Evaluating a global mental health research programme: an exploratory case study

by

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Statement of Originality

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Abstract

Background: The publication of the 2007 Lancet Series set out the agenda for global mental health (GMH), calling for the scale-up of services to reduce the treatment gap, especially in low-middle-income countries (LMICs). Since then, there has been an increase in research programmes to address this agenda. These research programmes have different aims, including strengthening research capacity, testing, and developing interventions, or both. Yet there is limited research exploring whether these programmes can achieve their individual and GMH aims. The overall objective of this thesis was to evaluate a GMH research programme (GLOBE) delivered in three LMICs, Bosnia-Herzegovina, Colombia, and Uganda.

Methods: Three studies were conducted to address the overall aim, the latter two forming an exploratory case study. They included: a systematic review of how GMH is understood in academic literature; a prospective longitudinal study involving interviews capturing the expectations and experience of members of GLOBE (n=38); a mixed methods evaluation of resource-oriented multi-family groups, delivered as part of the research programme, exploring feasibility, intervention fidelity, outcomes, and experiences.

Findings: The findings demonstrate that GMH is understood beyond the local-global debate and that elements such as community engagement and collaborative research programmes emphasise local-global connectedness. Comparing the experiences of the participating researchers with their initial expectations identified three key findings: (i) relationships built on trust and respect were established but took time to develop, (ii) equity in the partnership can be achieved despite the obvious imbalances in partnerships between HICs and LMICs, and (iii) individual-level research capacity strengthening was achieved, yet institutional research capacity is needed to generate reliable career pathways for LMIC researchers. Evaluating the multi-family group intervention was feasible in the LMICs and yielded positive outcomes and experiences despite being an exploratory design.

Conclusion: Overall, this evaluation provides encouraging findings that the experiences of participating researchers can meet their initial expectations. Yet the evaluation highlights limitations such as sustainable research capacity, and therefore setting more realistic aims for future GH programmes may be helpful. Positive improvements observed in the multi-family groups raises the question of whether larger trials are needed before wider implementation.

Contents

Details of Contribution and Collaborations

Chapter 3: The conceptual review is a comprehensive version of an article published in the British Medical Journal (BMJ) – Global Health. The candidate was responsible for the design, analysis and write- up. Professors, Stefan Priebe and Victoria Jane Bird – the candidate's supervisors, provided conceptual input and guidance. Erin Burn, Sana Sajun, and Mimi Suzuki, all helped to ensure the consistency of paper screening, data extraction, and evidence synthesis.

Chapter 4: The prospective longitudinal qualitative study was conducted using Michael McGrath and Francois van Loggerenberg as secondary reviewers who independently analysed and applied codes to transcripts. The candidates' supervisors, Stefan Priebe and Victoria Jane Bird, reviewed the coherence, and reliability of the reported themes. The chapter presents an extended version of a manuscript which is still currently under review in the BMJ Open Journal.

Chapter 5: The mixed methods evaluation of the multi-family group intervention was designed, conducted, and analysed by the candidate. Paul Bassett, the statistical consultant for the USCP, provided statistical advice on conducting the individual participant data (IPD) meta-analysis. The candidates' supervisors, Stefan Priebe and Victoria Jane Bird, reviewed the methodology and interpretation.

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List of abbreviations

BPRS	Brief Psychiatric Rating Scale
BSFC	Burden Scale for Family Caregivers
CAMI	Community Attitudes Towards Mental Illness Scale
COREQ	Consolidated Criteria for Reporting Qualitative Research
CRF	Case Report Form
CSQ	Client Satisfaction Questionnaire
CSRI	Client Service Receipt Inventory
DFID	Department for International Development
EDC	Electronic Data Capture
ELFT	East London NHS Foundation Trust
ENTREQ	Enhancing Transparency in Reporting the Synthesis of Qualitative Research
GDP	Gross Domestic Product
GMH	Global Mental Health
HIC	High-income countries
IDP	Individual Participant Data
ISMI	Internalised Stigma of Mental Illness Inventory
ITAQ	Insight and Treatment Attitudes Questionnaire
LMIC	Low- and middle-income countries
MANSA	Manchester Short Assessment of Quality of Life
MARS	Medication Adherence Rating Scale
mhGAP-AP	Mental Health Gap Action Programme
mhGAP-IG	Mental Health Gap Intervention Guide
MNS	Mental, Neurological and Substance misuse disorders
MRC	Medical Research Council
NIHR	National Institute of Health Research
ODA	Official Development Assistance
PI	Principal Investigator
PRISMA	Preferred Reporting Items for Systematic reviews and Meta-analyses
QMUL	Queen Mary, University of London
RCT	Randomised Control Trial
RPC	Research Programme Consortia
SD	Standard Deviation
SERS	Self-esteem Rating Scale
SIX	Objective Social Outcomes Index
SMI	Severe mental illness
SMI	Severe mental illness
SSI	Semi structured interviews
STAR-C	Scale to Assess Therapeutic Relationships in Community Mental Health Care
TAU	Treatment as usual
UK	United Kingdom
USCP	The Unit for Social and Community Psychiatry
WHO	World Health Organisation
ZBI	Zarit Burden Interview

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Chapter 1: Introduction

1.1 Chapter overview

This chapter sets out the rationale and provides the underlying foundation for the thesis, which is to evaluate a global mental health (GMH) research programme. It begins by providing background, giving an overview of GMH, outlining the events that led to the 2007 Lancet Series and the key themes that emerged from this series, focusing on the scaling-up of mental health services. The background also discusses the need for mental health research and how collaborative research programmes can help to strengthen research capacity in low- and middle-income countries (LMICs). The background is followed by the introduction of the NIHR Global Health Research Group and its role in this thesis as a mixed method prospective exploratory case study to evaluate a GMH research programme. Finally, the last sections of this chapter provide a rationale for the overall thesis, outline the aims and research questions, and describe the candidate's role in each of the study chapters.

1.2 Background

1.2.1 Global and LMIC burden

Mental health problems have a significant impact due to their chronicity, high prevalence, and high mortality and disability rates (2,3). Estimates show that more than 7% of the global burden is occupied by mental and substance use disorders or collectively (3). Approximately three-quarters of this mental health burden is located in LMICs (4). Moreover, due to demographic and epidemiologic transitions in many LMICs, the burden of mental health disorders is set to increase significantly over the next decade (5). The burden experienced in LMICs is further exacerbated by social factors such as poverty, urbanisation, migration and lifestyle factors (4).

1.2.2 The treatment gap

Although treatment for most common mental disorders is effective and available, those who suffer from mental health disorders do not receive care in many countries (4). The minority of those who can access treatment receive care perceived as scarcely adequate (6). The World Mental Health Surveys revealed that 76–85% of individuals experiencing mental health disorders receive no treatment in LMICs compared to 35–50% of individuals in high-income countries (HICs) (2). The discrepancy between individuals who require treatment and those who receive treatment is known as the treatment gap (9). This gap is exceptionally high in LMICs, representing 90% of the population who need care and are not receiving it (7). More than 85% of the global population residing in LMICs (8) puts the need for treatment into perspective.

Besides the low availability of mental health services and treatment, stigma prevents individuals from seeking and accessing care, and it can manifest in different internalised or expressed ways (9). Stigma is also recognised as the main reason for the minimal investment of resources required to

transform and improve mental health systems and provide much-needed access for those who need it (10). The impact and experience of mental illness in LMIC settings can be demoralising regarding the levels of stigma existing at all levels of society (11). Stigma exists globally and is not restricted to certain parts of the world (12). A study led by Thornicroft *et al.* highlighted high rates of stigma expected and experienced by individuals with schizophrenia in 27 countries globally (13). The same study demonstrated how the impact of stigma correlates with other areas of life, such as decreased employment, poorer help-seeking behaviour, and poorer health outcomes (13).

1.2.3 Scarcity of services

The lack of mental health professionals impacts the availability of mental health services and, therefore, affects access to care (8). Studies comparing the presence of mental health professionals in HICs and LMICs indicate how the differences are significant (8). A study estimated that from a sample of 58 LMICs an average increase of 239,000 workers are needed globally to provide adequate care and address the shortage of mental health workers (14). These scarcities are not unique to mental health professionals but also occur in general health professionals, often resulting from brain drain (15). The brain drain of health professionals, from LMICs to HICs, exacerbates the current inequity observed in access to mental health services (16). Migration of health workers has increased due to population changes in HICs, global scarcities in health workers, and the globalisation of the labour market for health professionals (16). Medical migration can be tackled by improving mental health researchers' career and training prospects in LMICs and addressing issues around professional isolation (16). Furthermore, institutional and network capacity strengthening can help drive these objectives by supporting career pathways for researchers and developing the institutional infrastructure to ensure research careers are a viable and sustainable option in LMICs (16,17). Research capacity building will be later explored as part of the evaluation of a GMH research programme.

1.2.4 The 2007 Lancet Series

The mental health burden mainly experienced in LMICs, alongside the treatment gap and scarcity of services, collectively prompted the publication of the GMH series led by the Lancet in 2007, presenting current evidence for GMH and the agenda (8,10,11,18–20). Leading the series were predominantly researchers and clinical practitioners based in HICs (21). Each article discussed a specific theme of GMH, providing the rationale and leading to the overarching need for scaling-up mental health services globally. The first article highlighted the interconnection between mental health disease and other health disorders (11). The second article discussed mental health resources discrepancies in resource distribution globally, and inadequate resource usage (18). Saxena *et al*. highlight how government allocation of funding to mental health is insufficient in LMICs compared

to the burden of disorders experienced by these countries (18). This article also emphasises the role of stigma and discrimination in preventing those who need help from accessing services (18). The third article, led by Patel *et al*. outlined the evidence relating to the effectiveness of interventions for the treatment and prevention of mental health conditions in LMICs (19). The article highlighted the clear evidence for a combined approach of drugs and psychological therapies for individuals who have common mental disorders, such as depression (19), whereas drugs, community and family-based approaches are recommended for more severe mental illnesses such as psychotic conditions. This article drew attention to the lack of evidence supporting interventions in LMICs, including psychosocial interventions (19). The fourth article explored the present situation regarding countries' mental health systems worldwide, including LMICs and HICs, by utilising data from the World Bank and World Health Organisation (WHO) databases (8). The article highlights the lack of financial resources allocated to mental health and the limited human resources and infrastructure devoted to mental health in most LMICs compared to HICs (8). The fifth article describes how mental health system development advancement in LMICs is generally stagnant (10). Saraceno *et al*. explored the barriers preventing mental health service progression and identified the following: public health priority, the resistance to decentralisation of mental health service, the challenges of delivering care in a primary care setting, the lack of adequately trained and supervised human resources, and the lack of mental health leadership (10).

1.2.4.1 Scaling-up mental health services

The group that led the Lancet series called for the scaling up of services and interventions for individuals experiencing mental health disorders to reduce the treatment gap, emphasising focus on LMICs where treatment gaps are wide (7,20). Scaling-up is defined by the WHO (22) as 'deliberate efforts to increase the impact of health service innovations successfully tested to benefit more people and foster policy and programme development on a lasting basis (p.2)'. It refers to the scaling-up of cost-effective, evidence-based services and treatments in LMICs (20).

As part of the effort to scale up mental health services in LMICs, the WHO published important documents, the WHO's Mental Health Gap Action Programme (mhGAP- AP) (23) and the Mental Health Gap Intervention Guide (mhGAP-IG) (24). The mhGAP-AP outlines essential steps for scaling-up mental health provisions in LMIC. The mhGAP-AP presents an integrated management guide for priority conditions, such as depression, psychosis, bipolar disorders and epilepsy (23,24). Moreover, mhGAP-IG includes templates for evidence-based interventions that can be adapted in various settings and used to tackle a range of mental disorders. For example, psychotropic medication is one of the treatments suggested in the mhGAP-IG (24).

Evidence-based interventions to address mental disorders in LMICs have come under criticism for several reasons. Although the biomedical causes of physical health problems are well established, the evidence is less robust for mental health problems (25,26). The scaling-up of evidence-based interventions, such as medication, may be more favourable as they are perceived as more straightforward to implement than more complex psychosocial interventions (27). Due to the lack of research capacity and financial and human resources in LMICs, evidence supporting these mental health interventions is limited (18). Moreover, the types of approaches recommended by the mhGAP initiative are replicating the provision of service advocated in HICs, despite the lack of evidence showing any effectiveness in these countries (28). The scaling up of evidence-based interventions has led to discussions about how culturally feasible or appropriate these approaches are in other settings (29). The scaling up of evidence-based interventions implies the absence of the evaluation of acceptability and feasibility (28). In HICs, as in the UK, exploratory studies are tested to ascertain the optimal design and feasibility in preparation for larger studies which can evaluate intervention effectiveness (30). These interventions are expensive, and many LMICs do not have the resources to support larger and complicated trials to test for efficacy and effectiveness (31).

Another limitation of the mhGAP initiative is the lack of importance placed on mental health disorders' social and cultural determinants (28). Social determinants relate to social, cultural and economic factors that can influence the prevalence and severity of individuals' mental illness (32). There is a growing body of evidence that mental disorders are socially determined and influenced by specific periods of life such as childhood and adolescence (28). Community-based approaches can help explore the social determinants of mental health, prioritise local needs, strengthen and empower community resources, and develop locally resonant solutions (34).

The criticism of the GMH approach to scaling-up interventions has led to a divide between the public health approach supported by evidence-based practices (which tend to be more common in HICs) and the more socially, culturally grounded approaches, such as community-based approaches (35). The latter is better positioned to prioritise social determinants of mental health disorders and find more locally resonant solutions (35). Despite a methodologically diverse evidence-base, community-based approaches are viewed as subsidiary compared to the more traditional public health approach (36). This divide within GMH is commonly referred to as the local-global divide (35), where global refers to evidence-based practices, and local refers to approaches derived locally, such as community-based approaches. There is a concern that GMH is at an 'impasse', meaning that progress within the field cannot be made due to the local-global debate currently defining it (37).

1.2.5 Research capacity in LMICs

Despite LMICs experiencing a significant proportion of the burden of mental health disorders (11), their contribution to the evidence base to address this burden is significantly low (38,39). More than a decade ago, less than 10% of global health resources were used to tackle health problems in LMICs, which accounted for more than 90% of the worldwide population(38,39). This discrepancy of global resources is referred to as the '10/90 gap' (38,39). A key factor exacerbating this gap is the scarcity of research originating from LMICs. Previous studies from other global health disciplines, including maternal health, indicate that researchers from HICs tend to inhibit the most important authorship position, first and last (40,41). Alternatively, HIC researchers have been accused of tokenism, , where LMIC researchers are included as authors despite not having contributed to the writing process (42). Dimitris *et al.* quantified the proportion of LMIC-affiliated authors from articles that were published between 2000 and 2017, and discovered that although proportions of LMIC led publications have increased over time, these tended to be driven by researchers in HICs (43).

Limited research in LMICs means that local issues are not empirically investigated to establish locally appropriate solutions. Research led locally is vital for responding to global health challenges in LMICs (44). The lack of local solutions to local problems in LMICs means that interventions developed and tested in HICs are frequently implemented in LMICs, often failing to consider contextual and cultural factors (37). Moreover, a limited research capacity cannot support the development of adjacent mental health infrastructure and policies requiring high-quality evidence that reflects local priorities (45). Research capacity in LMICs needs to be improved by increasing research funding, addressing the lack of trained researchers and creating an appropriate research environment (46). Supporting and sustaining capacity strengthening initiatives is crucial for developing adequate mental health systems (21), especially given the urgent need to address the burden experienced in LMICs.

Many funding agencies responded to the need for investment in strengthening research capacity. For example, the Department for International Development (DFID) has funded several research programmes, known as Research Programme Consortia (RPC), which allocated a particular amount of time and financial resources to strengthen research capacity, facilitate career development and share the findings. Another example is the WHO Alliance for Health Policy and Systems Research, which aims to improve the health of those in LMICs by facilitating the generation and use of evidence to strengthen mental health systems (47). More recently, the National Institute for Health Research (NIHR) Global Health Research programme partnered with Grand Challenges Canada in October 2019, investing £6 million over three years between 2019 and 2022, representing part of their GMH research programme (48). Research partnerships between institutions in HICs and LMICs,

and amongst only LMICs, have played a crucial role in strengthening research capacity to reduce health inequalities (49).

1.2.5.1 Research partnerships between HICs and LMICs

Collaborative research partnerships between HICs and LMICs have become an important strategy to implement research capacity strengthening activities (50). Alongside research capacity strengthening, these partnerships are also delivering interventions to improve the mental health infrastructure in LMICs. Partnerships bring together expertise from various disciplines across a range of settings, meaning that the research programmes delivered are contextualised, including those knowledgeable of a particular setting (51). Partnerships can also contribute to better access to funding, improved reliability, and influence to sustain fundamental change in policy and practice (52).

However, there are numerous issues experienced by these research partnerships, which were initially recognised. There is concern regarding the ability of these research partnerships to form equitable relationships, mainly where funding originates from HICs (53). Research partnerships involving HICs and LMICs have been accused of one-directional flow of knowledge, and one-sided benefit, where only LMIC researchers are learning and receiving the benefits (54). Moreover, there is limited evidence evaluating the ability of research partnerships to address capacity strengthening in LMICs (55,56).

1.3 The National Health Institute for Health Research (NIHR) Global Health Research Group (exploratory case study)

To address some of these challenges within GMH, significant amounts of funding have been allocated to HICs to conduct research in partnership with and based in LMICs. Although funding has been mainly allocated to global health programmes, a significant proportion has supported GMH (57). The NIHR Global Health Research programmes offer one example of funding GMH research programmes. This GLOBE programme was used as an exploratory case study to evaluate GMH research. This section will introduce the aims of GLOBE, the partners, and the activities and methods.

1.3.1 Background

The NIHR is a UK-based governmental body that financially supports health and social care. It represents the most significant clinical research funder in the UK. The NIHR budget for 2019- 20 was over £1.2 billion (58). The NIHR Global Health Research programme was a portfolio of projects established in 2016. The programme facilitates collaborative quality health research to address health issues in LMICs, specifically, in Official Development Assistance (ODA) countries. ODA is the official overseas aid budget. The NIHR Global Health Research programme comprises three streams:

1. Programmes led by researchers who address specially targeted areas of research are directly managed and financially supported.
2. Partnerships contributing to high-quality global health research, in collaboration with other funders.
3. People facilitating research capacity, training and development of global health researchers and future leaders in the UK and LMICs.

The NIHR Global Health Research Groups represent a component of the Global Health Research Programme and are defined as the joined forces of expert researchers from research institutions in LMICs and the UK. An NIHR Global Health Research Group was used as an exploratory case study in this thesis (hereafter referred to as GLOBE) to explore a GMH research programme in-depth and improve the understanding of GMH.

1.3.2 Aims and objectives of GLOBE

GLOBE is an international programme of work that began in 2017 and continued until 2022 (59). The programme was originally funded for three years and has been extended twice. GLOBE was awarded funding for an NIHR Global Health Research Group on 'Developing Psycho-Social Intervention for Mental Health Care'. The co-applicants of the NIHR award comprised the Principal Investigators (PI) of each country, including the UK. The LMIC partners consist of researchers located in Sarajevo (Bosnia- Herzegovina), Bogotá (Colombia), and Kampala (Uganda) – see Figure 1.1. Each country had the aim to develop community care for individuals with severe mental illness (SMI).

The aims were to create partnerships of experts from HICs and LMICs and work collaboratively with local stakeholders to adapt and develop resource-oriented psychosocial interventions for individuals with SMIs, in three LMICs, with the UK acting as coordinator. By developing and testing resource-oriented interventions, the GLOBE research programme aimed to promote sharing and learning across member countries, strengthen research capacity, and explore sustainable treatment interventions for individuals with SMI. There were also aims to improve the mental health outcomes of individuals with SMI, strengthen research capacity, enhance mental health system infrastructure, improve the overall mental health care in these countries, and ultimately reduce the treatment gap.

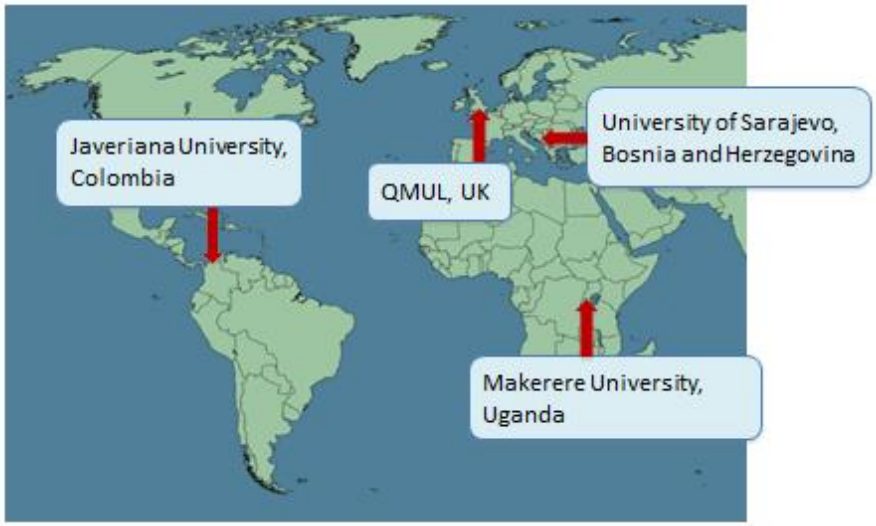

Figure 1.1 GLOBE research groups

1.3.2 GLOBE countries and sites

The GLOBE programme developed and tested resource-oriented interventions in Bosnia-Herzegovina, Colombia, and Uganda. The three countries were invited to participate in the programme based on their availability, existing relationships, and programme timelines. The diversity of each country, geographically, socially, culturally, economically, and having a history of armed conflict may improve the generalisation of the programme's findings to other LMIC settings. These three countries also experience varying degrees of mental health system challenges shared by many LMICs (8), relating to limited mental health, human and financial resources. Furthermore, by including a diverse range of countries, there was hope that it would provide an opportunity to learn from the commonalities and differences in experiences.

1.3.2.1 GLOBE country context

1.3.2.1.1 Demographics and ethnicity

Table 1.1 presents a selection of each participating country's demographics and development indicators. Notably, Bosnia-Herzegovina and Colombia, are both upper middle-income countries, whereas Uganda is a lower income country. Regarding demographics, there is variance in total population, and crude birth rate across each country. Both, Colombia, and Uganda have the same crude death rate per 1,000 people. Life expectancy, generally, even when stratified by sex is very similar in Bosnia-Herzegovina and Colombia. In Bosnia-Herzegovina, three ethnic groups, namely Bosniaks, Serbs and Croats (60) make up more than 96% of the population s,. The bulk of the population in Colombia is mostly White and Mesitizo (61). Mestizos emerged because of the interaction between Spanish colonialists and the indigenous population of Colombia. White Colombians descended from European, primarily Spanish, but also Middle Eastern (62). Baganda are

the largest ethnic group in Uganda, making up about 16.5% of the population, whose official language is Luganda (63).

Table 1.1 Country-specific data for demographics and development indicators (64–69)

Country	Bosnia-Herzegovina	Colombia	Uganda
Location where GLOBE research programme is implemented	Sarajevo	Bogotá; Cali	Kampala; Jinga; Masaka; Mitiyana
WHO region	EUR	AMR	AFR
World Bank income categories	Upper middle	Upper middle	Low
Population (millions)	3.5	51.3	47.1
Population living in urban areas (%)	49	82	26
Birth rate, crude (per 1,000 people)	8	14	37
Death rate, crude (per 1,000)	11	6	6
Life expectancy (years)	78	77	64
Male	75	75	61
Female	80	80	66
Official languages spoken	Bosnian; Serbian; Croatian	Spanish; English	English; Swahili; Luganda
Ethnicity	Bosniaks 50.11%; Bosnian Serbs 30.78%; Bosnian Croats 15.43%	Mostly Whites and Mestizos 87.58%; Afro-Colombians 6.68%; Amerindian 4.31%	Other 32.1%; Baganda 16.5%; Banyankole 9.8%
Global Gender Gap Index ranking	76	59	66
Lifetime Physical and/or Sexual Intimate Partner Violence against women (%)	11	33	499
Unemployment (%)	14.9	13.9	3.6
Male	12.7	11.5	3.2
Female	18.1	18.1	4.1
Adult literacy rate (%)	97	96	77
Male	100	95	100
Female	95	96	71

1.3.2.1.2 Conflict

Each country has experienced armed conflict at varying time points. The breakup of Yugoslavia during the early 1990s led to one of the worst conflicts since World War II occurring between 1991 and 2001 (70). The war took place at different places, but primarily affected Bosnia-Herzegovina, and neighbouring Croatia and Kosovo. Priebe and colleagues (71) reported prevalence rates of mood disorders and post-traumatic stress disorders (PTSD), at 22% and 35% respectively, in the Bosnian population 11 years after the war.

Colombia has experienced armed conflict for over 50 years (72). Tamayo-Agudelo and Bell discuss the current challenges faced by Colombia, including poor access to mental health services, and displacement due to conflict and violence (72). More individuals have been displaced by the presence of violence in Colombia more so than any other country (73). Previous research established a higher prevalence of mental health issues in individuals who have been internally displaced (74).

Uganda has experienced numerous wars, the most recent being the Ugandan Bush Wars, which took place between 1980 and 1986 (75). Similarly to Bosnia and Colombia, Uganda continues to experience the lasting effects of civil unrest and it is considered one of the barriers to accessing effective care (76). Generally speaking, households who have been affected by conflict experience poorer mental health function which in turn can lead to lower social capital, and therefore further exacerbating mental health problems (77).

1.3.2.1.3 Rural-urban divide

Table 1.1 highlights the striking differences across each country in relation to the proportion of those living in urban areas, with approximately 82% of Colombian individuals residing in cities, whereas only 26% of Ugandan citizens live in urban areas. The uneven distribution of mental health services and the general lack of investment into the mental health sector, exacerbate the current situation experienced in Colombia (78). The high percentage of individuals residing in urban areas is due to displacement, from rural to urban, which usually is a permanent change (78). In Uganda, there is widespread inequality between urban and rural regions, with more resources centred in cities, particularly regarding human resources (79). Moreover, the distribution of human resources is disproportionate to urban areas, with the density of psychiatrists located in urban areas being 11 times greater than that of the national average (79). One of the strategies to improve access in rural regions is the integration of mental health care into primary health care (80,81). In one example, in an initiative in Mayuge, a rural region of Uganda, established how service user support could be achieved through the integration of mental health into primary care (81).

