for a thematic analysis of the primary qualitative data. In the sub-sections that follow, I have included a brief description of each topic, derived from the scoping review, and then presented an analysis of the primary data relating to each topic.

Table 8. Topics addressed by partnership guidelines

Ranking*	Topic
1	Roles, responsibilities & ways of working
2	Capacity strengthening

3	Motivation & goals
=3	Resource contributions
5	Agenda setting & study design
=5	Governance structures, institutional agreements
7	Dissemination
=7	Respect for affected populations, including local relevance
=7	Data handling and ownership
10	Funding
=10	Long term commitments

*Ranked in order of the number of guidelines which included the topic as identified from the Scoping review in Chapter 2.

Roles, responsibilities & ways of working

Partnerships should have processes to support regular, open and transparent communication between partners and commit to transparency, particularly around finance and administration. There should be jointly agreed mechanisms for conflict resolution and decision-making and partners should be accountable to one another.

Since the discipline of global health remains, by and large, concerned with improving health in LMICs, it was not surprising that participants exclusively described partnerships that focused on health issues within their own countries rather than in HICs. Nevertheless, it is worth making this point explicit since it had implications for the roles and responsibilities performed by each partner. Many participants described how their institution led project implementation, including field and clinical activities, while HIC partners usually occupied a technical advisory role. The roles occupied by each partner were also strongly influenced by which institution had initiated the research idea. In the majority of the examples that participants gave, HIC institutions had initiated the research projects described. The balance had shifted in three of the four institutions towards more projects being initiated and led by the sub-Saharan African partner, and one of the four organisations included in the study now initiated and led more than half of its partnership projects.

Where a HIC partner had seeded the research idea, participants described a range of experiences both about the roles that they had in the project and how these were agreed. A number of participants described positive experiences where they had been consulted from the outset, had co-designed and co-developed projects and where structures were put in place to facilitate joint contributions, e.g. senior staff appointed to equivalent positions within each partner institution.

Even where contributions were not equal, as long as roles and responsibilities were clear and jointly agreed at the outset and boundaries were respected, a number of participants were satisfied. They felt that clarity of roles was important for avoiding conflict, e.g.:

"I'm always very, very keen on 'let's be clear on what the roles are and what is expected and what we each are supposed to achieve', so that there is no misunderstanding and nobody ends up feeling short-changed." [D01_EMR]

In contrast to these positive examples, a number of participants described situations in which they had been involved late, had limited scope to contribute to study design and the HIC partner had controlled the decisions about who performed which roles, which they found demotivating e.g.:

"I have worked on studies where I knew I could contribute more, but your role is already defined: 'You are managing fieldwork, you are recruiting and overseeing data collectors, and sending us the data'. End of story. I'm like, 'I want to be involved in the analysis, it's qualitative data, I am excited about these things, I want to be involved and maybe co-author', but that option is not provided many times." [A01_SR]

"At the beginning, if you really explain to me some of my roles and responsibilities, then I begin to lower my expectations." [D03_JMR]

Several participants commented on roles shifting as a partnership went on. This flexibility was regarded both positively, for instance, where participants had been happy to step in and assume responsibilities that had initially been assigned to the HIC partner, and negatively, for example where the HIC partner had overridden a prior agreement and interfered in activities and decisions which were within their partner's remit.

A number of participants talked about the importance of communication between partners that was frequent, timely, transparent and two-way. Where there was strong communication, participants felt that this helped to generate a shared vision about the purpose of partnership and each partner understood what the other wanted to get out of the relationship. The ability to discuss issues and address them openly and respectfully was seen to be critical, e.g.:

"If there are issues that, you know, perhaps we need to deal with, or that we were not comfortable with, we must be able to sit as partners and talk about them, rather than one of the partners being the partner, at the same time, the Court". [A03_EMR]

Participants described both positive and negative experiences of structures put in place to support project communications. Several participants talked about the value of holding regular meetings to keep abreast of project progress, share ideas and make decisions, but a couple of participants had experienced meetings being used as a form of control, as this quote illustrates:

"Another problem is micromanagement. There have been some sub-agreements where the other partner schedules weekly calls…but then you find the team here can almost make no decision if the partner does not agree, which can quickly defeat the purpose of being the local expert if you cannot contribute to the implementation locally." [C02_JMA]

Several participants described the importance of mutual respect and appreciation between partners irrespective of their differences, and this framed the way in which partnerships unfolded, e.g.:

"Coming into the partnership with the attitude that…everybody has something to offer. It may not be equal. but just having that attitude that…everybody going into it has something to bring onto the table. I think is a very critical aspect in determining how the partnership is going to flow." [A05_SA]

Meanwhile, several other participants described how HIC partners lacked humility and brought an attitude of entitlement and superiority into the partnership, e.g.:

"The attitude is that you don't know it, and they know it all, and so your responsibility…is to follow direction and not to contribute alternative views and where you contribute alternative views they are shot down." [A05_SA]

"…they go in, like IN. It's like when you enter the house and you are invited to sit in the sitting room, someone can go up to the bedroom." [C03_EMR]

Participants gave examples of where an attitude of superiority had manifested as the HIC partner interfering in the implementing partner's operations and trying to dominate decisions and exert control even when they were not in the lead role. These participants also felt that HIC institutions attributed greatest value to their own contributions and undervalued the contributions of their partners, e.g.:

> *“I think that our northern partners or Western European partners have been a little bit slow to realize two things: one is the historical predisposition that has created… a lopsided system, where one person is seen to be more important or cleverer. A lot of these sort of historical predispositions have nothing to do with innate ability. They've also failed to realize that a lot of their own growth is the result of these partnerships and that there is probably more they are gaining from the partnerships than the so-called Southern partners are gaining.” [C01_SR]*

One participant speculated that an attitude of superiority might be associated with a fear of losing status and funding. An example that illustrates this possibility was a project where a funder changed their approach between two phases of work and decided to fund sub-Saharan African institutions directly rather than through HIC institutions. Under the new model, the sub-Saharan African institutions decided what technical support they needed and chose which HIC institutions to partner with, rather than these decisions being made by HIC partners. The two HIC partners who had been involved in the first phase of work resisted the change, though ultimately they conceded to it.

Several participants felt that it was important that their institution set out its expectations of partnership when engaging with HIC institutions and felt that this was not something they had historically done well. This appeared to be changing, and participants described having greater confidence to negotiate their position when engaging in new collaborations. For example:

> *“Initially we were more in the ‘take what you're given’ kind of scenario. But I think through these experiences it's built our capacity to be more choosy…about…who we get into partnerships with and ensure that there's actually value in those partnerships and it's not an exploitative kind of partnership.” [D01_JMR]*

> *“Once you put down what you also expect from this partnership as a local researcher, it has tended to work well... Now, things have changed. People are more aware people know stuff so you are able to outline your needs and meet each other halfway and get a better relationship out of it.” [D02_SR]*

Capacity strengthening

Strengthening of individual, institutional and systemic or national capacity, encompassing research and research management, including budgeting, contracting and ethics. Some guidelines argue that stronger partners should provide resources and expertise to support the development of weaker partners, while others emphasise the bi-directional nature of capacity strengthening that results in mutual learning and growth.

A number of dimensions of capacity strengthening in partnerships emerged from the data. These included: capacity strengthening as a formal component of a project or achieved informally through working collaboratively towards a project's goals, capacity strengthening as an intentional aim or a by-product of the collaboration, capacity strengthening with a focus on research skills or research administration, capacity strengthening for individuals or for institutions, and capacity strengthening as uni-directional or bi-directional. These dimensions are listed here as dichotomies but in the examples given, partnerships were often described as supporting capacity strengthening in multiple ways.

PhD training was frequently cited as a major benefit of partnership for individuals, their institutions and nationally through the creation of a *"pool of scientists"* [C04_SR], many of whom were reported to have progressed to senior leadership and management positions in participants' own or other African institutions. Participants emphasised the value of studying at and being awarded a degree by a HIC institution, including the academic mentorship that students received. Participants from one of the institutions in the study described how PhD positions and post-doctoral training fellowships were routinely incorporated into grant applications and partnership projects were used not only to address specific research questions but also as a platform to build individual and institutional capacity. While formal training was seen to be of great value - and this included not only PhD training but also focused technical training such as using a particular research software or learning a new research method - participants also valued the learning gained from working alongside HIC partners. Frequent and open discussion where knowledge, expertise and ideas were exchanged created a conducive environment for learning and both partners were felt to benefit. Several participants felt that HIC partners failed to adequately acknowledge the learning that they themselves gained from collaborating and undervalued their partners' expertise, e.g.:

> *"There's still that resistance, the feeling that the North is always superior in terms of having capacity and technical expertise…Can we reach a stage where we take stock of where each partner's*

> *strengths and weaknesses are and build this capacity…based on those strengths and weaknesses, rather than simply saying, 'because you're from the north, you are the stronger partner'?" [D01_JMR]*

Several participants described how the research management and support systems in their institutions had improved through working in partnership, for example, through adopting and adapting templates and policy documents from HIC partners. However, capacity in this area was typically seen to be *"lagging behind"* [B02_SA] improvements in researchers' skills and qualifications. Several participants suggested that HIC institutions should do more to support their partners to overcome their institutional capacity constraints, or they should adapt their requirements to accommodate partners' limitations. For example, one participant explained that, despite their institution having persistently poor performance in financial reporting over a long period of time, no HIC partner had ever offered support to address this:

> *"We are always having the same challenges in terms of delayed reports, inaccurate reports, but I don't think there has ever been a measure taken to say 'OK…you are always delaying in reporting. What can we do to support you so that in future projects that we collaborate on, these issues are sorted out and things work out better?'" [B02_SA]*

Several other participants described how HIC partners with long-standing experience of collaborating with institutions in low-resource settings were generally more flexible and easier to work with than newer partners who had less understanding of the capacity constraints of the context in which they were operating, e.g.:

> *"Our partners in the higher income institutions may not actually understand that what appears to be a very simple task to them may not necessarily be a very simple task for us." [B02_SA]*

Several other participants felt that HIC institutions could and should do more to support capacity strengthening across the broad range of areas that are necessary to succeed in research, for example by involving their partners in communications with funders, grant writing and networking skills, e.g.:

> *"You really don't know how that process of engagement goes when you're always in the lobby when everyone else is in the conference room." [C02_EMA]*

Two participants suggested that HIC partners may even intentionally limit the areas in which they supported capacity strengthening in order to perpetuate a relationship where their partners depended on them, e.g.:

> *"That really makes me sometimes question, what does capacity building mean? …What do they mean when they say they are doing this capacity building, because you're still left dependent on them." [C02_JMA]*

In contrast, other participants described how they had benefited from partnerships through exposure to opportunities, entry into networks, and visibility to funders which might lead to future direct grant funding, e.g.:

> *"You want to partner with others because it also helps you to be within the community of the same people who are working over the same things and it increases your influence and net worth." [B01_EMR]*

Overall, despite some problematic aspects, participants overwhelmingly considered capacity strengthening to be one of the main benefits of working in partnership with HIC institutions.

Motivation and goals

It is important to discuss and legitimise each partner's interests and priorities and to identify mutual benefits and shared goals for the partnership. Balancing individual and joint objectives is important for the sustainability of a partnership and for developing trust.

A couple of participants commented that while they had not been personally involved in setting goals in partnerships, senior staff from their organisation were involved. One participant commented on having the opportunity to *"refine and contextualise"* [B01_JMR] goals that had been defined by others. Another participant commented that once goals were jointly agreed, each partner should be trusted to work towards them independently. They implied that this was not always the case and the HIC partner sometimes interfered in areas that were outside their remit.

Two participants described internal processes that made sure their institution's needs were met, for example, using a grant review form that served as a checklist for meeting minimum institutional requirements, and internal legal review of contracts. Meanwhile one participant was critical of some researchers in his institution who he felt took advantage of partnership opportunities to fulfil personal career ambitions, such as authorship on publications, without making a sufficient contribution to the partnership to justify these rewards.

Several participants had experienced partnerships where they felt that HIC stakeholders had prioritised their own goals over those of their partner and benefits were unevenly distributed in favour of the HIC partner, which led to a sense of being exploited, e.g.:

"You're more on the receiving end and you sometimes question and feel, 'Am I only being used to just meet the interest of somebody else?'." [A05_SA]

One participant differentiated between individuals' responsibility to negotiate a fair relationship with one another and structural unfairness which was difficult to tackle as an individual. Several other participants alluded to a blurring of the boundaries between individual and systemic inequity. For example, one participant described how individuals from HIC institutions were inclined to perpetuate systems (systemic inequity) which aligned with their own motivations and goals (individual inequity), e.g.:

"They work within this system that is designed in a super-biased way and somehow these well-meaning people are unable to come out of this. In some cases they might even be tempted to use this system to survive. To get a favour." [C01_SR]

Two participants commented that research should be guided by a higher purpose and should aim to achieve strategic goals and one lamented that his country "piggy-backed" *[B01_JMR]* on external priorities to chase funding rather than adhere to its national research agenda.

Resource contributions

Partners should discuss and agree what resources each stakeholder commits to a partnership and different types of contribution should be recognized and valued. Benefits accrued by each partner should be in proportion to the costs of participating in the partnership.

Funding is discussed in detail in a later section, but relevant to this section is the relationship between money, hierarchy and power that came through in several participant narratives. These participants felt that the institution that brought the funding – usually the HIC partner – privileged this over other resource contributions and it distorted the value attributed to each partner's contribution and how the HIC partner behaved. For example:

> *"There will be people with the money, there will be people with expertise, with field experience, …with political experience that are necessary to make this mission come true. …We must put all these things on the table. The assumption that one aspect…is more important, that the person with the money is more important than the person with the knowledge, doesn't make a lot of sense." [C01_SR]*

> *"If someone is bringing the resources, then definitely they are going to set the agenda" [D03_JMR]*

Participants described how their institutions often contributed great experience of the context in which research was conducted and had capacity to mobilise and coordinate field activities, and while some HIC partners valued these contributions, others overlooked them, e.g.:

> *"The local experts, more or less, are just data collectors because they have no contribution that stands." [C02_JMA]*

Another participant talked about how a HIC partner had not expected her to contribute very much. She did not feel patronised by this attitude but welcomed the HIC partner's acknowledgement of her contribution and she claimed to have gained in confidence because of receiving positive feedback and recognition.

Infrastructure was mentioned as a valuable resource contribution to several partnerships, for example, one participant described how they invited a HIC partner to join a project to do the laboratory analysis because their own lab did not have the capacity for the advanced techniques required.

One participant commented that each partner's contributions and the benefits they derived should balance, but there was no evidence from the interview data to suggest that this was explicitly discussed as part of establishing a partnership.

Agenda setting and study design

The research agenda should be set jointly. All partners should be involved in proposal writing and there is agreement on study design, especially in multi-sectoral research studies.

Participants reported a wide range of experiences of their level of involvement in study design. One participant categorised studies into four types which into which they had varying levels of design input. These ranged from: studies where a HIC institution wanted access to a particular country or health facility and there was low partner involvement in design; studies where the proposal was co-written by both partners (high partner involvement); studies where a HIC institution co-opted partners because of their expertise and gave them the opportunity to create a niche in the project to suit their interest (high involvement in a limited area); and studies initiated by the sub-Saharan African partner where they sought help from HIC partners (high involvement in design). Other participants described a similar pattern of variation across a spectrum from full involvement in study conceptualisation, design and throughout the project, to being co-opted on the cusp of proposal submission or once funding had been awarded and being expected to implement a pre-formed study. Participants commonly described being involved late and with limited scope to influence a study. The following quotes illustrate the two ends of this spectrum of involvement:

> *"It was a collaborative thing. It wasn't one organisation doing it, then seeking partnership after that. No, from the onset, it was a co-joined, developed protocol". [A04_JMR]*

> *"I'm handed with a proposal that is already done and they say, 'You get this through the ethical clearance and then you're going to be the local investigator of that study'. I really don't hold much say". [B01_JMR]*

Participants expressed their preference to be involved early in study design as this increased their engagement in and motivation towards the work and meant that the study was more likely to be appropriately costed and designed for the context, e.g.:

> *"If we are really partners then we should be sitting at the table together from the beginning, all the way through the budgeting, so that it's fair across the line". [C02_EMA]*

Several participants acknowledged that, especially in consortium applications involving multiple institutions, the lead institution often took an expedient route of writing most of the grant before involving partners. Proposals might arrive with very short notice to respond, which limited the extent to which partners could contribute. One participant working in a research administration function commented on how, in their interactions with him, academics from his own institution mirrored the variable ways in which HIC institutions worked with their partners: sometimes he was heavily involved in proposal development from the outset. At other times he was hardly involved at all.

Participants from two institutions had experience of leading proposal-writing. While they also participated in projects as sub-contractors, their institutions had become more selective in deciding which projects to get involved with. A couple of participants acknowledged that it had taken a long time for their institution to reach the stage where they were able to apply directly for funds, and in one case it was now their research office, rather than HIC partners, that determined how each institution participated in a bid:

> *"In the old days…the collaboration was mainly initiated from the researchers working from those collaborating situations, but currently we have …a special office which is dealing with those contracts, this is called the grant office". [C04_SR]*

In contrast to study design, agenda setting was largely considered to be the remit of funders. A couple of participants described the difference between research conducted with in-country funds which was scrutinised for its alignment to national priorities, and externally funded work where an overseas funder's agenda might override the implementing institution's strategic priorities and their country's national research agenda, e.g.:

> *"If the institution is not firm, then they are not able to negotiate, and you may realize that they have resources and…no sense of strategic direction, or even why…they're doing the work that they're doing. You become a money-oriented institution rather than pursuing certain strategic goals". [A03_JMR]*

Governance structures, institutional agreements

There should be a formal agreement to document partnership arrangements which are enacted through governance structures. Types of agreement include memoranda of understanding, codes of conduct, terms of reference and research agreements.

Legal agreements or contracts documenting the financial commitments between institutions were used without exception in project-level partnerships, often accompanied by a scope of work or terms of reference. Several participants drew attention to problems they had encountered in relation to legal agreements. For example, in one case a HIC institution had issued the sub-Saharan African partner with a consultancy contract which had unfavourable payment terms and limited their rights to use project data. In several other cases, there had been considerable contracting delays – both within the sub-Saharan African partner's institution and the HIC partner institution – which had negatively impacted on project progress.

There was variation in the use of non-legally binding documentation, such as memoranda of understanding (MOU), and differences of opinion about the value that these were seen to add. For example, one participant felt that MOUs were too remote from the engagements that they were in place to support to have any utility and were often poorly thought out, inadequately communicated and lacked a champion. This was a particular risk if the creators of the MOU left the institution without transitioning ownership for the partnership to someone else. In contrast, several other participants felt that MOUs helped to cement relationships, demonstrate commitment, define areas of collaboration, support multi-stakeholder engagements, e.g. between academic, government and implementing partners, and elevate the relationship to institutional level which created a more sustainable partnership.

Several participants referred to the value of a written agreement – whether as part of a contract or a non-legal document – to clarify roles and responsibilities, guide behaviour and ensure no partner was exploited. Such agreements could also be useful in serving as the basis for stepping away from a partnership if one or both sides felt that it was not working in the way set out in the agreement.

Only a few participants described partnership governance structures. These included a leadership working group, a steering committee and a governing council which had evolved from being a governing body for a single partnership into an independent group of interdisciplinary health professionals.

Dissemination

Issues around dissemination include the obligation on partnerships to make research findings available in a format appropriate to the audience and for a wide range of audiences to be considered in dissemination plans, including the populations involved in and affected by the research. Expectations and opportunities for authorship should be clear and agreed on by all partners.

Several participants described sharing research results with participants and government stakeholders and explained how they typically led these processes with little involvement of HIC partners. Dissemination plans were not widely mentioned, though a couple of participants described having been involved in projects where a dissemination plan was developed before data was collected and all interested parties were able to stake a claim to a topic of interest, while another had never been involved in discussing outputs until after data collection was completed.

Participants described a range of experiences with respect to authorship of peer reviewed academic journal publications. Several participants had experienced the HIC partner controlling who had the opportunity to contribute to academic papers and they had either been demoted from what they felt was their rightful position in the authorship hierarchy or had been excluded, despite their obvious contribution to the study, e.g.:

> *"They wanted to treat us as research assistants and not as partners in a developing country context…When it came to authorship, they wanted to be the ones who determine who was to participate". [D02_SR]*

> *"For me, it's very demeaning when you are passed over for an opportunity to co-author on work you conceptualised from scratch and you were available, because a student somewhere has only come in to analyse the data". [A01_SR]*

In contrast, some participants described situations where all contributors had been duly acknowledged according to their level of contribution and they had experienced no conflicts or constraints over authorship.

One participant called for more journals to follow the path of requiring manuscripts to include at least one author from each country in which a study was undertaken, while another mentioned the role that funders played in setting expectations for authorship. Two participants touched on situations where they felt authorship was undeservedly bestowed upon researchers from their own institution who had not contributed meaningfully to manuscripts. One implied that this approach undermined recognised conventions for authorship where an individual's contribution influenced whether and where in the authorship list they were named. The other described it as a negotiation tool whereby the HIC partner gained access to a study site in exchange for the sub-Saharan African researcher securing authorship irrespective of their contribution to the study.