1.3.2.1.4 Gender relations

Alongside the experience of conflict, across the LMICs, it is important to consider the equality between men and women in these three countries. The Global Gender Gap Index is used to benchmark the current situation and development of gender equality across four fundamental dimensions, including educational attainment, economical participation and opportunity, health and survival, and political empowerment (82). Table 1.1 shows how similarly positioned Bosnia-Herzegovina, and Uganda, are in the Global Gender Gap Index ranking, despite being a middle- and low-income countries respectively at 69th and 65th, contrastingly, Colombia is positioned at 22nd (83). According to a report exploring the current status of gender relations in Bosnia-Herzegovina, Dušanić, presents indicators such as employment as a proxy for measuring gender quality (65). Table 1.1 shows that there is higher unemployment in women, and lower literacy rates in women compared to men, suggesting a degree of gender inequality. Alongside employment and literacy, Dušanić reports figures from a survey on attitudes towards gender relations, specifically that around 51.9% and 53.1% of Bosnians believe that women's roles belong in taking care of the home, and raising children, respectively (65). Although Bosnia is ranked the lowest, in relation to the Global Gender Gap Index, compared with Colombia and Uganda, the rates of gender-based violence (GBV), specifically referring to a lifetime of physical and sexual violence against women is reported at 11%. Whereas women in Colombia, and particularly in Uganda, experience high rates of a lifetime of physical and sexual violence. According to the Uganda Bureau of Statistics (UBOS), more women became unemployed in 2016/2017 compared to 2012/13, suggesting a worsening climate in relation to gender relations (84). Table 1.1 shows how there are differences in unemployment and literacy rates, with women experiencing lower rates in both indicators for each country. Colombia is the only example where literacy rates are higher in women compared to men, this represents one dimension and that establishing gender equality in Colombia remains an ongoing challenge (85). The report also highlights how gender inequality is even more pronounced across the rural-urban divide and given that 82% of Colombian individuals reside in urban areas, it is worth highlighting this point (please refer to Table 1.1). Regarding each countries unique context, it is useful to see how conflict and cultural history has perpetuated and led to an inadequate mental health system. The following section will briefly summarise the mental healthcare systems of each country.

1.3.2.1.5 Mental healthcare system

Table 1.2 shows how each country differs in terms of their mental healthcare system. There are notable differences across each country regarding a range of mental health system indicators. It is evident that there are a limited number of clinicians who are specialised in psychiatry, including nurses and psychiatrists. The number of suicides are markedly higher in Bosnia-Herzegovina for all age groups (86), which is interesting since all countries have experienced some form of conflict.

Commonalities include the existence of mental health jurisdiction within each country, although there may be the presence of mental health laws, whether they support a broad spectrum of mental health services is perhaps up for debate (87). Moreover, there is also the presence of mental health legislation, programmes and policy in each country. Although there is the presence of certain legislation and policy, it does not always mean that these are appropriate or effective. There is a need for newer, more updated mental health laws in Bosnia-Herzegovina, for example, to support community mental health care, and the implementation of new services oriented to the needs of patients and their continuity of care (88). In Colombia, for instance, mental health policies and laws have become gradually more comprehensive, which accommodate for more innovative and inclusive programmes, grounded in evidence, to address key mental health issues (89). Whereas in Uganda, existing legislation supporting coercive treatment of individuals experiencing mental illness is viewed as highly stigmatising (76). Although there is a drive to establish new legislation to accommodate for less stigmatising practices in Uganda, such as community mental health care, its introduction has been frequently delayed (76).

When examining specific indicators of mental health systems, such as number of psychiatrists, number of nurses and the proportion of health expenditure towards mental health, there are differences across the three LMICS. For example, there are 1.8, 2 and 1.6 psychiatrists per 100,000 people in Bosnia-Herzegovina, Colombia, and Uganda, respectively. There are 10 and 2 nurses per 100,000 people in Bosnia-Herzegovina and Uganda, respectively. Alongside the mental health workforce shortage, there is also a lack of financial backing to develop adequate mental health infrastructure. The proportion of the mental health budget derived from the total gross domestic product (GDP) expenditure on health in Colombia and Uganda is 0.7% and 0.08%, respectively. Healthcare, including mental healthcare, relies heavily on international aid and donors.

Table 1.2 Country-specific data for health resources, neuropsychiatric burden, and mental health system indicators (8)

Country	Bosnia-Herzegovina	Colombia	Uganda
Psychiatric nurses per 100,000 people	10	-	2
Psychiatrists per 100,000 people	1.8	2	1.6
Mental health beds outside mental hospitals (% of total mental health beds)	33.3	-	50.0
Total number of mental health beds (per 10,000 population)	3.6	-	0.44
Proportion of mental health budget (% of total health budget)	-	0.08	0.70
Presence of mental health legislation	Yes	Yes	Yes
Presence of mental health policy or programme	Yes	Yes	Yes
Suicide per 100,000 people*	13.87	6.11	2.01
Rate of DALYs by neuropsychiatric conditions per 100,000 people	3047.02	4193.38	2574.86
Health providers per 100,000 people	27	190	81
Total expenditure on health (% of GDP)	9.5%	7.6%	7.3%

1.3.2.1 The LMIC sites

In Bosnia-Herzegovina, the UK research group worked directly with The Clinical Centre at the University of Sarajevo. In Colombia, the UK group partnered with the University of Javeriana and worked at several clinical sites in Bogotá and Cali. In Uganda, the leading partner was Makerere University College of Health Sciences working in Kampala at the Butabika Hospital and three other clinical sites based in Jinja, Masaka, and Mityana. At each centre, a research group including senior academics was trained and the local PIs provided continuous supervision and received support from the UK research group.

1.3.2.2 The UK as coordinating centre

As the coordinating centre, the UK group consists of researchers based at the Unit for Social and Community Psychiatry (USCP), a part of Queen Mary University of London (QMUL). As of 2012, the unit was named a WHO Collaborating Centre, the first centre specifically designated to deal with mental health service development worldwide, representing one of 150 Centres related to mental health in the WHO's 53-country European region. The USCP, founded in 1997, functions and sits between QMUL and the East London NHS Foundation Trust (EFLT). It is a unit within the Wolfson Institute of Population Health based at QMUL. The USCP leads and conducts research on utilising social interaction in mental health care, which involves developing and evaluating innovative interventions in the UK, and since 2017 has been engaged in research in global health specifically GMH. The unit is also involved in health service evaluation, improvement, and teaching. It is in the East London borough of Newham, an area that is culturally and ethnically diverse and has the lowest number of White British of other boroughs in London (90). It was also the official site of the London 2012 Olympic Games. Professor Stefan Priebe is the director and head of the USCP. The unit comprises 43 full-time researchers, PhD students and managerial and administrative staff all working or supporting an array of studies that engage in interdisciplinary collaboration with the social sciences and humanities. Research in the unit tackles concepts, methods, and practice of social psychiatry. It includes epidemiology, evaluating mental health care in naturalistic and experimental studies and developing and testing innovative treatment methods using qualitative and quantitative methods. Studies can range from proof of concept or feasibility to randomised controlled trials (RCTs). The unit conducts trials in collaboration with the Pragmatic Clinical Trials Unit at QMUL.

The GLOBE programme represents the first global health initiative for the USCP. The USCP had not embarked on research at a global level; almost all previous research had focused on multi-site studies within Europe. Regarding existing relationships, researchers from the UK and Bosnia-Herzegovina had an established working relationship before GLOBE. The USCP, the UK research group, is conducting extensive research in Bosnia- Herzegovina concerning post-conflict mental health (91). Given that the USCP is also linked to EFLT, there is a looser relationship with the Ugandan research group via the Butabika-East London Link. The Butabika-East London Link began in 2005 and operated as a multidisciplinary, institution-to-institution collaboration with EFLT. However, most of the Ugandan researchers participating in GLOBE were not directly connected to the Butabika-East London Link, indicating that the relationship between the UK and Ugandan group was a new one. The relationship between the UK group and Colombia represented a new one entirely.

1.3.3 Activities and methods

GLOBE comprises a moderately large programme of work principally devoted to adapting and delivering three resource-oriented interventions in the three LMICs. There is an emphasis on collaborating with local stakeholders to adapt interventions for individuals with SMI and running studies to test these resource-oriented models in three different settings.

1.3.3.1 Resource-oriented interventions

Diseases are traditionally considered a deficit, and therefore treatments or interventions have been developed to address or remove this deficit (92). This notion has also governed the way psychiatry is approached (93). Interventions have been developed to address these deficits and rely on pharmacological treatment models and psychotherapeutic approaches (92). Psychotherapies, such as cognitive-behavioural therapy, are applied to remedy bad behaviour and thinking patterns (92). Focusing on deficits only represents one model in psychiatry, and several alternative models of therapeutic treatments have arisen, tapping into an individual's strengths and surpluses by concentrating on their existing social resources. Collectively, these models are referred to as resource-oriented. Rather than directly targeting the deficit, the models aim to identify the surplus of either personal or social resources possessed by an individual, to ultimately, indirectly, influence the symptoms of a disease (92). Priebe *et al.* identified an array of resource-oriented therapies, including befriending, solution-focused therapy and systemic family therapy (92). Befriending refers to activities encompassing on-to-one friendships, whereby volunteers are matched with patients to cultivate a supportive relationship and participate in social or recreational activities. Solution-focused therapy supports patients in recognising their expectations of issues and identifying suitable solutions separate from the cause of the problem. Finally, systemic family therapy refers to different models that involve family members in the context of treating a patient, focusing on the family dynamic while tapping into the resources within.

These therapeutic models underpin the interventions delivered, tested, and developed as part of the GLOBE research programme. The interventions were intended to stimulate sustainable community-based care for individuals experiencing SMI in LMICs. They were designed to be low-cost interventions utilising the existing resources and social structures in each setting. The three resources used were: consultations between patients and clinicians (DIALOG+), families and friends of individuals' experiences (multi-family groups), and volunteers from the community who are prepared to befriend patients (volunteer support). Before implementation, local stakeholders were involved in designing and adapting the interventions to ensure cultural appropriateness and fit.

i) DIALOG+ is an app-based intervention designed to make routine meetings between patients and mental health professionals therapeutically effective (94). It combines quality of life, patient-focused communication, and solution-focused therapy into one application.

ii) Volunteer support involves linking unpaid volunteers with single patients or groups of patients to help them use their social networks or engage in activities.

iii) Multi-family groups entail helping family members or friends provide support and effective care to patients.

The selection of each intervention design involved a shared and stepwise process to identify the most appropriate design for each intervention. The LMIC partners exceeded what was originally stipulated in the original application in terms of intervention design. They included small-scale non-controlled and non-randomised controlled trials and randomised controlled trials. The main features of the nine studies are depicted in Table 1.3, demonstrating the commonalties and differences across the three LMICs. Country-specific adaptations were implemented to ensure that the interventions were culturally and logistically appropriate for each setting and according to each country's health system. All data from the different studies of the programme were analysed on a country-specific level. This thesis aimed to adopt a cross-country level analysis and compare the impact of one of the interventions, the multi-family group, on the outcomes of recipients.

Table 1.3 Main characteristics of the nine studies that will be conducted in the three LMICs

	Bosnia-Herzegovina	**Colombia**	**Uganda**
DIALOG+	Cluster RCT, 72 patients with depression and anxiety, 14 clinicians, Control group= TAU	Cluster RCT, 168 patients with SMI, 14 clinicians, Control group = TAU	Cluster RCT, 168 patients with MNS, 14 clinicians, Active control group
Family Involvement	RCT, 72 patients with SMI, 36–72 family members/friends, 6–12 clinicians, Control group = TAU	Non-controlled trial, 30 patients with SMI, 30–60 family members/friends, 6–12 clinicians, No control group	Controlled trial, 30 patients with SMI, 30–60 family members/friends, 6–12 clinicians, Control site
Volunteer Support	RCT, 72 patients with SMI, 36 volunteers, Control group = TAU	Non-controlled trial, 30 patients with SMI, 20 volunteers, No control group	Controlled trial, 30 patients with SMI, 10 volunteers, Control site

Abbreviations: RCT - Randomised control trial, SMI - Severe mental illness, MNS - Mental, neurological and substance misuse disorders, TAU - Treatment as usual

1.3.3.2 Capacity- strengthening and other aims

The GLOBE programme had various streams dedicated to addressing the research capacity needs of each LMIC research group. These included clinical placements, paper and grant writing weeks,

monthly seminars, and extensive training in the use of Stata, NVivo and REDCap, which continued throughout the programme, as and when needed.

Mutual learning was also prioritised in the programme. This was facilitated by annual visits to London, before the pandemic, to present study updates and exchange novel ideas for potential projects, teaching, and learning. Longer stays were organised for a limited number of participants from each LMIC group, involving clinical placements at ELFT and participating in other research programmes at USCP.

1.4 Thesis project rationale

Since the 2007 Lancet Series publication, interest in the field of GMH has grown exponentially. Figure 1.2 shows the increase in publications within the PubMed database that contain the term 'global mental health'. A Google search specifically for the term conducted on 1st November 2009 retrieved around 62,300 associated sites, with 85% registered since 2008 (57).

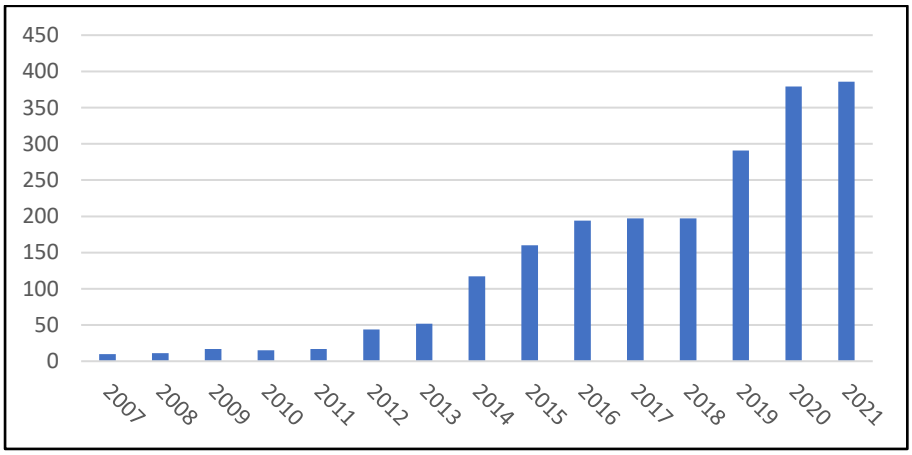

Figure 1.2 PubMed articles relating to GMH since 2007

As a result of this increase in interest, many academic institutions and organisations have strived to meet this demand, providing more opportunities to study and research the field of GMH (95,96). Alongside this new academic landscape, as mentioned, there has been an increase in the number of international research programmes and interventions functioning under the banner of GMH that have received significant funding from agencies and governments (95,96).

These research programmes aim to address some of the goals for GMH by scaling-up interventions, reducing the treatment gap and strengthening research capacity. Different research programmes entail different objectives. Some strongly focus on supporting research by providing career pathways for early-career researchers (97,98), while others aim to improve mental health systems in LMICs through integration (99). Several research programmes have emerged that are working to advance

some of the core aims of GMH, developing and improving mental health services and strengthening research capacity in LMICs.

The Programme for Improving Mental health carE (PRIME) aimed to scale-up treatment programmes for specific mental disorders in primary and maternal health care. PRIME was an internationally-led DFID funded programme funded for six years that was delivered in five LMICs in Africa (Ethiopia, South Africa and Uganda) and Asia (India and Nepal) (97). Another example of a research programme is Emerging Mental Health Systems in LMICs (EMERALD) ran from 2012 to 2017 (99). The EMERALD programme aimed to improve the outcomes of individuals with mental health disorders in six LMICs, located in Africa (Ethiopia, Nigeria, South Africa, and Uganda) and Asia (India and Nepal). Improving individual outcomes was facilitated by generating evidence and building capacity in mental health systems, research, and policymaking. The Partnership for Mental Health Development in Sub-Saharan Africa (PaM-D) also represents a research programme that addresses the critical aims of GMH (45). The PaM-D brought together researchers and practitioners in sub-Saharan Africa (Ghana, Kenya, Liberia, Nigeria, and South Africa) and HICs to develop infrastructure to support mental health research capacity in this region. The African Mental Research Initiative (AMARI) programme focused primarily on supporting early-career researchers in Africa, specifically Ethiopia, Malawi, South Africa, and Zimbabwe (98). These partnerships between HICs and LMICs offer one approach to capacity strengthening in research and improving mental health systems (100). They aim to improve mental health service delivery in LMICs by forming sustainable long-term collaborations, facilitating research expertise, knowledge, and experience and encouraging bidirectional learning (100).

However, evidence for supporting the use of these partnerships is limited, and evaluations tend to focus on the process and outcomes of health partnerships (101). International health partnerships like the ones described above are variable in terms of their aims, such as offering different levels of capacity strengthening, either focusing on LMIC research careers or intervention development, or in the case of GLOBE, both. The variability exhibited by these collaborative programmes contributes to the difficulty in establishing and understanding their effectiveness in achieving their aims (101), especially those that go beyond an intervention's outcomes. There is limited research exploring how research programmes are successful or not in achieving their aims while also addressing the broader aims set out by GMH. A growing body of literature has explored the experiences of participating researchers in global health or GMH programmes (102–104). There is a focus on achieving equity within partnerships between HIC and LMIC researchers (51) and developing the sustainability of research groups in LMICs (105). Yet these experiences rarely correspond to a specific programme and usually depict the experiences of international partnerships in general. Breuer *et al.* presented

the experiences of the PRIME programme, identifying specific lessons to inform future collaborative research (51).

No evaluation has taken a single programme and assessed whether or not they have achieved their aims while adopting a prospective longitudinal approach, to the candidate's knowledge. No evaluation has followed members of a collaboration from inception to completion, comparing experiences with initial expectations. There tends to be a focus on the effectiveness of an intervention delivered by a programme while ignoring other crucial aspects of a collaboration (101). Limited evidence supports a programme's ability to tackle research capacity strengthening in LMICs (55). There is limited research exploring the multiple perspectives involved in collaboration, such as HICs and LMICs, early-career researchers, and those in more supportive or administrative roles (105).

Generally, the evaluation of GMH research programmes focuses on the later experiences, or the outcomes of a collaboration or intervention, respectively. Previous literature indicates that no research has adopted a prospective approach exploring the participating researchers, comparing their experiences with their initial expectations, while performing an in-depth evaluation of an intervention being delivered from the same collaboration. Given that the GMH field is still relatively new, the evidence to support the use of research programmes in fulfilling key objectives of the GMH agenda is minimal. It is crucial to generate and develop evidence and frameworks that can support the effectiveness of GMH research programmes.

To effectively evaluate a GMH research programme, an important step is to improve the clarity of the term by conceptualising what it means, given that GMH is a young term both theoretically and empirically. There is no consensus on what the word means, and those engaging with the term make assumptions about it (106). Conceptualisation was necessary before evaluating the GMH research programme, as it identified and described specific indicators of GMH that could be measured and evaluated.

This thesis was funded by QMUL and ran alongside the GLOBE programme, seeking to understand how GMH research programmes work and how effective they are in achieving their aims using the GLOBE programme as an exploratory case study. The GLOBE programme was consulted as a real-life GMH research programme to evaluate the partnership's developments over time while considering one of the interventions: multi-family groups. The exploratory case study consisted of two parts: first, a prospective longitudinal analysis of members of the GLOBE research programme, and second, the mixed-methods evaluation of a multi-family group intervention. The current project is highly relevant, as it provides insight into how a GMH research programme functions by evaluating GLOBE,

a collaboration between the UK and three culturally different LMICs. This thesis utilises a conceptual element, a prospective exploration of expectations and experiences, and a detailed analysis of one strand of the work, combined to offer different perspectives of an evaluation.

1.5 Aims

Regarding the above rationale, the overarching aim addressed in this thesis is exploratory, and it seeks to evaluate a GMH research programme. The evaluation will focus on the programme's ability to promote an equitable, sustainable partnership and how it addresses strengthening research capacity in the three LMICs. The evaluation will also focus on the programme's capacity to test and develop an exploratory resource-oriented multi-family group intervention and compare findings across the three LMICs. However, before evaluating the GLOBE programme, the thesis will consult academic literature to understand the term GMH theoretically.

Three research questions are proposed to address the overall aim:

Research Question 1: How is the term, 'global mental health', understood in the academic literature?

***Research Question 2*:** What are the initial expectations of researchers participating in a GMH research programme? What are their experiences? Which expectations were met, and which were not?

Research Question 3: What are the feasibility aspects, experiences, and outcomes of a multi-family group intervention? How do they compare across three LMICs?

1.6 Role of candidate

1.6.1 Overall Project

This thesis project represents the PhD strand of the grant application for the GLOBE programme, funded by QMUL. My contribution to the PhD project was to define the criteria to base the evaluation on, specifically to assess how the GLOBE research programme could achieve equity and sustainability within the partnership, address research capacity strengthening and to explore how it could test and develop an exploratory study. The latter aspect focused on the detailed evaluation of a multi-family group intervention. I outlined the specific research questions and designed and developed each of the research studies included in this thesis. I received guidance and support from my supervisors and members of the academic unit situated in the USCP. Chapters 3 and 4 were written as manuscripts for journal publication, which involved the contribution of co-authors. Chapter 5 will be written up as a publication later, including the contribution of co-authors. The contribution from each co-author is described in each corresponding section. I was the lead

researcher for each study, responsible for the design, data collection, analysis, interpretation, and writing of these manuscripts.

1.6.2 Conceptual review

I was the lead researcher on the review and was responsible for the study design, screening, data extraction, synthesis, and interpretation presented in Chapter 3. Mimi Suzuki, Erin Burn and Sana Sajun contributed to the eligibility criteria and screening and provided detailed comments on drafts of the manuscript. Stefan Priebe and Victoria Jane Bird gave guidance on the research design, and both provided extensive comments and feedback on the manuscript.

1.6.3 Case study

1.6.3.1 Prospective longitudinal qualitative analysis of members of GLOBE

For the prospective longitudinal qualitative analysis presented in Chapter 4, I was the lead researcher responsible for the study design, data collection, transcribing, coding, analysis, interpretation and writing of the manuscript. Michael McGrath and Francois van Loggerenberg contributed to the analysis, through their input with coding, analysis, interpretation and providing detailed comments on drafts of the manuscript. Stefan Priebe and Victoria Jane Bird gave guidance on the research design, and both provided extensive comments and feedback on the manuscript.

1.6.3.2 Mixed methods evaluation of a family intervention delivered in three LMICs

For the mixed-methods evaluation presented in Chapter 5, I was the lead researcher responsible for the study design, data collection, analysis, interpretation and writing of the chapter. External statistical consultant Paul Bassett guided me on how to conduct an individual participant data meta-analysis. Stefan Priebe and Victoria Jane Bird gave guidance on the research design, and both provided extensive comments and feedback on the chapter.

Chapter 2: Methodology

2.1 Chapter overview

This chapter outlines the overall design and structure of the thesis and its underlying philosophical paradigm (pragmatic). It will also explain how the research paradigm informed this thesis's overall approach and design. Finally, this chapter will discuss how the pragmatist paradigm lends itself to a mixed methods case study.

2.2 Thesis design

This thesis includes a conceptual review, a prospective longitudinal (qualitative) analysis and a mixed methods intervention evaluation. Its overarching aim was to evaluate a GMH research programme. This evaluation began by addressing the term's lack of clarity by conceptualising how GMH is understood and characterising it beyond the local-global dichotomy (Chapter 3). Then, as a mixed methods prospective exploratory case study, this thesis conducted an empirical investigation using the GLOBE research programme (Chapters 4 and 5). Figure 2.1 depicts the overall thesis structure, and Figure 2.2 explains the GLOBE case study's procedural diagram.

Using a conceptual review methodology, Chapter 3 adopts a theoretical approach by consulting the academic literature to determine and synthesise a conceptual framework of how GMH is currently understood. Chapter 4 employs a prospective approach to comprehensively explore a GMH collaborative research programme, following individuals involved in the programme's implementation from its inception to its end. Chapter 5 evaluates one strand of the GLOBE programme, delving into the multi-family group intervention's feasibility, outcomes, and experiences. Both present the empirical investigation, which uses the GLOBE research programme as a mixed method exploratory case study, with data collected using a range of methodologies (see Figure 2.2). The GLOBE study was introduced in the previous chapter (refer to Section 1.3); however, further context will be provided in Chapters 4 and 5, to support the individual studies. To address this thesis's empirical objectives of this thesis, the GLOBE research programme was examined by investigating qualitative and mixed methods research questions using semi-structured interviews, outcomes measures, data on intervention fidelity and participant experiences.