Respect for affected populations, including local relevance

Research results should not only be made available in the public domain, but partners should push for the translation of findings into policy and practice. Research should only be done where there is buy-in from and relevance to the communities in which it is planned to take place and where it addresses a priority health issue in the country or region.

Several participants described how it was difficult to exert much influence over what research was done in their country since most funds came from outside the country and were almost always tied to an externally imposed agenda, as discussed above in the section on agenda setting. For example:

> *"You are saying 'no, but this is not the most pressing issue in the country'. And they say, 'well, it's the resources that we have and it's for [specific research topic]'." [A03_JMR]*

One participant described how being the lead applicant on funding applications gave his institution significant control to align research studies with the institutional research strategy and with national priorities. This was much more difficult, if not impossible, when acting as a sub-contractor where there was often minimal room to negotiate the scope of a project. Several other participants lamented the lack of funding for research from their national government which led to dependency on international financing and an externally imposed research agenda.

Despite the challenges of influencing the scope of research, several participants described having engaged closely with policy-makers. They gave examples of government stakeholders acting as gatekeepers to study populations, e.g. school-aged children, and ensuring that all research was aligned with their local priorities and mission to improve health in their community.

Data handling and ownership

Includes issues relating to research data collection, management, storage, sharing, use and ownership. There should be clear and jointly agreed plans between partners for all data related issues, with particular emphasis on data ownership and use.

Many participants had had experience of data sharing agreements and described a range of data ownership arrangements. These ranged from shared ownership, to funder- or lead partner-ownership allowing use by other stakeholders, to situations where the partner who had collected the data did not have access to it and was not involved in analysis and writing up. Several participants described slow and bureaucratic processes to request access to data, even when it had been collected in their own country, e.g.:

> *"For you to have access to this data, it's close to impossible…you have to write to the funder, you apply to the ministry, the ministry has to give permission then another person has to clear you and you are wondering, 'Why is it so difficult to access information or data that pertains to the community where we're living?'." [D03_JMR]*

A couple of participants described a disconnect between the principles outlined in data sharing agreements and practices operationalised at project level which resulted in situations where, for example, data was held and analysed outside of the country where it was collected, or there were conflicting interests to use the data, particularly where HIC students were involved, e.g.:

> *"Students…are selfish because they want to finish the PhD, so when you have that data there is some sort of scramble... Everybody's competing for the data." [C05_JMR]*

Funders were seen to be influential in determining how data was shared and who owned it and their policies were seen to drive data sharing practice.

Funding

Long-term core funding is critical for achieving partnership sustainability, yet most individual grants operate over a short, e.g. three to five-year, time horizon. More funding opportunities are available to HIC than LMIC partners and this affects how funds are channelled to each partner. This context demands that partnerships strive to distribute funding fairly between partners, funds should cover the full costs of engaging in research and partnerships must consider the implications of funder-specific rules and requirements on project feasibility.

Many participants reported access to funding as being a major benefit of collaborating with HIC partners, and some correlated this with being able to leverage the reputation and capacity of HIC partners, e.g.:

> *"If you are trying to win a large grant, I am sure you have to demonstrate that you have the capacity to do the research. So, if we were to bid for such grants as the prime [applicant] or on our own, where there is a requirement for lab capacity or other forms of capacity, then I'm sure we would not have had the research portfolio that we have now." [B02_EMA]*

The relationship between where funds originated and how they were disbursed was discussed at length by a number of participants. Funding originated almost entirely, if not exclusively, from HIC funders, but participants had a range of experiences with regards how funds were received into their institution. All four institutions had received grants directly from funders and in one case this was now the predominant mechanism. For the other three organisations, their experience was typically as a sub-contractor to a HIC institution which acted as the lead partner. Eligibility to apply for funding was one reason that participants cited as driving which institution was the primary grant recipient. One participant felt it was fair that when funding was derived from HIC taxpayers, a substantial share of this funding was retained and invested in the HIC where the funds originated. Another participant felt that it was reasonable that when funding originated from a HIC, the institution from that country should be the lead applicant, while a contrasting view expressed by a couple of other participants was that funding calls should always be open to applicants from any country.

Participants described how being in the lead partner role gave them more control over their strategic direction as they had greater influence over project scope and design, more opportunity to negotiate for funds, and more room to manoeuvre when delivering the project because of flexibility in how funds were used. This quote illustrates the opposite, i.e. the disadvantages of being in a sub-contractor position, especially as an implementing partner where operational complications could have a major impact on the resources required to deliver a project:

> *"Essentially, when people make decisions on your behalf, you end up running the operations which tend to be the most costly part but having the smallest proportion of the cake…If you are tied at that point, because of those lack of flexibilities, you bear that cost. So, the institution doing the actual implementation ends up subsidizing these organisations big time." [C01_SR]*

The same participant described how their organisation had chosen to move away from large scale field implementation because, despite large sums of money coming into the institution, this work generated very little intellectual capital or strategic value, e.g.:

> *"You find yourself running this massive mundane operation on behalf of other institutions so you cannot focus on anything strategic." [C01_SR]*

Several participants described being satisfied with the funding their institution received as a sub-contractor and felt that they had adequate opportunity to influence budget decisions, e.g.:

> *"I really don't care how much money is going to the UK, because I know that I've got enough funds to do this study." [B04_SR]*

Meanwhile, several others described circumstances where proposals came in at very short notice and it was not feasible to give a proper review or make substantial changes, or the study was already funded by the time they became involved and the scope of work had already been determined. One participant argued that researchers from his institution needed to take greater responsibility for negotiating a fair budget and had themselves to blame if their allocation of funding was inadequate, while others described how grant review processes in their institution helped to ensure all costs were considered and that their institution secured adequate funding to do the work.

Several participants were critical of funders with low indirect cost rates because this meant that their institution ended up subsidising projects. They were also critical of funders who offered higher indirect cost rates to the 'home country' partner compared to other institutions in a collaboration. Some participants described how their institution might waive its indirect cost policy in order to secure a grant, or their institution's policy under-estimated the real costs of running projects and exacerbated the issue of the institution subsidising research. Some funders and partners were rebuked for their stringent financial governance requirements given that they provided very little support to develop and maintain appropriate systems and disallowed financial management as a direct cost in project budgets. One participant drew attention to the imbalance in financial accountability where they had to report in great detail to a lead partner, yet the partner had no accountability towards them:

> *"You can't really question the decisions when it comes to how funds are spent, yet you as a partner in the south, you have to be accountable, even for a bottle of water…that you buy using Western project funds…We cannot hold them accountable, because the funding is not coming from the global south." [D03_JMR]*

Several examples of partnerships were described where the sub-Saharan African partner had been the lead applicant and sub-contracted to other institutions, including those in HICs. In one example, it had been the first time the funder had issued a grant in this way. The HIC partners on the grant were described to have initially resisted the new funding model, though they ultimately accepted and complied with it:

> *"The resistance was there initially in terms of them [HIC partners] being at the mercy of the Southern partner in terms of the Southern partner determining…what support they needed … and the amount of funding that could be made available for that support." [D01_EMR]*

In another case, a participant described the learning process that their institution was undergoing in deciding what requirements to place on sub-contracted partners for reporting and payment when they were in the lead partner role. They described how other partners had complained that their institution, as the lead partner, was holding onto funds, while they felt that they had a fair share of the resources given the additional responsibilities they had to manage the project. The opposite perspective on this issue was voiced by several other participants who described working with HIC partners who they felt had retained a disproportionate share of grant budgets. These participants described how feelings of mistrust and inequity were fueled when the lead partner lacked transparency about how funds had been allocated between institutions. Two specific grievances were voiced over what was perceived to be an unfair distribution of funds: firstly, that most of the funding often remained in the HIC institution when the work largely took place in LMICs. Secondly, that salaries and benefits for HIC staff were disproportionately high in comparison with the compensation that their own institution's staff received, even after having accounted for cost-of-living differences. A third grievance, which was more about scope creep than the initial distribution of funds between partners, was that having agreed to deliver a piece of work for a specified budget their institution had been expected to take on additional activities without any extra funding, e.g.:

> *"When you look at it and the expectation, it is somebody asking you to deliver a Rolls Royce and they're giving you money to buy a Toyota." [A05_SA]*

The very limited funding for research provided from within their country specifically and sub-Saharan Africa in general was a concern for several participants, who felt that in order to break away from the model of HIC dominance, it was necessary that their governments invested more in research, e.g.:

> *"In the South, governments give lip service to funding research. They'll talk big, they'll go to conferences and make all these commitments, but when it comes to actually dishing out the money*

it's peanuts compared to what our Northern partners may be getting through their governments…We need to walk the talk as well and empower our own institutions". [D01_JMR]

Long-term commitments

Long-term commitments help achieve sustainability and elevate relationships above individual projects towards institutional partnerships. It takes time and commitment to establish and build meaningful relationships between individuals and institutions.

Participants from three of the four institutions included in the study described how a HIC partner had been instrumental in founding their institution and the relationship continued in some form to the present day. For at least one of the institutions, the HIC partner remained on the board and had a strong influence on the institution's research direction. With these long-term partners, participants described collaborative activities which extended beyond research, including joint PhD programmes and faculty and student exchange. One participant discussed how the HIC partner provided resources to bolster their institutional capacity, which were also beneficial to the HIC partner, for example, interns and graduate students coming in on placements to support data analysis. The potential for a partnership to leave a legacy that went beyond the specific remit of the project was particularly associated with longer term partnerships, e.g.:

"We should also remember that we need to strengthen this department as part of the capacity building within this project, so that level of consideration is also, it's beyond the research. To make sure you will also leave a footprint after the research is done." [B01_EMR]

Several participants described how it was easier to work with HIC partners who were experienced in working in low-resource settings, understood the constraints of the context and were willing to adapt their own systems and requirements to fit the needs of their partner, and this was often the case where a relationship had been established for some time, e.g.:

"When you're working with … experienced collaborators they've got mechanisms to start asking about things…way ahead of time… so they do anticipate that things can go wrong, and they know how to communicate." [B04_SR]

Overarching analysis

In the preceding sub-sections I have presented the study findings using a thematic analysis which used key domains for effective partnership as identified in the scoping review of guidelines for partnership described in Chapter 2. In this section I take a step back and make connections across these topics in an overarching analysis that aims to interpret ‘what is going on’ in contemporary global health research partnerships.

I start with the observation that all the partnerships that participants described had a focus on improving health in one or more low- and middle-income countries. No examples were given of a partnership where the focus was on improving the health of citizens of a HIC. This aligns with the widely understood mission of ‘global health’ to improve health outcomes for disadvantaged individuals and communities and reduce health inequities across the globe. However, it is also fundamental to framing the context within which partnerships were initiated and operated, where the sub-Saharan African partner’s country was always an intended beneficiary of the research. Consequently, the sub-Saharan African partner was typically responsible for the implementation aspects of a study and sometimes ran sizeable field or clinical operations, while the HIC partner typically occupied a technical advisory role, which set up a hierarchical ‘implementer-overseer’ dynamic. A similar dynamic was generated in how partnerships were financed: funding was derived almost exclusively from HIC governments and donors and was typically channelled through a HIC partner. There were various reasons for this, including eligibility criteria and individual and institutional experience and expertise. Irrespective of the reason, a consequence was that the institution that received the money from the funder became the lead partner contractually, whereby it was responsible for reporting to the funder and sub-contracting to partner institutions. Most participants strongly associated the institution that brought the funding as the institution that set the agenda and held power in the relationship. However, of particular interest were the examples where a participant’s institution had been the lead partner. Several participants described facing resistance from one or more HIC partners who were unaccustomed to being in a subordinate position. In some cases, HIC partners had continued to try to exert the level of control and influence that was typically associated with the responsibilities of being the lead partner. This suggests that power was in part determined by the structural relationship between partners, but also by prevailing expectations and attitudes. The sub-Saharan African institutions in the study that had considerable experience of submitting grants as the prime applicant were well established and had a long history of working with HIC partners. Participants from these institutions attributed a large part of their institutions’ scientific and grant management capacity to the support they had received from HIC partners. However, they also shared examples across the research lifecycle, from conception of an idea to completion of a study, of issues that they felt were inequitable. This suggests that while many participants acknowledged the personal benefits they had received and welcomed the status that they felt HIC partners had helped their institutions to achieve, the way in which this occurred mattered, and it remained pejorative. Examples that participants gave of HIC partners trying to dominate how partnerships worked, who could use research data and who authored papers, were seen as attempts to protect their own interests and perpetuate a position of power.

Participants also described some very constructive partnerships where they felt there was appropriate recognition and respect between partners and the partnership felt equitable even though it was not equal. Interestingly, while it might be expected that the smaller the difference between partners in terms of institutional capacity and resources the greater the chance that the partnership would be considered equitable, this did not come through in the findings. Some of the partnerships that were described most enthusiastically by participants were those where resource and capacity differences appeared greatest, and participants self-identified as subordinate to HIC partners.

While there was no sign of an increase in research funding commitments from the governments of countries in which participants were based, participants gave several examples of HIC funders changing their funding models and providing more opportunities for sub-Saharan African institutions to receive funds directly. This appeared to be contributing to a virtuous circle whereby the stronger the capacity of the sub-Saharan African institution, the more easily they could win funds directly, the more they could influence what research they engaged in and the more experience they got of managing grants as the lead partner, which further strengthened their position. This confluence of money, capacity and power seemed to be a central construct driving how partnerships worked.

My observation on fairness in the research partnerships described by participants is that there was no unified perspective. Partnerships varied from being considered very fair to very unfair, and similar issues were interpreted quite differently by different participants. For example, some participants felt it was very reasonable that the lead partner should come from the country providing the funds for research, while others felt that eligibility restrictions were unfair and grants should be available to anybody to apply for. Some participants were satisfied when their institution received adequate funds to deliver their scope of work and had no interest in what funding the HIC partner received, while others were critical of HIC partners' lack of transparency around budgetary allocation. Some participants felt that it was fair for a significant proportion of grant funds to remain in the country that provided them, while others felt that HIC partners usually retained a disproportionate share of funding. This particular issue also illustrated another consideration: that an individual's or institution's position in the partnership structure affects the extent to which something appeared fair or unfair. For example, participants from an institution that had had considerable experience of leading and managing grants had found their partners believing that they were holding onto a disproportionate share of funds, while they felt that the funding they retained was necessary to cover the responsibilities and risks associated with administering the grant.

There was a tension between the views of participants who expected HIC partners to provide capacity strengthening as part of a partnership, and those who felt that their individual and institutional capacity was undervalued. In terms of the type of capacity development that partnerships offered, PhD training was mentioned by a number of participants as being a major benefit and something which had positively shaped the management and leadership of their institutions, while other participants felt it was unfair when capacity development opportunities focused narrowly on PhD qualifications and did not address the broader skills and knowledge required to win and manage grants. Some participants had had experience of HIC partners denying them opportunities to contribute to authorship, while others knew of colleagues who had taken advantage of partnerships to secure authorship on papers that they contributed little or nothing to.

While participants who experienced HIC partners as arrogant and supercilious never found this acceptable, there were also many HIC partners who participants described as being respectful, courteous and humble.

What emerges from this complex array of participants’ experiences is that participants had varying views on fairness about similar issues, and that there was considerable variation in the perception of fairness between different partnerships, while, overall, partnerships appeared to be becoming gradually more equitable along the domains identified in guidelines for partnership.

Chapter 5: Discussion

In this study I set out to explore how stakeholders in a sample of research institutions in sub-Saharan Africa experience partnership with HIC collaborators. Partnership between HIC and LMIC institutions remains a prominent mechanism by which global health research is conducted, and at the time when I began my inquiry, in 2020, there was a sizeable body of literature in the academic and practitioner domains describing how such partnerships function, identifying challenges, and advocating for better practice. Underpinning calls for improved practice was the criticism that partnerships are unfair and disproportionately advantage HIC researchers and research institutions. In the introduction to this thesis, I have described specific problems that have been identified, many of which can be traced back to an imbalance in power and resources between HIC and LMICs. One response to tackling these problems has been the development of principles and guidelines for partnership. As the first objective of my study, I summarised this material as a way of identifying key areas of focus for partnership improvement. I conducted a scoping review of principles, guidelines, frameworks and models for partnership from the academic and practitioner domains. This is described in detail in Chapter 2: Scoping review in the form of a journal manuscript. I used the themes from the scoping review to inform the second objective of my study, which was a qualitative study of how stakeholders in a sample of institutions in eastern and southern Africa experience partnership with HIC collaborators. I wanted to explore whether participants' experiences resonated with themes that have been previously documented, whether there were other issues which need to be considered, whether there was any indication of change in partnership practices and to consider what might be driving or inhibiting change. The study contributes to the body of work on research partnerships by documenting sub-Saharan stakeholders' experience at a particular point in time in the evolution of global health.

Concurrent with my study has been an upsurge of attention on decolonising global health, the trajectory of which I have described in the introduction chapter along with definitions of key terms and a mention of influential thinkers. This movement challenges the foundations on which global health is built and demands a re-examination of the historical framing of Western science as a universally applicable epistemology (Hirsch, 2022). Proponents of decolonising global health argue that the structures and ideology of global health remain heavily imbued with neo-colonialism (Eichbaum et al., 2021). Most guidance for partnership has been developed by HIC institutions during this neo-colonial era. Guidelines have largely sought to improve practice within the existing system in order to achieve fairness. The decolonising global health movement demands a more radical approach of demolishing the existing system and rebuilding a new one, while considering which features of the current system should be maintained. I will reflect later in this chapter on the implications of the decolonising global health movement for research partnerships. I will also draw on several theories of power - the imbalance of which between partners from HICs and LMICs has long been associated with inequities in global health research – to describe what is going on in partnerships. While I did not conduct a power analysis as part of my study, nor do I claim to have mastered the myriad theories of power, I will try to unpack the concept in order to provide a more nuanced understanding of how power relates to research partnerships. 'Power imbalances' are often referred to in the literature on research partnerships, but with rather little interrogation of types of power and how power can shift between actors. This is of particular relevance for considering what is going on in projects where a sub-Saharan African institution is the lead partner and there has been a partial shift in the balance of power. Before moving into these broader reflections on power and decolonising global health, I will discuss the findings of my qualitative study as they pertain to key domains for equitable partnership that emerged from my scoping review of principles and guidelines for partnership. I will consider the extent to which the partnerships described in my study exhibit principles of fairness, and comment on how the study findings connect with wider discussions and changing practice in the field. My interpretation of the findings is inevitably influenced by my positionality as a white European female who has worked for LSHTM - a HIC research institution - for over a decade, the last six years of which have been based at an internationally renowned research institution in Kenya. I have described my positionality and the reflexivity which I have tried to bring to this study in the Methods chapter (see p. 58). It is perhaps useful to reiterate here that I acknowledge that I am a beneficiary of the neo-colonial system of global health and am myself entangled within the partnership paradox (Crane, 2010) whereby addressing partnership inequality is my aim while also the basis on which this study has been possible.

Common ground in partnership guidance

I decided to conduct a scoping review of the academic and practitioner literature on principles, guidelines, frameworks and models for research partnership because, in my early forays into the literature, I came across a variety of tools to support research partnerships but no summary of these tools. Unbeknown to me, at the same time as I was conducting my scoping review, two other research groups, Faure *et al*. (2021) and Monette *et al.* (2021) were finalising similar reviews, both of which were published in early 2021. My review was published in April 2022. The publication of three similar reviews within a relatively short space of time suggests both the accumulation of a critical mass of literature on the topic of partnership guidance, and an appetite from a global health audience for efforts to distil this guidance.

While the objective, scope and methods of each of the three reviews were slightly different, they shared considerable common ground in terms of the themes that they identified as being important in research partnerships. The approaches taken by each review and commonalities in the themes identified are discussed in Chapter 2: Scoping review and are not repeated here. I will, however, draw attention to the framing of equity within each review.

Faure *et al.* (2021) set out to define what constituted equity in international health collaborations. They identified 10 domains which were critical to the development of equitable collaborations. All sources had to have an explicit focus on equity to be included in their review. In contrast, Monette *et al.* (2021) sought to identify commonalities in the principles guiding 'good' health research partnerships and drew attention to principles about which consensus was lacking. They identified equity as a principle that emerged from guidance on 'good' health research partnerships and was found in multiple guidelines. They went on to reframe equity as a *'shared vision, fundamental goal, or encompassing value'* (p.8) for 'good' partnership. That is to say that they did not start by selecting sources based on a focus on equity but reached the conclusion through the course of their review that equity was a value that underpinned all sets of principles for 'good' partnership. Similarly to Monette *et al.* (2021), I also did not select guidelines *because of* their focus on equity. I included sources which articulated principles, guidelines, frameworks or models for research partnerships between HIC and LMIC institutions. Sources incorporated into my review included terminology in their titles such as '*fruitful'* (RAWOO, 1999), '*successful'* (Larkan et al., 2016; Migot-Adholla & Warner, 2005), '*effective and innovative'* (Association of Universities and Colleges of Canada, 2013) and '*ethical'* (Kennedy et al., 2006) alongside '*fair'* and '*equitable'* (Cornish et al., 2017; Dodson, 2017; Ecosystem Services for Poverty Alleviation, 2018; Newman et al., 2019). My starting position was, nevertheless, that equity should be a normative aspiration for partnerships. That is, it is right that partnerships strive to be fair, and my assumption was that this position would be shared by guideline authors and could be used as a unifying value underpinning guidelines. Similarly to Monette *et al*. (2021), I did indeed find that guidance loosely coalesced around equity as a central construct and, like Faure *et al.* (2021), I used the common themes emerging across guidelines as indicators or domains of equitable practice. My intention was to analyse how stakeholders at institutions in sub-Saharan Africa experienced partnership in relation to the domains of equity identified in the review. I felt this would be a useful way to gain insights into any perceived inequities because principles for equitable practice are typically a response to inequities that have been identified. For example, the issue of HICs dominating what topics get researched is addressed by a principle of joint agenda setting, and the issue of HIC researchers extracting data from LMICs is addressed by a principle of fair sharing and use of data.