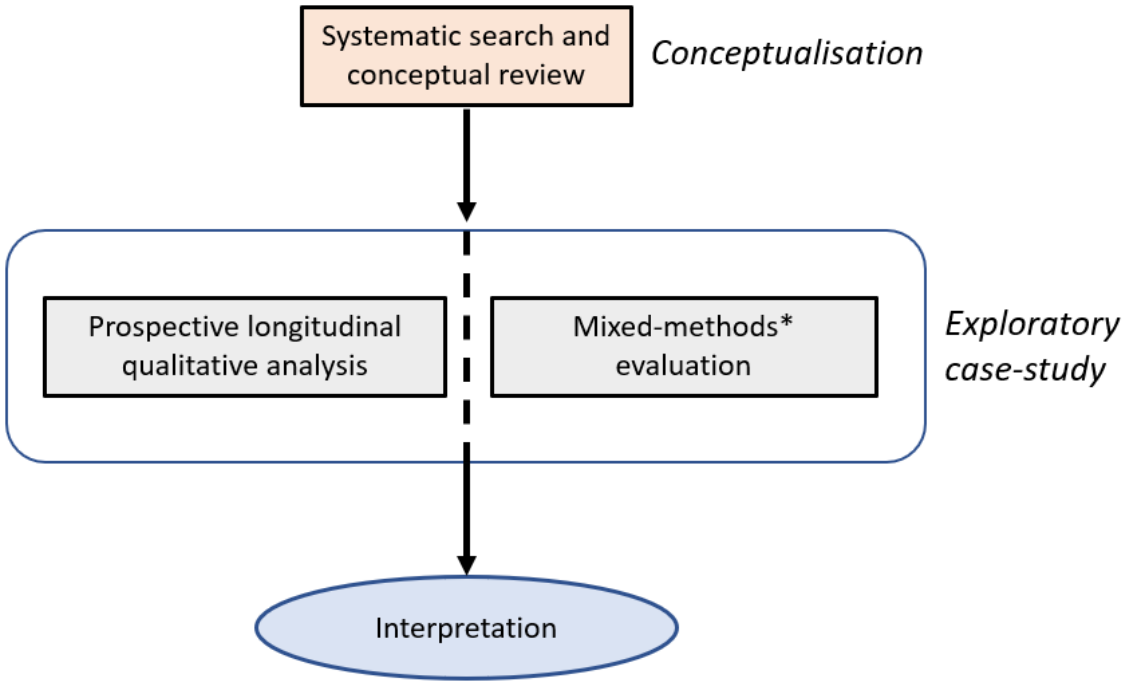

Figure 2.1 Thesis design portraying how each study links to one another (*quantitative dominant)

2.2.1 The GLOBE case study

This thesis includes a conceptual element, a prospective exploration of expectations and experiences and a mixed methods analysis of one strand of the work. Chapters 4 and 5 represent the empirical evaluation of a GMH research programme, utilising GLOBE as the case study. This section will discuss the rationale for using a case study design. Figure 2.2 depicts a procedural diagram of the mixed methods exploratory case study used in this thesis. Creswell and Plano (107) describe the approach as a ' type of mixed methods study in which the quantitative and qualitative data collection, results, and integration are used to provide in-depth evidence for a case(s) or develop cases for comparative analysis' (p.116).

As research areas become increasingly complicated, more exhaustive research investigation is needed (108). This notion is particularly fitting for evaluating a GMH research, given that it has been described as a fragmented field (27). With this complexity in mind, mixed methods case study research designs offer an approach to capture and provide insight into complex phenomena. When combined, mixed methods and case studies offer unique methodological advantages when addressing intricate research issues (109). Although both mixed methods and case-study approaches exist as standalone research designs, when combined, the boundary that separates between them becomes more porous, allowing each to guide the researcher towards understanding complicated phenomena (110). The addition of a prospective viewpoint means a more nuanced understanding of

how a GMH research programme evolves (111). To fully understand this thesis's, it is necessary to define case study, mixed methods, and prospective approaches as individual methods. Figure 2.2 presents a procedural diagram of the case study used in this thesis - the GLOBE research programme. It has two principal components: (a) a qualitative examination of the expectations and experiences of a research programme's participating members in a prospective longitudinal analysis, and (b) a mixed method evaluation of its psychosocial multi-family group intervention.

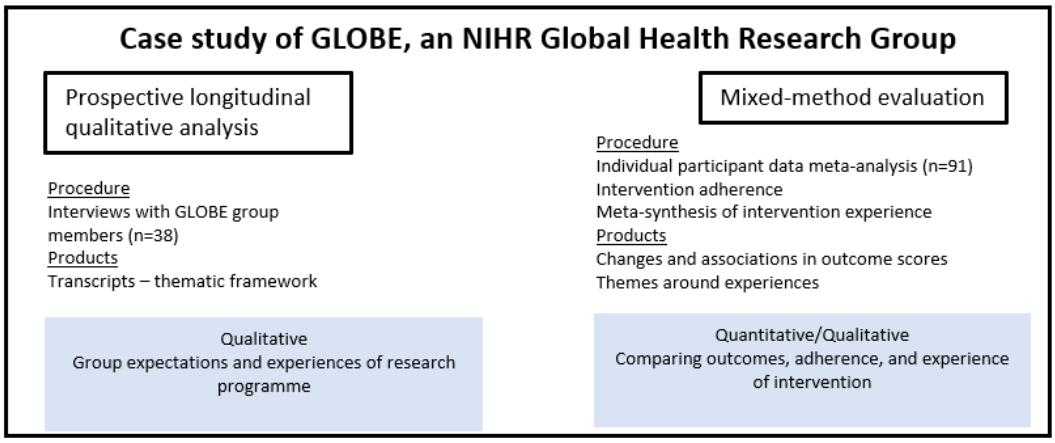

Figure 2.2 A procedural diagram of the case study used in this thesis

2.2.1.1 Case study approach

The case-study approach is an in-depth empirical enquiry of a policy, project or programme activity in a real-life context that captures the complexity and uniqueness of the case being explored, which is usually a contemporary phenomenon (112–114). In case study research, the cases in question are bounded by time and activity, and data is collected using multiple methods, typically over time (114). In this thesis, the GLOBE research programme serves as the particular case, with two empirical components, that explore the development of a GMH partnership over time and evaluate a multi-family group intervention. This research approach aims to gain a practical understanding of GMH in research and practice (112).

Many researchers have different notions of what constitutes a case study discussed by many researchers. The most common elements are that case studies should be complex functioning units, be investigated in their natural context, and be contemporary within a real-life context (108,115–117). The reason for focusing on the contemporary instead of the historical is that no direct observations can be taken from a historical phenomenon (118). These common elements are observed in the current case study employed in this thesis. The complex functioning unit is represented by a collaboration comprised of multiple partners across different continents. Moreover, the GLOBE programme is being investigated in a real-life context and itself is positioned within the contemporary field of GMH (57).

Despite the commonalities of case study research, some elements are unique depending on the researcher's viewpoint. Yin identified three prerequisites when conducting a case study, the first of which is the intention to respond to how, what, why, and who questions (113). Furthermore, the researcher must have little to no control over any activities relating to the unit under investigation (113). These additional prerequisites were satisfied in this thesis since it aimed to address specific research questions, and I had no control over any activities conducted by the GLOBE programme.

Alternatively, Stake describes case study research as 'holistic', 'empirical', and 'interpretative' (119). Holistic relates to the idea that the case is inextricably linked to its context, which resonates with the prerequisite above about investigating a phenomenon in its natural context (119). This holistic concept conveys how the case study explores the GLOBE programme as a whole unit, focusing on partnership development and intervention. The overall aim of this thesis was to use GLOBE as a tool to conduct empirical research when evaluating a GMH research programme's effort to address its goals. Interpretative, in this thesis, relates to how this case study represents one interpretation of the evaluation of a GMH research programme. Therefore, while the findings offer a detailed understanding of how GLOBE operated, broad conclusions drawn from this thesis should be approached with caution.

Similar to Stake, Merriam articulates that a case study has three discrete elements: 'particularistic', 'descriptive', and 'heuristic' (120). Particularistic refers to the context, while descriptive indicates a rich explanation of the phenomenon, and heuristic enables individuals to learn and interpret it. The GMH programme, whose experiences in three LMICs are investigated in this thesis, is the contemporary phenomenon. The actual unit of analysis will be the data captured from each country, and different data collection has occurred to address the different research aims and questions.

One of the main advantages of adopting the case study design is that the case itself serves as a tool, assisting the interpretation and understanding of a specific social phenomenon (112,116). As mentioned, this thesis takes a theoretical and empirical approach, with the term's conceptualisation providing a theoretical perspective. A case study is a tool for conducting an empirical investigation into specific components of GMH as a collaborative research programme and as an intervention. There are three types of case study design: exploratory, explanatory, and descriptive (113). There is further variation within the context of these case study types, such as single or multiple cases and comparative case studies. Given that this thesis is highly exploratory and focuses on one collaborative research programme, GLOBE, it is evident that it is utilising one case to evaluate a GMH research programme.

Case studies can be used to develop or confirm existing theories, and when creating new theories, at least one or more cases are usually required (121,122). Research derived from exploratory case studies tends to build theory rather than affirm, which would be more relevant to descriptive and explanatory case studies. They are uniquely placed to facilitate theory building in theoretical constructs, propositions, or midrange theory (121). In this thesis, the exploratory case study was consulted to refine, extend, and strengthen components of the conceptual framework reported in Chapter 3. The fundamental notion is that a case can exist to offer an opportunity to explore, build, and extend theory using an inductive approach (121).

Inductive reasoning is the process of generating a theory or concept derived directly from the case's data (123)– the evaluation of GLOBE. In contrast, deductive reasoning refers to the process by which a hypothesis is established, and empirically tested outcomes are obtained through deduction. The deductive approach restricts data interpretation by using existing frameworks or discourse to reach a conclusion. The approach adopted in this thesis is both inductive and deductive due to the initial conceptualisation of GMH, followed by the empirical evaluation of GLOBE. The conceptual framework derived in Chapter 3 represents an inductive approach to synthesising the term's meaning by consulting academic literature. The GLOBE evaluation would then be used to delve deeper into specific elements identified within the conceptual framework. A balanced inductive-deductive approach was adopted within the studies. Chapter 5, for example, presents a mixed methods evaluation of a multi-family group intervention, where qualitative data aided the formulation of hypotheses tested by quantitative analysis. Chapter 4, the prospective longitudinal qualitative analysis of GLOBE collaboration members, demonstrated a balanced inductive-deductive approach to interpreting findings, to a lesser extent. Although solely qualitative, the analysis of the first set of interviews at the collaboration's inception generated a framework that was used to analyse the second set of interviews at the tail-end of the programme; the original framework derived from the expectations interviews was employed to compare them to the experience's interviews. Outside of the initial framework, there was still some flexibility in identifying novel findings.

When deriving conclusions, a generalisation that occurs during deductive reasoning involves the generation of hypotheses based on current literature, and the expected results are evaluated against the observed results. In comparison, generalisation based on inductive reasoning leads to theory generation or conceptualisation of the case being investigated. The case study presented in this thesis aligns more with generalisations derived from inductive based reasoning (123). Generalisation involves deriving conclusions from specific cases and making inferences about the unstudied ones (124). The notion of generalisation is common in case study research discussion, especially when

questioning how generalisations are established from a single case study, which is the most criticised aspect of using a case study research design (125,126). Researchers view generalisability from a single case as inadequate for building and strengthening theory (125). Yet when researchers discuss the insufficiency of generalising from a case study, they tend to refer to qualitative research-intensive case studies, since qualitative research is described to be non-generalisable (125). However, Yin introduces the term analytical generalisation, which aims to extend and strengthen theory about the phenomenon being studies rather than making inferences about a defined population sampled in a study (127). In this case, GLOBE represents a GMH research programme, with its evaluation having wider implications for the theoretical understanding of GMH and, more specifically, GMH research and practice.

2.2.1.2 Mixed methods approach

Figure 2.2 depicts a procedural diagram of this case study. Moreover, this thesis employs a mixed methods approach. Qualitative data collection is used to address the research question in Chapter 4, while both qualitative and quantitative data collection are used in Chapter 5. The case study design allows for the use of multiple methodologies to capture data and provide a detailed description of a particular phenomenon. In this thesis, qualitative and quantitative methods were appropriate for exploring specific research questions and understanding how a GMH research programme works.

The mixed methods social science research approach became popular due to its ability to combine the strengths of different methods, provide a rich interpretation of a specific phenomenon, and respond to complex research questions that require cultural, contextualisation and multiple perspectives (128–130). Similar to why the case study research approach is becoming more common, mixed methods is needed to provide a nuanced approach to addressing the complexity of research problems. When exploring specific complicated topics, there is a necessity to combine qualitative and quantitative methods to afford an in-depth and broad. With the rise multidisciplinary and interdisciplinary research approaches, mixed methods research has become more relevant. In this thesis, adopting a mixed methods approach is appropriate as it will enable the investigation of a complex functioning unit such as GLOBE.

When different data types are mixed to address a specific research question, it enables a deeper, comprehensive understanding of the topic being investigated. Using a mixed methods approach circumvents an overdependence on usually more quantitative techniques. Including qualitative data collection to address a research problem can offer a more nuanced understanding of an individual's perspective regarding a specific phenomenon (117), adding a subjective component to primarily objective reasoning (131). It can strengthen findings through a process known as triangulation.

Triangulation refers to the convergence and support of findings derived from different methods exploring the same phenomenon.

Although there are many benefits to adopting a mixed methods approach, there are also disadvantages (129). A key drawback is that it combines two comparatively different research methods, and there is the potential issue of interpreting conflicting results (132). Alongside conflicting findings, a mixed method approach means that different research paradigms are combined to support each other; moreover, some researchers believe that different paradigms are incompatible (133,134). Furthermore, certain paradigms are considered to be only compatible with specific qualitative and quantitative methods (135). Thus, the mixed methods approach, which combines multiple methodologies, is considered philosophically meaningless and logically inconsistent due to the incompatibility of research paradigms (135).

There are diverse types of mixed method designs, in which qualitative and quantitative data are weighted based on the research question. Nonetheless, this thesis adhered to an embedded typology, where both quantitative and qualitative data collection and analysis occur within a traditional quantitative or qualitative design. Figure 2.2 depicts the GLOBE research case study, detailing the two main streams constituting this thesis's empirical research. The prospective longitudinal qualitative analysis is solely a qualitative stream. On the other hand, the mixed-method evaluation of the psychosocial multi-family group intervention is predominantly quantitative but includes a qualitative strand. The embedded model lends itself to a case study design, which combines both types of data to examine the GLOBE research programme and its activities.

From a philosophical perspective, the mixed methods approach combines different research paradigms, which, as mentioned, can accommodate both inductive and deductive reasoning and logic. Therefore, researchers can develop and build theories, as well as test hypotheses all within the same study (121). Qualitative research, in most cases, uses inductive inquiry, which means that reasoning flows from the data itself to generalisation or theory construction. In contrast, quantitative data collection focuses on testing existing hypotheses and is more deductive. Researchers encourage a pragmatist approach when using a mixed methods design (128). The following section will describe the pragmatist research paradigm in more detail, including its implications for using a case study design.

2.2.1.3 Prospective longitudinal approach

The case study also adopted a prospective longitudinal approach. Chapter 4 follows GLOBE members from inception to completion, capturing their initial expectations and later experiences. This approach is more specifically defined as qualitative longitudinal research, which seeks to understand

and identify the change observed, as well as how and why it occurred within a given socio-cultural context (136). Qualitative longitudinal research is focused on capturing the interaction between time and the cultural domains of social processes (137). The notion of context complements the case study research design, as a case study is mainly concerned with an activity or programme occurring within a specific context (119).

Adopting a prospective longitudinal approach has many advantages. Holland *et al.* emphasise how a qualitative longitudinal approach can help evaluate specific programmes that aim to achieve certain outcomes, thereby bridging the gap between what a programme is intended to do and how individuals experience it (136). This point is critical for evaluating GMH research programmes, particularly in identifying factors that have enabled or hindered their ability to achieve the intended aims. Previous literature has focused on assessing GMH research programmes by capturing experiences at the end of a programme, usually after the research has long been completed (138). The main advantage of adopting a prospective approach is having an unbiased baseline which later assessments can be compared. Capturing individual's initial expectations of a programme before it begins allows a researcher to explore their views before their experiences influence them and put them at risk of significant bias. Moreover, this approach allows one to observe how a phenomenon evolves (111). Another key strength of this approach is that it can highlight the important micro-social processes within a certain context (136). This aspect is demonstrated in exploring how experiences differ from initial expectations of GLOBE's participating researchers (Chapter 4).

2.3 Theoretical and methodological considerations

2.3.1 Research paradigm

A research paradigm is defined as a 'set of common beliefs and agreements' applied by researchers about 'how problems should be understood and addressed' (139). They are considered epistemological stances, which view research as intrinsically involved in the nature of knowledge and knowing (86). A phenomenon can be perceived in a variety of ways, which determines how a research question is approached.

Guba contends that specific research paradigms are defined by their ontological, epistemological, and methodological positioning (140). Ontology establishes the nature of a phenomenon, while epistemology describes what approach is needed to uncover knowledge about the phenomenon, and methodology states the process required to complement the approach (140). Axiology is an additional element focusing on how the researcher can influence knowledge (141). In research, a paradigm must be explicitly clear from the start to inform the necessary methodological approach to investigate the phenomenon and how the findings can be interpreted (142).

Since the 1980s, there has been a shift towards more qualitative research in social, which has proven to be difficult to apply as a research paradigm. Before this shift towards qualitative research, the social sciences were dominated by a positivist paradigm (143). Positivism is a research paradigm that refers to an approach that relies on empirical evidence to generate knowledge about the world around us (144). However, a positivist paradigm cannot accommodate a mixed methods approach, and many researchers argue against adopting a philosophy of pragmatism (128).

2.3.1.1 Pragmatic paradigm

The pragmatist paradigm was chosen to guide and frame this thesis's research, as it lends itself to a mixed methods research design. Pragmatism is defined as the application of logic or reason to doing or thinking something (145). This definition suggests that rather than focusing on what is theoretically ideal, pragmatism is concerned with what is practical and attainable (146). At the centre of pragmatism is its competence to evaluate the value of knowledge based on its ability to address practical questions (147). In other words, knowledge is only significant when applied on a practical level.

From an epistemological perspective, pragmatism can circumvent theoretical discussion about the truth and reality in favour of a practical appreciation of a real-world phenomenon (148). Therefore, the epistemological underpinning of pragmatism is that knowledge is derived from a practical understanding. Furthermore, pragmatism finds value and meaning from the practical outcomes of research findings (149). This thesis aimed to evaluate the GLOBE research programme to ascertain what can be learned about GMH research programmes in a broader context and how this insight can contribute to the overall understanding of GMH.

Pragmatism is concerned with knowledge being context-dependent; therefore, when contexts change, so does the usefulness of this knowledge (147). Case study research involves an empirical investigation of a programme in a real-life context to capture its individuality, making this thesis pragmatic by design. However, although the contextualisation of knowledge defines pragmatism, it does not mean that this knowledge cannot be translated between contexts (146). Under the pragmatist paradigm, knowledge generated from research is considered non-generalisable (146). Nevertheless, it believes that knowledge from one context can influence knowledge generated in another (150).

Pragmatist research entails producing actionable practical knowledge with real-world consequences (151). It makes useful knowledge to provide solutions to existing problems, derived from evaluating specific behaviours or practices (151). Research focusing on participant experiences to generate applicable findings is a central tenet of pragmatism (152). This thesis focuses on the GLOBE members,

capturing their expectations and experiences with the research programme, and generating findings that incorporate multiple perspectives to produce insight that will inform future GMH and global health research programmes. The overarching aim of this thesis is to evaluate a GMH research programme, and by using a pragmatist stance, the knowledge and insight gained from this thesis may be valuable to GMH on a practical level, particularly from the perspective of collaboration and multi-family group intervention.

Pragmatism is criticised as a research paradigm because it does not engage in metaphysical discussion, as many other paradigms do (128). Epistemologically, this research paradigm prioritises finding value and meaning in the practical outcomes of research findings (149). Therefore, pragmatists are accused of focusing heavily on practicality and ignoring the role of theory (153). Researchers argue that to be reflective in research, one must understand the implications of the paradigm's theoretical underpinnings (128). Given that pragmatism does not do this, may be more challenging to accomplish.

An interpretivist paradigm was initially considered in the first instance, given the nature of this thesis, with a significant portion relating to the interpretation of the expectations and experiences of participating researchers of a GMH research collaboration. An interpretivist paradigm holds that a single phenomenon has multiple interpretations. Qualitative research should consider various perspectives and experiences in viewing the world, primarily through the lens of different cultures (154). The advantages of interpretivism enable a diverse investigation into a research phenomenon, which appears to be an apt approach for this thesis. Those who adhere to interpretivism are naturalistic, observing participants in a real-world setting (155). This paradigm would be fitting if perhaps the thesis only considered the collaborative aspect (Chapter 4) of the GLOBE case study, such as observing the activities of the group members – via semi-structured interviews- and how they evolve. However, this paradigm does have limitations.

Since this thesis adopts a mixed method approach, it requires a paradigm that allows for both qualitative and quantitative research methodologies. In interpretivism, the nature of reality is socially constructed through the lens of multiple perspectives (156). Therefore, the main disadvantage is its subjective approach. Although the overall aim of this thesis is to evaluate a GMH research programme, a part of the research involves objectivity, especially when exploring the outcomes of the multi-family group participants (Chapter 5). Since the findings of Chapter 5 would be difficult to interpret using an interpretivist paradigm, pragmatism was selected based on its ability to accommodate a mixed method design and practical approach.

2.4 Implications of a pragmatist research paradigm

It is important to be explicit with which paradigm informs research, as each has several implications. This section will outline the main implications of a pragmatist approach to a mixed method and case study research design.

2.4.1 Implications for mixed method research design

Mixed methods research is considered the third methodological movement, following qualitative and quantitative research. Establishing a conforming philosophical paradigm in mixed methods research has been met with much difficulty (157), as it is regarded as a crucial aspect of research inquiry. Pragmatism is often linked to mixed method research (128,150). A vital feature of a pragmatist approach is that it does not require pre-existing assumptions or theories; instead, it accommodates a range of methods to encapsulate a rich understanding of a complex phenomenon (146). Pragmatism is associated with a mixed methods approach to study; in essence, the paradigm sees both quantitative and qualitative value to answer a research question (107,150). Pragmatism holds that there is no single way to learn, but rather many different ways to understand due to multiple realities (107,150). Hence, to understand these numerous realities, it is necessary to adopt various methods in both qualitative and quantitative approaches (107,150). A mixed methods approach will be used in this project to explore the research questions, and to capture the multiple perspectives. This thesis employs a conceptual element, a prospective exploration of expectations and experiences, and a detailed analysis of one strand of the work, combining multiple perspectives of a GMH research programme. The pragmatist paradigm sits in the middle of the paradigm continuum, encompassing both deductive and inductive reasoning, which can offer a more flexible approach to research (143).

2.4.2 Implications for case study research design

Many methodologies are underpinned by a particular philosophical paradigm, that guides and frames the research. Yet, given its practical flexibility, a case-study design does not ascribe to a specific ontology, epistemology, or methodology (158). Using a case study design allows for flexibility in terms of the paradigm it can assume, depending on the nature of the research question. The case study can position itself from a positivist perspective, whereby there is only one single reality, all the way to an interpretivist perspective, which considers multiple realities and meanings are present (113). Case studies have been described as bridging paradigms; rather than adhering to a single paradigm, the bridge allows researchers to tap into different epistemologies and methodologies to address the research questions (159).

Qualitative paradigms, such as interpretivism, are consulted to facilitate a broad investigation of the phenomenon, and case-study research typically centres on qualitative inquiry (142,160). The case

study research design invites empirical investigation of a specific phenomenon of interest and can accommodate a mixed methods approach (113). Pragmatism's central tenet emphasises a pluralistic approach to selecting methods to address the research question (149). In this thesis, the case study explored how a GMH research programme was able to promote equity and sustainability in a partnership, address research capacity strengthening, and test and development an exploratory study.

Chapter 3: Understanding Global Mental Health: a conceptual review

3.1 Chapter overview

This chapter presents the findings from the conceptual review, which aimed to answer research question 1: How is the term 'global mental health' understood in academic literature? The rationale is for conducting this review is outlined. This review protocol was registered on the PROSPERO database [CRD42017072594]. The review employed a systematic search and synthesised four conceptualisations from sixty included studies using content analysis. The findings illuminate the different understanding of GMH and its meaning beyond the current local-global characterisation. Accordingly, the implications of these findings should enable researchers embarking on GMH to refer to this framework and see how expanse the field is and how it is not restricted to the polemics. The findings of this chapter were published, and the publication can be found in Appendix 1. The review was carried out and reported following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (161), as presented in Appendix 2.

3.2 Rationale

Chapter 1 introduced the lack of clarity around the conceptualisation of GMH. This section will provide further rationale for conceptualising the term by starting with how the term began. Then briefly outlines how the term is linked to various happenings, despite not having a clear conceptualisation.

The processes of globalisation have reduced the boundaries between countries, meaning that many engage in one space, referred to as a 'global village', yet others are not benefiting from the improvements in knowledge and technology, and there is growing inequality (162). Globalisation aside, the sentiment of the term GMH predates the Lancet 2007 series, through the Global Burden of Disease report, revealing the magnitude of the global burden by mental disorders (163). Besides burden, the 2001 World Health report highlighted the inequalities in treatment gaps prevalent in different countries (164). It provided recommendations for governments to respond to their mental health climate, tailored to varying levels of development (164).

Collectively, these reports revealed that much of the global burden was experienced in LMICs, where access to treatment was not being met, and therefore prompted academics, policymakers, and practitioners to begin viewing mental health on a global scale. However, the publication of the 2007 Lancet series, calling for efforts to scale up mental health services globally, led by psychiatrists and researchers from HICs (11,165), officially brought the term *global mental health* to the fore and into mainstream usage.

The term itself superseded other precursor terms such as *international* or *tropical health*. Becoming global implies a sense of inclusivity by including all individuals experiencing mental illness anywhere in the world who are worthy of care, regardless of location (166). Similarly to global health, rebranding the term distinguished it from international health, which primarily focused on infectious diseases in LMICs (167). Koplan *et al.* define global health as a discipline that 'focuses on issues that directly or indirectly affect health but can transcend national boundaries' (p.1994) (167). The word global has connotations of other global bodies, such as the WHO, from which the GMH movement derives much guidance (168). Using 'mental health' instead of 'psychiatry' indicates a more all-encompassing term, recognising that GMH is implicitly linked with other academic disciplines rather than a psychiatric exercise (166). Global health has been described as intersecting many different disciplines, such as public health and international health, and as highly interdisciplinary and multidisciplinary – linking with fields outside biomedicine (167). GMH has also demonstrated its capacity to associate with other disciplines, such as anthropology (169), to understand the human experience of mental ill-health rather than being restricted by a psychiatric or biomedical lens.

Since the 2007 Lancet series publication, GMH has driven research, academic training, funding programmes, policy, and action. Many educational institutions have established postgraduate programmes solely dedicated to increasing knowledge and research in GMH (95,96). In research, GMH is the recipient of substantial amounts of funding. For example, Canada's Grand Challenges has invested CAD$47.6 million, supporting 95 projects implemented in 32 LMICs (170). Global Challenges Research Fund (£1.5bn) and Newton (£735m) both encourage research partnerships between the UK and other global institutes, including significant funding dedicated to GMH research (171). The NIHR Global Health Research programme funding scheme is described in Section 1.2.5. Furthermore, the Medical Research Council (MRC) released new investment streams of up to £20 million, also committed to targeting the burden caused by mental illness, especially in LMICs (172). In response to the COVID-19 pandemic, funding agencies have been promoting research exploring the effects of the pandemic on mental health on a global scale (173).

Aside from its academic status, GMH represents a global movement with the agenda to make mental health as important as physical health and raise its profile within the global arena (168,174). Those working within GMH advocate for human rights in mental health to be a priority around the globe, specifically for those suffering to be treated fairly and with dignity (175).

The term is clearly linked to many different endeavours, but despite GMH's exponential growth and momentum, there is no consensus around its meaning. Swartz describes the term as 'messy, contradictory, fragmented' (p.537) (27). No researcher has attempted to conceptualise the term.

Instead, those who engage with it echo literature that has come before it or replicates the arguments and debates that characterise it. Researchers have attempted to characterise GMH by systematically evaluating its 'implicit priorities' (176). Yet, the term remains vague in its meaning, and this lack of clarity has led to an assumption that those engaging with the term are talking about the same thing (106,166), so it remains unclear what it actually means.

Without conceptualisation, one cannot assume that a researcher engaging with the term is thinking of the same set of ideas when they engage with GMH. When a shared understanding of a word or term is lacking, our understandings of the word or term may or may not differ across different groups of individuals, contexts, and time. In comparison, GMH can be thought of differently, such as a domain within global health or the humanitarian application of psychosocial approaches (57,177). The issue with definitions is that no one universal description of the term will withstand changes in time culture and be suitable for all contexts (178), further supporting the need for conceptualisation. So, when a researcher uses a term or is seemingly engaging with a term, other researchers reading their work will understand the terms and what they mean differently, irrespective of their perspective and experience. Currently, GMH is characterised by a local-global debate. It has been described as at risk of reaching an 'impasse' (37) due to the high level of debate shrouding the term and preventing it from developing. More specifically, individuals entering the field are being forced to decide where they sit within the argument and essentially inhibiting the development of ideas and perspectives emerging from the continuum (37). Therefore, GMH is at risk of becoming a nebulous and meaningless term.

3.3 Aims

Accordingly, developing a conceptual framework can help map out GMH's current landscape and portray how the term can exist beyond the debate that currently characterises it. It can help demarcate GMH's content and identify the key parameters that characterise the term, helping to differentiate it from similar fields and help guide the evaluation and monitoring of GMH-related activities (106). This review consulted how the term is used in the academic literature to synthesise and identify how GMH is understood.

3.4 Methods

3.4.1 Overall approach

This conceptual review began with a systematic search adhering to best practice guidelines and is reported following the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) and the checklist can be found in Appendix 2 (161). The review utilised the involvement of multidisciplinary members as part of the review team and used a highly iterative approach as per the recommendations set out by Lilford *et al.* (179). An interdisciplinary team searched, analysed, and

interpreted this review. This team comprised the current doctoral candidate, and five members are forming an internationally- diverse, mixed career-stage research group, reflected by English, German, Japanese and Pakistani nationalities. EB, SS, VB, and SP are actively involved in coordinating several global health projects focusing on delivering community-based psychosocial interventions in LMICs – spanning four continents, with both VB and SP as PIs.

The team are shown in Table 3.1. The search was conducted in May 2020, and the PRISMA flow diagram can be found in Figure 3.2. The search term was simply 'global mental health'. The main output of this process is to conduct a data-driven conceptualisation by consulting the previous literature involving research and theory and synthesising these to construct a conceptual framework. Understanding how different researchers have defined GMH previously will form the basis of the conceptualisation, using the array of definitions and interpretations that emerge from previous literature. A conceptual framework, defined by Jabareen, is a set of related concepts that provide a comprehensive understanding of a phenomenon (178,179) for relevant stakeholders engaging with GMH. The study protocol is registered in the PROSPERO database [CRD42017072594].

3.4.2 Eligibility

This review aims to conceptualise the term *GMH.* Given that many papers use and engage with the term without necessarily defining it, it was deemed appropriate to establish the eligibility for this review as to whether authors explicitly defined or described their understanding of GMH. In addition to describing GMH, the eligibility criteria included papers that consulted well-known definitions in the current literature, such as representing the mental health domain of global health (57). There was no restriction on language, but by nature of searching for the term using only the English language would have presumed a predominantly English set of records retrieved.

3.4.3 Search strategy and screening

The following databases were searched in May 2020: Scopus, PubMed, Web of Science, Grey literature report and Open Grey. Databases were searched from inception onwards, and although the term's usage gained increasing momentum from 2007 onwards, the concept of viewing mental health on a global scale was acknowledged (180–184). The reference list of the prominent GMH series: Harvard Psychiatry review 2012 and the Lancet series, 2007, 2011, and 2018 were all hand-searched, selecting these based on the journal's high impact factor. In addition to hand-searching journal series, specific GMH funding calls were examined to establish how funding bodies framed the term.

After removing duplicates, the screening process was approached in two stages. First, the doctoral candidate screened all titles and abstracts. Second full texts were accessed, and the doctoral

candidate independently reviewed all papers, whilst the second reviewer Mimi Suzuki (MS) (refer to Table 3.1), independently screened a random sample of 40% of full-text articles. The IRR achieved an 88% concordance rate, and any inconsistencies were discussed and resolved amongst the wider team. Despite only searching GMH in English, some retrieved records were in other languages, such as Spanish. Members of the Colombian group translated these texts and helped establish whether the article met the eligibility criteria. Given the high number of papers (n=347) that fulfilled the eligibility criteria (see Figure 3.2), it was necessary to take a random sample of sixty articles from the included papers to develop the conceptual framework. This process involved using a random number generator using Microsoft Excel, where the sampling frame (1-347) and the sample size (60) were both defined.

3.4.4 Data extraction

Data from each study was extracted into a Microsoft Excel spreadsheet. The data extracted included interpretations of GMH, whether an author uses an existing definition, and other relevant text, such as aims, approaches and criticisms. Data extraction was compared with the second reviewers, Erin Burn (EB) and Sana Sajun (SS), who independently extracted data from 50% of the final included studies to ensure accuracy.

Table 3.1 Description of study team and influence on research

	Candidate	**EB**	**SS**	**MS**	**VB**	**SP**
Professional role and credentials	Health services researcher	Researcher	Researcher	Researcher	Researcher	Psychiatrist, researcher
Role in the research	Lead researcher	Supported data analysis	Supported data analysis	Supported data analysis	PhD supervisor	PhD supervisor
Potential influence on the analysis	Familiar with research participants	Familiarity with global health research	Familiarity with global health research	Not familiar with global health research	Familiarity with global health research	Familiarity with global health research
	Familiarity with international collaboration literature					

3.4.5 Data analysis

An inductive qualitative content analysis was deemed suitable, enabling a systematic and comprehensive approach to describing a phenomenon in different contexts (185,186). The

qualitative content analysis was deemed an appropriate approach for multiple reasons, mainly because establishing the author's understanding of GMH did not require an in-depth interpretation of the extracted text but a low-level descriptive inference (187). Using content analysis allows the description of a phenomenon in a conceptual form (185), where GMH represents the phenomenon. Qualitative content analysis is one of many approaches that can be used to analyse and characterise textual information by establishing who is saying what and in what context (188,189). The approach involves systematic coding and categorising employed to examine large amounts of text and develop patterns and discourses (190–192). Content analysis is compatible with multidimensional phenomena (185,193), suitable for exploring the different facets of GMH. The approach facilitates the detailed description of the content without focusing too heavily on its inherent meaning (194,195).

This review adopted an inductive content analysis, which was suitable for allowing coded categories to be derived directly from the text (196). Inductive was chosen over deductive, as there is no existing conceptual framework underpinning GMH as a comparative reference (196). The only characterisation of GMH would be the local-global debate. With this binary debate in mind, it was considered an element within each conceptualisation rather than considering the local and global separately. Although the inductive approach did in some way refer to the local-global debate, there was no obligation to be restricted to this simplistic framework (195).

The main reason for choosing content analysis over other qualitative descriptive approaches, such as thematic analysis (197), was its overall aim to develop a conceptual framework with a low level of interpretation (187). Meaning that the framework produced when using content analysis is less complicated and accessible for a broader range of researchers and practitioners. Vaismoradi *et al.* compare the analytical phases between thematic and content analysis; the differences lie with thematic analysis concerned with latent and manifest content, whereas content analysis can choose between them (187). The manifest content is directly extracted from the content, whereas latent requires a deeper interpretation. This review was only concerned with developing categories from manifest content, as the aim was to synthesise individual understandings of GMH. An underlying meaning was not needed, as the framework needed to be explicit in content.

The analysis adhered to an inductive content analysis demonstrated by Elo & Kyngas (185), shown in Figure 3.1. The preparation phase involved the extraction of key texts' interpretations of GMH (referred to as units). In this case, a unit represented one or more sentences taken from the included papers that often reflected more than one perspective of GMH. Immersing within the text began upon the first extraction. Once all relevant text was pulled from the papers, it was a case of

becoming immersed in the data and determining what warranted attention. The inductive content analysis involved open coding, creating categories and abstraction. The extracted texts are read and re-read, assigning a descriptive code. These descriptive codes were then grouped into groups or subgroups whilst continuously examining the remaining coding clusters to see whether new categories could be formed or whether they could form existing groups (187). Abstraction involved developing a description encapsulating the fundamental characteristics of the higher-order categories, which was iterative until no further condensing could occur. The final step in the analysis involves the way the analysis is reported. In this review, the main output was a conceptual framework, constituting all the conceptualisations that the academic literature surrounding GMH. This conceptual framework consists of descriptive categories outlining each conceptualisation of GMH (187).

Once the framework was constructed based on the sample of sixty papers, vote counting was used to assess the framework's validity by applying it to the remaining 287 papers (Table 3.2).

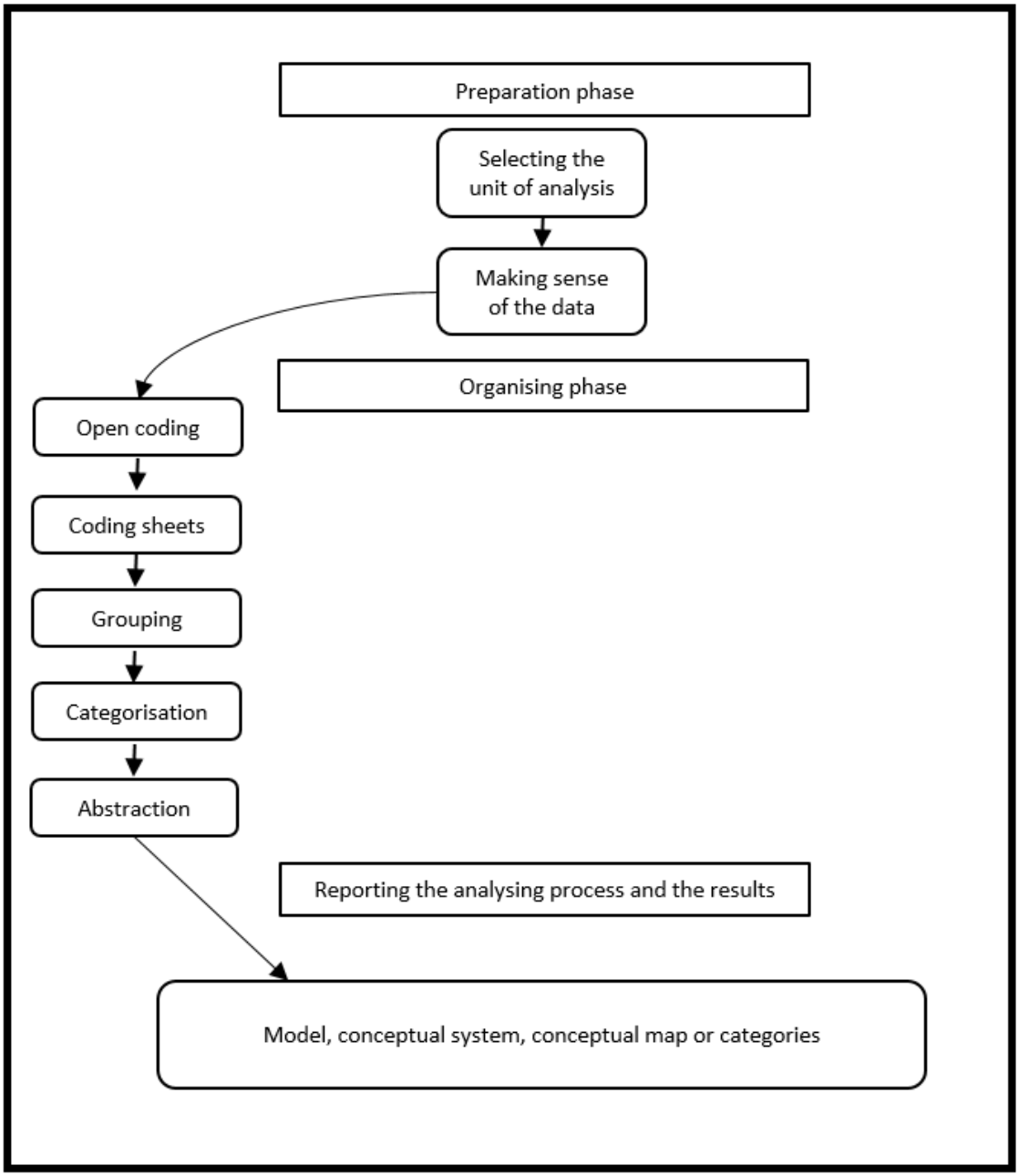

Figure 3.1 Inductive content analysis modified from Elo & Kyngas (2008) (185)

3.5 Results

3.5.1 Included studies

The selection process is depicted in Figure 3.2. Using the search strategy detailed above, 1198 unique studies were identified. Of the retrieved, 516 were omitted through reading the abstract section only, therefore leaving 682 studies that were checked for eligibility. Once all the 682 papers were screened reading the full text, 347 met the eligibility criteria of exhibiting a clear definition of GMH. Since this was too many to conduct an in-depth synthesis, a random sample of sixty papers was taken and employed to develop a conceptual framework of GMH. The sixty papers comprised research articles (n=18); comments, editorials, or correspondence (n=16); GMH series articles (n=6); reviews (n=6); original articles (n=6); debates (n=2) case study or report (n=2); a symposium article (n=1); a thematic paper (n=1); study protocol (n=1); introduction (n=1). All sixty papers were published between 2007 and 2020, and although the majority came from either the UK (n=28), the US (n=14) or Europe (n=6), many originated from South Africa (n=4), Canada (n=3), Australia (n=1), India (n=1), Norway (n=1), Panama (n=1), and Switzerland (n=1). A list of the included study characteristics can be found in Appendix 3.

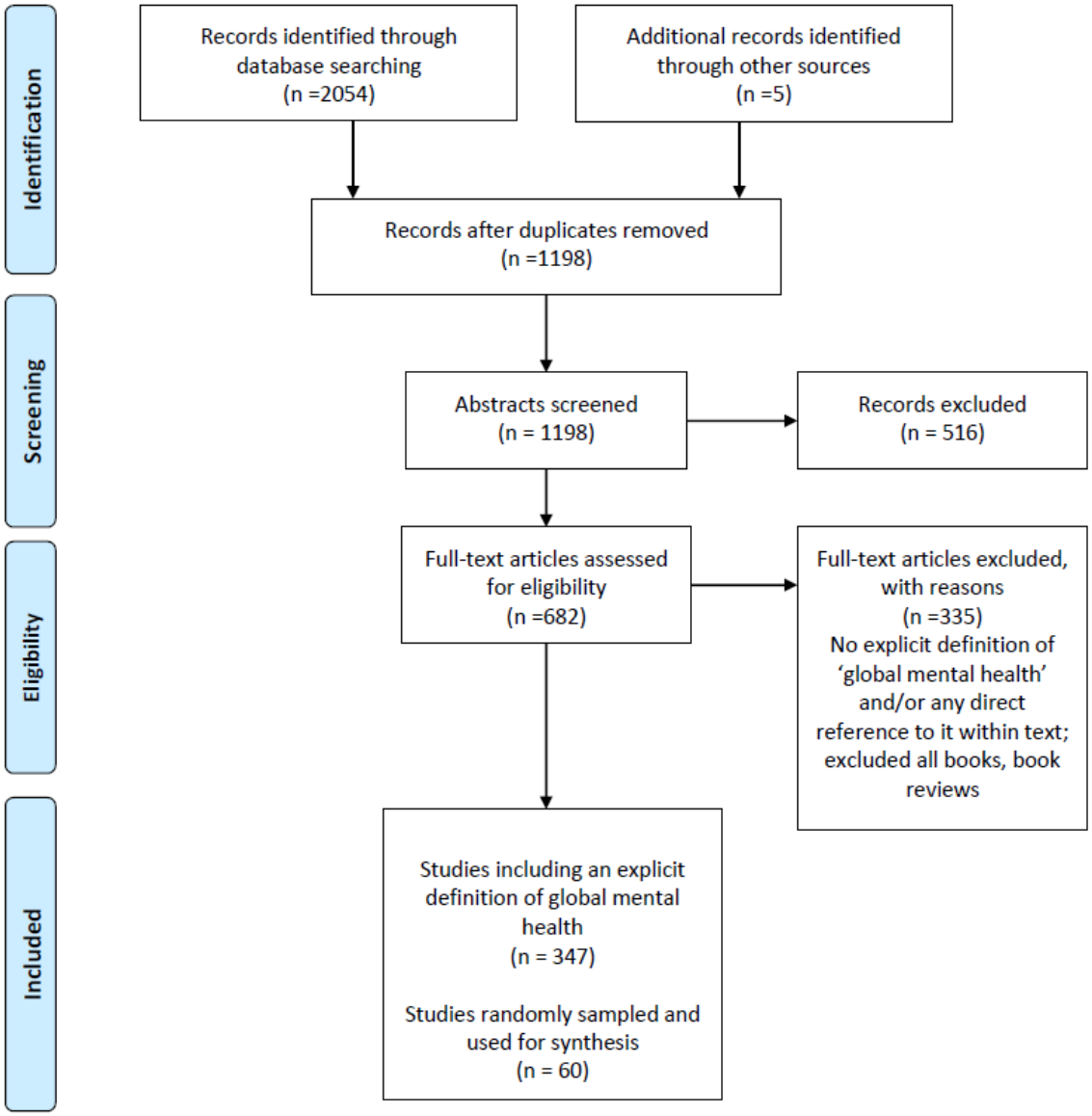

Figure 3.2 PRISMA flow diagram

The synthesis developed and identified four conceptual understandings of GMH from the sixty included randomly selected papers. Using vote-counting, this conceptual framework was checked against the remaining included papers that met the eligibility criteria. Table 3.2 shows the vote-counting result and reveals how many papers have a broad understanding of GMH by employing more than one understanding. Vote counting concluded that all 347 articles used more than one conceptualisation of GMH. First, 239 papers considered GMH as implementation, indicating that it's mostly about practice and delivering interventions. Second, 213 articles thought GMH to be a research field. Third, 181 papers believe GMH to be an LMIC initiative. Finally, 170 articles judge GMH to be associated with an improved environment for mental illness. A Venn diagram is displayed

in Figure 3.3, revealing the overlap between the conceptualisation and the number representing each conceptualisation.

3.5.2 Globalising mental health research

Many authors portray GMH as an important research field to generate an effective evidence base that can support and drive global practice and guide global policy (57).

Many researchers acknowledge the influence of globalisation on the prevalence and incidence of mental health issues and have highlighted the urgency for a global response to tackle the burden (35,57,206,198–205). There is recognition of the universal nature of mental health conditions and that addressing the global population's health requires the involvement of all countries, given that we are residing in an interconnected world (198). Furthermore, there is a commonality in how mental health impacts people's lives globally (198). Alongside this commonality, researchers acknowledge a global inequality concerning access to evidence-based mental health treatment, predominantly in LMICs and low-resourced parts of HICs (19,20,57,207–210). To address the treatment gaps that exist globally, advocates of the GMH movement have promoted scaling-up evidence-based mental healthcare providers as a priority, focusing on LMICs (198,211,212).

Although there is a strong focus on LMICs, researchers have emphasised the need to look beyond LMICs and adequately target efforts to low-resource regions. Exploring the mental health needs of populations such as migrant communities who, as a result of mass migration, end up located in high-resource settings, researchers admit that GMH needs to address the needs of culturally rich communities due to mass immigration (213). This notion of making GMH more inclusive and not restricting research effort to solely LMICs has been echoed by other researchers (57,210,214).

Moreover, from an innovative perspective, many researchers are interested in the capacity for interventions and treatment approaches conceived and developed in LMICs to establish whether they could be exported and implemented in other contexts such as HICs – a process referred to as *reverse innovation* (215). The idea is that the innovation occurring in LMICs can address mental health issues and social determinants linked to inequity in HICs (215).

Academics leading in the field of GMH believe the purpose is to create a global community, generate and translate findings from diverse cultural settings, and move away from a traditional 'silos' approach (206). Accordingly, to accommodate research in culturally different settings, there is a move towards the cross-cultural adaptation of classifications and assessments of mental health disorders and function (27,216–222). International collaboration provides an avenue for

strengthening the research capacity of LMIC institutions and improving their ability to secure research grants to set their research agendas that are better positioned to address more local priorities and contribute to the GMH research output (204,207,209–211,223).

Global health research collaborations between HICs and LMICs can address several aims. These can include generating new research evidence, strengthening the research capacity in LMICs, tackling health inequalities across and within countries, improving the quality and outcomes of health care in LMICs, and providing an opportunity for mutual learning (200,211). However, the literature demands a more critical evaluation of GMH collaborations between LMIC and HIC institutions. There is less information regarding the non-technical or non-specific intervention factors that have a crucial role in influencing implementation (224). For example, studies have explored the role of 'non-specific' factors of collaboration, such as leadership models, collaboration and contextual factors, and how they influence the formation of effective, equitable global research partnerships (57,215,224–226). This research provides frameworks to guide international collaboration and improve implementation when research is conducted in different cultural contexts (57,210,211,223,224,227). Furthermore, mutual learning is a process that has been discussed broadly in the context of global health collaboration and is recognised as one of the crucial motivations for these collaborations, superseding the one-directional process that characterised past partnerships (57,200,207,215,223,228). In addition, to providing opportunities for reverse innovation (215).

Within the field of GMH, there is an opportunity for other forms of collaboration, such as linking with other academic disciplines. Similarly to global health, GMH exhibits a highly interdisciplinary research space, benefiting from evidence from disciplines including implementation science, epidemiology, geography and anthropology (19,57,200–205,212,229). There is extensive evidence of the GMH field using more anthropologically related methodologies, such as ethnography and participatory approaches (27,199,216–222,230). Using these approaches, GMH is better placed to understand an individual's or community's in-depth nuanced experiences of mental health disorders.

Furthermore, researchers like Jain and Orr explicitly demonstrate how ethnography is important for GMH research, especially in the context of characterising different mental health perspectives from a range of cultural settings (218). Adopting a mixed methods approach to mental health research through investigating mental health interventions, representing research participants, and prioritising their experiences as part of the research findings (59,226). Including qualitative data as

part of research ensures that the field of GMH is adhering to paradigms that exist beyond health sciences (217,218).

Despite GMH research increasingly focusing on the cultural experiences of mental disorders more recently, the GMH agenda has been accused of relying too heavily on Western psychiatry and biomedical models whilst disregarding the role of culture and context contributing to the experiences of mental health (27,57,217,218,222,229–232). This criticism encouraged more locally resonating research by incorporating local relevant knowledge and conceptualisations of mental health through the narratives of those impacted by mental health disorders (35,57,222,230,231,233,234,198,201,205,212,216–218,221). Furthermore, many more examples of GMH research have recently involved more innovative and cost-effective interventions that prioritise local stakeholders (19,59,235). Other examples of GMH research include linking formal types of care with more alternative forms of healing, such as spiritual or religious, therefore demonstrating the adaptivity and flexibility of the field and the ability to incorporate and expand existing treatment frameworks (208).

In the context of expanding existing frameworks, the GMH field represents an opportunity for integration, resourcefulness, and pluralism concerning the development of solutions to mental health issues shared worldwide and generating novel ways to address the growing burden (57,206,226). Researchers in the GMH field have demonstrated a progressive shift from mental illness determinants to exploring factors that sustain mental health (206,216,233). For example, research exploring recovery instead of treatment and investigating ways to use aspects of the community, such as making families integral in patient care (59). Moreover, GMH research suggests a move towards an epistemological pluralism, where no one paradigm dominates and has equal weight, to provide the scope for a range of perspectives that can incorporate clinical, social, and cultural frameworks into the GMH evidence-base (203,206,217,219).

3.5.3 Global mental health is implementation

Another way GMH is conceptualised is as implementation, the process of acting on or executing ideas and interventions. In other words, those who are concerned with designing and delivering mental healthcare programmes use the term to denote the practice and activities that encourage and improve mental health infrastructure globally but particularly in LMICs (201,203,211,217,218).

The treatment gap is defined as the discrepancy between individuals who require care and those who receive care, which has encouraged those engaged in GMH to address the lack of adequate

mental health infrastructure by building capacity for mental health systems (200,211). The concept of the treatment gap has been introduced as a tool to guide decision-makers on where to target action, intervention and service scale-up, with a greater emphasis on LMICs, as a way to highlight the imperative need to focus resources and solutions in these countries (200,211).