At the same time as using domains of equity as a starting point for exploring stakeholders' experience, I was mindful that guideline development has been disproportionately influenced by stakeholders from HICs (Binka, 2005) and guidelines derive largely from within the neo-colonial implementation of global health that is increasingly being challenged. I was keen to remain open to the possibility that sub-Saharan African stakeholders may have other priorities to those identified in existing partnership guidance and that domains of equitable practice may look different from different perspectives.

In the next part of this chapter, I will discuss the study findings in relation to prominent domains for partnership fairness and the underlying inequities that they seek to address. I will attempt to relate participants' experiences to theory and practice in the field.

Roles, responsibilities and ways of working

Guidelines for partnership suggest that equity in roles, responsibilities and ways of working can be achieved through having regular, open communication where partners are transparent and accountable to one another, particularly around issues of finance and administration, and there are jointly agreed mechanisms for making decisions and resolving conflicts. Partnership guidelines place greater emphasis on how partners relate to one another than the roles they occupy, and a delineation of roles and responsibilities between LMIC and HIC institutions is often assumed. The most common configuration for the partnerships described by study participants in this study was one in which a HIC institution acted in a technical advisory capacity and the sub-Saharan African institution led project implementation, which reflects the division assumed in much partnership guidance. This division was exacerbated when the HIC was the prime grant recipient, which was the case in most of the examples in my study. Some of the most illuminating examples were where a sub-Saharan African institution had been the prime recipient of a partnership grant. Participants reported how HIC partners sometimes continued to act as if they were leading the project. This suggests that a degree of hierarchy is expected whereby the lead partner takes on certain roles and responsibilities. However, it also implies that a change in partnership structure may not in itself be sufficient to override engrained patterns of behaviour and self-identification in which HIC partners expect to operate as the dominant constituency. The concept of *habitus* from Bourdieu's theory of power and practice (Bourdieu, 1977), in which actors are conditioned to behave in certain ways based on prior experience, offers a way of understanding this phenomenon and will be discussed further in the section on power, position and capacity (see p. 114).

Without exception, all examples of partnership projects in this study addressed health issues that were primarily a concern in one or more sub-Saharan African countries, rather than in a HIC setting. This remains typical in 'global' health, a term which provides a veneer of universality that is inconsistent with the discipline's focus on health issues in LMICs (Eichbaum et al., 2021) and has implicit connotations of hierarchy among the HIC health and development institutions that use it (Khan et al., 2022). Whether language entrenches or reveals underlying attitudes, it was the case in this study that some HIC partners reportedly brought an attitude of paternalism, if not superiority, to their 'global' health research engagements. This was not, however, universal: other relationships were described as mutually respectful. A division of labour was not itself considered problematic provided that both partners agreed on roles and responsibilities and co-developed processes for handling, for example, communication, decision-making and conflict.

Some HIC institutions were reportedly inflexible and reluctant to consider mutually workable solutions when in the lead partner position, while expecting different rules to apply when they were the sub-contracted partner. A pertinent example was a HIC institution that required partners to adhere to their financial reporting requirements rather than make modifications that considered the limitations of partners' financial management systems. Meanwhile, when the HIC institution was a sub-contractor in a partnership, they failed to provide the level of financial reporting detail that the lead sub-Saharan African partner requested. This could be seen as another illustration of a HIC partner displaying a dominant *habitus* (Bourdieu, 1977) arising from their habituation to setting the rules rather than being governed by the rules of their sub-Saharan African partner.

Using the same case to illustrate a different point, the sub-Saharan African lead partner felt that it was their prerogative to determine what information they shared with sub-contracted collaborators and that it was neither necessary nor appropriate to provide full transparency. This conflicts with partnership guidelines that call for transparency and mutual accountability (3rd World Conference on Research Integrity, 2013; Ecosystem Services for Poverty Alleviation, 2018; Gaillard, 1994; Newman et al., 2019; Rethinking Research Collaborative, 2018). It suggests that some issues that have been framed as inequities between HIC and LMIC partners could be interpreted through a difference lens. This example relates to structural power (Barnett & Duvall, 2005) whereby the lead partner is accountable to different stakeholders – notably funders - compared to sub-contracted partners who are accountable to the lead partner. Structural power is exercised according to the position in the partnership structure that each partner holds. Historically, HIC-LMIC inequities and structural power imbalances have looked similar because the institution holding more structural power has been the HIC partner, but examples such as this suggest the need for a more nuanced understanding.

Capacity strengthening

Capacity strengthening was overwhelmingly considered to be one of the main benefits of partnering with HIC institutions. Guidelines for partnership focus on capacity strengthening as an intentional activity. While the study findings confirmed that capacity strengthening embedded formally into the design and delivery of a partnership was valued, so too was learning acquired informally through the process of sub-Saharan African partners collaborating with HIC partners. There was a strong sense that to succeed in the international research arena, it was necessary to learn the rules of the game as it is currently played in relation, for example, to applying for grant funds, networking and publishing. Arguments have been put forward that the 'game' of global health can only become fair if a new set of 'rules' is developed (Chaudhuri et al., 2021). The case for dismantling the existing structures within which global health operates is discussed later when we look at the implications of the decolonising global health movement (see p. 115), while examples of new rules that are already beginning to take effect are discussed in sections on dissemination (p. 104) and funding (p. 108).

There were more examples of capacity strengthening for research – particularly, PhD training - than for research management and systems strengthening, which is consistent with other evidence (for example, Franzen et al., 2017). There have been efforts to map research management capacity in Africa (Consort, 2017a, 2017c) and to strengthen research management systems within projects and consortia (Wallis & Bates, 2016). Recent initiatives such as the Research Management Programme in Africa (https://www.aasciences.africa/aesa/programmes/research-management-programme-africa-rempro-africa) organised by the African Academy of Sciences and the Good Financial Grants Practice standard (https://www.aasciences.africa/ggc/standard), also developed at the African Academy of Sciences, aim to strengthen research management at a systemic level. This type of strategic initiative may be more appropriate for developing research management capacity at institutional level than attempting to embed it within individual projects, because of the complexity and resources required to strengthen systems. However, given that a number of the partnerships described in this study were long-term institutional partnerships, the paucity of examples of research management capacity strengthening may also indicate a bias among HIC institutions in the areas that they prioritise and are equipped to support. This is perhaps unsurprising given that attention on research management capacity in HIC research institutions has also lagged behind scientific capacity development and the contribution of administration continues to be under-acknowledged relative to the contribution of research (Acker et al., 2019).

The study findings revealed varied opinions on whose capacity should be strengthened. Some participants were very clear that they expected HIC partners to provide resources and expertise to build their capacity. Others felt that each partner had something to offer to the other but that HIC collaborators did not always recognise this. A number of partnership guidelines advocate for mutual learning and growth (Association of Universities and Colleges of Canada, 2013; Cornish et al., 2017; Newman et al., 2019; Stöckli et al., 2018) and there is pressure to move away from a giver-receiver paradigm (Binagwaho et al., 2013; Binka, 2005; Prasad et al., 2022). There have also been calls for greater diversity in the type of knowledge that is accepted and valued in health and education. Hall and Tandon advocated for 'knowledge democracy' (2017) and Visvanathan called for *'cognitive justice'* (Visvanathan, 2009), while De Sousa Santos claimed that the *'abyssal thinking'* of modern science (De Sousa Santos, 2007) has killed other knowledge systems, particularly non-Western philosophies, in a process of '*epistemicide',* and that this is to the detriment of our understanding of the world. In specific reference to global health, concerns have been expressed that capacity strengthening initiatives often serve to reinforce existing hegemony (Bamford, 2019) and that this is inadequate and a reassessment is required of what knowledge is valued, in a process of that Atuire and Bull describe as *'epistemic decolonisation'* (Atuire & Bull, 2022, p. 67). In this study, what was apparent was the desire from stakeholders in sub-Saharan African institutions to expand their scientific technical knowledge through partnership and to increase their adeptness at operating effectively within the existing, HIC-designed, system of global health. Meanwhile, study participants also wanted their expertise and experience to be recognised and valued, especially in areas in which HIC institutions were less proficient. This is not an argument for knowledge democracy or cognitive justice in quite the way that Hall and Tandon (2017) or Visvanathan (2009) described them, but rather a request for recognition and valuing of all domains of expertise that are essential to the implementation of global health research. Currently, some domains e.g., funding and technical knowledge, are valued more highly than others e.g., organisation of field activities and understanding of the context in which research takes place. What I infer from this is that it remains essential for there to be opportunities for knowledge- and skills-based development for those who want it and that this does not need to conflict with ideals of knowledge democracy and cognitive justice which should also be pursued. Greater acknowledgement of the different domains of expertise that are needed to deliver global health research may also open the door to an appreciation of different ways of knowing and what these can contribute.

Study participants had mixed experiences about the level of HIC partner willingness to involve them in all aspects of the research process. Some felt fully engaged throughout the research lifecycle, while others felt that HIC partners manipulated the areas in which they included their partners. This range of experiences reinforces the importance of discussing each partner's roles and responsibilities early. Some HIC stakeholders may simply not perceive the value to their partners of exposure to certain aspects of the research process, for example communication with funders. If the conversation were framed around capacity strengthening, it might change the way in which HIC stakeholders think about involving their partners. It also requires a shift in the perception of what to prioritise and how success is measured: when under pressure as the lead partner to deliver outcomes, HIC partners may seek the most time efficient approach, which may conflict with an approach that prioritises partners' learning. Funder and institutional metrics that recognise capacity strengthening outcomes alongside scientific outcomes are likely to help and have been advocated (Boum Ii, 2018). The assertion made by a couple of study participants that HIC stakeholders intentionally limit development opportunities in order to perpetuate a dynamic of dominance-subordination over their partners is more sinister. It implies the persistence of a colonial mindset characterised by entitlement and control (Walsh et al., 2016) and suggests that attempts to induce change are likely to be resisted.

Motivation and goals; agenda-setting and study design

Motivation and goals and *agenda-setting and study design* were identified as separate topics in my scoping review of partnership guidelines. The former emphasises the need to value each partner's respective interests as well as identify mutual benefits and shared goals, and the latter is about the research agenda being set jointly and all partners being involved in proposal writing and study design. I will discuss them together because of the interaction between them in the study findings.

The study findings revealed multiple levels of influence and spheres of control in determining how research studies were designed. Funders were seen to have ultimate control over setting the broad agenda for the research they chose to fund, which has been identified as a problem because funders' interests may not be aligned with the priorities of the countries and institutions where research is conducted (Binka, 2005; Bradley, 2017; Coloma & Harris, 2009; Franzen et al., 2017; Kunert et al., 2020; Viergever et al., 2010). In this study, participants described feeling pressurised to accept partnership offers in order to secure funding for their institution and to meet individual targets for career progression. This is not unique to sub-Saharan African stakeholders – HIC researchers also scramble for funding and adapt their research ideas to meet funders' interests. This may go some way towards explaining why identifying mutual benefits and shared goals for a partnership did not appear to be a widely pursued element of partnership development: the imperative to secure funds may have been sufficient motivation to engage in a partnership, with each partner's goals being corralled within the boundaries of funders' interests. Having said this, several participants did talk about goals. Some criticised HIC institutions for putting more emphasis on achieving their own goals than those of their partners. Seeking gains, potentially at the expense of the partnership as a whole, has been attributed to a system of benefits and rewards in HIC global health institutions which do not reward long-term commitments between partners (Bradley, 2008) nor the policy-oriented, applied research outputs which partnerships may generate (RAWOO, 2001). There is some evidence of this changing. For example, the criteria for academic promotion at one UK university, LSHTM, was updated in 2022 to place more emphasis on partnership outcomes (London School of Hygiene and Tropical Medicine, 2022). Using a research partnership to satisfy personal goals appeared to be something that any individual with the opportunity might exploit: several study participants described how researchers from their own institutions had used partnership projects to fulfil performance criteria in relation, for example, to funding and academic authorship.

Returning to the notion of levels of influence and spheres of control, participants felt that influencing study design was a more realistic expectation than having control over the broad research agenda. I agree that study design falls more squarely within the scope of a partnership than does agenda-setting, although some funders have very broad funding remits that allow for significant applicant discretion e.g., the Wellcome Trust's Fellowship schemes. The extent to which a partner can influence study design is moderated by who the lead applicant is and how they operate. Lead applicants choose what funding they apply for and the extent to which they involve partners in study design, and they can often engage early with funders to influence project scope. In this study, the prime applicant was more often than not from a HIC and sub-contracted the sub-Saharan African partner to work on grants that they had already identified, if not already secured. Participants had a range of experiences of involvement in study design under this configuration of partnership, from being expected to implement pre-formed proposals through to having equal design input to the HIC partner. One institution in the study was now the lead applicant for more than half of the partnership grants it was involved with. This conferred benefits, including greater autonomy and influence over study design and budget.

Partnership guidelines emphasise the importance of all partners being involved in proposal writing and contributing to study design (Afsana et al., 2009; Alba, Verdonck, et al., 2020; Association of Universities and Colleges of Canada, 2013; Carbonnier & Kontinen, 2014; Cornish et al., 2017;

Dodson, 2017; Ecosystem Services for Poverty Alleviation, 2018; Gaillard, 1994; RAWOO, 1999; Research Fairness Initiative, 2018; Stöckli et al., 2018). Tight funder deadlines, slow institutional review procedures and heavy applicant workloads compromise the extent to which engagement prior to proposal submission happens. Research institutions should lobby funders for longer application lead-times to facilitate greater involvement of all partners, and some funders have also pushed this agenda forward by requiring all partners to be named and involved at application stage. There are accusations that this has been tokenistic (Gautier et al., 2018; Murphy et al., 2015) and there would be benefit in greater scrutiny of whether early partner engagement is genuine, but it offers a step in the right direction. The involvement of all partners in study design also pertains to technical and written language skills – funders require grant applications to be submitted in a specified language, often English, which disadvantages applicants for whom this is not their first language – as well as to the attitude of the lead applicant. My observation from this study is that there remains considerable variation in the capacity of sub-Saharan African research institutions to lead grant proposals and in the extent to which HIC partners embrace partner involvement in study design. Efforts must be made to move both issues forward.

Resource contributions

Partnership guidelines suggest that each partner's contributions should be discussed and agreed, and different types of resource contribution should be valued (3rd World Conference on Research Integrity, 2013; Afsana et al., 2009; Association of Universities and Colleges of Canada, 2013; Cornish et al., 2017; Dodson, 2017; Ecosystem Services for Poverty Alleviation, 2018; Faure et al., 2021; Gaillard, 1994; Kennedy et al., 2006; Larkan et al., 2016; Newman et al., 2019; Research Fairness Initiative, 2018; Stöckli et al., 2018; Trust, 2018). Some guidelines propose that benefits accrued by each partner should be in proportion to the costs of participating in the partnership. There was no evidence in this study that any cost-benefit analysis at the level of a partnership as a whole happened in practice. Given claims that the benefits of partnership have been disproportionately accrued by HIC partners (Bradley, 2007; Crane, 2010; Eichbaum et al., 2021) the absence of joint discussion on costs and benefits was notable. It was not possible to ascertain whether this reflected the difficulty of attributing costs and benefits to different resources and activities, unequal power relations that inhibited such discussions from taking place or was an issue that stakeholders did not consider to be important. Participants did, however, express opinions about costs and benefits in relation to specific aspects of partnership e.g., budget allocation, and whether these were fair.

Bourdieu's theory of power suggests that economic power has primacy over other forms of power (Bourdieu, 1977; Bourdieu, 2008). In this study, this was evidenced by the authority attributed to the institution that brought funding into the partnership, which was usually the HIC partner. Other contributions were deemed to have less value attributed to them. Several participants felt that their understanding of the context in which research was conducted and their ability to mobilise and coordinate field activities, which Bourdieu described as 'cultural capital' (Bourdieu, 1977), were undervalued by HIC partners and there was a perceived hierarchy of contributions, where money and resources were at the top and cultural capital was lower down.

The situation whereby HIC stakeholders limit opportunities for LMIC partners to operational activities (Craveiro et al., 2020; Mony et al., 2005) has been described as a relational structure of 'subordinate integration' (Feld & Kreimer, 2019, p. 166) and this seems an apt description of the experience that some participants' had of being pigeonholed into operational areas and denied access to others.

Governance structures and institutional agreements

Having a legal agreement in place where there was an exchange of funds between institutions was universal for all partnership projects described in the study, though some concerns were raised over the nature and timeliness of such agreements. Imbalance in the legal capacity of collaborating institutions leading to unfair contracting has been recognised as an issue in partnerships which needs to be addressed, and dedicated resources have been developed to improve how contracts are negotiated. For example, the Council on Health Research for Development's (COHRED) Fair Research Contracting toolkit (http://frcweb.cohred.org/) aims to support vulnerable populations in poorly resourced settings to negotiate fair and ethical research contracts. An observation from my own professional experience is that HIC research institutions' legal departments are often under-resourced and operate at arms' length and without a sense of connection to the research activities that they are there to facilitate. A mandate to protect their own institution can come at the cost of severe delays and contracts that place disproportionate demands on sub-contractors. There was some evidence of this in this study, and of sub-Saharan African institutions being expected to find workarounds to operating without a contract that would not be tolerated in HIC institutions. Bureaucratic power (James, 2011) describes the power derived from knowledge of administrative processes. In the case of research partnerships this is often exercised by the HIC partner by virtue of their experience of leading grants and managing the associated administrative and legal processes. Even when HIC partners are in a sub-contractor role, they may still wield more bureaucratic power than LMIC partners because of the relative wealth of administrative experience and resources available within their institution in comparison with LMIC institutions. This behoves HIC partners to ensure that due diligence processes, payment terms, data ownership rights, reporting requirements etc. balance risk and self-interest with fairness to their partners' position and interests.

The value attributed to MOUs and other non-legally binding forms of agreement was mixed. They were sometimes seen to cement a partnership through demonstrating institutional commitment that went beyond individual relationships, while other times were considered to be too far removed from partnership activities to be relevant and their symbolic value was outweighed by lack of practical application. Written commitments that clarified roles and responsibilities and guided behaviour were, on the other hand, seen to be useful, particularly for holding partners to account and ensuring that no partner was exploited. Such commitments were in some cases considered to be practical aids to support partnership functioning, but in others they appeared to reflect a lack of trust between partners.

Dissemination

Findings relating to dissemination fell broadly into those pertaining to sharing results with national audiences, including policy stakeholders and study participants, and with an international audience through publication in peer-reviewed journals. The importance of sharing results with the community in which a study has taken place has been emphasised in several guidelines for partnership (Alba, Verdonck, et al., 2020; Cornish et al., 2017; Newman et al., 2019; Trust, 2018), yet in this study participants considered this responsibility to fall squarely on the partner in the country where the project was conducted. It did not come across as an issue applicable to partnership which suggests that the institutions implementing field activities considered it their responsibility to provide feedback to communities, perhaps underlined by the requirements of ethical review boards.

Authorship of academic journal publications has been a much-discussed example of partnership inequity. Hedt-Gautier *et al.* (2019) conducted a systematic review of authorship in collaborative research in Africa which showed that African authors are often 'stuck in the middle' with HIC authors typically book-ending papers as first and last authors, a finding corroborated by Mbaye *et al.* (2019). Other bibliometric analyses have reported a mixed picture. A few have found LMIC authors to be well-represented on papers reporting research done in the country in which they are based (Plaisant et al., 2010), but most have found that LMIC authors are under-represented (Boum Ii, 2018; Iyer, 2018; Kelaher et al., 2016; Schneider & Maleka, 2018). Two published papers are included in this

DrPH thesis. The first, a scoping review, is authored by myself and my supervisors, of whom two are from the UK and one is from Cameroon, working in Kenya. The second paper, based on the qualitative study findings, includes as authors the key contacts from each of the institutions involved in the study where they expressed an interest in contributing to authorship. I followed the convention of listing authors in the order which reflected their level of contribution to the paper, with my supervisors listed as the last three authors on the paper to recognise their input at earlier stages in the conceptualisation and design of the study as well as in commenting on the draft manuscript. Could these collaborators have been listed in a different order, and could the author list have been different? Certainly. In hindsight, I reflect that my consideration of how much to involve collaborators from the institutions that gave me access was constrained by my assumptions about what doctoral level research requires and the need to demonstrate my own intellectual contribution. This ostensibly benign excuse is rather weak, and I am mindful for future work to pay close attention from the outset as to who should be involved and how so that authorship follows logically from collaborators' involvement in a study.