Since implementation requires the support of theoretical frameworks, it is clear that this current understanding of GMH is inextricably linked with the previous. This notion of action has been reflected by the call to scale-up mental health services by improving adequate formal services for individuals with mental disorders, focusing on LMICs (20,57,201,203,211,224). The action of scaling up services has been described in two ways: integrating mental healthcare into existing health systems and substituting institutional forms of care (236–238) with more continued community-based care (57,202,239).

However, in the context of implementation in different cultural settings, little attention has focused on the applicability, feasibility, and sustainability of scaled-up interventions (204,210,223,227,239). For example, LMICs especially experience many barriers inhibiting integrating care into existing health systems, including limited government financial support, sparse mental health professionals, inadequate research capacity, and poorly organised and developed mental health systems (19,57,210,227,239). Therefore, this dimension of GMH focuses more on the interface between how research is applied to different contexts and aims to understand what can or cannot be implemented and sustainable for different settings, particularly in LMICs (223,224,227).

Viewing GMH as implementation again links this conceptualisation with the first, as it demonstrates how significant the discipline implementation science plays in the inquiry of GMH (224). Evaluating the implementation of mental health programmes has been an essential approach to identifying the barriers and facilitators to improve the traction of interventions in mental health systems (204,210,227,239). Moreover, making sure that these mental health programmes prioritise research capacity strengthening, as they are about intervention effectiveness (59,208,211,227).

It is well recognised that despite not receiving support from their governments, LMICs do receive aid in the form of research funding, representing one avenue to improve LMIC mental health infrastructure, but this tends to be managed and led by HIC institutes (239). There are many issues stemming from the effectiveness of externally-led programmes in improving LMIC mental health infrastructure (204,210,215,239), further supporting the need for locally-driven programmes to address the locally-rooted problems with locally-led solutions (218,223).

The role of communities to help address some mental health burden represents a key component of GMH. Strengthening and empowering communities can help address some inequality in access to treatment, and facilitating more locally rooted action is a crucial part of GMH (240). One way of scaling up mental health services is by improving community care provision, which has been focused on LMICs (199,200,202,218,231,240–243). Involving the community in the care of individuals who have mental illness offers a way to strengthen mental health services and increase the cultural competency of community health workers (240,242). Furthermore, a mental health system with a closer relationship with the community can improve its awareness and help better monitor social-cultural determinants of mental distress and identify the protective factors for good mental health (199,200,203,231,240–243). Training lay health workers to deliver interventions task shifting has been used to overcome scarce community mental health professionals (199,200,212,238,239,242,243). Social inclusion programmes (199,200,240,241) and integrating mental health into primary care (20,202,206,238), represent other practices that GMH has promoted.

Evidence indicates GMH is extending its practice, for example, by exploring ways for more traditional forms of treatment, e.g. spiritual healing, to join forces with the professional sector (208,216). In addition to harnessing alternative forms of therapy, GMH has displayed a propensity for innovative technologies to support and facilitate treatment, diagnosis and education (59,235,239,243). One GMH study exhibits the use of an e-learning intervention in low-resource areas to improve the cross-cultural awareness of mental health (244).

In the context of improving mental health infrastructure, GMH is characterised by a global-local debate, where we have the universal evidence-based biomedical approach to services versus the more empathetic locally embedded service approach (203,205,218,224,228,232). The global strategy is defined as exporting Western psychiatry to LMICs whilst stifling and ignoring cultural alternatives to mental healthcare healing (203,217,219,232). In contrast, the local approach describes a more locally resonant approach to healthcare that prioritises local knowledge and engages stakeholders in the design and delivery of mental healthcare (203,205,239).

3.5.4 Improving the mental health landscape

Another way GMH is conceptualised is to improve the mental health landscape, create an environment conducive to the mentally unwell, and identify protective and preventative factors by adopting a recovery-oriented approach (214,216,240). Moreover, those working in GMH recognise that to address the burden of mental health issues, a global response is needed to facilitate and

support mental health infrastructure and cultivate support in research in addressing mental health prevention and promotion. Both things will improve the mental health landscape. Alongside the conceptualisations of research and practice, the term has been described as a social movement to transform how mental health is understood, maintained and treated (19,57,200,243).

In line with this changing culture surrounding mental health, GMH advocates for policies that acknowledge and prioritise social inclusivity, the human rights of vulnerable individuals, and the stigma surrounding those living with mental disorders (87,168,200,211,214,218,221,245,246). Moreover, GMH advocates envisage policies that incorporate the perspectives of service users and other relevant stakeholders to ensure that they resonate with those impacted by mental illness, e.g. including families of those suffering (87,214,217,245).

Those members who have been integral in coordinating the movement have elevated the profile of mental health within the global arena by framing it as a global health issue to ensure it attracts attention and resources whilst competing against other chronic and non-chronic diseases (87,168,200). Researchers and practitioners engaged in GMH are involved in recognising an opportunity for policy reform and seeking ways to create or modify policies to ensure the appropriate infrastructure and care are available for those impacted by mental illness (19,20,87,210,211,214,215,238).

In the context of improving mental health, the GMH agenda is promoting training for effective leadership and management of mental health systems and developing mental health professionals' skills by having closer links to the community (215,247). Community participation is an integral part of GMH's call for scaling up service provision (57,199,200,216,242). This aspect of GMH aims to assemble and tap into the health resources available within a community and help strengthen a community's capacity by developing mental health competency and delivering psychosocial care (57,199,202,241,242). Moreover, when incorporating capacity building into mental health programmes, extending the reach toward policymakers could help facilitate mental health system reform (209). As mentioned, GMH recognises the impacts of globalisation. There is an initiative to develop culturally competent curriculums that can accommodate approaches to care for minority groups, such as asylum seekers and migrant communities (203,213,229,244,247–249).

Regarding reorienting mental health systems, GMH has acknowledged a shift from targeting the determinants of mental health to exploring factors that improve resilience and promote mental health (59,216). The notion of reorienting mental health systems has been observed by Priebe *et al.* by demonstrating how resource-oriented interventions can utilise 'existing resources and social

structure in LMICs' as a form of promotion (59). An example of a resource-oriented intervention is family interventions, which involve family members and friends as part of individuals' mental health care and treatment (59).

Along with research and practice, policy reform in GMH has been the subject of criticism, with a similar debate between policy promoting the universal use of evidence-based solutions to care versus policies facilitating practices rooted in the context (214,218). As a result and as comparably with research and implementation, there is a desire for policy to be diverse and reflect the needs and priorities of individuals who are impacted by mental illness (168,218–220).

3.5.5 Learning from and supporting LMICs

Another way GMH is conceptualised is as an LMIC initiative. GMH researchers, practitioners, and policymakers are guided by the widest treatment gaps, which occur primarily in LMICs (201,211,223). It is widely understood that GMH efforts are focused on LMICs, as a way to support their global development with regard to infrastructure, research and also policies (19,20,87,243). This dimension of GMH's understanding combines the previous three but communicates a sense of urgency towards LMICs.

One of the main objectives of GMH is to generate a globally resonating evidence-base, requiring all countries to develop their interventions and contribute their experiences and findings to the GMH evidence-base (222). However, LMICs experience research gaps alongside treatment, meaning that their ability to participate in GMH research is limited, limiting the research output these countries can contribute (209–211). Generally, research in LMICs is constrained by the available resources, but research capacity is in many countries inadequate (200,239). Research is needed to monitor and refine existing mental healthcare systems and ensure that the infrastructure can meet the growing need (215,239). In addition to limited research capacity, LMICs face ongoing challenges with inadequate access to and use of data to facilitate and improve existing mental health services (202,207,209,210). Accordingly, another core component of GMH is to strengthen research capacity and promote local leadership, independence and sustainability in their research priorities (20,209–211,223,224,239).

Despite the sentiment of the GMH movement claiming to serve all people worldwide (243), most of the activity that stems from GMH focuses on LMICs (19,57,200,212). With LMICs as the focus, researchers have criticised the GMH agenda of being imperialistic by introducing Western concepts and ideas around mental healthcare to culturally different contexts (27,35,57,231,232). Regarding collaboration, historically, partnerships that emerged between HIC and LMIC researchers have been

described as facilitating the unidirectional flow of knowledge occurring in global cooperation. Yet GMH has emphasised mutual learning in partnerships between HIC and LMIC institutions and ensuring that HIC researchers also benefit from partnerships (57,200,206,226,228).
Alongside mutual learning, there are also opportunities for reverse innovation in partnerships involving LMIC partners, given that working within resource-constrained settings could reveal innovative approaches to care (59). Many informal treatment options represent the first line of care in LMICs, usually including cost-effective, innovative, and traditional therapies. GMH researchers are keen to find ways to combine these approaches with more formal types of care to address some of the barriers to accessing care (208,216,219,222).

As part of scaling-up services, integrating programmes into existing mental healthcare systems had been primarily targeted at LMICs, to improve their mental health infrastructure (206,208,210,223,227). However, given that LMICs experience many challenges in developing an adequate mental healthcare system, further research is needed to address interventions' acceptability, feasibility, and sustainability (204,208,210,223,227). Strengthening community integration in LMICs is advocated by many authors (199,238,239,241,242),as it offers an alternative approach to institutionalised care, improves service provision, and adds variety to the care available (236–239). The concept of task-sharing has been a strategy also primarily aimed at LMICs, particularly with the limitations around specialised mental health professionals (20,212,239).

In addition to issues around the acceptability of interventions, in LMICs, governments usually do not sufficiently invest resources into mental health. There are high rates of stigma and discrimination, and they lack the relevant legislation to influence mental health services (57,211,220,225,239). Global cooperation, through research partnerships, offers one way of investing academic and economic resources to LMICs (204,210,223,239) to improve mental health research and reduce the stigma surrounding mental disorders (200,202,212,241,242). These partnerships face challenges around equity and overcome the power dynamics in these relationships, usually between LMICs and HIC academic institutions (215).

With striving for equality and inclusivity amongst partnerships, many researchers and practitioners are aiming towards the decolonisation of the field of GMH (35,232). Meaning that there is unequivocal acknowledgement of the expansion of Western models of mental health, which are emulating the dynamics of the colonial era, and therefore there is a drive to combat structural systems of power and dominance that are currently used to govern and improve mental health globally. More specifically, as part of the campaign to decolonise GMH, there is a desire for the

indigenisation of GMH practice and research (203,205,223,239). The indigenisation of GMH, refers to the notion that research and practice should be led by local populations and communities, rather than externally-led programmes whereby local stakeholders have little to no ownership (204,210,215,239). In summary, indigenisation calls for an emphasis on more grass roots community-based approaches, which are embedded in local context that can ensure outcomes that are locally relevant (203,205,223,239).

3.5.6 Vote counting

The conceptual framework presented above was synthesised using a random sample of sixty papers identified that met the eligibility criteria. This framework was subsequently validated using a vote counting approach, and the results indicate that most articles employ more than one conceptual understanding of GMH: as research (n=213), as implementation (n=239), as landscape (n=170), and LMICs (n=181). The results from the vote-counting are displayed in table 3.2, and a visual representation of the overlap of conceptualisation is portrayed in the Venn diagram in Figure 3.3. A list of GMH conceptualisations and details of included papers in the review can be found in Appendix 4.

Table 3.2. Vote counting - understandings of global mental health

Themes	***Number (%) of 347 studies identifying the themes***
Globalising mental health research	213 (61.4)
Global mental health is the implementation	239 (68.9)
Improving the mental health landscape	170 (50.0)
Learning from and supporting LMICs	181 (52.2)

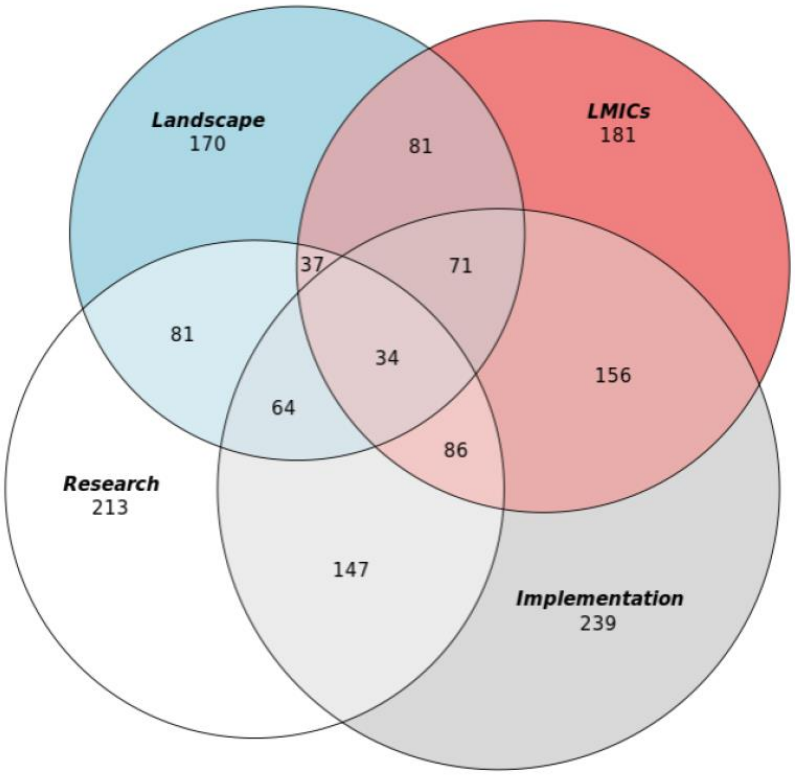

Figure 3.3 Venn diagram displaying all 347 papers and identified conceptualisations

3.6 Discussion

3.6.1 Main findings

This conceptual review aimed to identify the different, closely linked ways GMH is understood in academic literature and synthesise them to produce a conceptual framework of the understandings of GMH. The main finding is that GMH is understood as a diverse field connected to research, implementation, and policy. Each component is urgently articulated towards LMICs while acknowledging how GMH research and implementation can learn directly from LMICs. Almost all actors engage with more than one conceptualisation of the term, as shown in Figure 3.3.

The findings indicate that GMH is predominantly concerned with LMICs, however, many researchers acknowledge the globalised world and how mental health distress transcends boundaries. This finding is communicated through aspects of GMH research that address the needs of marginalised communities residing within HICs, such as migrant communities. This point emphasises that rather than restricting the effort and focusing solely on LMICs, GMH issues transcend borders, which needs to be considered. It is evident that the priority of actors engaged in GMH is to support LMICs, whilst being wary of repeating the conditions of colonialism and viewing global research partnerships as an opportunity for creativity and innovation. There is evidence of learning from LMICs, from a research

and practice perspective, but the overriding view is that LMICs or low resourced regions are the priority.

However, the findings also demonstrate how GMH has evolved from its earlier stance by displaying how it can focus on determinants of health and ways to prevent illness and promote wellness, raising the profile of mental health through community engagement. When observing the *research* conceptualisation of GMH, the findings indicate how GMH is highly interdisciplinary, partnering with disciplines, such as anthropology and even geography, to tap into a wealth of methodologies and paradigms that exist beyond the biomedical framework.

Similarly, with *implementation*, the findings suggest progress in prioritising local knowledge from researchers and practitioners when the GMH agenda had initially acted more imperialistic. This understanding highlights the significance of implementation science in GMH implementation by evaluating and identifying which interventions work in different settings and what we can learn. The findings illustrate the importance of collaboration between HICs and LMICs in GMH and offer a way to direct financial resources and expertise. Especially given how LMICs face many barriers to achieving mental health equity, such as little to no government investment in mental healthcare and infrastructure and offers a way to direct financial resources and expertise. It also represents an avenue to strengthen research capacity, develop and test interventions, and provide an opportunity for mutual learning and reverse innovation processes. The latter processes, mutual learning, and reverse innovation, offer a way to balance the power differences in global health collaboration, given that funding comes from HICs. Partnerships also represent an opportunity for innovation. LMICs are resource-constrained and could offer opportunities for creativity, thus creating new innovative interventions that could be cost-effective in an LMIC context and also function in a high-income setting. Yet, the findings suggest that critical evaluation is needed to ensure equity between HICs and LMICs is achieved, along with mutual learning and capacity building. In general, collaboration is viewed as a vehicle to address the mental health research, implementation, and policy needs within the LMIC context. There is an apparent transformation in terms of the GMH *landscape,* shifting its focus from institutional forms of treatment to more community-based care and, at the same time, providing care that is more locally relevant and works from the bottom upwards.

Finally, the framework offers a novel way to view GMH beyond the local-global dichotomy, albeit the debate runs through the framework. The framework reveals the activities and endeavours associated with local and global spaces and highlights the spectrum of activity between the two. These findings offer an alternative way of viewing GMH to encourage researchers who are newly

engaging with the field to use it as a reference point. Furthermore, these findings illuminate the initiatives that strengthen the bond between local and global practices.

3.6.2 Strengths and limitations

This review is the first to identify the various understandings of GMH, and to see how those understandings are applied in the academic literature and synthesise them into a conceptual framework. To the candidate's knowledge, it is the first study to conceptualise the term GMH to offer a robust framework for those engaging in GMH, regardless of the context, time, or culture. By providing a conceptual framework to underpin GMH that goes beyond a definition, those working in GMH can refer to this framework, or parts of this framework, to support their work. This provides an alternative to referring to the numerous definitions (57,177), which are not necessarily appropriate for all contexts. The framework also presents GMH beyond a local-global dichotomy and supports the current discourse exploring what is occurring in GMH between the debate (37). In addition to reporting activities beyond the binary, the framework also indicates how local and global spaces work together by strengthening their bond, for example, with research partnerships between HICs and LMICs, and how communities, inhabiting the local space of GMH, can be supported.

Regarding the methodological approach, content analysis facilitated a highly iterative process, whereby members of the review team could trace each concept back to the text, which helped develop and shape it when required. A multidisciplinary team incorporated perspectives from various disciplines, albeit from high-income countries. The content analysis allowed for the process of reducing a large sample of extracted text into its fundamental characteristics (196). Furthermore, given that the framework was synthesised using a sample of sixty papers, the remaining 287 papers were used to test its external validity through vote-counting. Despite its strengths, this review has several limitations.

The main limitation is that the systematic search was conducted using a range of databases primarily concerned with research and implementation. This element may have biased the findings towards a research and implementation lens, which is apparent when considering the number of papers exhibiting these conceptualisations (see Figure 3.3).

Lilford *et al.* highlight the importance of consulting the perspectives of a multidisciplinary team to ensure a meticulous approach and diversity in the analysis and interpretation (179). Yet the conceptual framework synthesised in this review only offers one interpretation of the literature. Regarding how the term was conceptualised in this review, alternative conceptualisations could have arisen using content analysis by organising and articulating the components differently (250). A

different framework may have resulted from another multidisciplinary team due to a different lens, set of experiences and skills influencing the analysis and interpretation. For example, the interdisciplinary team who contributed to the analysis and interpretation of this current framework are involved in community and social psychiatry, so although this can be viewed as a benefit, there was an initial critical lens of the global or universal understanding of GMH.

Finally, given that the search term was limited to English, this may have influenced the nature of records retrieved during the systematic search; however, a few papers in different languages were identified, perhaps due to being assigned an English keyword or their abstract being written in English, which is the case for some international journals. Fortunately, these were translated using the assistance of GLOBE team members. This methodological decision may have ignored the plethora of perspectives emerging from different non-English speaking contexts and, therefore, the potential to incorporate interpretations from around the world. The decision to restrict the search to English only was due to the lack of resources required to translate abstracts and papers effectively, limiting the inclusion of different and much needed cultural insight into GMH. Perspectives are further limited by there being a general under-representation of research led by LMIC authors (251). Therefore, even if we included search terms in different languages, there would still be a skew towards a western perspective due to the structural inequalities that exist in global health and GMH research.

3.6.3 Interpretation and comparisons with the existing literature

Although this review aimed to conceptualise GMH, other disciplines, such as global health, have also been the subject of lacking clarity in its meaning. Global health is a relatively new term, which underpins various activities, such as research, practice and policy (252–254). The term, comparably to GMH, lacks a shared understanding, raising the contention of how such a necessary discipline can support such research activities without an appropriate framework (167,252,255). Like with GMH, ambiguity around the meaning of global health can shroud the differences in the drives and interests of practitioners, researchers, policymakers and funding bodies working in the field (167).

There are many existing definitions of global health (252,253), Koplan *et al.* offer a clear one (167). Failing to demarcate a suitable global health framework means that those engaged in global health research and practice do not know how to develop within the field. As highlighted in the rationale, a definition cannot always withstand the test of time, context, and culture, making a conceptual framework necessary. Koplan's definition highlights the interdisciplinary and multidisciplinary global health, the need for global cooperation and how the scope is not restricted to LMICs (167). It acknowledges how issues that influence health can transcend country boundaries (167). The current

findings complement these characteristics of global health, particularly with GMH admitting that although there is a heavy focus on LMICs, researchers have emphasised the need to look beyond LMICs and adequately target efforts towards resource-constrained settings that occur within HICs. Alternative global health definitions recognise that a global approach is needed to address health issues that transcend boundaries (256–258). This aspect is unique to global health and GMH and differs from the precursor discipline, international health, whose primary focus was health issues in LMICs (167). Although global health and GMH are distinct from international health, both have built on and benefited from the research interests of the precursor discipline (256), which possibly explains why there remains a strong focus on LMICs.

Furthermore, there are numerous definitions of global health (256,257), providing a shared appreciation for the term, up to a point whereby further conceptualisation is needed to achieve an inclusive understanding that will resonate with different groups of individuals, contexts and time. The findings of this review indicate the multiplicity of functions that GMH is associated with, which compares with global health also exhibiting multiple functions, each one serving a different purpose, such as research, practice and promotion (256).

Before this framework, GMH was characterised by a local-global debate, and although the debate has helped drive the field, it also prevents further progression (37). The extensive debate representing GMH has meant that those entering the field are compelled to position themselves on either side of the argument, reinforcing the divide. This prevents ideas and perspectives from emerging (37), however, this review offers an alternative way to view GMH beyond the local-global divide that has characterised it. The debate is presented as a feature of each conceptualisation rather than defining GMH. Therefore, this review allows scope for ideas that do not necessarily relate to either local or global aspects but could indicate where local or global aspects of GMH work together in the context of research, implementation, or policy.

The findings emphasise how global processes continue to connect local traditions and cultures. ‘Local-global connectedness’ refers to individuals associated with local or global engagement in the same space (259). Therefore, in the context of GMH, the local-global space promotes the flow of knowledge between the two communities through the delivery of action via service, research or advocacy (260). Regarding local-global connectedness, the framework emphasises the role of communities in driving some of the core aims of GMH (34). Communities appear as a critical component throughout the framework, which highlights the local-global connectedness within the GMH space, particularly in research and practice. In the past, the notion of connectedness was not

necessarily explicitly discussed in the debate surrounding GMH. Still, evidently, there is a connection between powerful global forces and local spheres, representing populations and communities.

Another way that the findings emphasise the local-global connectedness is through global cooperation. Koplan *et al.* recognise that for global health to progress, development, research and practice necessitates global cooperation (167). The conceptual framework emphasises collaborative research partnerships between LMIC and HIC institutions to address the health inequalities across and within countries. They are addressing health inequalities by generating new evidence, strengthening the research capacity in LMICs, improving the quality and outcomes of health care in LMICs, and providing an opportunity for mutual learning and reverse innovation. The conceptualisation of GMH highlights how solutions to issues existing on a global scale could be addressed with local solutions, further demonstrating how global research partnerships strengthen the link of local-global connectedness. Mutual learning offers one way to connect local and global spaces by enabling the flow of knowledge from the local context to help inform and influence global processes.

The global effort against the HIV/AIDS epidemic illustrates how the lack of cooperation between local and global systems negatively impacted the response to address the global issue, notably how efforts failed to involve local communities (261). The GMH movement has based many of its tactics on gaining global attention and traction on the advocacy strategies adopted by the HIV/AIDS movement (168) It has successfully raised its profile within the global arena (168), however, due to using these strategies, mental health has been viewed in the same way as infectious diseases and therefore treated using biomedical frameworks, which ignore the role of social determinants and local context.

Similarly, to GMH, global health was subject to criticism, particularly around this notion of medical imperialism and the reliance on biomedical frameworks. Rowson *et al.* argue that the meaning of global health will change depending on the researchers or practitioners working within it (254), which is apparent in the different understandings of GMH. The understanding of global health has shifted over time, evolving its agenda from a biomedical focus towards encapsulating a broader disciplinary approach, such as linking with anthropology to help form a more holistic view of health on a global scale (254). This notion of evolving agenda is also apparent in GMH. Recent efforts in the field of GMH reflect both a change in agenda and epistemological underpinnings (169). When GMH first emerged into the mainstream, it became shrouded by a debate between local and global views on how mental health issues should be addressed (169). As a result, the debate propelled the development of GMH. Those individuals who previously criticised the global nature of the GMH

approach are now working to support the local side of the discussion by creating programmes focusing on socio-cultural approaches (169). From an implementation perspective, there is evidence of this shift by the occurrence of more culturally receptive interventions and delivery (262–264).

Many of these approaches function beyond the biomedical framework, formally acknowledged in the Lancet Commission 2018, stating that mental health issues 'exist along a continuum' (32). This acknowledgement indicates a shift from the earlier GMH response, categorising mental health into discrete categories and related treatments. While GMH today is increasingly rejecting the discrete categorisation of mental health issues, and embracing the role of socio-cultural determinants (265).

The understanding of global health has shifted over time, evolving its agenda from a biomedical focus towards encapsulating a broader interdisciplinary approach, such as linking with anthropology to help form a more holistic view of health on a global scale (254). This changing agenda is notable in the current findings. GMH research seeks to accommodate novel and innovative ways to address mental health issues and inequities and work towards a more nuanced landscape (28).