Frustrations over being excluded from authorship opportunities were raised by participants in this study, but this was not a universal experience. Participants also described authorship being distributed fairly, including opportunities for first- and last-authorship on papers. Several participants gave examples of colleagues who had been named as authors where they felt this was unjustified because of the minimal contribution these colleagues had made. Their concern was that this undermined established principles for authorship, such as those advocated by the International Committee for Medical Journal Editors (2022) and did not reflect well on their institution.

Journal publishers are increasingly engaging with issues of equity and ethics, having initially been pushed by funders to remove barriers to accessing research. The shift in emphasis from pay-to-view to pay-to-publish as advocated by 'Plan S' (https://www.coalition-s.org/) is an example. While not without challenges, including sometimes high fees to publish despite tiered fee rates to reflect the income level of the country from which the fee is paid, this is a move toward greater accessibility of research. Publishers are now also voluntarily taking a more active stance toward promoting equity in the papers they publish. For example, in a recent editorial, *Nature Portfolio* committed to improving inclusion and ethics in its journals (Nature, 2022) informed by the Global Code of Conduct for Research in Resource-Poor Settings (Trust, 2018). The publisher PLOS and editors of a number of other journals have also called for measures to promote equitable authorship in papers that report on research conducted in international partnerships (Morton et al., 2022).

Promotion criteria for researchers seeking career development have traditionally had a strong focus on publication record. Thus, pressure to increase representation of LMIC authors, particularly in first-author positions, may present a conflict of interest to HIC researchers seeking career progression. There is some evidence that HIC academic recognition and reward metrics are changing. For example, in 2022 LSHTM's criteria for academic promotion (London School of Hygiene and Tropical Medicine, 2022) were updated to place greater value on co-investigator and not only principal investigator roles and to give LSHTM staff credit for papers on which partners took more prominent authorship positions. There is a risk that by giving credit for 'in the middle' authorship it is not possible to differentiate between papers where HIC researchers have encouraged LMIC partners to lead the paper-writing process and those where an LMIC author would have been first author anyway. It is also important that measures to promote greater representation of LMIC authors are focused on removing barriers and providing opportunity while maintaining standards, so that achieving first- and last-authorship remains aspirational for all researchers.

What is needed is a broader consideration of what constitutes a meaningful contribution in global health research. Some funders, e.g. Wellcome Trust, are moving away from using a journal's impact factor as the primary metric of quality in grant applications and the UK Research Excellence Framework, which measures quality in research in order to determine funding allocation to UK Universities, has increased its emphasis on sustainability and research impact, which it defines as *'an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia'* (UK Research and Innovation, 2022a). Traditional hierarchies of authorship are also being reviewed through reconsidering criteria for authorship, for example awarding greater recognition to the contribution of those leading field research activities (Closing the door, 2018; White, 2020).

In summary, steps are being taken to remove barriers in academic publishing and to reflect on what sort of outputs offer value to different stakeholder groups, including the communities in which research is conducted. There was some evidence of progress in this study, particularly in relation to the publishing of academic outputs.

Respect for affected populations, including local relevance

A number of partnership guidelines advocate for research findings to be translated into policy and practice and argue that research should only be conducted where there is buy-in from the communities in which it is planned to take place and it addresses a priority health issue in the country or region. Aspects of these issues were picked up in discussions on agenda setting (p. 102) and dissemination (p. 106). Given participants' views that setting the research agenda was largely outside of their control, the paucity of discussion about the relevance of research to local communities may reflect participants' perceived lack of agency to influence what research is done. It may also be that study participants did not see these issues as being central to their experience of partnership with HIC collaborators and thus did not bring them to the fore during interviews, even if they were important considerations in their work. There was some indication that this might be the case: a few participants *did* provide rich descriptions of how they engaged with communities as an integral part of research design, implementation and analysis. Engaging with community stakeholders is central to a growing body of work on participatory research which aims to address social justice, reduce health disparities and provide a bridge between research and practice (Birch et al., 2013; Cargo & Mercer, 2008; Christopher et al., 2008; Darby, 2017). Community stakeholders are also central to some framings of decolonisation, for example the definition put forward by Development Reimagined which defined decolonisation as *'The dismantling of unjust colonial-rooted methods, biases, and systems to ensure the independence and full agency of all involved organisations, communities, and persons'* (Development Reimagined, 2021, p. 4).

The findings from this study suggest that the current system by which health research topics are identified and pursued is largely unable to accommodate potential beneficiaries at the point at which the research agenda is set and participation comes after grants have been awarded. Community members may be involved in refining the study design to ensure acceptability and applicability of the research topic – for example, at KWTRP, some sensitive study topics have involved community consultation during grant development (Personal communication, 2022). Other studies of partnerships employing participatory approaches have found considerable variability in the extent to which community participation occurs. Some authors question whether involving stakeholders at all stages is justifiable or places unreasonable demands on community groups (Boutilier et al., 2011). As more effort to increase the involvement of research stakeholders in agenda-setting is required, so too is attention on how to appropriately engage potential beneficiaries who are currently one step further removed than researchers from how decisions are made about what research needs doing.

Data handling and ownership

References to 'parachutes', 'parasites', 'mosquito' and 'safari' researchers (Bradley, 2017; Closing the door, 2018; Edejer, 1999) as described in the introduction chapter have provided vivid negative imagery of how data has been handled by HIC researchers. There have been longstanding calls to ensure that data is not extracted from LMIC countries and used by HIC partners without involving stakeholders from the countries where it was collected. This has manifested in partnership guidelines that promote the use of data sharing agreements and highlight the need for clarity over who owns research data and how it is used. These practices may be reinforced by data governance committees in LMIC institutions that set policies which strengthen individual researchers' positions in negotiating for fair access to and ownership of data generated locally. In this study, while there was some evidence of data being jointly owned, there were also examples of participants having been excluded from accessing and using data that their institutions had collected, and discrepancies between policies promoting fair data sharing and use and practice. Funders and publishers are increasingly applying pressure for data to be made publicly available (UK Research and Innovation, 2022b; Wellcome Open Research; Wilkinson et al., 2016). Meanwhile, there is increasing stringency globally to protect individual research subjects' identities through data protection legislation. Ideally, attention on standards for data accessibility and privacy will also stimulate greater consideration of fair data ownership and use in research partnerships. However, while peer reviewed journal publication based on primary research remains a key metric for recognition and academic career progression, the propensity for tensions in who owns and can use data remains. The measures discussed above in the section on dissemination (p. 106) to improve LMIC representation in journal paper authorship, coupled with reconsideration of what types of output are valued, should, however, lead to data sharing agreements and practices gearing towards more joint sharing of data.

Funding

Access to funding was seen by sub-Saharan African stakeholders to be a major benefit of collaborating with HIC partners. At least two different things seemed to be driving this: firstly, grant eligibility criteria favouring HIC institutions meant that some sources of funds were only available to sub-Saharan African institutions if they partnered with a HIC applicant. Secondly, HIC institutions were seen, overall, to have more experience of applying for funds, better contacts, stronger engagement in networks where opportunities were discussed, and a stronger reputation.

There were some examples in this study of funder policies having changed to allocate funds directly to institutions in sub-Saharan Africa rather than channelling them through HIC institutions. Groups such as the UK Collaborative on Development Research (UKCDR) (https://www.ukcdr.org.uk/) and Council on Health Research for Development (https://www.cohred.org/) provide platforms to share resources (Kunaratnam et al., 2021; UK Collaborative on Development Research, 2021), convene discussions and secure commitments to changing funders’ practice and are acting as catalysts for change. Signs of an increase in direct funding of institutions in sub-Saharan African have also been seen through initiatives such as the Alliance for Accelerating Excellence in Africa (The African Academy of Sciences, 2022) and the Africa Centers for Disease Control and Prevention (https://africacdc.org/) which act as hubs of scientific expertise and as brokers to manage and distribute funds that address issues of regional priority. Advocates have also called for LMIC governments to increase investment in research (Abimbola et al., 2021; Bertelsmann-Scott, 2017; Saha & Pai, 2021) in order to move away from neo-dependency (Adeyi, 2022), the reliance on foreign investment in research. Several participants in this study felt that more funding from their governments was necessary to gain greater research independence, but they were underwhelmed by progress in this direction.

While grant eligibility is constrained by funders’ policies, being able to apply for grants is a function of opportunity alongside individual and institutional capacity and experience. HIC researchers and administrators often remain at an advantage over their sub-Saharan African counterparts because of the depth of experience and capacity of their institutions, and because of the contacts and networks that they have access to. However, there were examples in this study where sub-Saharan African institutions had led grant applications, including one institution that was the prime grant recipient for over half of the projects in its portfolio. Where this was the case, it diminished other funding-related problems, such as a disproportionate share of funds remaining in HICs, lack of HIC partner financial transparency and accountability, budgets being set without input from partners, and scope creep without adequate financial compensation. The shift from sub-contractor to lead partner was observed to double down on disrupting prevailing power dynamics. Not only did being the lead partner offer privileges associated with the hierarchy of how partnerships are structured but managing the purse strings held sway in establishing a position of authority over other partners. This is another illustration of how economic power has primacy over other forms of power (Bourdieu, 2008).

As opportunities to secure funding evolve through changes in grant eligibility criteria, growth in the capacity and experience of sub-Saharan African institutions and greater visibility of African scientists in relevant networks, the perceived desirability for sub-Saharan African stakeholders to partner with HIC institutions may reduce.

Long term commitments

For three of the four sub-Saharan African research institutions in the study, a HIC institution had been instrumental in establishing the institution and supporting its growth. Study participants welcomed this, since it had brought continuity of funding, investment in research infrastructure, opportunities to develop long-term initiatives such as joint PhD programmes, and development of scientific and managerial capacity. Long-term relationships, and the benefits they can confer, have been described elsewhere (Boutilier et al., 2011). However, there was more than a hint of paternalism in the accounts that several participants gave of the relationship between HIC partners and their own institution, and HIC institutions appeared to continue to exert significant control and influence over their sub-Saharan African partners.

A central focus for future partnership development must be on how to achieve the benefits that have historically been conferred by sustained investment of HIC partners in strengthening sub-Saharan African institutional capacity without this being done in a paternalistic or exploitative manner. Examples may include partnerships between two or more institutions in sub-Saharan Africa or between HIC institutions. While historically this has been framed as an issue between HIC and LMIC institutions, it applies to any long-term collaboration where there is a capacity gap between the partnering institutions.

Reflecting on my own experience at KWTRP in Kilifi, Kenya, I observe that many of the research management systems and processes that underpin how the institution operates are informed by HIC practices. These have undeniably contributed to the international reputation and success of the organisation, but potentially to the exclusion of alternative approaches. While it remains advantageous for sub-Saharan African institutions to adopt systems that have served HICs well in running research institutions and managing grants, there must be scope to contextualise approaches and HIC institutions must be open to adapt and improve their own systems.

Do partnership guidelines contribute to fair partnership practice?

The preceding sections of this discussion indicate that the study findings largely endorsed the domains identified in partnership guidance for equitable partnership. Domains that garnered the most attention from participants were *capacity strengthening*, *funding*, and *roles, responsibilities and ways of working*. *Motivation and goals, resource contributions, governance structures and agreements*, and *local relevance* had a lower profile, but all generated some discussion. There did not appear to be any domain from partnership guidance which was not pertinent, nor any major theme identified by participants that was missing from guidance. This provides reassurance that partnership guidance has the potential to aid the endeavour of pursuing more equitable partnership relations.

However, there was no evidence that guidelines were actually used to support partnership functioning. This raises questions as to why, after some guidelines have been available for several decades, they are not adopted. Possible explanations are: despite the substantial body of literature on research partnerships, HIC and sub-Saharan African institutions have not identified inequities in partnership as something either that is a priority or that is within their power to address; HIC partners' are following guidelines to inform how they operate, but this is not discussed with their sub-Saharan African partners; guidelines are poorly publicised and there is low awareness of their existence; guidelines are difficult to apply and are not the best way of influencing practice; institutions already have their own policies pertaining to the issues that partnership guidelines address and do not seek additional direction; or how partners work together is a secondary consideration to the 'business' of doing global health research. In this study, there appeared to be low awareness among sub-Saharan African stakeholders of the existence of guidance for partnership. The findings also suggested that sub-Saharan African stakeholders' primary focus was the research itself, rather than relational aspects of partnership work, and that certain constraints, for example grant eligibility criteria, that impact on how partnerships operate were considered beyond their scope to change.

Bradley suggested that there is naivety in the notion that guidelines and principles have the potential to overcome deeply entrenched problems in partnerships (Bradley, 2017), and the apparent ineffectiveness of partnership guidelines observed in this study could be seen to support this. However, despite guidelines not being used, the overall trajectory seemed to be towards partnerships becoming more equitable along the dimensions of equity identified in partnership guidelines, although participants' experiences were very diverse. If partnership guidelines are not the major influence on changes in how partnerships are working, it is interesting to speculate on what might be driving change.

My interpretation is that change is occurring through the confluence of several factors. Sub-Saharan African researchers and administrators are becoming more experienced and the technical and managerial capacity of their institutions is growing, in part due to long-standing relations with HIC institutions. There have been changes in the policies and practice of funders, publishers and HIC institutions that reduce structural barriers to the pursuit of equity, and HIC collaborators' behaviours and attitudes are becoming more respectful. If not specifically driven by guidelines for partnership, perhaps this is a consequence of cumulative exposure to arguments to recognise and address HICs' colonial past. These changes converge towards a re-distribution of power in partnerships, but also reflect that where power differences remain, changes in attitudes and behaviours can also result in experiences of greater fairness.

Of particular salience were the experiences that sub-Saharan African partners had when acting as the prime grant recipient in a relationship with a HIC institution that was the sub-contracted partner. Such examples illustrate a reversal of the structure that has historically dominated global health where a HIC institution is the prime grant recipient and sub-contracts to LMIC partner institutions. As has been noted in several earlier sections in this discussion*,* how a partnership is structured in terms of who leads and who is sub-contracted has a prominent bearing on the dynamics within the partnership. When sub-Saharan African partners assumed the lead partner role, this led to other barriers towards achieving equity diminishing. However, the change in role was insufficient to fully overcome engrained attitudes and behavioural norms of either the HIC or sub-Saharan African partner. Examples of partnerships where the LMIC institution is in the lead role have had very little coverage in the literature to date. This may be because such arrangements are relatively recently emerging and there has not been sufficient time to assess what is going on in such relationships, or because the change in structure is seen to remove other barriers and there is less to write about, or perhaps both. Given the rarity of descriptions of partnerships where the sub-Saharan African partner is in the lead role, the examples from this study provide a valuable, if limited, insight into understanding what a change in partnership structure implies. This is considered in more detail in the next section.

Power, position and capacity

The sub-Saharan African institutions in this study that had significant experience of leading partnership projects had a long history of collaboration with HIC partners. HIC partners had helped to establish systems and processes that corresponded with those in their own institutions, provided scientific, technical and managerial training, invested in research infrastructure, and mentored African researchers and research managers. These activities resonate with the literature on capacity strengthening which has a multi-level focus on individuals, institutions, and the wider environment (Bowsher et al., 2019; Cole et al., 2014; Marjanovic et al., 2013; Wallis & Bates, 2016) and promotes the development of research skills (Dean et al., 2017) as well as systems to manage, support and utilise health research (Consort, 2017a, 2017b, 2017c; Wallis & Bates, 2016; Wallis et al., 2017). Since changing the systems and structures that support research is challenging and takes time and commitment, there is merit in emphasising the potential – or perhaps even the responsibility - of long-term partnerships to have institutional capacity strengthening as a core shared goal. The institutions in this study with substantial experience of leading partnership projects could be described as 'high capacity' institutions in terms of their research infrastructure, access to resources, and technical and managerial expertise.

For the sub-Saharan African institutions that were able to secure funds directly as the lead applicant, thereby acquiring financial power, various partnership inequities associated with other power differentials appeared to diminish in importance. It has been suggested that several other sources of power lay the foundations for securing financial power (Sriram et al., 2018). These sources include: technical expertise, which emerges from the knowledge, skills and information that individuals hold and their claim to that knowledge (Haas, 1992); bureaucratic power, which is derived from the knowledge and authority of bureaucracies and the administrative processes through which policies are designed and implemented (James, 2011); and networks and access. This source of power includes issue networks, which are alliances of interest groups that align in support of a particular cause, and epistemic communities, which are groups of experts with an authoritative claim on knowledge within a particular domain (Haas, 1992). In global health research, technical expertise manifests in relation to discipline-specific and methodological knowledge and is enhanced through access to technical resources, such as specialist laboratory equipment and IT capability. Bureaucratic power builds from exposure to the machinery of international grant funding and the development of administrative and legal systems to support research administration. Networks and access relate to the specialist communities in which scientific ideas and opportunities are discussed and connections into the workings of key stakeholder groups, such as funders. It appeared that technical expertise, bureaucratic power and networks and access were all sources of power which sub-Saharan African institutions had been able to build through partnership with HIC collaborators and which facilitated their ability to secure financial power through winning grants as the lead applicant. Once in the lead applicant position, sub-Saharan African institutions had been able to exert structural power (Barnett & Duvall, 2005) whereby accepted norms around how partnerships are organised permitted them to exert influence and control over sub-contracted collaborators.

However, even when sub-Saharan African partners were the prime grant recipient, there was some evidence of HIC partners being unwilling to adjust to a subordinate role and continuing to exhibit an attitude of entitlement and superciliousness. Concepts from Bourdieu's Theory of Power and Practice (Bourdieu, 1977) provide a useful lens through which to explore this. Bourdieu discussed power in relation to the intersection between *habitus*, *field* and *capital*. Fields are bounded and structured spaces of dominant and subordinate positions occupied by individuals and institutions and organised around combinations of capital. The field in this study is global health research partnerships. Actors seek to strengthen their position through drawing on different sources of capital, which provide structure to the field. Bourdieu identified these as economic, social, cultural and symbolic capital (Sriram et al., 2018; Walsh et al., 2016). Economic capital is seen to be most important and pertains to money and resources; social capital is derived from collaboration between individuals and groups; cultural capital refers to patterns of socialisation and understanding, the use of specialist objects and skills and qualifications gained through being part of a group; and symbolic capital is about prestige and recognition. Habitus refers to the values and expectations that actors acquire through their habituation to the social world that they occupy (Bourdieu, 1977). It is about how stakeholders self-identify as influenced by their experience. Bourdieu described the hiatus that can happen when the structure of a field changes and evolving opportunities are not matched by a change in actors' aspirations. Bourdieu called this a *hysteresis* effect (Schwartz, 1997). It is one way to explain why HIC stakeholders may continue to embody a dominant habitus even if they have less economic capital in a research partnership relative to the sub-Saharan African lead partner and even when they are working with high-capacity sub-Saharan African partners who have acquired substantial social, cultural and symbolic capital.

Correspondingly, sub-Saharan African stakeholders may continue to occupy a subordinate habitus, even when there are structural changes in the field that bestow greater capital upon them. There were several examples from this study where participants self-identified as subordinate to a HIC partner even when the partnership relationship appeared to be fairly well balanced. Walsh *et al.* (2016) applied Bourdieu's theory to excellent effect in interpreting the findings of study in Zambia of public health research collaborations between Zambian and 'northern' stakeholders. Their analysis resonated with the findings from this study and adds support to the utility of Bourdieu's thinking in understanding power relations in global health research partnerships.

My interpretation of the relationship between power, position and capacity is that sub-Saharan African institutions that have had long-standing relationships with HIC partners have been able to develop individual and institutional capacity in research and research management which has led to their accumulation of power across several dimensions, including technical expertise, bureaucratic power and networks and access. This in turn has unlocked opportunities to gain financial power through leading grants and to exert structural power over a partnership as a consequence of being in the lead applicant position. However, despite changes in power dynamics, HIC partner attitudes may remain supercilious. Habitus (Bourdieu, 1977) is a useful concept to explain this, and the sub-ordination which sub-Saharan African partners may exhibit, even when roles in a partnership have shifted and the sub-Saharan African partner has an equivalent or elevated relative position of power.

Finally, it is worth revisiting the finding that there was not an obvious correlation between participants' experience of how equitable a partnership was and their power relative to that of the HIC partner. A number of examples were given whereby participants felt that partnerships were fair even where there were substantial differences in power and institutional capacity between their own institution and that of a HIC partner, and other examples where, despite reduced power asymmetry, the partnership was considered to be unfair. It is encouraging that partners with substantially different capacities can work effectively together and move toward closing the capacity gap, but also concerning that ostensibly more equal partnerships continue to be experienced as unfair. The instances where sub-Saharan African stakeholders experienced greater dissatisfaction with a partnership despite an apparently smaller power differential in relation to the HIC partner can perhaps be explained by level of exposure to HIC research settings: sub-Saharan African stakeholders who had greater exposure to HIC research institutions perhaps had greater awareness of the benefits accrued by these institutions and how benefits were protected and perpetuated. These individuals were no longer operating from a subordinate *habitus* in the relationship and did not feel that HIC partners were justified in operating with a *dominant* habitus. Perhaps these individuals viewed the relationship as unfair because they came from a perspective of expecting it to be equal, in contrast to other sub-Saharan African stakeholders who continued to consider their position sub-ordinate.