The current findings reveal how opponents of GMH perceive it as too heavily focused on expanding Western models of mental health into low resource areas, and that this approach is too entrenched in colonial attitudes and relationships. In the context of an evolving agenda, some of those engaged in the field of GMH are fostering a movement of decolonisation, through moving beyond the propagation of Western models of mental health, towards more locally embedded approaches. Mills argues the imperative need for exploring ways to distance from Western concepts of psychology and psychiatry (266). Mills emphasises how psychiatry has been used to control and keep track, by translating the irrationality of mental health experiences into objective and quantifiable illnesses (266). There is emphasis on how the MGMH is contributing towards colonisation, through the expansion of pharmaceutical markets in LMICs to target these illnesses. In response to this, those engaged in global health and GMH, in the last few years have been working to decolonise these disciplines. Decolonising global health and GMH is currently underway and is referred to as a movement of disassembling structures that sustain power (267). This has triggered discussions around whether the global health (and GMH) can even survive this decolonisation process. For true decolonisation to ensue, the spaces within global health practice must be stripped from all forms of higher power, which not only refers to White supremacy but also patriarchal power structures (268). Although there are calls to transfer the power to local ownership, there are concerns as to how this will occur in practical terms (269). Much of the global health research infrastructure (including GMH) resides in HICs, while the bulk of research and practice, particularly the delivery of programmes and

interventions, occurs in LMICs (268). Abimbola & Pai argue that the only way global health (and GMH) can survive the decolonisation, is as long as those engaging within these disciplines fully dedicate to the transformation (268). The discussion around decolonisation of global health (and GMH), has involved researchers from HICs, and LMICs, where the latter have benefited from and have developed careers within the current global health structure. Global health is still complete with colonial ideologies and practices, and therefore to fully be decolonised complete system reform is required to focus on the current assumptions of global health and GMH (1). Kwete et al. developed a framework to demonstrate how the decolonisation should target three levels, practices, institutional/organisational and policy level to ensure a vital paradigm shift (Figure 3.4).

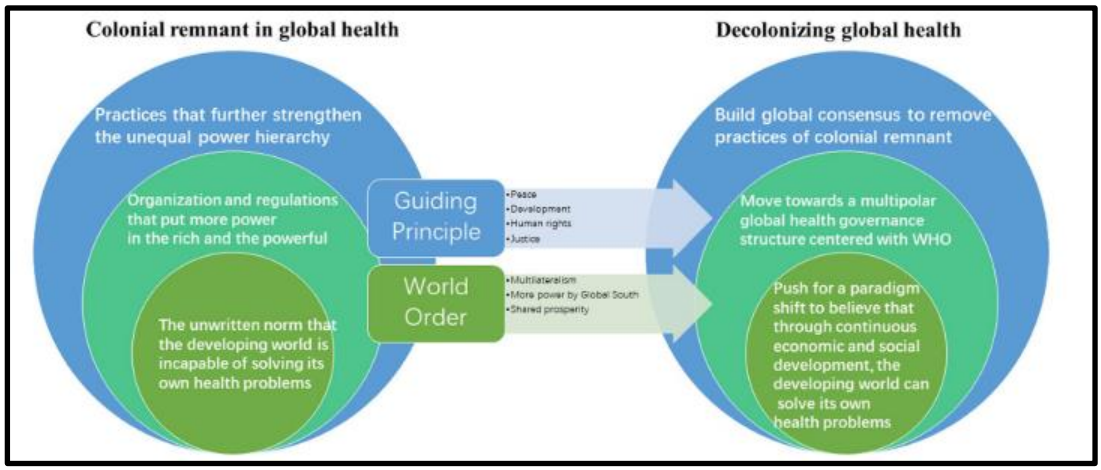

Figure 3.4 Framework of the decolonisation of global health (1)

It is clear that the decolonisation and indigenisation process in global health and GMH will be ongoing, and if true radical transformation is to occur, then global health (and GMH) may need to be given a new name (268).

3.6.4 Implications for research and practice

This conceptual review presents a framework of how GMH is understood in academic literature. The framework demonstrates the continuum of understandings of GMH and the diversity in its meanings. Researchers going forward could use this framework to position themselves within the literature rather than gravitating towards the local-global debate that has characterised GMH until now. Researchers and practitioners, or more generally those engaged in GMH, should be aware of the different understandings of GMH. The framework offers a simple summary. Understanding how diverse GMH is, can help encourage those entering the field to expand and develop innovative ways to address mental health inequity and treatment gaps.

The main implication of this review is that it did not try to construct a new definition for GMH; instead, it set out to create a simple framework, offering a detailed summary of how the term is

currently conceptualised in academic literature. For those embarking on careers in GMH, the framework provides a novel overview of GMH, without imposing a side of the debate, but rather displaying a spectrum of activities under the umbrella of GMH. Although the review did not attempt to create a new definition for GMH, it has provided a simple framework, which offers a detailed background of what is currently being associated with the term. Firstly, the different conceptualisations presented in this review may remind actors engaging with GMH of its wide usage within the realm of academia and may also present authors with a helpful classification scheme to refer to. In addition to the term's varied usage, the framework demonstrates the diversity that exists within the field, such as through its capacity to adopt epistemological pluralism and the potential for the field to become more integrative in how it addresses mental health problems globally. For example, the potential to develop existing formal care frameworks to accommodate alternative healing forms, which are more prevalent in LMICs (208,216). Alongside epistemological diversity, the framework emphasises the interdisciplinary nature of GMH and the capacity for potential linkage with other disciplines such as anthropology and geography (219,270). It is helpful that individuals in the GMH field better acknowledge where their efforts contribute along the continuum of engagement; therefore referencing the proposed framework may help encourage this.

This conceptual review has synthesised and identified four overlapping ways GMH is understood in the literature. The simple framework outlines the key characteristics of the GMH landscape, which may serve as a useful guide for monitoring and evaluation. The findings emphasise the broad usage of the term within academic literature and the diversity existing within the field of GMH, which is not confined to the limits of the local-global debate. Referencing a framework like this may help those engaging with the area delineate where their work fits within the scope of GMH.

3.6.5 Implications for this thesis

The study addressed Research Question 1 of the thesis 'How is the term 'global mental health' understood in academic literature?'. The conceptualisation of GMH has improved the clarity of the term by defining its key characteristics. The framework highlights two implications for this thesis. First is the need for critical evaluation of GMH research collaboration between HICs and LMICs, to help identify factors influencing research programmes' success and effectiveness, particularly in promoting equity, mutual learning and addressing research capacity strengthening in LMICs. Second, the framework highlights the need to test for the feasibility and acceptability of interventions in LMICs, mainly when interventions are developed in HICs.

Chapters 4 and 5 will explore in-depth these characteristics by empirically evaluating the GLOBE research programme. First, by taking a global research collaboration between HICs and LMICs and adopting a critical evaluative approach exploring aspects such as strengthening research capacity,

mutual learning, equity, and generating novel, innovative knowledge (Chapter 4). Second, the thesis will adopt a mixed-method approach to evaluating a psychosocial intervention delivered in three LMICs, Bosnia-Herzegovina, Colombia, and Uganda (Chapter 5). Finally, this thesis will explore the commonalities and differences in a multi-family group intervention's experiences, outcomes, feasibility, and fidelity (Chapter 5).

Chapter 4: Expectations and experiences from a global mental health collaboration: a prospective longitudinal qualitative study

4.1 Chapter overview

The previous chapter synthesised and developed a conceptual framework for understanding GMH. The framework highlighted two implications. First is the need for a critical evaluation of partnerships between HICs and LMICs to focus on the non-specific aspects of delivering programmes (224), and explore how the dynamics of collaboration and other contextual factors contribute to effective GMH research programmes (57,215,224–226). Second, evaluation is needed to address the issues of achieving equity and overcoming power dynamics in these research partnerships (215).

Global collaboration has been used as a strategy to overcome these barriers and advance the core objectives of GMH, with the hope of strengthening research capacity in LMICs, to tackle health inequalities across and within countries and provide the opportunity for mutual learning and reverse innovation. Yet the review also highlighted that there is a need for a more critical evaluation of GMH collaboration between LMICs and HIC institutions, mainly focusing on non-specific partnership factors (224). For example, further research is needed to explore leadership models, capacity strengthening, collaboration, and contextual factors that influence the ability to form effective research partnerships, and ensuring these partnerships are equitable. Therefore, this current chapter aims to compare how the experiences of members of the GLOBE research programme differed from their initial expectations.

This chapter represents the first empirical component of the exploratory case study evaluating the GLOBE research programme (refer to Figure 2.2 reported in Section 2.2.1).This chapter employs a prospective approach to comprehensively explore a GMH collaborative research programme, conducting semi-structured interviews during the programme's implementation from its inception (n=18) to its end (n=30). Interviews conducted first captured the expectations, and these were cross-examined with the experiences captured later. These findings are explored with other examples of collaborations and first-hand commentaries on LMIC-HIC collaborations in global health. Finally, the implications of these findings are discussed concerning practice, research, and this thesis's wider scope. This study is reported to adhere to the guidelines defined by the Consolidated Criteria for Reporting Qualitative Research (COREQ) (Appendix 5) (271). A manuscript of the findings of this chapter is currently under review by the BMJ Open journal.

4.2 Rationale

Global health research collaborations between HICs and LMICs are a common strategy and can help to address several aims. These can involve tackling health inequalities across and within countries,

improving healthcare quality and outcomes in LMICs, generating new appropriate evidence, strengthening research capacity in LMICs, and facilitating mutual learning (105,272–274).

Strengthening research capacity improves the ability of institutions within LMICs to become competitive in the global research community (56). Investing in local researchers by training and developing capacity at the individual and institutional level can help establish and stimulate local research and its ownership; it can also address local communities' needs and contribute indigenous knowledge to the global scientific community (207). Local researchers are better situated to address local problems because they understand the culture of the setting (275). Furthermore, research partnerships can foster mutual learning and offer new perspectives which is beneficial to both partners (276). Research collaboration can provide opportunities for reverse innovation, where ideas conceived in LMICs are embraced by HICs (277).

Although there are many advantages to collaboration, there are also several challenges. In the context of global health research, partnerships depend significantly on the partners' existing research capacity and autonomy (272). Research capacity is disproportionately concentrated in HICs. An imbalance that originates from colonial histories that have persisted as economic inequalities, loss of expertise through brain drain, and dependence on HICs (278).

This situation can exacerbate existing power imbalances in partnerships, often resulting from funding, expertise and knowledge transfer (278–280). Global health and GMH research are criticised for reprising these colonial dynamics through scientific endeavour (281). Because of these challenges, the ability to address mental health needs can be severely constrained, something that hampers any progress in developing a mental health system that is sustainable and adaptable to issues at the local, national and global levels (282). Other concerns stem from the equity of partnerships, the relegation of roles (e.g. not including LMIC researchers as authors) and the failure to share results with the local community (283). Only 35% of authors working in LMICs are researchers from those countries, even though 92% of studies involve interventions being delivered locally (251).

Generally, the understanding and perception of effective partnerships is inconsistent and stimulates critical discussion (284). Previous research has identified crucial areas for successful, sustainable, and equitable partnerships (105,272–274). These include funding arrangements, procedures for selecting authors of publications, the ownership of research, the contributions of different research members to the research and implementation process and developing sustainable research capacity in LMICs.

This current study aims to address gaps in the literature. Few studies explore participants' perspectives of HICs and LMICs, at different career levels and working in various roles (105). No previous research has examined the initial expectations, assumptions, and experiences of members of a specific global mental health research collaboration whilst considering the viewpoints of a diverse set of participants in both HICs and LMICs (105,285). Many evaluations of partnerships between HICs and LMICs are retrospective in their approach, therefore not adopting a temporal perspective (105). For example, exploration of participants' experiences often occur long after completing a project (138) and therefore is at risk of recall bias. Prospective longitudinal research is needed to study changes in partnership dynamics to advance the understanding of collaborations and their ability to achieve equitable relationships and strengthen research capacity (105). Furthermore, evaluating members delivering a programme in situ will enable the identification of specific factors that influence their success or failure (105).

Therefore, for this study it was necessary to adopt a prospective longitudinal evaluation to explore how views changed over time and how experiences compared with initial expectations. This approach may help identify expectations from the outset of collaboration and monitor the expectations during the research process to ensure all anticipations and concerns are adequately addressed to avoid any potential frustrations. Such evaluations should consider the views of different types of participants in the research, i.e., senior researchers, managers, and researchers who implement the study designs.

4.3 Aims

This study represents the first empirical component of the exploratory case study, using the GLOBE research programme to explore the participants' expectations of a GMH research programme collaboration and how they compared with their actual experiences. The study focused on how participating researchers' views changed over time and how their initial expectations differ from their actual experiences. The research aimed to address the research question 2 outlined in the introduction chapter.

***Research Question 2*:** What are the initial expectations of researchers participating in a GMH research programme? What are their experiences? Which expectations were met, and which were not?

4.4 Methods

4.4.1 Study design

This study adopted a prospective longitudinal approach to evaluate the expectations and experiences of the GLOBE research collaboration members. The current chapter focused on how the

later experiences with the initial expectations, which is the main reason they were presented as one chapter instead of individual chapters. This way, approaching the study enabled a more direct comparison of the interviews collected at different time points.

To capture the initial expectations and experiences of the GLOBE research members, in-depth semi-structured interviews were deemed most appropriate. This methodological approach enabled focused discussion of specific areas outlined in the topic guide whilst allowing participants to share their views openly (286). Semi-structured interviews are uniquely placed to capture the independent views of an individual and as part of a formative evaluation of a programme (286). The study referred to existing frameworks on collaborative governance to help inform topic guide development, analysis and interpretation of the findings (287,288). This study adhered to the COREQ to guarantee methodological transparency and rigour (Appendix 5) (271). The study team included two independent researchers, Michael McGrath (MM), Francois van Loggerenberg (FvL), and the candidates' supervisors, Victoria Jane Bird (VB) and Stefan Priebe (SP), who also contributed to the analysis and drafting of the manuscript. The potential influences each researcher may have imposed on the study are presented in Table 4.1.

Table 4.1 Description of study team and influence on research

	Candidate	**MM**	**FvL**	**VB**	**SP**
Professional role and credentials	Health services researcher	Researcher	Researcher	Researcher	Psychiatrist, researcher
Role in the research	Interviewer, lead analyst	Supported data analysis	Supported data analysis	PhD supervisor	PhD supervisor
Potential influence on the analysis	Familiar with research participants Familiarity with international collaboration literature	Familiarity with global health research	Familiarity with global health research	Familiarity with global health research	Familiarity with global health research

4.4.1.1 Prospective longitudinal study design

A prospective longitudinal study design follows individuals over an extended period. Data was captured, via semi-structured interviews, with the same cohort at two different time points. The first time point was collected to establish participants' expectations, and the second was to document their later experiences. This approach was deemed the most appropriate design given that the same cohort of participants was being followed over time (289). The purpose was to capture how views of a GMH research programme changed over time (289). A key advantage of adopting a prospective longitudinal approach is its capacity to identify patterns over time. The study design observes the

impact of certain events on the participants involved. The current study helped to establish expectations around capacity building, publications, adaptation of interventions, contributing knowledge, and mutual learning to demonstrate how these evolved throughout the programme (289). Participants who leave a cohort prematurely or join influence the conclusions drawn from the data, posing a challenge (289). When the data was collected to capture the members' expectations, not all participating researchers had been recruited to join GLOBE, this sample primarily included the senior investigators from each country, who were also the co-applicants. The junior LMIC researchers were only interviewed to capture their experiences, since they were recruited to GLOBE later. Furthermore, given that data is collected at usually pre-determined time points, at the inception and nearing the end of the programme, the data can only speculate on the events that occurred during the interim and rely on the participant's recall (289).

A repeated cross-sectional design was also considered; however, this approach assumes that study participants are significantly or entirely different at each data collection time point (289), which was not the case for this study. Although new participants were interviewed later than initially, the cohort interviewed represented a sample affiliated with the same GMH research programme. The sample, therefore, corresponded to the same overall experience.

4.4.1.2 Semi-structured interviews

As mentioned, this study collected qualitative data via one-to-one semi-structured interviews. Kvale describes qualitative interviewing as having the intention to capture descriptive accounts of participants, or interviewees, concerning the interpretation of a particular phenomenon (290). This thesis aims to evaluate how a GMH research programme can fulfil its aims by exploring in-depth the views, perceptions, and experiences of members of a GMH research programme.

Focus groups were considered in the preparation phase of this current study. Focus groups refer to interviews with multiple participants to discuss a specific topic. The critical element of focus groups is that they rely on the homogeneity of participants to capture views around a phenomenon of interest (291). The point was, however, to establish individual perspectives; therefore, semi-structured interviews were deemed appropriate as they involved one respondent at a given time. The approach utilises open and closed-ended questions, as well as prompts to establish a deeper understanding. Including open-ended questions enables more flexibility in the interview by incorporating additional prompts to query themes in greater detail (286). The interviews required a certain degree of probing around specific sensitive topics, such as equity and having ownership of the research; therefore, semi-structured interviews afforded the privacy and space to talk candidly about these topics, rather than if the respondents were in the presence of colleagues in focus groups (286). One challenge of semi-structured interviews requires the interviewer to be sensitive (286).

This point resonated with the candidate, as the intention of the discussion was to engage with potentially sensitive topics; as mentioned, a certain degree of composure and self-confidence was needed to navigate this (286).

Interviews can occur either face-to-face, via telephone or virtually, through tools such as Zoom. Due to each research group's vast geographical reach as part of GLOBE and the COVID-19 pandemic. Face-to-face interviews can have the advantages over virtual or telephone interviews. For example. being present alongside the respondent makes clarifying responses easier or requesting further clarity regarding specific responses (292). Yet research has demonstrated that face-to-face interviews are only slightly better than interviews conducted virtually (293).

4.4.1.3 Programme and setting

The GLOBE research programme is introduced in-depth in Section 1.3. GLOBE aimed to cultivate relationships between experts in HICs and LMICs and work with local stakeholders to test and develop resource-oriented interventions for individuals with SMI in Bosnia-Herzegovina, Colombia, and Uganda (59). Testing the interventions offered an opportunity to explore and demonstrate how these community-based interventions could deliver low-cost, sustainable forms of care for those experiencing SMI in LMICs and improve care. Before implementation, local stakeholders designed and adapted the interventions to ensure cultural appropriateness. Alongside testing and developing these resource-oriented interventions, the research sought to build and strengthen research capacity in each country. Mutual learning was encouraged throughout the programme.

4.4.3 Sample

This study aimed to explore the expectations and experiences of a GMH research collaborative programme; therefore, purposive sampling was used. Two semi-structured, one-to-one interviews were conducted with group members, the first one between June and December 2017 and the second one between September 2020 and February 2021. The first round occurred before the current candidate had started the doctoral programme. It was assumed that purposive sampling was conducted, given that the participants who were interviewed included all GLOBE members at that point in time.

4.4.3.1 Purposive sampling

Purposive sampling is a technique in qualitative research where participants are chosen deliberately due to their characteristics (294). The process involves identifying and choosing participants or groups of participants that possess a certain knowledge and experience concerning a phenomenon of interest (107). In this case, the phenomenon was to explore how experiences can fulfil the initial expectations of those participating in a GMH research programme. Besides learning and understanding a particular phenomenon, the technique also identifies those who can articulate their

experiences in a way that lends itself to the aim (295). The aim is to establish rich experiences in a GMH research programme. The participants were selected based on their affiliation to the GLOBE research programme, making purposive sampling an appropriate method of choice. Given that this study is utilising GLOBE as an exploratory case study, focusing on members at differing career levels and assuming different roles with this collaboration, the type of purposive sampling emphasised a variation in terms of perspectives within the programme. Therefore, this sampling approach's strategy was to ensure maximum variation (296). All group members were invited to participate in this study, including the research assistants, statisticians, and programme managers, to ensure a broad spectrum of perspectives.

Qualitative methods are used to gain a deeper understanding of a specific research phenomenon (107), of which data saturation is a central tenet (115). Therefore, an advantage of using purposive sampling is that it allows the researcher to judge when data saturation has been reached. In this study, data saturation was determined by the candidate and the two secondary reviewers (MM and FvL). Another advantage is that, mainly, in this case, the heterogenous approach accommodated the selection of diverse participants, providing their insight into the topic under investigation. Despite the benefits, there are drawbacks. The main one is that given that the method involves selecting participants for research based on judgment, there is less capacity for the sample to generalise and draw conclusions; in other words, there is limited external validity (297).

4.4.4 Data collection

The initial interviews capturing the participating researchers' expectations were conducted by a previous researcher, which took place before I joined the USCP, in February 2019. This collection (n=18) occurred at the group's inception (i.e., before delivering the programme), during the initial workshops with the partners to develop the GLOBE programme. These mainly the senior investigators from each country. As these took place before COVID-19 pandemic, between June and December 2017, the researcher visited each country and conducted face-to-face interviews with the participants. The current candidate collected the interviews capturing experiences at the end of the programme during data analysis between October 2020 and February 2021. These interviews were conducted online via Zoom. Five participates who were approached to capture experiences did not respond to the invitation, and it was assumed a lack of availability or willingness was the reason for this.

The candidate was familiar with the participants, having met them at least once during the annual teaching week in June 2019. Most interviews were conducted in English, aside from two interviews which required the presence of a translator. Repeat interviews were not conducted. (Participant Information Sheet and Consent Forms for the interviews can be found in Appendix 6 and Appendix 7,

respectively). A topic guide was used to help focus on exploring individual and group expectations, the concerns and challenges of research collaborations, and the experiences surrounding multi-country partnerships (Topic Guides for initial and later interviews can be found in Appendix 8). It was modified slightly depending on the individual's position in the group, for example whether they were an early- or late-career researcher. The interviews lasted on average 50 minutes and ranged between 30 and 70 minutes. No remuneration was given for participants' time. The interviews included only the interviewer and interviewee, except for two occasions when a translator was present. All the interviews were recorded on two devices and transcribed by Temi, an external translator service. The candidate checked all the transcripts for clarity and preparation for the analysis before circulating a sample to members of the review team.

4.4.4.1 Topic Guide Development

This section will describe the topic guide development for the later interviews to capture experiences. I was granted access to the audio files of the initial interviews and transcribed and analysed them. The first stage was familiarisation of the interview data from the initial interviews and development of a broad thematic framework relating to the participating researchers' expectations. This framework was used to develop the topic guide used for the interviews to capture experiences. For example, themes concerning communication and interaction identified from the initial interviews were followed up in the later interviews, to allow for a comparison of experiences with expectations. The second stage was integrating of findings from the conceptual review (Chapter 3), particularly surrounding the issues of equity and power dynamics within partnerships between researchers in HICs and LMICs (57,215,224–226). The semi-structured approach enabled flexibility in how the questions were structured, such as the ordering of questioning would differ during the interviews. Additional questions and prompts were included if they were relevant to the topic. Finally, given that the interviewees were diverse, there was slight variation in how the interviews conducted, to reflect individual roles.

4.4.4.2 Ethical considerations

The Ethics Committee of Queen Mary, University of London, approved this study (QMREC2047a). Each participant was given an information sheet outlining the purpose of the study and signed an informed consent sheet before the interview.

4.4.5 Data analysis

After proofreading the transcripts, they were imported into NVivo 12 and analysed using framework analysis (298) and is described in-depth in the section below. To summarise, the process involved both inductive and deductive approaches. Initial interviews were listened to and re-listened several times to ensure familiarity and identify the key themes. Codes were developed and refined until no

new aspects were identified and organised into a thematic framework containing the expectations of the members of GLOBE. The same framework helped inform the topic guide for the later interviews. When I began collecting data on the experiences, they were transcribed, familiarised, and analysed accordingly. I was able to assign codes to these later interviews independently. Once all interviews were transcribed and cleaned a 40% sample of all transcripts- including initial and later interviews- were allocated to secondary reviewers (FL, MM). They conducted independent coding and theme development to ensure the trustworthiness of the findings. The findings were regularly discussed by the authors, who were all involved in global health research (see Table 4.1). They grew up on different continents, had different clinical and non-clinical backgrounds, and were at various stages of their careers. The findings were also presented to the broader multi-disciplinary research group of the USCP.

4.4.5.1 Transcription

All interviews, including those conducted in the first round, were transcribed using the automated online service Temi which utilises machine learning (299). Temi is an online platform where you can upload audio files with automatic transcription. Since the audio files did not contain patient information, it efficiently transcribed hour-long audio files in under five minutes. When files are uploaded to Temi, they are securely stored and transmitted using TLS 1.2 encryption, the highest level of security available. Files are transcribed by machines and are never seen by a human. Other Temi users cannot view any files uploaded unless they are shared via a link exported as .txt files. The user can delete all files, audio and .txt, once they have all been exported from the online platform. Each recording varied in quality due to regional accents or the use of a translator.

Consequently, once the.txt files were exported from Temi, the remaining transcribing would continue, going through line by line whilst playing back the original recording. This process of transcribing avoided many unnecessary hours transcribing manually from scratch. Still, due to its imperfection (99% accuracy based on high-quality recordings), a complete body of text could be examined line by line to ensure accuracy and clarity. This final step in the transcription process allowed for first-hand familiarity with the data and represented the first step in the qualitative analysis. Transcripts were not returned to the participants for correction.

4.4.5.2 Framework analysis

Framework analysis represents one qualitative approach and is frequently used in health research (298). The main interest of framework analysis is to depict what has occurred in a specific setting. The analytical approach is flexible in that it enables the researcher to begin analysing during the data collection stage or once all data is collected. The steps of framework analysis involve familiarisation, identifying a theme, indexing, charting, and finally interpreting and mapping (300).

Familiarisation is portrayed by the researcher becoming familiar with the interview transcripts or even the original audio files and identifying common themes. This process was conducted by the candidate and the secondary reviewers (FvL & MM). I would often revert to the source, the audio file, to re-listen and understand the tone during this stage.

Identifying a theme or framework followed the familiarisation stage. In this study, the candidate achieved this initially when analysing the initial interviews. This process involved coding and was primarily conducted in NVivo, whereby many codes were assigned to the transcripts, line by line. Identifying themes, or even an entire framework, was the key output of this stage and condensed the transcripts into more 'manageable chunks for subsequent retrieval and exploration' (p.116) (191). Participants were not involved in the coding process.

Indexing involved reviewing all codes assigned and grouping them based on their similarities. Once all codes were assigned, it was possible to condense and collapse similar codes into clusters or themes, which began the theme development process.

The thematic framework which was developed previous was applied to the transcripts. Once the themes were identified and indexed, charting the qualitative codes by theme allowed the candidate to summarise the information from each transcript. The thematic framework derived from the initial interviews was applied to the later interviews. This approach allowed the candidate to identify, by transcript, what expectations had been fulfilled or not.