Decolonising global health research partnerships

It has been argued that power privileges certain forms of knowledge and discourse in global health, and that this influences the types of solutions that are identified to address global health challenges (Benatar, 2016; Shiffman, 2014; Sriram et al., 2018). This is congruent with the notion of networks and access as a source of power as described in the previous section of the discussion, particularly epistemic communities - groups of experts who have an authoritative claim on certain domains of knowledge (Haas, 1992). It reinforces arguments by Hall and Tandon (2017), De Sousa Santos (2007) and Atuire and Bull (2022) mentioned earlier in this chapter about dominant forms of knowledge. It also provides a bridge to discussing the role of the emerging movement to decolonise global health, which seeks to redress power imbalances and challenge norms around accepted forms of knowledge in service of improving the health of populations (Khan et al., 2021).

The decolonising global health movement and its antecedents have been described in the Introduction and references have been made in earlier sections of the discussion to issues that are within the scope of what the movement sets out to address. This section of the discussion specifically considers how the movement might contribute to changing how global health research partnerships operate.

Issues presented in the decolonising global health literature about the effects of colonialism and examples used to illustrate the continued manifestation of the colonial legacy bear similarity to those that have been previously documented in literature on partnership inequities. For example, restrictions on grant eligibility and assumptions about expertise flowing unidirectionally from ‘North’ to ‘South’ are described in work on decolonising global health (Oti & Ncayiyana, 2021) and have been previously discussed in work addressing partnership inequities (Binagwaho et al., 2013; Binka, 2005). The issue of who sets the research agenda and whose interests this serves has recently been framed as an illustration of colonial dominance (Khan et al., 2021) and has previously been discussed in work on agenda-setting processes and capacity strengthening (Bradley, 2008; Coloma & Harris, 2009). The issue of the under-representation of LMIC authors in academic journal papers has been discussed both through the lens of decolonisation, (Abimbola, 2019; Abimbola et al., 2021) and without this framing as an inequity that needs to be tackled in partnership research (Hedt-Gauthier et al., 2019).

What is different in the presentation of the inequalities and power imbalances in global health is their recent re-framing as issues which need to be ‘decolonised’ and the manner in which this needs to happen. Through the demand to dismantle and reconstruct the system of global health in order to expunge its colonial legacy, the decolonising global health movement brings a more radical approach than much of the guidance for partnership, which seeks to pursue equity within the existing system. That said, there is a spectrum of positions within the decolonising movement from those who propose starting from where things currently are (for example, Demir, 2022; Khan et al., 2021; Kwete et al., 2022; Oti & Ncayiyana, 2021) to activists who believe that the complete removal of all colonial influence is a necessary condition for moving forward (Chaudhuri et al., 2021; Saha, 2019). There are also those who caution against pursuing extreme interpretations of the decolonising agenda arguing that this has the potential to undermine research-based knowledge, aggravate tensions and inhibit rather than accelerate progress (Hellowell & Nayna Schwerdtle, 2022). While I am inclined toward pragmatism and share the view that efforts to decolonise must not risk undermining progress, I also believe that there is value to be derived from the collective strength of all these varied positions on decolonising global health, and that what has been created is an identity for the movement which has the potential to bring about change.

Perhaps the key differentiating factor from previous efforts to work towards greater equity in research partnerships is the success and speed with which the decolonising global health movement has galvanised attention. It appears to be starting to shift the fulcrum from observation towards action of individuals, institutions and in the broader systems of global health, particularly in HIC contexts. Examples in earlier sections of this discussion drew attention to areas where systemic change is becoming apparent. These include constituencies that set the rules of the current global health research system, including funders and publishers, being held to account and keen to demonstrate progressive policies; for example, eligibility criteria for funding being reviewed, publication requirements changing and HIC institutions re-writing educational curricula, changing reward and promotion criteria and incorporating goals of equitable partnership into equality, diversity and inclusion action plans. Many of these actions were set in motion prior to the emergence of the movement to decolonise global health, but there appears to be a gathering of pace in their implementation. Where guidelines for partnership were relevant, but failed to gain traction, the decolonising global health movement may have struck a chord and generated resonance that is catalysing change.

Perhaps here it is worth documenting my own engagement with and response to both the equitable partnerships agenda and decolonising global health. Alongside my DrPH research inquiry and thesis-writing I became involved in several initiatives at LSHTM and participated in various external workshops and webinars relating to equitable partnerships. This was partly out of interest and partly because I felt it was important to establish a connection between theory and practice and try to keep up to speed with developments in this area.

I worked with colleagues from the Global Health Department to develop the *EquiPar* tool to support more equitable partnership practice between LSHTM and its collaborators. I also joined the coordinating group for the equitable partnerships workstream which was set up to take forward recommendations set out in the LSHTM Equality, Diversity and Inclusion (EDI) action plan. In 2021 and 2022 this group hosted a couple of all-staff and student webinars and instigated two ‘task and finish’ groups to address specific areas identified in the EDI action plan: I am a member of the task and finish group working on contracts and finance. I also attended several meetings of the grass roots Decolonising Global Health working group for equitable partnerships and contributed to a couple of taught classes, most recently a session in October 2022 for LSHTM research degree students on *Decolonising global health for doctoral students*. I was involved in the conception of a workshop jointly run by LSHTM, Liverpool School of Tropical Medicine and LVCT Health on *Institutional capacity to support equitable partnerships in health systems research* at the Health Systems Global conference in Bogota in November 2022 and I attended a variety of virtual workshops and seminars between 2020 and 2022. These included a workshop run by the LSHTM tuberculosis group on *Equitable leadership in global health research partnerships* in February 2022; a webinar by Dr. Olusoji Adeyi in February 2022 on *Global Health for the 21st Century: beyond power imbalances, foreign aid, and neo-dependency;* UKCDR's annual stakeholder event in March 2022 entitled *Looking to the long-term: Sustainable research partnerships between LMICs and the UK;* a webinar in July 2022 on *Justice Advancement Through Health Policy and Systems Research Decolonisation: Chipping Away at Structures and Processes;* a session at the UN General Assembly Science Summit in September 2022 on *The role of funders in enabling equitable research partnerships for development* hosted by UKCDR and ESSENCE for Health, and a round table, also hosted by UKCDR, on *Contracts, Due diligence, Costing, Ethics, Intellectual property and Authorship* which was part of their consultation to inform new guidance on equitable partnerships.

In listing these activities, my intention is to illustrate the sorts of initiatives that have been pushing the equitable partnerships agenda forward over the past couple of years. Several of them were also, or alternatively, promoted under the banner of decolonising global health. I found myself initially resisting identifying with this label and not engaging with 'decolonising' events because of their stridency and the discomfort that this made me feel, particularly given my position as a white, HIC researcher. While the decolonising global health movement has been highly successful, as mentioned earlier in this section, in galvanising attention and stimulating change very much because of its assertive challenge to the *status quo*, I wonder if there is a danger that 'moderates' will feel alienated by the inherent criticism embedded within the *de*-colonising agenda? It was very apparent that in the research degree student teaching session I was involved in, the small group of students attending were already tuned in to the notion that global health researchers must grapple with their field's colonial history. Did we exclude a group of students who would be keen to address issues of unfairness and ensure they act responsibly as global health researchers, but were deterred by the associations of coloniality? Given my earlier reflection that guidance on equitable partnerships has been around for some time without seeming to have generated much change, and that the decolonising global health movement has successfully brought many of the same issues into the spotlight, perhaps I am contradicting myself by now suggesting that the decolonising label may be in some ways a deterrent for wide engagement. However, perhaps the success of the decolonising global health movement in bringing issues of equity onto the table has helped to create an environment in which discussions on equity can now stand on their own.

My sense is that the path towards achieving equitable partnerships will continue to be blocked both by powerful authorities seeking to perpetuate their interests and because of the resource imbalances that continue to divide the individuals, groups and nations that 'have' from those that 'have not'. While the decolonising global health movement can help overcome blockages through re-framing of whose interests are served by global health research, whose knowledge counts and who has the authority to decide what research is done, there remains an imperative to close the gap on resource imbalances. One way of achieving this in research partnerships is through a continued focus on capacity strengthening. We have seen through examples in this study that power can be re-distributed and that this is linked to resources, experience and expertise, and that there is a strong demand from sub-Saharan African stakeholders for sustained commitments towards strengthening technical and research management capacity.

Study limitations, and some benefits

This DrPH thesis research aimed to make a modest contribution to understanding the experience of contemporary global health research partnerships from the perspective of stakeholders in sub-Saharan Africa with a particular focus on aspects of equitable practice. As with all research, there were constraints in terms of time, funding, and my expertise as a researcher to grapple with the methodology, analytical approach and understanding of the field. The latter was exacerbated by the explosion of attention on decolonising global health which was going on in parallel with the design and implementation of my study. I have familiarized myself with the literature on decolonising global health, but I may have framed my study differently had I started from a position of greater awareness of this body of work at the point of study design. Through my reading I have become much more aware of the significance of my own positionality in relation to the topic that I have been exploring. I recognize that I have grown up within the system that the decolonising movement demands be de-commissioned and reconstructed, and that there is a danger that my study is just another example of 'beneficent paternalism' (Fofana, 2021, p. 1157).

In conducting the scoping review, I excluded principles and guidelines for partnership that were derived from studies of individual projects. Of two similar scoping reviews published almost concurrently with my own, one, Faure et al. (2021) included empirical studies, including those based on single projects, while the other, Monette et al. (2021), like mine, did not. Interestingly, the themes reported across all three scoping reviews had considerable overlap, suggesting that leaving out single-project empirical studies may have been an immaterial exclusion criterion. Furthermore, given that single-project studies are likely to enter into greater depth in their analysis and interpretation of what is going on in a particular partnership, including them may have made a valuable contribution to the review. In my wider reading around the topic of partnership, I came across a number of articles that were studies of single projects and these informed my understanding of topical issues. I have referenced them, where appropriate, in the Introduction and in the Discussion.

I also struggled with the qualitative methodological approach to primary data collection, since my academic background is in the natural sciences and my day job is among scientific colleagues who are predominantly trained in a positivist philosophy. This was mitigated through my supervision team, two of whom are experienced social scientists and were able to guide and support me when I floundered. I was fortunate that, unlike many of my DrPH compatriots, my study was not adversely affected by the COVID pandemic. In fact, the pandemic simplified decisions about data collection because there was no possibility of travel and all data had to be collected remotely, in my case through web-based interviews. This even had some unforeseen benefits, for example being able to use the auto-transcription function of Zoom as an aid for producing the first draft of interview transcripts. Collecting data remotely limited the contextual understanding that I was able to gain about each of the institutions from which I identified study participants. Had I been able to visit, I undoubtedly would have gleaned additional insights and understanding of each of the four organisations that participated in the study. However, given that time and funding for travel would have been a constraint, and I may have had to select some but not all institutions to visit, I at least had the benefit of a consistent approach to all interviews. Scheduling was also easier to manage, particularly as a part-time student, because I could be more flexible with study participants' availability and fit in interviews over a more extended time-period than would have been possible had I travelled for, necessarily short, periods of data collection.

I made efforts to incorporate diversity in the characteristics of institutions included in the study sample and to identify participants with a range of job roles and experience in order to provide a broad range of perspectives. However, the criteria I used to select institutions included proxy indicators for institutional maturity and scale of research activities which may not have been the most robust measures of these characteristics. I did not include a criterion to select for type of research or diversity across research disciplines, e.g. product development, clinical trials, basic science, social science, on the assumption that each institution would conduct research across a spectrum of areas. It may be useful for future studies to have an explicit interest in looking at any differences between disciplines in stakeholders' experience of partnership. Due to funding constraints to pay for an interpreter and translation costs, I only included institutions in countries where English is an official language, and excluded francophone and lusophone nations, which is a further limitation of the study. My study findings may also have had stronger explanatory potential had I been able to include more participants from more institutions. Notably missing from the study are the voices of HIC stakeholders. When designing the study, I did consider including HIC researchers and administrators. Ultimately, I decided that to keep the scope manageable I needed to focus on a narrower study population, and I was most interested to learn what stakeholders in African institutions felt about partnership with HIC collaborators. It would, however, have been particularly interesting to have compared HIC and African stakeholders' perspectives of the same partnership. In the Implications for Research section on p. 128-130 I have noted two other opportunities to involve HIC stakeholders in future research on partnerships: firstly, exploring HIC institutions' experiences of being sub-contracted by an African lead partner institution and, secondly, studying the utility of partnership guidance.

In recognition of these limitations, I have sought only to offer illustrative findings and link them, where applicable, to issues that have been identified in the literature. I do not claim that the findings are representative of the concerns of stakeholders at research institutions across anglophone eastern and southern Africa, let alone a broader geographical area.

Implications for policy

There is plentiful advice and many recommendations available for improving the equity of global health research partnerships. These were highlighted in Chapter 2: Scoping review and revisited in earlier sections of this chapter alongside examples of evolving policy and practice. Here, I briefly highlight five additional implications for policy which strike me as being particularly pertinent in light of the findings from this study:

- Researchers, funders, publishers and research governance bodies should build on the momentum generated by the Decolonising Global Health movement to revisit how existing principles and guidelines for partnership could be used to improve equity in partnerships. Guidelines appear relevant, but have not been widely used, and there is potential to adopt and adapt them within contemporary partnerships. There is some evidence of this happening, for example, *Nature Portfolio* committed to improving inclusion and ethics in its journals (Nature, 2022) informed by the Global Code of Conduct for Research in Resource-Poor Settings (Trust, 2018).

- Funders should work together to consider how best to provide long-term support for institutional research management systems strengthening, particularly in resource-poor settings. Evidence from this study suggests that high-capacity research institutions in sub-Saharan Africa have a history of long-term partnership with HIC institutions, but there is a danger that this becomes an exclusive club that is difficult for new entrants to join. There are some examples of research management systems strengthening, such as the Research Management Programme in Africa (https://www.aasciences.africa/aesa/programmes/research-management-programme-africa-rempro-africa) and Good Financial Grants Practice standard (https://www.aasciences.africa/ggc/standard), but funders typically continue to focus on funding scientific research topics rather than the essential processes for managing research.

- Metrics that incentivise capacity strengthening and equitable practice should be considered alongside objectives for delivering research outcomes. This could be at the level of individuals' performance and in the objectives of research partnerships – either for partners individually or for the partnership as a whole.

- There is wide variation in what funders and lead research institutions (- which are still more often HIC than LMIC institutions) require in terms of financial management and reporting, standards around data ownership and use, project governance and other key operational dimensions of partnership. A simplified and more unified approach would be welcome alongside efforts to be flexible and respond to applicants' and sub-contracted partners' institutional processes and capabilities. Furthermore, longer lead times for grant applications and additional steps to ensure early and genuine involvement of all partners would be welcome. One example could be to require all partners to be present during any application selection process and for a representative of each partner to be involved at all stages in communications with funders.

- While managing their own risk, lead partners should also commit to representing the interests of their collaborators and ensure that sub-contracts are not disadvantageous to partners, particularly where partners are constrained by institutional experience or capacity, e.g. in legal review or budget development.

Implications for research

The findings from this study suggest several possible areas for future research. These include:

- Further exploration of partnership dynamics where sub-Saharan African institutions are the prime recipients of grants. This would include collecting data from HIC partners in sub-contractor roles to understand their experience of the partnership. Partnerships that had the configuration of being led by a sub-Saharan African institution were in the minority in this study and are rare in the literature to date. They shed a particularly interesting light on issues of power relations and the role of individual and institutional capacity in countering inequities.

- A follow-up study along similar lines to this study, five years on, to assess what has changed in how partnerships operate across the key domains identified for equitable practice. The surge of attention, particularly in HIC contexts, to decolonise global health presents an opportunity for a shift in the structures that support and constrain partnerships and it would be interesting to see whether and how this impetus for change impacts on partnership practice.

- Consultation with stakeholders at a broader range of sub-Saharan African institutions, including those in Francophone and Lusophone nations, and with increased emphasis on institutions with differing levels of capacity. While the vestiges of colonialism are not restricted to former British-colonised nations, it would be interesting to see what similarities and differences there are in the experience of research stakeholders in countries that were either governed by another European power, or maintained independence, e.g. Ethiopia. It would also be interesting to pay greater attention to institutions with differing levels of research capacity, since this has an influence on the power relations between partners, although not necessarily on stakeholders' experiences of equity – partnerships may be considered equitable even where there are substantial differences in institutional capacity, and partnerships may be considered inequitable where capacity differences are small.

- An investigation into attempts to use partnership guidelines to understand what barriers there might be to their use and whether – when there is a deliberate attempt to use guidelines - they are found to be useful, and in what ways. At the time of writing, there is a research study ongoing at LSHTM to pilot a bespoke institutional tool for equitable partnership which is an example of this. Recent additions to the suite of partnership resources, for example the ESSENCE and UKCDR Good Practice Document on supporting equitable research partnerships (ESSENCE & UKCDR, 2022), Equity Tool (Larson et al., 2022), BRIDGE guidelines for bridging equity and epidemiology (Alba, Lenglet, et al., 2020; Alba, Verdonck, et al., 2020) and latest edition of the KFPE guide for transboundary research partnerships (Stöckli et al., 2018) might also be useful resources to apply in a real-world context. Of particular interest would be any example where a sub-Saharan African partner suggests that guidelines are adopted, since this would provide a novel addition to the few examples that already exist. It would also be interesting to explore the utility of partnership guidance in collaborations where both partners are from LMICs or both are from HICs.

Chapter 6: Conclusion

This thesis has attempted to make a small contribution to the body of knowledge on global health research partnerships.

A scoping review of the academic and practitioner literature on principles, guidelines, frameworks and models for partnership indicated that there is strong consistency in the domains that are considered to be important in the pursuit of equitable partnerships.

Primary data collection and analysis exploring sub-Saharan African stakeholders' experience of partnership with HIC collaborators suggests that these domains are relevant to contemporary partnerships. However, guidelines themselves are not widely used to inform how partnerships operate. Despite this, there is some evidence to suggest that partnerships are becoming more equitable in the domains that have been identified as relevant to partnership, though there are also longstanding inequities and emerging tensions. If guidelines for equitable partnerships are not driving change, this leads to the question: what is?

My conclusion is that change is in part occurring because of an increase in the research and research management capacity of sub-Saharan African research institutions, leading to a re-distribution of power in the partnership relationship. There also appears to be a growing awareness of the role that HIC stakeholders play in perpetuating inequities and the contradiction that this presents in a field that espouses equity as a guiding principle and end goal. While these are not new issues, the decolonising global health movement has brought them into the spotlight and appears to be creating a momentum for change which surpasses previous attempts to galvanise attention and action.

What is needed to sustain and perhaps accelerate progress towards more equitable global health research partnerships is a multi-pronged approach: continued efforts to change the underlying attitudes, beliefs and structures that perpetuate inequities alongside continued investment in capacity strengthening for individuals, institutions and national research systems where there is demand.

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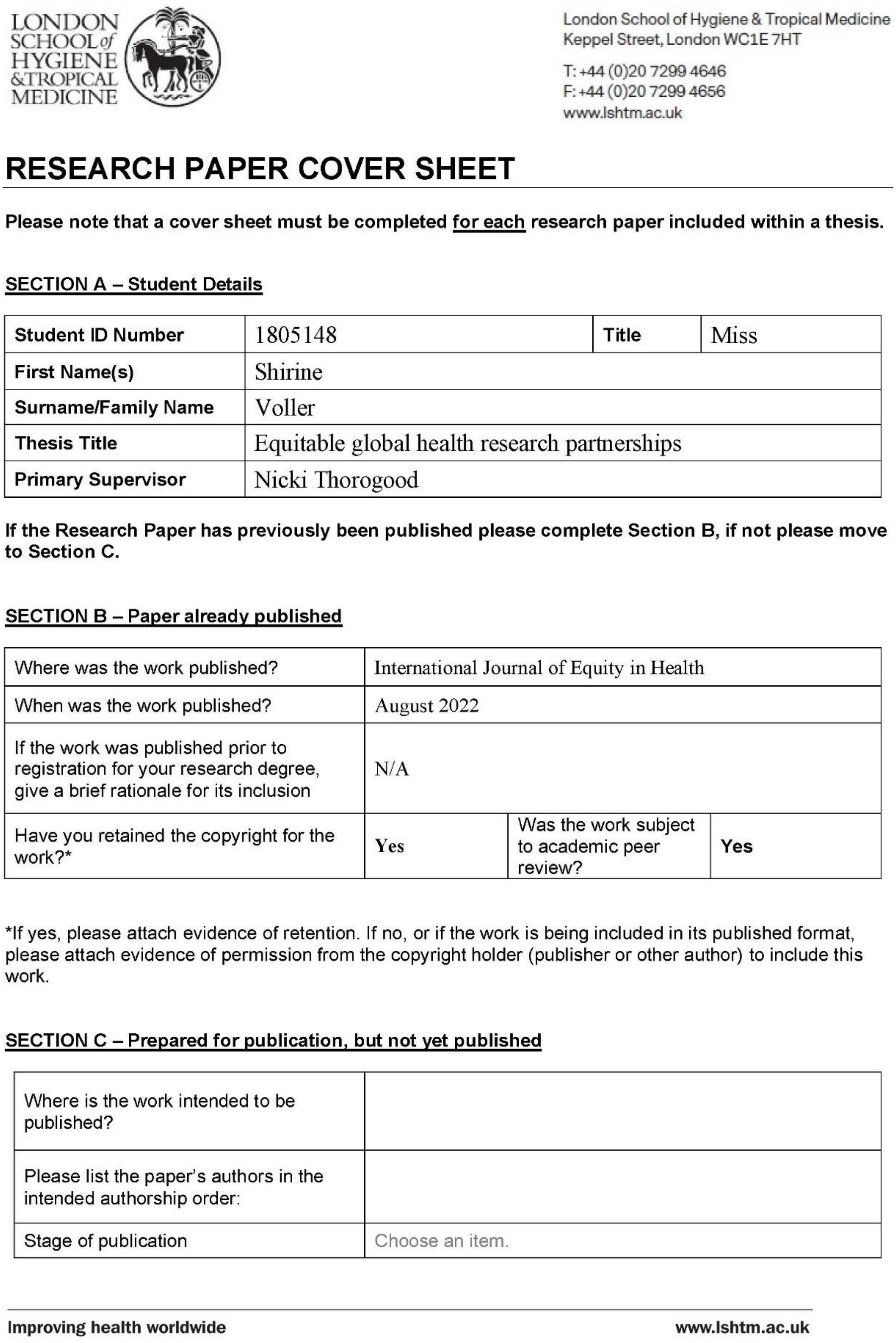
Annex: Published paper of qualitative study findings reported in Chapter 4 (Paper 2)



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SECTION A – Student Details

Student ID Number	1805148	**Title**	Miss
First Name(s)	Shirine		
Surname/Family Name	Voller		
Thesis Title	Equitable global health research partnerships		
Primary Supervisor	Nicki Thorogood		

If the Research Paper has previously been published please complete Section B, if not please move to Section C.

SECTION B – Paper already published

Where was the work published?	International Journal of Equity in Health		
When was the work published?	August 2022		
If the work was published prior to registration for your research degree, give a brief rationale for its inclusion	N/A		
Have you retained the copyright for the work?*	Yes	Was the work subject to academic peer review?	**Yes**

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SECTION D – Multi-authored work

For multi-authored work, give full details of your role in the research included in the paper and in the preparation of the paper. (Attach a further sheet if necessary)	Shirine Voller was responsible for study design, ethics submissions, data collection and analysis, drafting of manuscript. Nicki Thorogood, Joanna Schellenberg and Primus Chi contributed to the study design, analysis and manuscript. Chama-Chiliba Miriam Chitalu, Alinane Linda Nyondo-Mipando, Timothy Opobo and Clare Ahabwe Bangirana provided critical revisions to the manuscript. All authors reviewed and approved the final version of the manuscript.

SECTION E

Student Signature	Shirine Voller
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Date	12 November 2022

"*We should be at the table together from the beginning*": perspectives on partnership from stakeholders at four research institutions in sub-Saharan Africa

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Abstract

Background: Global health research partnerships have been scrutinised for how they operate and criticised for perpetuating inequities. Guidance to inform fair partnership practice has proliferated and the movement to decolonise global health has added momentum for change. In light of this evolving context, we sought in this study to document contemporary experiences of partnership from the perspective of stakeholders in four sub-Saharan African research institutions.

Methods: We conducted qualitative interviews with 20 stakeholders at research institutions in four countries in anglophone eastern and southern Africa. Interview questions were informed by published guidance on equitable research partnerships. Data was analysed through an iterative process of inductive and deductive coding, supported by NVivo software.

Results: Early-career, mid-career and senior researchers and research administrators from four sub-Saharan African research institutions described wide-ranging experiences of partnership with high-income country collaborators. Existing guidelines for partnership provided good coverage of issues that participants described as being the key determinants of a healthy partnership, including mutual respect, role clarity and early involvement of all partners. However, there was almost no mention of guidelines being used to inform partnership practice. Participants considered the key benefits of partnership to be capacity strengthening and access to research funding. Meanwhile, participants continued to experience a range of well-documented inequities, including exclusion from agenda setting, study design, data analysis and authorship; and relationships that were exploitative and dominated by high-income country partners' interests. Participants also reported emerging issues where their institution had been the prime recipient of funds. These included high-income country partners being unwilling to accept a subordinate role and failing to comply with reporting requirements.

Conclusions: Insights from stakeholders in four sub-Saharan African research institutions suggest that contemporary global health research partnerships generate considerable benefits but continue to exhibit longstanding inequities and reveal emerging tensions. Our findings suggest that long-term support targeted towards institutions and national research systems remains essential to fulfil the potential of research led from sub-Saharan Africa. High-income country stakeholders need to find new roles in partnerships and stakeholders from sub-Saharan Africa must continue to tackle challenges presented by the resource-constrained contexts in which they commonly operate.

Keywords

Global health research partnerships, Equity, Partnership principles, Partnership guidelines

Background

Both the benefits of and imbalances within global health research partnerships have been extensively documented. Imbalances include differential access to funding, knowledge, networks and educational opportunities (1,2) and high-income country (HIC) research institutions have historically exerted greater power and influence than their low- and middle-income country (LMIC) counterparts. This has manifested in a variety of ways: HIC partners have set the research agenda (3-6), pursued interests which may not reflect LMIC partner priorities (7-9), dominated all stages of the research lifecycle from design (10) through governance and administration (11-15) to publication (1, 11, 16-19), and confined LMIC partners to operational roles (1,17).

Guidelines for good partnering offer direction towards addressing inequities and guidance has proliferated in the global health and development sectors over the past 30 years. Table 1 lists a selection of these guidelines.

Table 1 Examples of partnership guidelines and resources

Bridging research integrity and global health epidemiology (BRIDGE) guidelines (20,21)
TRUST global code of conduct for research in resource poor settings (22)

KFPE guide for transboundary research partnerships (23)
Canadian Coalition for Global Health Research partnership assessment tool (24)
Research Fairness Initiative implementation guide (25)
Rethinking Research Collaborative promoting fair and equitable research partnerships to respond to global challenges (26)
Rethinking Research Partnerships discussion guide and toolkit (27)

A recent scoping review of guidelines for 'North-South' research partnerships (28) identified 22 sources of guidance. The most prevalent topics were: partner roles, responsibilities and ways of working - which encompassed communication, transparency, and mechanisms for conflict resolution and decision-making, capacity strengthening, motivation and goals, resource contributions, agenda setting and study design, governance structures and institutional agreements, dissemination, national relevance, data handling and ownership, and funding. Other efforts to synthesise partnership guidance (29,30) indicate strong concordance on the topics that stakeholders are encouraged to address, though there is limited evidence about the extent to which guidelines are used in practice. Guidelines typically focus on things that individuals and institutions should change. However, they may not always fully acknowledge the structural barriers and competing interests that get in the way of these changes being realised. Of note, *Nature Portfolio* recently committed to improving inclusion and ethics in its journals (31), informed by the *Global Code of Conduct for Research in Resource-Poor Settings* (22). This is an encouraging illustration of how guidelines are being put into action and it complements similar initiatives by PLOS and others calling for greater equity in academic publishing (31). There is growing demand for change and particular emphasis on 'decolonising' global health (32-34), which has been defined as 'a movement that fights against ingrained systems of dominance and power in the work to improve the health of populations, whether this occurs between countries, including between previously colonising and plundered nations, [or] within countries' (35) (p6). Sceptics argue that until fundamental change is realised, however, including updating systems of reward and recognition, channelling more funding directly to LMIC country stakeholders (15) and going so far as an entire 'systemic overhaul' (32) (p1) that involves 'dismantling of structures that preserve power' (p1), partnerships will remain inequitable.

This study explored the relationship between principles of equity and practice in global health research partnerships by documenting the experiences of stakeholders at research institutions in sub-Saharan Africa. It used a broad definition, informed by Bradley (36), whereby global health research partnerships encompassed 'the wide variety of arrangements that link researchers and research institutions in the global North and South' (p.3). The study enquired into what sub-Saharan African stakeholders considered to be the benefits of working in partnership with HIC research institutions, what made partnerships work well, what was problematic and the extent to which they felt partnerships were fair. The study was intended to provide a contemporary view on partnership from a range of sub-Saharan African stakeholders' perspectives and to consider whether there was any evidence of changes which might reflect shifts in the dynamics of the system of global health.

Methods

This was a qualitative study informed by a scoping review of the literature on principles and guidelines for 'North-South' research partnerships (28). Semi-structured interviews were conducted with key informants from a sample of research institutions in anglophone eastern and southern Africa. Since the researcher conducting primary data collection was affiliated with London School of Hygiene and Tropical Medicine (LSHTM) and had access to a list of LSHTM's international partners, a pragmatic choice was made to identify a sample from the list of institutions that had an active collaboration with LSHTM. The sampling approach was purposive with the intention of achieving diversity across the institutions sampled in terms of geographic location, type of institution (e.g. University, non-governmental organisation (NGO), independent research institute, national public health research institute), maturity as a research institution (for which the duration of the collaboration with LSHTM was used as a proxy) , and scale of research activities (for which the size of the grant portfolio with LSHTM was used as a proxy). Selecting institutions in different geographical locations was intended to reduce the potential cultural bias of any single country. Seeking diversity in type of institution, institutional maturity and scale of research activities was an attempt to incorporate differences in domains that may affect partnership equity. For example, universities typically have considerable bureaucracy which affects organisational agility when working in partnership, while smaller and newer organisations may have more limited capacity which can contribute to power differentials in partnerships. Discipline and type of research were not included as selection criteria since an assumption was made that institutions would conduct research across a range of disciplines and types.

Institutions were contacted sequentially between April and August 2021 and data was collected between June and December 2021. The final sample comprised four institutions in four countries: Malawi, Tanzania, Uganda and Zambia. One was a small NGO with a strong research interest, one an independent research institute and two were Universities. Two of the institutions had collaborated with LSHTM for over 20 years while two had become partners within the last five years. The size of the active grant portfolio with LSHTM varied from under £100,000 to over £1 million across the four institutions. While all institutions were active partners of LSHTM, the researcher who collected data for the study had no prior relationship with any of them.

Key informants were identified by asking the key contact at each institution for a list of colleagues who had experience of working with HIC partner institutions. We requested that the list included staff in academic and research administration roles at varying levels of seniority but did not place any conditions around age distribution, gender or ethnicity. In two institutions, we also used snowballing to a limited extent to identify additional participants.

Two interview topic guides were developed: The first was informed by a scoping review of principles and guidelines for research partnerships (28). The second topic guide was less detailed and contained broad questions to prompt participants to describe their experiences of partnership. Initially, the intention was to use the detailed topic guide with participants closely involved in individual partnerships and the high-level topic guide for interviewees less involved in individual partnerships who had a managerial or central administration role. However, through piloting and early interviews it was found that the high-level topic guide was often sufficient to elicit rich responses about a range of partnership issues. Questions from the detailed guide were used where additional prompts were needed. The topic guides were used flexibly given participants' varying experience of different aspects of partnership. Interviews focused on the areas that each participant had most to comment on. Participants were invited to reflect on their experiences of partnership with any HIC partner, not only LSHTM. The interview guides used for data collection are included in Additional file 1.

Interviews lasted between 45 and 60 minutes and all were conducted in English using the web-based Zoom platform (Zoom.us licenced education version). Field notes were written after each interview to complement the transcript. The recording and auto-transcription functions of Zoom were used to record and generate a preliminary transcript from each interview. The final version of the transcript was produced by listening back to the audio-recording and correcting errors in the auto-transcript. Transcripts were anonymised at this point so that only the audio-recording and a password-protected participant masterfile contained participants' names. The participant masterfile also included a unique reference for each interviewee and their contact details. Quotes used in the results incorporate the reference and role for each interviewee, e.g. *A02_EMR* indicates that the quote was from a participant from institution A who was an early-mid career researcher (EMR). *C03_SA* indicates a quote from a participant from institution C who was a senior administrator (SA).

NVivo release 1.6 1121 was used to code interview transcripts and support data analysis using a combination of inductive and *a priori* coding in an iterative and exploratory manner. Initially, a sample of transcripts was coded inductively, first by hand and then with codes set up in NVivo. The data were then reviewed again and organised using a small number of broad categories. Transcripts were also coded deductively using the framework of the key themes arising from a scoping review of principles and guidelines for partnership (28).

Results

Interviews were conducted with four to six participants within each of the four institutions included in the sample. In total, 20 interviews were conducted between 16 June and 7 December 2021. Interviewee characteristics are summarised in Table 2. Career stage was assigned as *Senior* where a participant held a position at Assistant Director or Director Level or Professor on the academic career path or had more than 15 years of experience within the organisation. Career stage was assigned as *Early or mid-career* for all other participants, i.e. those whose job level and experience did not meet the threshold for Senior. One third of participants met the criteria for Senior career stage, while two thirds met the criteria for early or mid-career. Six participants were female while 14 were male. Gender was not used as a selection criterion, and the unequal distribution of participants may reflect bias in the research sector at large towards employment of more men than women, though we were not able to ascertain this from the study.

Table 2: Participant characteristics

Gender		
	Female	6
	Male	14
Role type		
	Management/administration	5
	Research	15
Career stage		
	Early or mid-career	12
	Senior	8
Institutional affiliation		
	Research institute	6
	NGO	5
	University	9

Interview findings are presented below under broad categories describing the benefits of partnerships, features that made partnerships work well, problems experienced in partnerships and fairness in partnerships with HIC collaborators. Since naming HIC collaborators may risk compromising participants' confidentiality, we have not identified HIC institutions by name. It is worth noting, however, that participants drew on experiences of partnership with institutions in

Canada, Norway, Spain, Sweden, Switzerland, UK and USA. In most of these countries, more than one research institution was named in the examples given by participants.

Benefits of partnership with HIC research institutions

Capacity strengthening

The most widely reported benefit of engaging in partnerships with HIC research institutions was capacity strengthening. Benefits to individuals included PhD training, career development and improved skills and knowledge in scientific disciplines, research methods, grant management and administration. These benefits were gained through supervision, formal training, mentorship and on-the-job learning by interacting with collaborators, e.g.:

> *"When you are being engaged you can observe…the creation process, whether it is a creation of knowledge…of a grant, you participate and you see, so you build your skills on how to navigate around different calls. If there is any funding call, at least you know how to start." [C05_SR]*

PhD training was also seen to have strengthened institutional capacity through creating a *"pool of scientists"* [C04_SR], many of whom were reported to have progressed to senior leadership and management positions in participants' own or other African institutions. Other examples of institutional capacity strengthening included support to establish a PhD programme and investment in research infrastructure, such as a laboratory.

Funding for research

Access to funding was the second most frequently cited benefit of working in partnership with HIC research institutions. Participants gave examples of how partnering with HIC collaborators had enabled them to access funding which they would not otherwise have been eligible to apply for because of funder restrictions, and had given them a higher chance of success because of the reputation of the HIC collaborator, e.g.:

> *"If you are trying to win a large grant, I am sure you have to demonstrate that you have the capacity to do the research. So if we were to bid for such grants as the prime [applicant] or on our own, where there is a requirement for lab capacity or other forms of capacity, then I'm sure we would not have had the research portfolio that we have now." [B02_EMA]*

Other benefits

Other benefits that participants reported included: exposure to opportunities, entry into networks, and visibility to funders which might lead to future grant funding, e.g.:

"You want to partner with others because it also helps you to be within the community of the same people who are working over the same things and it increases your influence and net worth." [B01_EMR]

A couple of participants described how partnerships enabled researchers to fulfill the career goals and promotion criteria within their own organisations, such as grant income and publication. While most participants described how they and their institution had benefited from partnerships with HIC collaborators, several also talked about benefits to their country, including an enhanced international reputation for research leading to future funding, better health service provision and greater use of evidence-based decision-making where policy makers had seen the value of using research data to inform their policy choices, e.g.:

"Now I think there is an interest from policymakers in terms of 'what evidence are you providing after doing an intervention or a study? What works?'" [D03_EMR]

What made partnerships work well

Mutual respect

A number of participants described how mutual respect and appreciation of one another's contributions were fundamental to the functioning of a partnership. Participants had a range of expectations about the extent to which partner inputs should be equal. Some advocated for full equivalence while others were satisfied with a smaller input where the HIC institution was the lead partner, provided that their own contribution was recognised, e.g.:

"Coming into the partnership with the attitude that…everybody has something to offer. It may not be equal. but just having that attitude that…everybody going into it has something to bring onto the table. I think is a very critical aspect in determining how the partnership is going to flow." [A05_SA]

Early and continuous involvement

Many participants commented on the importance of having an input at all stages of a project from conception through to design, implementation, analysis and writing up. Particular emphasis was placed on being involved early on in order to be able to influence design and budget allocation, e.g.:

"If we are really partners then we should be sitting at the table together from the beginning, all the way through the budgeting, so that it's fair across the line". [C02_EMA]

Role clarity

A number of participants felt that reaching clarity on the roles and responsibilities of the institutions and individuals within a partnership was important for the partnership to function well. Participants felt that responsibilities should be established through joint discussion and boundaries respected once roles has been agreed e.g.:

"I'm always very, very keen on 'let's be clear on what the roles are and what is expected and what we each are supposed to achieve', so that there is no misunderstanding and nobody ends up feeling short-changed." [D01_EMR]

Some participants had a preference for formal documentation such as terms of reference, Memoranda of Understanding or documented principles for collaboration and conflict resolution. Others emphasized the benefits of an informal agreement on the principles for working together, including retaining flexibility for roles to evolve as the partnership developed.

Experienced collaborators

Several participants described how it was easier to work with HIC partners who were experienced in working in low-resource settings, understood the constraints of the context and were willing to adapt their own systems and requirements to fit the needs of their partner, e.g.:

"When you're working with … experienced collaborators they've got mechanisms to start asking about things…way ahead of time… so they do anticipate that things can go wrong, and they know how to communicate." [B04_SR]

Participants felt that experienced partners were typically more flexible, more engaged in helping to solve problems and more sympathetic to external constraints than inexperienced HIC collaborators.

Effective communication

Several participants commented on the importance of communication between partners that was frequent, timely, transparent and two-way. Where communication worked well it was felt to lead to a shared vision about the purpose of partnership and each partner understood what the other wanted to get out of the relationship. The ability to discuss issues and address them openly and respectfully, for example, in relation to budget allocation, was seen to be critical, e.g.:

> *"If there are issues that, you know, perhaps we need to deal with, or that we were not comfortable with, we must be able to sit as partners and talk about them, rather than one of the partners being the partner, at the same time, the Court". [A03_EMR]*

Long term relationships

A couple of participants talked about the importance of a long-term relationship that transcended individual projects, generated institutional benefits and left a legacy for the future, e.g.:

> *"We should also remember that we need to strengthen this department as part of the capacity building within this project, so that level of consideration is also, it's beyond the research. To make sure you will also leave a footprint after the research is done". [B01_EMR]*

Long-term collaborations allowed for trust and understanding between partners to develop which improved the working relationship and for initiatives such as faculty exchange and joint post-graduate training programmes to be established.

Several participants talked about specific ongoing or past collaborations which exemplified many of the themes of good partnership practice.

Example of good partnership practice

A HIC institution leading a grant application approached the sub-Saharan African collaborator at concept design stage to solicit input on study design and agree outline budget requirements. The application was a success and at each subsequent stage of project set-up, implementation, analysis and writing up the sub-Saharan African collaborator was fully involved. The intended project beneficiaries were also involved as peer researchers and were consulted on key decisions. Roles and responsibilities and a communication structure for the project partners were agreed early on. The HIC partner offered suggestions and provided support in areas in which the sub-Saharan African lacked experience and the sub-Saharan African partner gave direction on issues where they had more expertise. The sub-Saharan African partner had the autonomy to use their budget flexibly to meet the project needs as it evolved and formal reporting was minimised while informal communications were frequent and two-way. Overall, the sub-Saharan African partner felt that they had as equal a stake in the project as the HIC partner and were respected as equals. A relationship of trust and respect developed and the project led to other collaborative initiatives between the institutions.

Problems of partnering with HIC collaborators

Late involvement and confined role

A number of participants described the frustration of being asked to join a partnership after key decisions about project design and budget allocation had already been made. This frustration was exacerbated when their roles had remained limited throughout the collaboration, they had little influence on decisions and their involvement was diminished at key stages of the research process, particularly during data analysis and publication.

> *"They wanted to treat us as research assistants and not as partners in a developing country context…When it came to authorship, they wanted to be the ones who determine who was to participate". [D02_SR]*

Participants described a range of experiences with respect to data ownership and access to data. Some felt that shared ownership and rights to use data by the institution that generated it were typically clear and they had had no concerns, while others had experienced difficulties in accessing and using data even when they had been involved in generating it. Several participants described having been excluded from the writing process or the HIC partner demanding senior authorship of papers even when their contribution did not justify it, e.g.:

> *"For me, it's very demeaning when you are passed over for an opportunity to co-author on work you conceptualised from scratch and you were available, because a student somewhere has only come in to analyse the data". [A01_SR]*

Exploitative relationships

Several participants had experienced partnerships where they felt that benefits were unevenly distributed between partners in favour of the HIC partner, the relationship was exploitative and HIC stakeholders had prioritised their own objectives over those of their partners, e.g.:

> *"You're more on the receiving end and you sometimes question and feel, 'Am I only being used?' To just meet the interest of somebody else." [A05_SA]*

Participants proposed that there needed to be greater recognition of all contributions and that HIC institutions should offer benefits to their partners to balance out the benefits they had accrued from the relationship.