The final step of interpreting was primarily descriptive and involved exploring the themes to further group and categorise the information into higher-order categories. Research participants were organised into typologies centred around their commonalities. All researchers determined data saturation during the final stages of the analysis (301,302).

The advantage of adopting a framework approach is that it offers a systematic and flexible way to analyse qualitative data (298). Thematic analysis was considered an alternative approach (197). Thematic analysis is a qualitative method used to analyse texts, such as interview transcripts (197). In comparison, framework analysis applies an organised structure of inductively- or deductively developed themes using a cross-sectional approach (298). The current study used the framework derived from the initial interviews to analyse the later interviews conducted later. The framework approach made it more accessible to view the range of data across participants and themes, ensuring the analysis is representative of the entire dataset (303).

4.4.5.3 Reflexivity

Reflexivity refers to recognising your role in the research being conducted. It is about being critical towards yourself as a researcher and acknowledging this within the research. This idea of reflexivity is especially crucial in qualitative research since it is contextual and usually occurs between two or more people within a given space and time.

This thesis used the GLOBE research programme to evaluate a GMH research programme as an exploratory case study. This chapter focused on the collaboration component of the case study and utilised semi-structured interviews of the participating researchers in three different LMICs. As the lead researcher on capturing the expectations of a GMH research programme and how they differed from experiences, I was compelled to reflect on my role in this research critically. I am a British Iranian female who has lived only in the United Kingdom. I felt obliged to consider the privileged position I assumed during the research, especially as the interviewer. In addition to privilege, I had to consider the power dynamics that would be present when interviewing the participants of GLOBE, particularly the LMIC partners. The power dynamic between the other researchers, some of whom I interviewed for this study, and me would be further compounded by my implicit role as a GLOBE member, working on the PhD stream of the grant. Despite not being officially a part of the UK research group, I was closely affiliated with them. When I first started my PhD, to familiarise myself with the GLOBE study initially, I attended weekly meetings between the UK group and the LMIC researchers, which would involve an update on the progress of the project. On a couple of occasions, I recorded the minutes of the meeting. There were few occasions where I asked questions directed at the LMIC researchers. In addition to attending the meetings, the USCP hosted the 2019 teaching week (see Figure 4.1), which took place in June and involved a week of study updates, learning and training. During this week, I spent time with some of the team members from each country and began building a rapport with them.

These activities prompted me to consider my responsibility and actions in this study. I was always thinking about my position within GLOBE, even as an informal member, and my role's implications for this thesis (304). It was important to be aware of the shared and different experiences between the participants and myself and not simply ignore them. This was articulated through the reporting of the results.

To offset the differences in power dynamic as much as one can in a research situation like this, the interviews themselves created a safe space for participants to share their experiences. The pandemic meant that all the interviews were all conducted over Zoom. An advantage of this was that they did not impose so much on the participant’s schedule and that it was more convenient, accessible, and time-efficient (305).

Transparency is vital in qualitative research and a reflexive perspective (304). Following the COREQ guideline provided a transparent framework to ensure that the method fulfilled specific criteria concerning reflexivity, study design, and analysis and interpretation (271). This framework shaped the methodological choices to facilitate the research and recognise and acknowledge my role in this research (304).

Training and advancing my understanding of qualitative research was another strategy I pursued. Although I did not receive training in one-to-one semi-structured interviews, I read literature underpinning semi-structured interviews. I did not pursue training in conducting interviews because I had conducted interviews in my previous role as a research assistant. I believed that I needed more assistance with interpreting and reporting qualitative findings, which is where the bulk of my training concentrated on. The training I underwent included:

- Interpreting and writing up your qualitative findings- SRA Online Course attended on 22nd January 2021
- Qualitative data analysis – LISS-DTP attended between 5th February to 26th February

Figure 4.1 The GLOBE group members at the end of the 2019 teaching week

4.5 Results

4.5.1 Sample characteristics

In total, thirty-eight participants were interviewed. Eighteen interviews were conducted to capture the expectations of the GLOBE members and thirty to capture their experiences. Eleven participants were interviewed regarding both expectations and experiences. A further three participants were interviewed despite having left the programme. Figure 4.2 indicates the mix of participants, ranging from researchers and coordinators to more senior investigators.

Appendix 9 presents a table of information concerning the participants. Including their unique ID, their position in the GLOBE, the country research group they are affiliated with, and which interviews they partook in. The sample primarily comprised senior investigators in the initial interviews, while the experiences interviews featured a more diverse set of members, including the junior researchers.

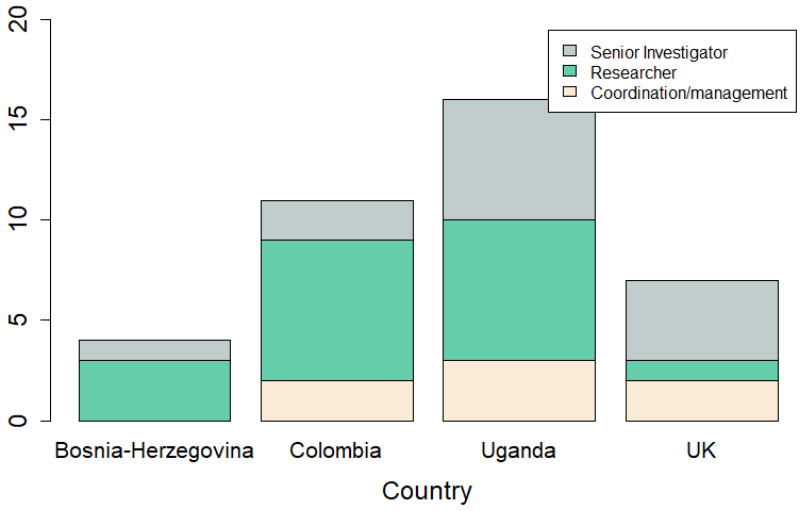

Figure 4.2 GLOBE participants by country

4.5.2 Overall framework

The overall framework, presenting the main expectations derived from the interviews, is shown in Table 4.2. The expectations derived from the first round of interviews were organised into four overarching themes: (i) Ensuring group coherence and commitment; (ii) Equity in the partnership; (iii) Learning and development; and (iv) Sustainability and impact.

To illustrate the results, instructive quotes are presented for each theme. An interview ID identifies participants and whether the extract originates from the expectation or experience interviews.

Table 4.2 Themes and subthemes relating to the key expectations of global collaboration

Themes	Ensuring group coherence and commitment	Equity in the partnership	Learning and development	Sustainability and impact
Subthemes	Clear, regular, transparent communication	Ownership of the research	Developing research expertise	Publications and dissemination
	Relationships based on mutual respect	Contributing to the intervention design	Opportunity for innovation	New research opportunities and extended networks
	Language as a barrier	Coordination and power dynamics	Mutual learning	Investing in local leadership
	Commitment to the programme		Building capacity	

Table 4.3 portrays to what extent did experiences meet these expectations and were categorised accordingly: (i) expectations met; (ii) expectations exceeded; (iii) expectations partially met, and (iv) expectations not met. The results section is structured using this categorisation and quotes to illustrate each category are presented. Additional quotes supporting each category are found tables 1-4 Appendix 10.

Table 4.3 Expectations met, exceeded, or partially met

Expectations met	Expectations exceeded	Expectations partially met	Expectations not met
Clear, regular, transparent communication	Commitment to the research	Ownership of the research	Opportunity for innovation
Relationships based on mutual respect and trust	New research opportunities and extended networks	Contributing to the intervention design	Mutual learning
Language as a barrier		Coordination and power dynamics	
Developing research expertise		Investing in local leadership	
Publications and dissemination		Strengthening research capacity	

4.5.3 Expectations met

4.5.3.1 Clear, regular, transparent communication

The respondents expected communication amongst the wider research group to be clear and regular to ensure a joint commitment to the programme and help build strong, trusting relationships.

> *Communication is so important to make sure there are no misunderstandings and people remain committed to the programme.* (R-16 Ugandan Senior Investigator expectations)

> *I think productive communication needs regular communication.* (R-32 UK Senior investigator expectations)

Previous experience in international collaboration for one Senior Investigator emphasised how miscommunication can happen and lead to further issues. Therefore, ensuring everybody is on the same page initially is crucial.

> *It's about making sure that you're clear about, not just expectations but clear that everyone understands and everyone's on the same [...] I think it is really important because a little misunderstanding at the beginning, if it's not checked by the end of the project, it's when you come to, when you come to look back at the data, if you haven't checked and clarified that each point that you've got some form of shared understanding between the different partners.* (R-33 UK Senior Investigator expectations)

Transparency was hoped for to ensure a shared understanding of all processes and responsibilities within the project, particularly for those who had worked in previous collaborative projects where they reported that important processes were kept hidden.

> *There were many other projects also regional I was involved in. […] All these projects were done behind closed doors. […] And this happened as I said is the general culture in our country*. […] *I'm not saying that everyone should be involved, but some transparency should be there.* (R-02 Bosnian Researcher's expectations)

> *You know, you need to be very well informed of exactly what your role is going to be on a project, how much time you're putting in, how much you are getting paid for that and what the outcomes are supposed to be, what the indicators are and then you evaluate yourself and make sure that work is done*. (R-23 Ugandan Senior Investigator expectations)

All participants felt that clear communication was sustained throughout. The regular meetings enabled a collective awareness throughout the programme, which many acknowledged as invaluable.

So, I think the facilitators of the project have maintained open communication lines, in that anytime you have a challenge, you can reach out. (R-20 Ugandan Coordination/management experiences)

> *And when we hear about the work in different places, I think it's important for the group's creativity.* (R-07 Colombian Coordination/management experiences)

The awareness of ‘what other people are doing’ (R-17 Ugandan Senior Investigator experiences) was a key facilitator in bringing everyone together and promoting the group's cohesion.

> *So even though you're collecting your data, you are always in the know of what other people are doing where it is that they have reached otherwise communication back and forth through emails. And even though the data was being collected locally, it was certainly a collaborative research*. (R-17 Ugandan Senior Investigator experiences)

LMIC partners perceived transparency in the collaboration. The specific factors that facilitated transparency were their involvement in the initial stages of setting up the studies, ensuring all were copied in on correspondence relevant to them, and an explicit authorship policy contributed to the transparency experienced (.

> *I would say yes especially with the UK team and our local team and the PI, there was transparency […] You were present at our meetings with the finance team, with the admin team. So, we always knew what was happening.* (R-04 Bosnian Researcher experiences)

> *Yes, it has been transparent enough for me. Because when the communication is passed on, sometimes from UK to Uganda, you're copied in from the first communication, you do not necessarily receive second hand like flow through the coordinator* (R-30 Ugandan Researcher experiences)

Although participants felt clear open communication throughout, others, particularly in more senior roles, did comment on the meetings being too frequent and thought they could be more appropriately targeted to researchers at different career stages.

> *I think we could hold meetings less frequently than every week to control how things are going. […] But for the coordinator and some of the other researchers, who don’t have enough experience, maybe doing them every week is okay.* (R-05 Colombian Senior Investigator experiences)

In agreement with the frequency of meetings, a Ugandan senior investigator added further insight into the difficulty of attending weekly meetings and suggested that meetings could be quarterly.

> *So, it becomes rather overwhelming. You're trying to write things here and there. So even it was one hour a week. I speak for myself. My commitment would always be, I'll attend next week's […] Then you end up really attending none. [...]. However, if we had like maybe the quarterly catch up or something that wasn't just reporting on what each site is doing would be helpful.* (R-17 Ugandan Senior Investigator experiences)

Although communication across research groups, particularly between the UK and the respective teams, was considered open, researchers from the Colombian group expressed how communication was more challenging within groups (see Table 1 Appendix 10). More specifically, one researcher highlighted how the hierarchical arrangement of members would affect effective communication, as

the more senior investigators would have less time to engage with less senior, earlier career, researchers.

4.5.3.2 Relationships based on mutual respect and trust

Given that participants would be working across different contexts, it was hoped that relationships would convey mutual respect, cultural sensitivity, and accommodate different working styles. Once the relationship is secure, it can 'move forward' (R-22 Ugandan Senior Investigator expectations).

> *It's about the people, the relationship that you develop with people once it is solid, then you can always move forward.* (R-22 Ugandan Senior Investigator expectations)

> *But still open towards challenges that and respecting everyone on a similar level the better it will be. Curiosity also helps, not tolerance, but curiosity and respect.* (R-32 UK Senior Investigator expectations)

> *But ensuring that things work out well, respect for each other, and whatever it is you've agreed to be working on.* (R-17 Ugandan Senior Investigator expectations)

Participants acknowledged that there needs to be a general understanding that individuals entering the collaboration will have different aims and expectations of the research programme.

> *If a particular group likes communicating in a particular way that you adapt your, your style and it is some sort of negotiation that people have different aims that they want to get out of this.* (R-33 UK Senior Investigator expectations)

> *Usually, it's difficult in the beginning because the expectations are different. You don't know what the other guys want. They don't know what you want. So, there's sometimes needs to be a bit of patience.* (R-23 Ugandan Senior Investigator expectations)

Many participants experienced mutual respect in relationships and discussed how solid interpersonal relationships were formed during the collaboration, either across the research groups or within their research groups.

> *And then the other one in having a collaboration of course, we made friends we've met people that we didn't know before. We continue to work on things together. So, I guess that was also achieved in terms of creating a collaboration.* (R-17 Ugandan Senior Investigator experiences)

Well, when I talk about the relationship issue first, the researchers had between each other. Well, the three of us became really good friends. We were sort of covering for each other because there are things that some of us were better at than the others. So, we quickly found our rhythm. […]. So, we work really, I can almost say perfectly, well with each other. (R-04 Bosnian Researcher experiences)

> *There was, on a personal level, mutual respect acknowledgement for different expertise.* (R-32 UK Senior Investigator experiences)

One researcher reflected on how they felt their ideas were respected, resulting in an extension to the original GLOBE study:

> *My opinion was respected. My ideas were respected. And the idea to research DIALOG+ in primary health care was mine. So yes, I feel quite respected.* (R-01 Bosnian Senior Investigator experiences)

4.5.3.3 Language as a barrier

The language was also identified as a potential concern in working across multiple countries. The partner groups were expected to understand and relay complex information to the rest of the group when needed and articulate ideas during the teaching weeks and extended stays.

> *But really understanding takes time. So that's one barrier. Language is another barrier. Communication and everybody because communication doesn't work smoothly.* (R-06 Colombian Senior Investigator expectations)

> *Of course, there are many barriers. It begins with the language. In European project meetings, it is also fascinating that after a few hours only the native speakers keep talking […] But, but even if it's English it will lower the level because people are not as comfortable in English than their own language and they can convey a completely different type of thinking, when they mean similar things, because they use the same words.* (R-32 UK Senior Investigator expectations)

Despite initial concerns, individuals observed how language impacted the capacity to work collaboratively and communicate effectively across the countries, particularly in articulating ideas to the rest of the group. It was noted as a structural barrier exists in international collaboration, inhibiting processes like mutual learning.

> *And I know that many of the research assistant members of my team do not express their ideas sometimes because they find it there's going to be difficult in English. […] So that for me is a big barrier. It's a structural barrier. And that structure of language reflects the structural barriers in international collaboration, in mutual learning. And if you want to have real collaboration, it will be very different if the meeting were done in Spanish and you had to express yourself in Spanish* […] *So, when you ask about mutual learning, about collaboration, they face a barrier in the language.* (R-06 Colombian Senior Investigator experiences)

> *And then I guess, disadvantages I think one of the hardest things was communication with each of the teams I guess there was always a language barrier with all the teams.* (R-36 UK Coordination/Management experiences)

4.5.3.4 Developing research expertise

Individuals, particularly the LMIC partners, hoped to improve their understanding of research methodology and develop the skills to conduct high-quality research.

> *And this is also rewarding because we'll develop methodological skills and research-related skills like writing papers or writing projects or applying for funds that will not make them*

> *more dynamic in the future. After all, there will be other projects that we will have the skills to apply for them.* (R-01 Bosnian Senior Investigator expectations)
>
> *The research and who are very good doing research and know how to do it and so that's something that's also important for me because many groups do design and try to, to run and research, but they are not very effective*. (R-06 Colombian Senior Investigator expectations)

Many respondents described the specific research skills they gained during the collaboration, either through day-to-day tasks or training. Writing up research protocols and standardising procedures would have provided the opportunity to learn more about the interventions in detail and ensure consistency in performing certain tasks.

> *I learned about the protocols, and how we make protocols for everything, and present that information to the sites. I didn't do that kind of work before, and I think it was very useful. (*R-07 Colombian Coordination/management experiences)
>
> *I think I've learned a lot of how collaborative research works and what is amazing to me is to see that in Colombia, we are doing great research*. (R-15 Colombian Researcher experiences)
>
> *We had a lot of things to learn how to write protocol or standard operating procedure and things like that and writing an information sheet […] that was something new for us.* (R-03 Bosnian Researcher experiences)

Analytical skills, including qualitative and quantitative data analysis, interview, and transcription skills, were developed.

> *Then in the period of the analysis, everything for me was new, the qualitative analysis. In the teaching week I started to learn about thematic analysis. Then here we have some sessions about thematic analysis too, and using NVivo, and then they do the practice to do that kind of analysis with our own information on data.* (R-07 Colombian Coordination/management experiences)
>
> *Previously, I have only been familiar with things like SPSS […] And the other point the qualitative interview training, the transcription and analysis training. Those are all skills that are gained, from professional aspect.* (R-30 Ugandan Researcher experiences)

4.5.3.5 Publications and dissemination

Publications were considered a vital output of the research collaboration, allowing researchers to exhibit competency to the research community, improve competitiveness, and support career development, particularly for the LMIC researchers.

> *So, I think that comes from other research because they are very important for the careers, for us recently publishing has become more important.* (R-06 Colombian Senior Investigator expectations)

> *So, I expected that there will be publications, and that the results will be disseminated and as by the nature of the grant the expectation is that the results from this particular study and their experiences will help us to write bigger grants and be able to win those grants.* (R-17 Ugandan Senior Investigator expectations)

> *For my intellectual growth, for my visibility, because I'm working in research and academia. When you don't publish then it's like everybody's wondering what you're doing. And so, the university has expectations.* (R-23 Ugandan Senior Investigator expectations)

A Colombian Senior Investigator commented on the expected benefit of being a part of a collaboration with native English speakers who are knowledgeable of the relevant literature, making the publishing process easier when compared to publishing as an independent research group.

> *If you are working with people that that knows very well that language [English] and that know what is going on in literature. It benefits us all* (R-05 Colombian Senior Investigator expectations)

Although a Ugandan Senior Investigator considered publications to be important, they also viewed them as secondary to improving service provision and implementing effective service delivery to vulnerable individuals.

> *As far as I understand improving service delivery, getting services to the people and effective services and then what else. Improving service delivery, I think all of these others as research and research and publications are secondary.* (R-23 Ugandan Senior Investigator expectations)

Experiences concerning the publication process were perceived as positive and fulfilling initial expectations. LMIC early-career researchers led the paper writing and were able to contribute contextual insight gained from working directly with the intervention and its recipients.

> *We were given an opportunity to write […] so we were able to research, get the literature view, and be genuine with what has been happening in the hosting community. Yeah, that's what some of the, that I've learned* (R-27 Ugandan Researcher experiences)

> *We [research assistants] are part of the paper writings group me personally I was able to do to be part of the family involvement. The first drafts were actually written by the research assistants, but not the drafts didn't have the analysis bit of it. Yes, but it was what we have actually done on the sites*. (R-26 Ugandan Researcher experiences)

Participants discussed how they received help in writing the manuscripts, either from within their research group or from the UK research group. Participants gained an improved understanding of the writing process.

> *And then writing the article, it was very useful. The meeting we had with [UK Senior Investigator] and with the rest of the group. It's not easy for me to write a discussion. I am not so practical with writing the discussion of the articles. And they gave me some advice - a systematic way to write the discussion. It was useful for me, because I think it's, it's better to do it that the way.* (R-07 Colombian Coordination/management experiences)

> *The PIs came, they sat down, and they were like, [participants' name] now we are going to learn how we can write out reports. There's the standard we want. So, we had to go word by word and study again on how to write the report, according to what they understand as their standards. So, there is a level on which I was lifted in terms of creating those reports. […] As you have this input from people who have done it over and over, you realise this is better. What they're telling you is better and more precise.* (R-30 Ugandan Researcher experiences)

Although there were comments indicating a desire to translate the findings in more innovative ways, the reality was that almost all publications were submitted to relatively high-impact English speaking journals (see Table 1 Appendix 10).

4.5.4 Expectations exceeded

4.5.4.1 Commitment to the research

Since not all researchers had been recruited when senior researchers in LMICs were interviewed about their expectations, some expressed doubts about whether they would remain committed to the research programme. Others placed great importance on selecting the right team for the role.

> *I hope I make the right choice for the research assistants […] because if I train someone to deliver the interventions, and they decide to leave after three, six months, it will be necessary to train another.* (R-01 Bosnian Senior Investigator expectations)

> *And I think that we must select very good that people here, we have some problems about that. […] So, we must think about that in maybe it, we must select very well the person that they are going to be involved in these types of projects.* (R-05 Colombian Senior Investigator expectations)

> *Commitment could be a challenge when collecting the data and documenting this. We have seen it before in some projects where the commitment is not that great.* (R-16 Ugandan Senior Investigator expectations)

Alongside commitment concerns of the impending early-career researchers, there was apprehension around fulfilling all the studies' responsibilities in the time frame, as participating in GLOBE

represented a second role for many of the participants.

> *That's a concern I have. I mean, it's included in the time, but also getting the commitment of people to work on the respective tasks within the time frame. Giving it like as though it was an eight to five and it is more possible for it to be an eight to five because we're going to be working with people who already have other responsibilities. Yeah, but we'll need to figure out how that gets worked.* (R-17 Ugandan Senior Investigator expectations)

> *Well, depending on the time availability maybe I wouldn't be able to have another job.* (R-05 Colombian Senior Investigator expectations)

> *For us it's very difficult to do that. So, most of us are researchers, part-time researchers or even at weekend researchers is that we try to do research in our free time. We don't have protected time to do research*. (R-06 Colombian Senior Investigator expectations)

Yet when discussing the commitment of the group's members, including the researcher assistants, many participants remarked on their enthusiasm and dedication, indicating that the experiences exceeded initial expectations.

> *I think what I really enjoyed about working on the project was the people. So, everyone on the teams were very nice people to work with but also very engaged, interested, enthusiastic about the work and very hard working.* (R-36 UK Coordination/management experiences)

> *I thought that the teams were really eager to make a difference. I know that the local teams tried their level best to make the research possible. [...] I thought that the teams were really dedicated and so they were big part of the facilitation process of making the research happen.* (R-37 UK Coordination/Management experiences)

> *Let's start with the facilitators for conduction of the study. We had a good research team. We had a good administrative team. (R-17 Ugandan Senior Investigator experiences)*

4.5.4.2 New research opportunities and extended networks

Participants indicated that if they demonstrated competence, commitment, and engagement in the current programme, they could lead to future research opportunities.

> *Then research opportunities will come out of this, depending on how much effort are you putting in.* (R-24 Ugandan Coordination/management expectations)

> *The reputation of the academic institution is a necessity proved so it's needs to be done well because this is where we are will representing institution here.* (R-34 UK Senior Investigator expectations)

There was an expectation that participating in international collaboration would mean access to existing research networks within each group and lead to new research opportunities beyond the immediate programme. Participants discussed how establishing a strong network would almost act as a vehicle for future opportunities (see Table 2 in Appendix 10).

> *And what is that really rewarding is when you design a network for one project, then you can easily embark on the other and use the previous network. If you're involved with people, like we're involved the people from the region, we now have a really good network* (R-01 Bosnian Senior Investigator expectations)

> *Whereas a project, like they say we have our network, and all the other partners have their networks, I suppose it's about forming those links with those other networks. So, we are set to gain, from those experiences and from those connections.* (R-33 UK Senior Investigator expectations)

Senior Investigators offered different perspectives regarding research opportunities and extending networks. A Colombian senior investigator specifically discussed developing projects exploring conflict, as this represents a national issue and impacts mental health in Colombia. At the same time, a Ugandan senior investigator emphasised how their existing networks may be needed.

> *I would like to have a good network to make more projects in continuing to being a network not only to have it three years and that's it but maybe to construct a real network between all the universities. I would enjoy a lot too to think about some projects between us in conflict. It will be very, very important because we need some help in that area too. To see, to have some people that think differently, to think in another way and innovatively* (R-05 Colombian Senior Investigator expectations)

> *And this is where the linkage, as I said, I have linkages, international linkages, I have connections with the people who are in research ethics and who can reach out to them […] So those linkages will become, I think useful.* (R-16 Ugandan Senior Investigator expectations)

Indeed, several new research projects emerged from the GLOBE programme that received competitive funding, which may indicate that expectations were exceeded. One study, led by the Ugandan research group, explored patient support during consultations:

> *The idea for the first proposal came from the Uganda team but was co- developed together with the UK team. The things we wanted to appreciate were the reasons for patients coming back for review and who is supporting them in doing this* (R-17 Ugandan Senior Investigator experiences)

> *From my point of view, it is a bit easier since we're working with already established partners. I think a challenge of GLOBE was sort of from the beginning establishing those partnerships and those working relationships and learning how to work with each partner. Whereas with OLA [new GMH research programme], we already knew the partners, and we already knew what to expect in terms of how we would work together.* (R-36 UK Coordination/management experiences)

As a result of additional funding to the site in Colombia, the network expanded in Latin America. The project expanded the network into Latin America to help build the research capacity of neighbouring countries.

> *We are planning another network with two countries of Latin America […] we could help both groups, groups that are intermediate like ours and groups that are beginning.* (R-05 Colombian Senior Investigator experiences)

> *Rather than having a completely new study on, let's say, healers in Colombia, we decided to spread our network. That was a decision. I think it was a good decision.* (R-32 UK Senior Investigators experiences)

4.5.5 Expectations partially met

4.5.5.1 Ownership of the research

Partners expressed a desire for autonomy and ownership when describing their ideal collaborations, especially being responsible for their studies. There was a concern shared about how, historically, LMIC researchers have not held positions more than 'data collectors' (R-16 Ugandan Senior Investigator expectations).