HIC partner superiority

Several participants described experiences of HIC partners behaving in a supercilious manner, lacking humility and not acknowledging their partners' competence. Participants described how HIC partners often attributed greatest value to the contributions they brought themselves, such as funding and the research capacity of their institution. Two participants commented on how HIC partners failed to acknowledge that their institutions' reputation and success was to a large extent based on work that was only possible because of working in partnership with LMIC partners, e.g.:

> *"I think that our northern partners or Western European partners have been a little bit slow to realize two things: one is the historical predisposition that has created… a lopsided system, where one person is seen to be more important or cleverer. A lot of these sort of historical predispositions have nothing to do with innate ability. They've also failed to realize that a lot of their own growth is the result of these partnerships and that there is probably more they are gaining from the partnerships than the so-called Southern partners are gaining." [C01_SR]*

Inauthenticity

Several participants had experienced a disconnect between a HIC partner's rhetoric of equality but practice of inequality, for example if a project was not going in the direction the HIC partner expected. In several examples, the HIC institution had used their position as the lead partner to *"bulldoze"* [B04_SR; D03_EMR] their way forward, even when this contravened a prior agreement about roles and responsibilities. For example:

> *"Our bargaining power is always to a certain extent [limited]…you reach a certain point, whereby if they say, "This is how things should be done", you bow down to that." [B03_SR]*

One participant gave an example of a HIC partner using capacity strengthening as a selling point in a grant application, yet when the project was implemented, no capacity strengthening was offered. Another described feeling misled by a HIC institution that had framed a project as a collaborative venture yet issued a consultancy contract which positioned the sub-Saharan African institution as a service provider. This had disadvantageous tax implications and left them with little room for intellectual contribution or rights to use the data:

> *"The attitude is that you don't know it, and they know it all, and so your responsibility…is to follow direction and not to contribute alternative views and where you contribute alternative views they are shot down." [A05_SA]*

Micro-management

Several participants gave examples of where HIC partners had micro-managed research projects, overstepped the boundaries of their role as lead partner and interfered in the sub-Saharan African institution's operations. For example, one participant described how they had been required to send documents for the HIC partner to review and were expected to attend meetings which were framed as progress meetings, but whose purpose seemed to be for the HIC partner to monitor their activity and control operational decisions. Several participants alluded to HIC partners having an attitude of entitlement, encapsulated in this comment:

> *"…they go in, like IN. It's like when you enter the house and you are invited to sit in the sitting room, someone can go up to the bedroom." [C03_EMR]*

HIC partner failure to accept a subordinate role

Several participants described challenges where their institution had been the lead partner and had sub-contracted to a HIC institution as part of a collaborative project. They had found that some HIC institutions had been resistant to accepting a role other than as the lead partner and failed to submit financial and technical reports to the standard requested, e.g.:

> *"The resistance was there initially in terms of them [HIC partners] being at the mercy of the Southern partner in terms of the Southern partner determining…what support they needed … and the amount of funding that could be made available for that support." [D01_EMR]*

Participants felt this was wrong given that the reporting requirements were very similar to those that their institutions were expected to comply with when sub-contracted by a HIC institution.

Other problems

Other problems that participants had experienced included: slow contracting, delays in payment and inflexibility and lack of support from HIC partners, especially where the HIC partner did not understand the challenges of the context in which they were operating, e.g.:

> *"Our partners in the higher income institutions may not actually understand that what appears to be a very simple task to them may not necessarily be a very simple task for us." [B02_SA]*

One participant commented that most successful health research institutions in sub-Saharan Africa had a long-standing relationship with a HIC university or research institution and senior staff often had a joint appointment. While ostensibly beneficial, he felt that this also presented challenges: staff in leadership positions may be compromised by seeking to meet the expectations of the HIC institution, which might be in conflict with the interests of the African institution and limit its trajectory towards independent success.

Fairness in partnerships with HIC collaborators

The concept of fairness underpinned many of the issues that participants raised about partnership with HIC collaborators and was also discussed explicitly. A couple of participants commented that inequities existed in partnerships between organisations in the region, not only in relationships with HIC collaborators, and attention should also be paid to these. However, this theme was not explored in detail in this study. Participants typically described having experienced both fair and unfair partnerships with HIC collaborators and partnerships that had elements of fairness and unfairness. Most striking was participants' initial responses to the question of whether partnerships were fair. Many laughed at the question and paused before giving an answer. Some participants implied that the complexity of the concept made it a difficult question to address succinctly, several others suggested that it was futile to isolate the issue and make a judgement on fairness in partnerships given the pervasiveness of unfairness across many aspects of life, while others implied that the pursuit of fairness was a luxury that was beyond practical consideration, e.g.:

> *"I think fairness becomes an abstract thing here. You do what you have to do to keep running sometimes." [A01_SR]*

Funding

The topic of funding generated most discussion with respect to fairness and elicited a range of views. One participant felt that it was reasonable that when funding originated from a HIC, the institution from that country should be the lead partner, while a contrasting view was that funding calls should always be open to applicants from any country. Another participant felt it was fair that when funding was derived from HIC taxpayers a substantial share of this funding was retained and invested in the HIC where the funds originated. Another participant described a recent situation where their institution had been in competition with others in the region to find a partner for a call requiring a UK lead applicant. They felt that this requirement was unfair because despite having a strong proposition they had not been able to apply as there were no UK partners left to partner with.

Several participants were critical of funders with low overhead limits which meant that their institution had to subsidize projects. Two participants described their experience of the distribution of funds between LMICs and HICs being unfair: one grievance was that majority share of the funding often remained in the HIC institution when the work largely took place in LMICs. The other grievance concerned salaries and benefits going to HIC institutions that were disproportionately high in comparison with the compensation that their own institution's staff received, even after having accounted for cost-of-living differences.

Several participants described how feelings of mistrust and inequity were fueled when the lead partner lacked transparency about how funds had been allocated between institutions. In contrast, several participants felt that as long as their institution received sufficient funding to deliver their component of the work, this was fair, and they were not concerned about how much money the lead partner received, e.g.:

> *"I really don't care how much money is going to the UK, because I know that I've got enough funds to do this study." [B04_SR]*

One participant commented on how responsibility lay with his own institution to pay close attention during budget development and to negotiate a fair funding allocation at the outset and that problems only arose when insufficient care was taken at this stage. A couple of participants had experienced receiving inadequate funds to deliver the work expected of them, and - having agreed to a scope of work – had been expected to take on additional work without any extra funding, e.g.:

> *"When you look at it and the expectation, it is somebody asking you to deliver a Rolls Royce and they're giving you money to buy a Toyota." [A05_SA]*

Two participants felt that the high Masters' tuition fees charged by HIC universities to LMIC students were unfair when these universities' core funding and reputation were founded on work done in LMICs. One participant described how HIC partners had a duty to distribute the benefits when they had gained from work conducted in LMICs, and it was unfair when this did not happen. Another participant felt that the tone of a partnership was to a large extent set by funders. This individual felt that partnerships were more likely to be fair when the funder issued criteria for equitable participation than where arrangements were left to the lead partner to determine.

Capacity strengthening

Capacity strengthening was the second most frequently discussed topic in relation to fairness in partnerships. Several participants described their expectation that capacity strengthening should be inherent in the design of research partnerships with HICs and when it was, this was fair. A couple of participants felt it was unfair when their expectations with respect to capacity strengthening were not met. For example, one participant described how their institution had strengthened the capacity of a HIC partner when they felt it should have been the other way around. One participant felt that when capacity strengthening was narrowly focused, e.g. on PhD training, individuals remained dependent on HIC partners because they were not exposed to the broader experiences, skills and capabilities needed to become a successful independent researcher. These included grant writing skills, how to engage with funders and networking skills, e.g.:

"You really don't know how that process of engagement goes when you're always in the lobby when everyone else is in the conference room." [C02_EMA]

Two participants felt that HIC partners intentionally restricted opportunities for capacity strengthening because this protected their own position in the partnership hierarchy, and they questioned the commitment of HIC partners toward supporting LMIC researchers' independence. The inverse of this experience was described by a participant who had been encouraged by the principal investigator from a HIC partner to write grant applications, supervise students and participate in training. The participant described the relationship as being very fair.

One participant differentiated between individuals' responsibility to negotiate a fair relationship with one another and structural unfairness which was difficult to tackle as an individual. Several other participants alluded to a blurring of the boundaries between individual and systemic inequity. For example, one participant described how individuals from HIC institutions were inclined to perpetuate systems (systemic inequity) which supported their own career advancement (individual inequity), e.g.:

"They work within this system that is designed in a super-biased way and somehow these well-meaning people are unable to come out of this. In some cases they might even be tempted to use this system to survive. To get a favour." [C01_SR]

Several participants described the unfairness of being limited by the HIC partner in the extent to which they were able to contribute to decisions relating to project design and delivery, while two others described feeling exploited by a HIC partner who had restricted their involvement in the partnership to data collection and excluded them from analysis and publication, e.g.:

"I have worked on studies where I knew I could contribute more, but your role is already defined: 'You are managing fieldwork, you are recruiting and overseeing data collectors, and sending us the data'. End of story. I'm like, 'I want to be involved in the analysis, it's qualitative data, I am excited about these things, I want to be involved and maybe co-author', but that option is not provided many times." [A01_SR]

One example was given where a participant's institution had been running a joint PhD programme with a HIC university. When the Memorandum of Understanding for the arrangement expired the HIC partner had decided unilaterally that the programme should not be renewed but should become a dual PhD programme whereby students could register at either institution. The HIC institution promoted this new arrangement as a benefit, but the participant felt that it was disadvantageous because the best students who could secure sponsorship chose to register at the HIC partner institution because of its strong reputation. Their own institution missed out on being associated with the highest calibre candidates.

Discussion

Interviews with early to mid-career and senior researchers and research managers at four institutions in anglophone eastern and southern Africa revealed wide-ranging experiences of partnership with HIC collaborators, both positive and negative. Existing principles for partnership (28-30) provide good coverage of the issues that participants described as being the key determinants of a healthy partnership, for example: mutual respect, involvement of all partners from concept design stage throughout the research lifecycle, clear governance and open communication. A small number of participants referred to published partnership guidelines, but none mentioned having used them. There is scope for institutions to adopt and adapt existing guidelines, and it would be useful to probe further into why, after several decades of guidelines being available, they are rarely used.

Participants described a range of benefits of partnering with HIC institutions. Foremost among these was capacity strengthening. Mutual learning and capacity exchange have been promoted in partnerships to acknowledge the value that each partner brings to the table (23, 37) and it would be interesting to explore the extent to which HIC partners also identify capacity strengthening as a benefit. Another key benefit identified was access to research funds, partly as a consequence of restrictions on LMIC organisations applying directly for funds originating in HICs. As discussed below, there is some evidence that more funding is being granted directly to LMIC institutions. This might alter what benefits LMICs perceive to be gained from partnering with HICs in future.

Meanwhile, participants had recently experienced a wide range of partnership inequities that have been well documented in the literature. This finding suggests that there is still some way to go before principles of fairness are embedded in practice and is consistent with claims that the system of global health remains colonial at its core (33). Inequities experienced by participants included only being invited to participate in a study after the research concept and design had been determined (10), being offered only a limited role (1, 17), receiving fewer benefits than HIC partners (36, 38), HIC partners interfering in the LMIC institution's operations (12, 39) and HIC partners over-claiming authorship positions (16, 18). Several less well documented challenges also emerged which had arisen when LMIC institutions were in the lead partner role. For example, one HIC institution was unwilling to adhere to the sub-contracting requirements issued by a lead partner from sub-Saharan Africa. Another was dissatisfied when the funder re-routed how funds were channeled so that they flowed from the funder to LMIC partners who then commissioned the support they needed from HIC partners. The experiences of sub-Saharan African partners when leading partnerships have had little coverage in the literature to date. They are likely to become more prevalent as funding patterns change and partnership structures evolve towards more partnerships being led from sub-Saharan Africa.

The narratives of participants from institutions with more limited capacity for research and research management hinted at some differences in the issues they were experiencing in comparison with participants at institutions with greater capacity and depth of resources. This is not something we have seen explored in detail elsewhere. For example, participants who felt that they and their institution were held back by lacking skills, experience or resources expressed a strong demand for capacity strengthening in science and operational areas. This appeared to be a lower priority for participants from high-capacity institutions for whom other issues were in the foreground, such as how to deal with HIC institutions who were unwilling to accept a subordinate position in a partnership.

Perhaps this differential underpins the finding that participants working in research institutions with greater capacity appeared to be able to exercise greater power and influence in their dealings with HIC partners than participants from institutions with more limited capacity. That is not to suggest that all power imbalances are a consequence of capacity differentials. However, many of the negative experiences that participants reported appeared to be related to their institution having less capacity than a HIC partner and this contributed to the power differential between them, as has been discussed elsewhere (40). This reinforces the need to ensure that individuals and institutions in capacity-limited contexts continue to be supported to develop the skills and experience to compete in a global research arena, and that this is done respectfully. Historically, HIC technical partners have provided much of the support, leveraging funding from HIC governments, commercial and non-profit entities, and are likely to continue to play a significant role for some time to come. However, pressure is growing from advocates in LMICs (34, 41, 42) for LMIC governments to increase investment in research and move away from the reliance on foreign investment in research coined as neo-dependency (43). Furthermore, emerging entities such as the African Academy of

Sciences' Alliance for Accelerating Excellence in Africa and Africa Centers for Disease Control and Prevention provide hubs of technical expertise, mechanisms to support capacity strengthening and channels through which funds, from any source, can be managed and distributed to address issues of regional priority.

There has been a steady crescendo of voices calling out the ills of the colonial legacy in global health and challenging the systems that perpetuate structural inequities and maintain the status quo where HICs dominate the discipline (35, 44, 45). Though it has taken several decades to build momentum, we may be approaching a tipping point for a major re-evaluation of how global health is conducted: some funders have already diversified their approach or are re-considering how to invest, for example increasing direct funding to institutions in LMICs, of which several examples were given in this study. Groups such as the UK Collaborative on Development Research (46) and Council on Health Research for Development (47) provide platforms to share resources (48, 49), convene discussions and secure commitments to changing funders' practice. Funders also have an influential role in setting expectations for how partnerships should operate and in choosing what to fund. Ring-fencing funds for activities that promote partnership development and increasing investment in institutional and systems strengthening are two possible options. In parallel with changes in the funding environment, powerful stakeholders in the 'global South' are increasingly acting as advocates for change (34) and HIC research institutions are starting to look critically at how they engage with partners. For example, the authors are aware of ongoing exercises at two UK universities specializing in global health to review their policies and practice in service of achieving more equitable partnerships, while a number of institutions have committed to undertaking self-assessments using the Research Fairness Initiative reporting tool (50). Future research that captures the perspectives of HIC stakeholders on partnerships, including motivations to change practice and the challenges thereof, would make a useful contribution to the evidence base.

The findings from this study suggest that the downstream impacts of changes in ideology and policy are, to a limited extent, reflected in the experience of stakeholders in sub-Saharan African research institutions, but there remain significant barriers to overcome. Embracing change poses challenges to those who are faced with relinquishing power (51), and several participants in this study gave examples of HIC partners who had been reluctant to cede control, speculating that this was driven by fear of losing the opportunities on which their careers and reputations had been built.

Notwithstanding the negatives, almost all participants in this study commented on the considerable benefits that they had experienced themselves and the value added to their institutions and countries from working with HIC partners. The overarching sentiment was not a demand for HIC research institutions to exit the global health stage. Indeed, several participants commented that it would be an abdication of responsibility for stakeholders with access to resources and expertise not to use it to benefit others. Participants' views on what still needs to change and how to achieve greater equity in global health partnerships represented a microcosm of wider discussions in the field and were largely optimistic that things are moving in the right direction.

Limitations

Efforts were made to incorporate diversity in the characteristics of institutions included in the sample and to identify participants with a range of jobs and experience in order to provide a broad range of perspectives. However, the criteria for selecting institutions used proxy indicators for institutional maturity and scale of research activities which may not have been the most robust measures of these characteristics. We did not include a criterion to select for type of research or diversity across research disciplines, e.g. product development, clinical trials, basic science, social science and this may be a useful selection criterion for future studies. Including only institutions in countries where English is an official language, and excluding francophone and lusophone nations, is a further limitation of the study. In recognition of these limitations, we seek only to offer illustrative findings and do not claim that these are representative of the concerns of stakeholders at research institutions across anglophone eastern and southern Africa, let alone a broader geographical area.

Conclusions

Evidence from stakeholders in a small sample of research institutions in anglophone eastern and southern Africa suggest that contemporary global health research partnerships generate benefits but continue to exhibit longstanding inequities and reveal emerging tensions. Published principles and guidelines for partnership seem to be relevant but are rarely used. Raising awareness of the existence of principles and guidelines alongside a commitment from stakeholders to adopt and adapt them may offer a useful step forward. The distribution of power between partners appears to be gradually levelling out as research institutions in sub-Saharan Africa grow in stature, research funding is re-configured and movements for research equity and decolonising global health gain momentum and drive change. Meanwhile, long-term financial and technical support targeted towards institutions and national research systems remains essential to fulfil the potential of research led from sub-Saharan Africa. As the landscape of global health changes, HIC stakeholders need to identify new roles in partnerships, and stakeholders from LMIC must continue to tackle challenges presented by the resource-constrained contexts in which they commonly operate.

Abbreviations

HIC	High-Income Country
LSHTM	London School of Hygiene and Tropical Medicine
LMIC	Low- and Middle-Income Country
NGO	Non-governmental organisation

Supplementary information

The online version contains supplementary material available at https:// doi.org/ 10. 1186/ s12939-022-01707-3.

Additional file 1. Interview topic guides.

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Authors' contributions

SV designed the study, collected and analysed the data and drafted the manuscript. NT, JS and PC contributed to the study design, analysis and manuscript. CMC, ALN, TO and CAB provided critical revisions to the manuscript. All authors reviewed and approved the final version of the manuscript.

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Availability of data and materials

The small sample size and nature of qualitative research makes it impossible for us to avail the data without compromising participants’ confidentiality or redacting transcripts to the extent that their meaning is distorted from that which informed the interpretation of the findings.

Declarations

Ethics approval and consent to participate

Ethical approval was obtained from the London School of Hygiene and Tropical Medicine observational ethics committee (reference number 25762). Institutional approval for the study was granted by all participating institutions, including research ethics committee approval where required. Further details are available from the authors on request. Written informed consent was obtained from all individual participants prior to their participation in the study. A report of the study findings was shared with all participants.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests. JS has a long-standing relationship with one of the institutions included in the sample but was not involved in data collection or analysis. SV, who conducted all interviews and data analysis, had no prior relationship with any of the institutions included in the sample, though they were all partners of LSHTM with which she is affiliated.

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Appendices

Data Management Plan for Research Students

Project title	Equitable Global Health Research Partnerships
Author name	Shirine Voller
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Date of last edit	29 May 2022

DESCRIBE YOUR RESEARCH

1. What digital resources – data, code, collection tools, etc. - will you collect/obtain and use?

Qualitative data from semi-structured interviews conducted remotely with staff at research institutions in sub-Saharan Africa that are partners of LSHTM. Digital recordings of interviews subsequently transcribed and stored electronically with printed hard copies.

2. What hardware and software will be used in your research?

- An encrypted and password-protected laptop to store participant details, interview recordings, transcripts and soft copies of documents included in the data set.
- Microsoft Outlook to contact study participants, send the study information sheet and send and receive the informed consent form.
- Zoom web-based communications platform, including its recording and auto-transcription functions.
- A secure server hosted by KEMRI Wellcome Trust Research Programme to which data is backed up and stored.
- NVivo 12 software for data analysis.

3. What data-related activities will be performed during the research?

Task	**Description**
Pilot interview guide Month 1 (Month 0 is date of ethics approval)	Pilot semi-structured interview topic guide with 3-4 collaborators at LMIC institutions that are not included in the study. Revise interview guide following pilot.
Conduct semi-structured interviews Months 2-7	Interview up to 30 participants who are staff at research institutions in sub-Saharan Africa which collaborate with LSHTM. Record interviews on Zoom or MS Teams. Transcribe using auto-transcription function where available and finalise by listening back to audio-recording. Remove participant name and institutional identifiers during transcription. Familiarise with information about each participant (name, job title, organisation, any other information avialable) before each interview and write field notes after each interview.
Analyse interview data	Annotate hard copies of transcripts by hand followed by structured analysis in NVivo. Use a thematic content analysis approach to analyse the content.

4. What quality checks will you perform to ensure resources are fit for purpose?

Test the quality of recordings produced on Zoom – found to be good quality with audio clarity as good as a digital voice recorder. Check how to use the auto-transcription function and the quality of transcripts it produces. The auto-transcription function was found to be of sufficient accuracy to use as a draft transcript but required listening back to the audio-recording to correct errors and complete gaps in order to produce the final transcript.

Have a digital voice recorder available as a back-up in case of any problem with the Zoom recording. Check the digital voice recorder in advance of interviews for adequate battery life and storage capacity.

Use a topic guide to retain consistency in the overall scope of interviews but use the guide flexibly in response to participants' interests, areas of experience and the information that they provide without prompting. This is consistent with accepted norms around the conduct of semi-structured interviews where the researcher introduces topics to be covered and sets the boundaries, but participants determine the priority attached to each topic and whether and how to address them.

Write field notes to accompany each interview, including before (noting down name, job title, institutional affiliation and any other issues of note), during and immediately after the interview. Writing notes in a timely way ensures that they are a close approximation of thoughts and reactions at the time and are not distorted by recall bias or other influences.

Transcribe interviews following accepted conventions to ensure consistency in the way in which verbal data is documented. DrPH researcher to conduct and transcribe all interviews to optimise consistency in the process of data collection and documentation.

Use NVivo for organising analysis. This allows for multiple files to be saved with a different date and name identifiers to aid the iterative process of analysis.

For data authenticity, keep a master folder of data that includes all audio files, transcripts, field notes and NVivo files. Save versions of the analysis with a date identifier and descriptor for differentiation.

5. How will you address ethical and legal issues within your research?

Seek ethical approval from the LSHTM institutional ethics review committee and respond to any recommendations or conditions of approval prior to starting data collection. Seek guidance from each institution involved in the study about what additional approvals are required for the research to be conducted in their institution. Since the research is non-interventional and is not health-related, it may be considered exempt from in-country ethical approval. However, any approvals that are required will be secured prior to starting data collection.

Seek individual consent from each study participant and document the consent on an informed consent form exchanged by email in advance of the interview. Send a participant information sheet with the informed consent form to ensure participants make an informed decision about participation. Check again before starting each interview that participants have read and understood the information sheet and are willing to continue to the interview on the understanding that they may withdraw at any time.

No legal issues expected to arise from the study, which is low-risk and non-interventional.

6. What documentation will be created to ensure resources can be understood?

Develop a coding scheme following an iterative thematic content analysis of interviews and make this available.

STORAGE AND SECURITY

7. Where will resources be stored at key stages of your research?

Identify where resources will be held during capture, processing, analysis and other stages, and who will have access to them. Consult *https://lshtm.sharepoint.com/Services/IT-Services/ServiceDesk/LSHTM-data-storage-options.pdf*

Store all data (interview recordings, transcripts, field notes) and documentation relating to the data (e.g. participant contact details, informed consent forms, NVivo files, data exported into MS word files) on an encrypted and password protected laptop and backed up to the KEMRI Wellcome Trust Research Programme secure server. In addition:

- Store participant contact details in a password protected MS Word file
- Delete original audio recordings and auto-transcripts from Zoom as soon as copies have been stored securely and backed up.
- Keep hard copies of transcripts and field notes in an office where access is by staff ID card and in a locked home office.

- Only the researcher has access to the primary data throughout the study, unless a supervisor requests to have access. In this case, the minimum amount of data required will be shared, the process of sharing will be documented and the supervisor will be requested to keep the data securely.

8. What labelling conventions will you apply to manage your resources?

Label audio files, interview transcripts and field notes to include the unique identifier given to each participant, the date of interview and a descriptor of what the file is (e.g. field notes, Zoom autotranscript). The unique identifier can be matched back to each participant on the password protected master file that contains names and contact details for each participant. For example:

B02_field notes_21-08-06	Participant 2 from institution B, Field notes of interview conducted on 6 August 2021.

Label data collection tools with the date that the version became current. For example:

Interview topic guide_Equitable partnerships_21-04-06

9. How will you keep data safe and secure?

Only anonymised data will be used - personal, sensitive, or otherwise confidential data is not needed for the research		Store personal details in a separate secure location & link it via an identifier	✓	Delete personal & confidential details at earliest opportunity (specify when below)	✓
Use digital storage that require a username/password or other security feature	✓	Physical security (such as locked cabinet or room)	✓	Protect portable devices using security features, e.g. biometric	✓
Encrypt storage devices	✓	Encrypt during transfer		Avoid cloud services located outside EU	
Take 'Information Security Awareness training'	✓	Ensure backups are also held securely	✓		
Notes:	• Data collection conducted remotely. Informed consent forms issued and returned electronically, hence physical security not required for informed consent forms, audio-recordings and transcripts. • Study laptop, notebook and printed copies of transcripts to be stored securely in an office accessed only by a staff ID card or in a secure home office.				

	• Laptop encrypted, password protected and backed up to a secure server. • Interviews recorded using the recording function of a secure electronic communications platform, Zoom, with digital voice recorder as a back-up (not required). Sound files transferred immediately after interview to the encrypted laptop and deleted from Zoom once backed up to the secure server. • Names and institutional affiliations removed from transcripts used for analysis. This is not full anonymisation and the data set will not be made available publicly to protect participants from being identified. • Names and contact details used to schedule interviews kept in password-protected MS Word file with a labelling convention that links the anonymised transcript to the original file. • Field notes taken electronically in MS Word in before, during and after an interview. Hard copy field notes may also be taken in a notebook which is stored in a ID-card accessed office or secure home office. • Interview recordings to be deleted within 12 months following the completion of data analysis. • All primary data and analysed datasets to be deleted three years after completing the DrPH programme, i.e. three years after acceptance of the final thesis.

ARCHIVING & SHARING

10. What resources should be kept as evidence of your research?

Store primary data and analysed datasets for three years following graduation from the DrPH Programme, ie. three years after the final version of the thesis has been accepted. Use transcripts as the record for an interview and delete recordings within 12 months of completing data analysis.

11. Where will these resources be hosted?

Store primary data and analysed datasets on the KEMRI Wellcome Trust Research Programme secure server. In the event of leaving KEMRI Wellcome Trust Research Programme, transfer resources to LSHTM Secure Server for remaining period until they are deleted.

12. When will the resources be made available?

During the research life		At the same time as findings are published in an academic journal		A set time after research end, e.g. 12 months. Specify below	
Resources already available (provide details below)		On completion of my thesis		Other (provide details below)	✓
Further information / Other					
The resources will be stored on the KEMRI Wellcome Trust Research Programme secure server, or LSHTM secure server in the event the researcher leaves KEMRI Wellcome Trust Research Programme, for three years after completion of the DrPH thesis. Raw data will not be made publicly available. The data will only be used to inform written outputs arising from the study, e.g. thesis, manuscripts for publication and reports.					

RESOURCING

13. What are the primary data management challenges in your research?

The data generated from the study through interviews is inherently identifiable. The extent of redaction that would be required to share the data whilst protecting the rights of the individuals who took part in the study is considered too great to leave a meaningful and 'true' record that could be used for other researchers to access for analysis. Consequently, the data set will not be shared for use by other researchers in any format.

14. How can LSHTM and others help you to better manage your data?

Guidance will be sought from data management experts at LSHTM as needed. Advice available online from LSHTM and from the UK Data Service will also be used to inform decisions about data management. LSHTM will provide support through access to its secure server to store data in the event that the researcher leaves KEMRI Wellcome Trust Research Programme during the period that the data needs to be retained.

Appendix B: Participant information sheet

Participant information sheet

Title of Project:
Equitable global health research partnerships

Introduction

I would like to invite you to take part in a research study about equity (fairness) in global health research partnerships. I use the term 'partnership' to refer to any formal collaboration between two or more research institutions. So that you can decide whether to take part, I am sharing information about why I am doing this research and what it involves. I am happy to provide more information if anything is unclear or you would like to know more.

What is the purpose of the study?

This study is the thesis research for my Doctorate in Public Health at The London School of Hygiene and Tropical Medicine (LSHTM). Through the study I will explore the experiences that individuals working in research institutions in sub-Saharan Africa have of working in partnership with high-income country collaborators. There has been a lot of research and writing about global health partnerships and various guidelines exist for how partnerships should operate in a fair way, but the perspectives of low- and middle-income country stakeholders are under-represented and the dynamics of partnership are evolving. This study aims to add to the existing knowledge base and highlight the recent experiences and issues relevant to stakeholders from institutions in sub-Saharan Africa. Ultimately, it is intended to inform improvements to how global health research partnerships work in future.

Why have I been asked to take part?

You have been asked to take part in this study because of your experience working for an institution that collaborates with high income country health research institutions.

Do I have to take part?

No. Participation is voluntary. There is no obligation for you to take part.

What will happen if I decide to take part?

If you decide to take part, we will schedule a time for an interview. I will send an informed consent form in advance for you to sign and return. The interview will be conducted remotely by Zoom, Microsoft Teams, Skype or phone and will last between 30 minutes and one hour. If you give consent, I will record the interview. There is no need for you to prepare in advance, other than to be ready to talk about partnerships that you have been involved with. I will ask permission to contact you after the interview if I need to clarify something you said.

What are the possible risks and disadvantages?

The study is not expected to place you at any risk or disadvantage. My work is not part of any audit, report or feedback to LSHTM about you, your institution or its relationship with LSHTM. I am not involved in the partnership between your institution and LSHTM and my work is for research purposes only.

What are the possible benefits to me?

A possible benefit to you is that by talking about your experiences of working in partnership, you identify issues that you wish to discuss with colleagues and partners that could improve your experience of working in partnership in future.

What if I have a concern about the study?

If you have a concern about any aspect of this study, please share it with me and I will do my best to address it. If your concern is not resolved and you wish to raise a formal complaint, you can do this by contacting the Head of Research Governance, Patricia Henley, at rgio@lshtm.ac.uk or +44 (0) 20 7927 2626.

The London School of Hygiene and Tropical Medicine holds insurance policies which apply to this study. If you experience harm or injury as a result of taking part in this study, you may be eligible to claim compensation.

Can I change my mind about taking part?

Yes. You can withdraw from the study at any time. If you withdraw from the study I will destroy all data that I hold about and from you.

What will happen to information collected about me?

All information collected about you will be kept private. Only I, my supervisors and authorities who check that the study is being carried out properly will be allowed to look at information about you.

Interview recordings (if you have given permission for the interview to be recorded) and transcripts will be stored securely on an encrypted and password protected laptop backed up to a secure server and will not be deposited in a publicly accessible data repository. Sound files will be transferred immediately after the interview to the encrypted laptop and will be deleted from the digital voice recorder and Teams, Zoom, Skype or phone.

Your personal details, such as your name, contact details and institutional affiliation, will be kept in a password-protected file with a systematic labelling convention that links them to the interview recording and transcript, which will be kept in a separate secure location. Only I will have access to your identifiable personal data.

The institutions included in the study will be named in the DrPH thesis report and may be named in other outputs from the study, e.g. research publications, but will be referred to as Institution A, B, C etc. in the results and discussion sections and will never be linked by name or other identifier to a data segment.

Individual participants will be referred to by job title and institutional reference, e.g. "Project Manager, Institution A". Where job titles are specific or rare and could potentially lead to identification, they will be changed to a more general job title in order to maintain participant confidentiality, Personal identifiers and any other information which may enable an individual to be identified will be removed from any data segment before it is included in a written output arising from the study.

Interview recordings will be deleted within 12 months following the completion of data analysis. At the end of the study, the data collected about you will be stored on LSHTM's secure server for three years, after which it will be deleted.

What will happen to the results of this study?

The study results will inform my Doctorate in Public Health thesis report. This report will be indexed by the LSHTM library and accessible to LSHTM staff and students. The results may also be used to publish research articles. No personal information will be included in the report or in any research article. Anonymised quotes will be used in the thesis report and in any journal articles. Quotes will not *contain any information that could lead to the identification of any participant, any other individual or any organisation.*

Who is organising and funding this study?

London School of Hygiene & Tropical Medicine is the sponsor for the research and has full responsibility for the project including the collection, storage and analysis of your data.

Who has checked this study?

This study has been reviewed and given favourable opinion by The London School of Hygiene and Tropical Medicine Research Ethics Committee (study number 25762).

Further information and contact details

Thank you for reading this information sheet. If you are willing to take part in the study, please confirm this and I will contact you to make arrangements for an interview.

Contact details: Shirine Voller, shirine.voller1@lshtm.ac.uk, +44 7974 562630 (UK); +254 795 746 834 (Kenya).

Version: 28 May 2021

Study title: Equitable global health research partnerships; LSHTM ethics committee reference 25762

Appendix C: Informed consent form

Informed Consent Form

Title of Project: Equitable global health research partnerships

Name of researcher responsible for project: Shirine Voller

Statement	**Please initial each box**
I confirm that I have read and understood the participant information sheet dated 28 May 2021 for the above-named study. I have had the opportunity to consider the information, ask questions and have these answered satisfactorily.	
I understand that my consent is voluntary and that I am free to withdraw this consent at any time without giving any reason and without my legal rights being affected.	
I understand that relevant sections of data collected during the study may be looked at by authorised individuals from London School of Hygiene & Tropical Medicine (Members of the Research Ethics Committee, the researcher's supervisors and examiners). I give permission for these individuals to have access to these records on request.	
I understand that data that I provide will be used in a Doctorate in Public Health thesis report and may be published in other formats for research purposes, and that I will not be identifiable from this information.	
I agree to take part in the above-named study.	

Printed name of participant	Signature of participant	Date

Printed name of person obtaining consent	Signature of person obtaining consent	Date

Study title: Equitable global health research partnerships; LSHTM ethics committee reference 25762

Appendix D: Interview topic guide 1

Interview guide for stakeholders involved in specific partnerships

Introduction

- Good morning/afternoon XXXX [name of interviewee]. I hope now is still a good time to talk? Thank you for making time to talk with me today.

- As I explained in my introductory email, I am studying for a Doctorate in Public Health at London School of Hygiene & Tropical Medicine. I am also an LSHTM staff member based at KEMRI Wellcome Trust Research Programme in Kenya where I work as a Programme Manager. My DrPH research aims to understand the experiences of stakeholders from institutions in sub-Saharan Africa of research partnerships with institutions in high-income countries. This research is not connected to any form of audit or feedback to LSHTM about its partners.

- Thank you for sending back the signed informed consent form. As stated on the form, personal information about you will be kept confidential and you may withdraw from the study at any time. Data will be stored securely throughout the study and kept securely for a limited time after the study has been completed.

- I expect the interview to last for up to one hour. I will ask open questions, and there are no right or wrong answers. I am interested to hear about your opinions and experiences.

- Do you have any questions before we start? Are you willing for me to record the interview? [If yes, start recording. If no, take notes].

Participant's role

- Could we start by you briefly describing your current job? *[Prompt for details: How long in role, nature of role]*
- Have you had any other roles at X [name of research institution]? [*Prompt for details]*

- Did you work anywhere else before joining X? [*Prompt for details. Only ask question if started at X in last 5 years].*

Experience of partnership

Now I would like to hear about your experience of research partnerships with institutions in high income countries.

- Could you describe some of the recent partnerships that you have been involved in?
  [Who partners were, funder, ongoing or finished, purpose and scope, size $$, interviewee role in partnership, get sense of what interviewee understands partnership to be].

- Now can you describe in more detail [project name]/ the partnership with LSHTM/a partnership with another institution that you have been closely involved with?
  [Probe for information about purpose and scope, institution(s) involved, funder, when started, respondent's role and extent of involvement, role of his/her institution. Allow participant to talk at length].

Overall experience

- Overall, what have been the most positive aspects of the partnership?
  [Probe: for self, for institution, for other stakeholders. Why and how?]

- What has been difficult, or not worked well, and why?

- What would make the partnership work better?
  [Probe: if could change one thing about working with the high-income country partner, what would it be?]

- What are the most important factors in determining how well this partnership has worked?

- Do you think the partnership is fair?

[Probe: for self? for institution? Why yes or why no, what fairness means, what is stopping it from being fair (if so), e.g. structural barriers such as (poor) education, is concept of fairness important?]

- Is this partnership typical of other research partnerships that you have been involved in with high income country institutions?
  [Probe: how yes and how no, seeking examples and try to assess how widespread different issues are]

- Are there differences between partnerships with other sub-Saharan African institutions and HIC institutions, or not?

Themes of fair partnership

[Adapt or don't ask questions if already covered in previous discussion]

Now I will ask some more specific questions about the partnership you talked about previously, or a different partnership if you prefer.
[If different, prompt for brief details]

- How did you come to be involved in this partnership?
  [Probe: own and institution's role in agenda setting, proposal writing, study design; how these phases went, whether topic a local – institutional & country- priority]

- How were the goals of the partnership agreed on?
  [Probe: are own and institution's motivations recognised and priorities reflected? Benefits to self and institution]

- Is there any form of written agreement, like a memorandum of understanding or terms of reference, in addition to the contract?
  [Probe: how developed, whether useful, other governance structures? How decisions made?]

- How are roles and responsibilities in the partnership agreed on? How do members of the partnership communicate and work with one another?

[Probe: transparency, accountability, resolving conflicts, is there a steering group or advisory group?]

- What does each partner contribute to the partnership?
  [Probe: value placed on different contributions, is there proper acknowledgement of own institution's contributions and what it offers high income country partner? Are benefits proportionate to contributions?]

- Can you say a bit about funding for the partnership?
  [Probe: how funds distributed and managed, whether funds adequate for the work – are full costs covered, plans for securing future funding, satisfied with funding arrangements? How much awareness of and involvement with funder?]

- Has there been any capacity strengthening, or is any planned?
  [Probe: what and for whom? Individual, institutional? Research, research management? Formal, informal? Support for budgeting, contracting, ethics, research skills?]

- Can you say a bit about how data is stored, shared and who uses and owns it?
  [Probe: are there agreements on data ownership and sharing, material transfer agreements etc. If so, how reached? issues experienced].

- Is there a dissemination plan for the partnership? Are there plans to use the findings to inform policy and practice?
  [Probe: Types of outputs planned, audiences, authorship;
  [Probe for policy & practice: How? By whom? Resources dedicated to this? Is this relevant?]

- We have covered some of the key areas documented in guidelines for partnership. Are there other important aspects of this partnership that you would like to talk about?
  [Give space for participant to talk about other features of partnership]

- Are any discussions happening about equitable partnerships in your institution, in networks that you are involved in?
  [Probe: where, who, what issues, how being taken forward]

Closing

We are now approaching the end of the interview. Before we finish, is there anything else you want to say about your experience of partnership with high income country research institutions?
[Prompt for details]

Thank you very much for your time. I may come back for clarification if there is something that is not clear or if I have some additional questions as I am writing up the interview, if that's OK? Please contact me at any time if you have any questions, comments or concerns.

Close interview

Appendix E: Interview topic guide 2

Interview guide for institutional stakeholders not closely involved in specific partnerships

Introduction

- Good morning/afternoon XXXX [name of interviewee]. How are you? I hope now is still a good time to talk? Thank you for making time to talk with me today.

- As I explained in my introductory email, I am studying for a Doctorate in Public Health at London School of Hygiene & Tropical Medicine. I am also an LSHTM staff member based at KEMRI Wellcome Trust Research Programme in Kenya where I work as a Programme Manager. My DrPH research aims to understand the experiences of stakeholders from institutions in sub-Saharan Africa of research partnerships with institutions in high-income countries. This research is not connected to any form of audit or feedback to LSHTM about its partners.

- Thank you for sending back the signed informed consent form. As stated on the form, personal information about you will be kept confidential and you may withdraw from the study at any time. Data will be stored securely throughout the study and kept securely for a limited time after the study has been completed.

- I expect the interview to last for up to one hour. I will ask open questions, and there are no right or wrong answers. I am interested to hear about your opinions and experiences.

- Do you have any questions before we start? Are you willing for me to record the interview? [If yes, start recording. If no, take notes].

Participant's role

- Could we start by you briefly describing your current job? *[Prompt for details: How long in role, nature of role]*

- Have you had any other roles at X [name of research institution]? [*Prompt for details]*
- Did you work anywhere else before joining X? [*Prompt for details. Only ask question if started at X in last 5 years].*

Experience of partnership

Now I would like to hear about your experience of research partnerships with institutions in high income countries.

- Could you describe some of the recent partnerships with high income country research institutions that you have been involved in?
  [Probe: Role in relation to partnerships; Who partners were, funder, ongoing or finished, purpose and scope, size $$, get sense of what interviewee understands partnership to be].

- Have you been involved in [project name]/ the partnership with LSHTM?
  [If yes, probe: how involved? How has experience been? What has been positive, negative, what could be better? What needs to change?].

- What are the most positive aspects of working with high income country partners?
  [Probe: for self, for institution, for other stakeholders. Why and how?]

- What aspects are difficult or do not work well?
  [Probe: for self, for institution, for other stakeholders. Why and how?]

- What is needed to make partnerships with high income country partners work better?
  [Probe: if could change one thing about working with high income country partners, what would it be?]

- Thinking about your experience of partnerships, what are the most important factors in determining how well a partnership works?

- Have the partnerships you have been involved with been fair?
  [Probe: for self? for institution? Why yes or why no, what fairness means, what stops partnerships from being fair (if so), is concept of fairness important?]

- Are there differences between partnerships with other sub-Saharan African institutions and HIC institutions, or not?

- Are there discussions about equitable partnerships happening in your institution, in networks that you are involved in?
  [Probe: where, who, what issues, how being taken forward]

Closing

We are now approaching the end of the interview. Before we finish, is there anything else you want to say about your experience of partnership with high income country research institutions?
[Prompt for details]

Thank you very much for your time. I may come back for clarification if there is something that is not clear or if I have some additional questions as I am writing up the interview, if that's OK? Please contact me at any time if you have any questions, comments or concerns.

Close interview