> *The best collaborations I've had are when they let me be their driver because I know the system […] but they feel like they should control what's going on locally and usually makes you feel disempowered […] It becomes easier if I feel like I'm the one in control cause the questions which usually arise at home [Uganda], are the ethical side of things, it's me who is usually put, on the spot and not the external.* (R-17 Ugandan Senior Investigator expectations)

> *Sometimes partnerships don't do so well because the local people feel like they're not being treated fairly. They don't give you a chance to voice, to be active participants and they are relegated to data collectors* (R-16 Ugandan Senior Investigator expectations)

Furthermore, a UK Senior Investigator hoped that LMIC partners would assume ownership of the research despite the grant being managed by the UK research group.

> *I hope that that doesn't translate into being seen that - oh we will just do what you want us to do because you're the ones coming in with the money.' That to me is sort of like the opposite of what we want.* (R-33 UK Senior Investigator expectations)

The experiences indicated that the LMIC partners perceived that they had ownership of their studies and that having autonomy made the experience a positive experience. A Ugandan Senior Investigator commented on their input as part of the research proposals.

> *So, to me whenever there are institutions from other countries, as long as I have ownership, I tend to like it better. You know, it's better organised, you know, some things to learn from*

them because they're from different cities. (R-21 Ugandan Coordination/management experiences)

We just want you to implement it. I think that it wasn't like that the proposals had to be developed with the input from the UK team, but with a lot of input from the Ugandan team. So I think that also was very good in terms of helping us as learning experience, but also for collaboration. So that there's a sense of ownership on our part as well. Not feeling like it should all be just, you know, them to us. (R-18 Ugandan Senior Investigator experiences)

However, a UK participant believed that enabling the LMIC partners to lead on aspects such as training could be a way to improve the sense of ownership, despite being led by the UK.

I do think we should be identifying expertise and identifying existing training and getting other countries to run those training sessions. So, it's not just the UK coming and providing training for X, Y, and Z that would help people, feel an increased the sense of ownership that this is a group that may be led by a certain country, but this is a group where we are all in equal partnership and we all have a role to play. (R-33 UK Senior Investigator experiences)

4.5.5.2 Contributing to the intervention design

A UK senior researcher emphasised that the collaboration would be a space where every member could contribute their perspectives and input regarding partners' contributions.

I think Queen Mary already has a protocol somewhere, but I think we're going to have to put in the nitty-gritty details for the process of the adaptation (R-23 Ugandan Senior Investigator expectations)

So, it's expanding and making the research would be more democratic. So, it's not just based on how much money you can get in your own country, but it's increasing collaboration so that more people can be introduced to high quality research and that can bring they own specific contribution to that. (R-33 UK Senior Investigator expectations)

Partners expected their knowledge of the local context and health systems to help adapt the interventions and foresee any likely challenges.

Challenges locally in Uganda and challenges with the partnership. So locally of course the work is going to be done here and uh, that means there needs to be called first of all can clear understanding what it is what that this project is all about. (R-16 Ugandan Senior Investigator expectations)

The experiences around contributing to the collaboration and intervention development were perceived positively by the LMIC partners. Many participants emphasised how the collaboration offered a space to share ideas, including those from junior researchers.

And to some extent, they accepted the things I suggested and dismissed the things that were wrong, but I felt that I was listened to, that I was heard. The UK team understood the

suggestions I had and if they were good, they were accepted. (R-04 Bosnian Researcher experiences)

There's fair ground. In terms of collaboration really, there's no issues with the collaborators. I have no problems with anyone. Yeah. I think it's fair in collaborations, people are open. You're free to voice your opinion. So is that's not a problem really (R-17 Ugandan Senior investigator experiences)

And when you mentioned everyone, I mean, everyone from the most junior researcher to the PI. It was a beautiful experience coming from a completely different backgrounds that is more hierarchical and more oppressing. This was democratic research platform. (R-01 Bosnian Senior Investigator experiences)

Although partners perceived the collaboration created a space for sharing and exchange, a Colombian senior investigator commented on the contributions made towards adjusting the interventions.

The research designs and many of the main components come from the UK, the role of Colombia or other countries is limited because the money and the resources are not ours. So that means that the possibility of really making changes or deciding many things about the project is limited. (R-06 Colombian Senior Investigator experiences)

This opinion was echoed by participants in the UK, highlighting how the partners contributed to adjusting the intervention.

If they needed things changed, they did put their case forward. But because they were all interventions that were developed in the UK, I suppose they went with the flow for a lot of it, just to test things out. (R-37 UK Coordination/management experiences)

I feel like we did make the decisions like in terms, if they suggested something and we didn't agree with it, then we would have the final say, even though we didn't necessarily know their context, as well as them and what works. (R-38 UK Researcher experiences)

4.5.5.3 Coordination and power dynamics

The UK group expected to offer administrative and research support throughout the programme whilst expecting challenges around ensuring their involvement was not too prescriptive. One UK senior investigator expressed concern about the balance of power, given the UK's role as coordinator:

Rather than having a partnership of four equal sites, it still looks like you have one side that is partnering down on the three other sites and setting the agenda. I know this is where the research expertise is. (R-35 UK Senior Investigator expectations)

Other UK participants described how they hoped to assume coordinating and supporting roles. One UK Senior Investigator commented on the building collaboration into the programme despite being positioned as the coordinating centre.

> *I think my role, it's to keep things moving and making sure we meet deadlines from all funders here and supporting our partner countries and delivering the studies.* (R-36 UK Coordination/management expectations)

> *I mean in this project we as the coordinating centre so as a coordinating centre, it's our overall responsibility but I think the more collaboration you can build into that process the better […] if it's just one partner coming in and telling the other partners what to do, that can be quite disempowering* (R-33 UK Senior Investigator expectations)

Senior investigators in the LMIC research groups described their expectations in coordinating their research groups.

> *My role as the PI here in Uganda should be giving leadership and direction to do the project and ensuring that administrative issues are taken care of to improve the way the project is implemented. Again, it is a partnership with Queen Mary and others. As a PI, to ensure that there is good communication and linkage with the PI on the other side so that we can move ahead smoothly.* (R-16 Ugandan Senior investigator expectations)

> *So, like yes, coordinated activities. I've had a team of researchers. I would like to hold team meetings, for example, and maybe coordinate or direct them […] where all of the researchers come together and discuss the advance of the project.* (R-05 Colombian Senior Investigator expectations)

A UK Senior Investigator highlighted their scepticism around the prospect of incorporating all perspectives, particularly when it comes to translating and disseminating the data collected. In practice, the UK will be the dominating force.

> *And again, knowledge is power. You know, coming back to the power of view as a primary researcher will go to all three sites will do and you will get to know about all of them. And so, in some ways the translation then comes through the correct version, which is the British one.* (R-35 UK Senior Investigator expectations)

The UK research group felt that the adherence to the grant requirements imposed a more prescriptive way of coordinating the group, which was more than anticipated and was perceived to have influenced the power dynamic within the collaboration (see Table 3 in Appendix 10).

> *I think we're quite restricted by the actual mechanisms of the grant and things such as the fact that the contracts must be issued through Queen Mary […] it all rests with the lead organisation [the UK]* (R-33, UK Senior Investigator experiences)

> *It's tough because it's like, how equitable can it really be when the money comes from the high-income country? [...] There were points at which the teams would be like happy for the UK team to lead it because they [UK team] were experts in how things are run here and how money was won and how grants were, were achieved and, you know, that sort of thing. (R-37 UK Coordination/management experiences)*

In contrast, the LMIC partners did not comment on the presence of a power dynamic but rather on the consistent and constructive support they had received, as they were aware that a UK grant was leading them.

> *I would like to say that the UK team was immensely supportive. At times I felt like we were pestering them. They had this infinite patience for us and our constant questions. So, I think none of this would have gone as quickly and well as it did if we weren't sort of supervised by the UK team* (R-04 Bosnian Researcher experiences)

> *It was a very, very positive experience because they [UK group] were very supportive all the time, they were available anytime for any need. So, they were very professional, and they were very supportive in that way.* (R-10 Colombian Researcher experiences)

However, hierarchy was acknowledged, and it was highlighted how this impacted the coordination within the local LMIC groups (see Table 3 in Appendix 10).

> *The PIs are the leaders, and they have this hierarchical position. And I think it's very common in research.* (R-07 Colombian Coordination/Management)

There were issues in both Uganda and Colombia, relating to coordination. In Uganda, there were severe delays in payments which impacted the livelihoods and morale of the researchers (see Table 3 in Appendix 10).

> *But sometimes there are delays in salaries because of the bureaucracy in, in, in, in the salary scheme, the salary system. So you realize that you can go a month without payment, sometimes a month and a half.* (R-26 Ugandan Researcher experiences)

Whereas, in Colombia bureaucracy was attributed as the reason for a significant delay in starting the project for a researcher.

> *And, and so at the beginning, for me, it was really difficult because since I was assigned to the specific clinic that's another thing that, that kind of like hit me was that there's so much bureaucracy here. So much team within the people who we recruit within the other partners who participate with us. So, like the clinic that I was assigned to, it took about three months start. So, it took forever to start*. (R-09 Colombian Researcher)

4.5.5.4 Investing in local leadership

Investing in local leadership was recognised as a crucial step for working toward the sustainability of the research groups and a key expectation of the programme.

> *I would have the opportunity to employ three young researchers. The project will employ them, we will have them in the department, and they will simultaneously be acquiring research skills in collaborations with Queen Mary and Uganda and Colombia. And they will*

remain an asset to the department where I work (R-01 Bosnian Senior Investigator expectations)

They are [researchers] going to have an opportunity that many of us did not have to work in international collaborations at the beginning of their careers. […] I believe that the return will be great too. (R-06 Colombian Senior Investigator expectations)

However, participants felt that the grant lacked the resources to make the infrastructural changes needed to establish academic posts. UK members echoed this opinion.

So, I think that that role that it had being able to help other people, to develop their career has been fulfilled with the limitation of the structure of any faculty that is flexible, but it's not entirely flexible to changes. (R-06 Colombian Senior Investigator experiences)

*We do not leave enough money for this career path. These academic roles required to do professional research are simply not there (*R-33 UK Senior Investigator experiences)

Despite the perceived lack of local leadership development in GLOBE, there were opportunities for senior investigators to mentor and support early-career researchers within their research group.

The team of young people we have worked with has put me in a mentorship position for them. And they look up to you, and they want to listen to what you're saying, you're directing them, you're advising them. (R-18 Ugandan Senior Investigator experiences)

I have always tried to engage young researchers in our teams and, when possible, to give them lead roles. And I actually renounced to a lead role in one of the studies to allow a young researcher to be able to, to engage, because I think that the way to, to really help other young faculty to the better develop the skills, and also because I think that that person was, in the end, more qualified than I was in that particular study. (R-06 Colombian Senior Investigator experiences)

4.5.5.5 Strengthening research capacity

Building on and strengthening research capacity was a significant expectation for many participants. Specifically, participants emphasised the need to become more competitive in terms of applying for and attracting funding for further research.

We don't have the capacity to do some things. For example, we don't have capacity to successfully submit a Wellcome Trust grant and win it without help. So, for selfish purposes, we need to build our capacity. (R-22 Ugandan Senior Investigator expectations)

So, the more capacity we have means we're better research in the area, better quality research, but also would be able to provide very competitive grants that are attracting international funding and be seen as global players, uh, in addressing a challenging issue. (R-16 Ugandan Senior Investigator expectations)

> *Then also my research capacity, yeah. I know that will be improved. And then having new collaborations. […] Maybe writing more grants where personally we are improving in Uganda.* (R-24 Ugandan Coordination/management expectations)

A UK senior investigator considered the strengthening research capacity in the LMIC research groups to be the primary aim of the GLOBE collaboration. Delivering the interventions was a lesser priority in comparison.

> *So, my understanding is that the main aim is to build research, relationships, and capacity in the three partner nations particularly - I think that's the primary goal I think the three interventions are subsidiary to that and supposed to be a vehicle whereby relationships and capacity will be developed for the future.* (R-35 UK Senior Investigator expectations)

One participant perceived research capacity building as developing skills at the individual level to deliver the current programme and achieve it.

> *There was need for capacity building for the members on the team at different stages of the study […] we needed to train the researchers in REDCap, data entry, collecting data for qualitative interviews, reviewing transcripts, all that was part of the capacity building that has been emphasised through the study* (R-20 Ugandan Coordinator experiences).

Although the pandemic hindered the programme's ability to deliver specific workshops dedicated to paper and grant writing, one UK respondent considered the programme's capacity-building efforts inadequate overall (see Table 3 in Appendix 10).

> *I do think that COVID hasn't helped because it prevented face-to-face contact in the last year. And this year was going to focus on dissemination, grant writing, and ideas generation that's not been able to happen.* (R-33 UK Senior Investigator experiences)

> *I'm not so sure. It was difficult. Yes, of course, we build up research capacity a bit, but if the whole group stopped tomorrow, we wouldn't leave long-term, highly functioning research groups behind.* (R-32 UK Senior Investigator experiences)

4.5.6 Expectations not met

4.5.6.1 Opportunity for innovation

There was an expectation that working in resource-limited contexts and collaborating with international experts would lead to new ideas and interventions, given that constraints can lead to innovation.

> *So, looking at different cultures and seeing how distress is dealt with around the world can be one way to get new perspectives that could lead to real innovation rather than just I'm going to tweak this intervention slightly, or I'm going to try this intervention with a different population* (R-34 UK Senior Investigator expectations)

> *But when you look into the health system of the UK and that you have been working a lot on providing psycho-therapeutic interventions, not only the classical intervention. So, trying to learn about how to really do that is inspirational is for me.* (R-06 Colombian Senior Investigator expectations)

There was concern that new perspectives would be challenging to discover, given how many of the senior investigators from the LMIC were educated in Western located universities.

> *I would be concerned that the key people we meet, the professors and so on, are all already westernised. And that they are in the positions that they are in because they are Westernised. because they already like maybe like trained in America and Europe and have published here and all that.* (R-32 UK Senior Investigator expectations)

The LMIC partners expected to learn more about psychosocial interventions and new treatment approaches that are not common in LMIC contexts. The experience of delivering the interventions fulfilled the expectations of learning about novel, low-cost interventions.

> *So, I think this is very important because it shows us new opportunities and new ways to help people with a mental concern. [...] And it's very cheap. So, I think is it is a new way that we have not explored yet enough. I also saw these interventions reduce stigma which is very high in Colombia* (R-13 Colombian Researcher experiences)

> *I think that these kinds of studies are a novelty here, it is not very frequent to have these. So, this research will bring attention to these interventions.* (R-08 Colombian Coordination/management experiences)

Despite one LMIC respondent commenting on how the programme offered a novel way of viewing their work, the expectation of working collectively to generate new ideas for interventions was ultimately not met.

> *Maybe the thing that we still need to do is how to develop research ideas collectively […]. I would like to learn how to work with a group and think together to develop new research ideas.* (R-06 Colombian Senior Investigator experiences)

> *I mean, we are part of this business that is, I don't think, very innovative […] I hope we had an atmosphere where this was stimulated.* (R-32 UK Senior Investigator experiences)

4.5.6.2 Mutual learning

In the initial interviews, a fundamental expectation for international collaboration was the strong desire to collaborate with a diverse group of researchers and promote cross-cultural discussion and learning (see Table 4 in Appendix 10).

> *Mutual learning means sharing experience and discussing different points of views. Mutual learning is me learning from you about advantages or disadvantages of something you've done or plan to do.* (R-02 Bosnian Researcher expectations)

> *When we participate in international collaborations we tap into resources and here, I don't mean financial resources […] but rather in the intellectual resources that exist out there* (R-16 Ugandan Senior Investigator expectations)

> *For example, in Colombia we used to think in one way. And I used to do the things in just one way because that's that the way we know. So, we don't move of that. So, if you know that in other countries there is another way, the kind of work, maybe we can use that and vice versa and all that.* (R-10 Colombian Researcher expectations)

A UK Senior Investigator expected their views to be challenged by working alongside individuals with different perspectives and experiences.

> *I mean that will vary but I hope I will pick up ideas and perspectives that I haven't thought of, and I don't think of it […]. And we should do the same, although I'm hopefully will be impressed by one or two things that they do, but more that it challenges my views and where I'm stuck, opens up new.'* (R-32 UK Senior Investigator expectations)

However, one Ugandan Senior Investigator believed that the flow of knowledge would only be between the UK and the Ugandan group and that learning amongst the LMIC partners would not be a priority.

> *The primary concern is between here and London. […] We know that we are all part of the same bigger group, we're exchanging information with the other people. There's a lot of learning also that takes place there, but that is less of concern. It is mainly here and London.* (R-16 Ugandan Senior Investigator expectations)

One Colombian senior investigator stated that learning does take time and that this may be difficult to achieve in the timeframe of GLOBE.

> *What do you learn after one year of living in that country is very different year two, year three, year four? So, it's about a slow learning. So that kind of knowledge she taken that as your colleague inside knowledge with that native knowledge of the local knowledge? With the living. The living knowledge I would say is I think that it's very difficult to acquire. So, for example, for the, for the international groups that come here, they have an idea, and they start to learn a lot about all the quantity. But real understanding takes time.* (R-06 Colombian Senior Investigator expectations)

Concern was raised, by a UK senior investigator, about the planned arrangements to encourage mutual learning, such as the teaching weeks and seminars all being hosted in the UK.

> *My understanding is that lots of the sharing and learning is going to be done in Britain and I suppose you're out of your comfort zone in somebody else's country and you don't own it as much.* (R-35 UK Senior Investigator expectations)

Whilst partner perspectives demonstrated the development of research expertise, learning on the UK side was less apparent (see Table 4 in Appendix 10). Although the UK team did not necessarily acquire research skills, one UK investigator acknowledged:

> *So, I didn't observe much learning across the groups as much as we very much did try and get them to communicate to each other. I don't feel they did. I felt like there was for the main three partners, like the three separate partners or feeding into us, not feeding into each other.* (R-38 UK Researcher experiences)

Generally, some interviewees perceived mutual learning to be even less evident amongst the partner groups, perhaps due to the lack of interaction.

> *There should be intercommunication between the different players, a lot of communication with the other institutions as opposed to the communication being only between, Uganda and Queen Mary* (R-16 Ugandan Senior Investigator experiences)

> *Maybe we need some interaction a little bit more in some proposals that come from South to North, not North to South. And I think that it will be very useful to have at least one meeting every three months, for new ideas of research. Because we have a lot of options, different from the UK.* (R-05 Colombian Senior Investigator experiences)

4.6 Discussion

4.6.1 Main findings

This chapter explores the initial expectations of GLOBE and presents their evaluation of whether these experiences were met, or not met, or partially met. This study demonstrates the range of expectations and experiences derived from a multidisciplinary research group at different career levels. The findings suggest that most expectations were partially met, met, or exceeded. Most of the findings indicate that nothing was experienced, which was not expected. Despite not all expectations being fully met, the experiences were mostly positive.

Referring to the overall framework (refer to Section 4.5.2), it is clear that the expectations regarding clear, regular communication and relationships based on mutual respect, were associated with the theme of group coherence. These expectations were generally a function of the members and how they organised themselves as a collaboration, primarily through ensuring group cohesion. Clear communication played an essential role in the partnership, mainly because the groups were in different countries. Building trustful and respectful relationships enabled friendships to develop on an interpersonal and professional level. The language barrier was considered an issue in the ability for some participating researchers to articulate ideas, particularly in the Colombian research group.

The experiences that exceeded expectations, such as commitment to the research and new research opportunities and extending networks, may have benefited from group cohesion due to the strong relationships and competence in research capability. Expanding networks occurred more easily due to establishing solid relationships within GLOBE, this was demonstrated by the development within Latin America. There was a concern about junior researchers and others being able to fully commit to the research tasks, yet the experiences showed a high level of engagement. The partially met expectations – in many cases- demonstrated a divide in views between the UK group and the LMIC partners. When referring to the framework, it is apparent that many of these expectations relate to promoting equity within the partnership. For example, where LMIC partners felt like they experienced ownership of the research, the UK group thought that this could have been enhanced by allowing the partners to lead on training. The UK group exhibited concern over the overall coordination of the collaboration, and the presence of power dynamics, particularly concerning the grant mechanisms. However, the LMIC partners did not acknowledge any power dynamics but recognised how supportive the UK group was. Interestingly, inequity was perceived by the group with the most power rather than the group without. Strengthening research capacity and developing local leadership were also perceived as partially met. The LMIC partners felt that the programme met their expectations when considering capacity building at the individual level and predominantly targeting the skills required to deliver the programme itself, whereas the UK believed that the programme's efforts to address and strengthen capacity were inadequate at the institutional or infrastructural level. This was similar to investing in local leaders, although partners felt that the experience of working in an international collaboration would be invaluable to the careers of junior researchers, others agreed that there were not sufficient resources to support longstanding positions.

4.6.2 Strengths and limitations

This study is the first qualitative longitudinal exploration of expectations and experiences of a GMH collaboration exploring partnership dynamics throughout the intervention delivery to the candidate's knowledge. A significant advantage of this approach is that it allows an in-depth interpretation of how a phenomenon evolves (111). In this study, the prospective qualitative longitudinal approach helped evaluate whether the GLOBE programme could achieve specific outcomes, particularly strengthening research capacity, developing local research leadership, and ensuring equity within the partnership. Therefore this has helped address gaps between what a programme intended to do and how an individual experienced them (136). The evaluation was able to establish factors that enabled and hindered the ability of GLOBE to achieve its aims. Another unique aspect of this study is that capturing the initial expectations of group members allowed their

views to be uninfluenced by potential events during the experiences, therefore minimising any bias. Finally, all expectations and experiences were derived from a specific collaboration, GLOBE, which offers further insight into partnership dynamics by examining a programme in its natural setting (108,115–117). There are limited evaluations that have focused solely on a particular research programme, and previous research has often explored research experiences from a general perspective, therefore failing to encapsulate the actual changes in partnership dynamics that occur over time (138). Finally, this evaluation incorporated the views of HIC and LMIC participants at varying career levels and in different roles, including those who support the administrative aspect of research programmes. This approach has captured multiple perspectives contributing to the GLOBE, adding to the rich description of the collaborative aspect of a GMH research programme.

However, the study has several limitations. Myself and others involved in reviewing and analysing the data were known to members of the collaboration. Considering my role, my position within GLOBE may have influenced the one-to-one interviews to capture the experiences. Regarding the relationship between the interviewer and the interviewee, one must consider the broader social context of the relationship. My affiliation with GLOBE may have influenced how the partners interacted with me and viewed me as a formal member of the UK research group, despite not being involved in the coordination. For example, the power dynamics within the interview context could have been challenging to overcome (306). Although conscious attention was given to acknowledging the power dynamic, more reflexive practice could have been adopted to establish a better rapport with the interviewed participants. Each interview began with a brief explanation describing the nature of the research and reiterating the information sheet. It may have been appropriate to have acknowledged my role within GLOBE to let the interviewee know that this has not been ignored. Since this could not be changed, I employed strategies to offset the occurrence of power dynamics, such as adhering to the COREQ framework (271). Using the COREQ framework provided transparency and encouraged reflexivity in study design, analysis, and interpretation.

Another key limitation is that my affiliation with GLOBE and my familiarity with the participants from the UK research group may have facilitated a degree of social desirability bias. The concept of social desirability bias is defined as respondents downplaying socially undesirable opinions or viewpoints (307). It is the inclination to report the reality to be in line with what is perceived as socially acceptable. Paulhus describes one facet of social desirability as impression management, which refers to how individuals curate themselves to fit within a specific context or please an audience (307). For example, the LMIC participants may have underreported particular experiences, such as experiencing equity, to appear more likeable and socially acceptable. Downplaying the specific experiences within GLOBE may mean that the findings are less authentic. Bergen and Labonté

outline strategies to overcome or mitigate social desirability tendencies, such as ensuring privacy, anonymity, confidentiality, introducing the study in detail, and developing rapport (308). During the study, these strategies were exercised, mainly introducing the study in-depth, using the information sheet, and providing further detail before each interview. Although approaches to minimise social desirability were addressed, there is no way to establish how authentic participants' responses are.

Another limitation of this study was that member checking, or respondent validation, was not carried out. Member checking involves the participants themselves reviewing the interpreted findings to internally validate them and reach higher truthfulness and representation (309). Although there are many advantages to conducting member checking, such as preventing any inaccurate information from being presented as part of the findings, it gives interviewees the chance to confirm the interpretations imposed on their interview transcripts. However, others are opposed to using member checks, as they can unfavourably change the data, especially when it is the researcher's role to interpret the participants' experiences (310–312). The researcher and participant are stakeholders within the research; thus, both will portray a different interpretation of the data.

As mentioned, the initial interviews took place at the inception of the group's formation. Since only the senior investigators were awarded the funding, these interviews depict mostly the expectations of these senior investigators. Since the research assistants were recruited later, their views are only captured in the experience interviews. Therefore, the findings offer a more cross-sectional view of the researchers' experiences rather than exploring how these perspectives evolved over the programme. Despite this, the results show in-depth accounts of researcher experiences of the programme, which is still limited to the broader literature, as evaluation of collaborative programmes tends to only focus on more senior members (105).

Finally, the findings relate to the expectations and experiences of one research collaboration. Much of the characterisation is thus specific to the contexts and individuals participating in this collaboration. The generalisability of the findings should be considered with caution; building on the existing literature on GMH collaborative research is required.

4.6.3 Interpretations and comparisons with the existing literature

Many of the findings identified in this study confirm findings in previous literature whilst offering a more nuanced approach. Most initial expectations were either met, exceeded, or partially met, and the experiences were positive overall.

Strong interpersonal relationships, clear inclusive communication and mutual trust were central to the positive experiences of the research programme. The findings revealed how professional and

interpersonal relationships contributed to a positive experience. Previous literature suggests that investing in personal relationships, especially when individuals come from different countries with different cultural values, helps to encourage a shared motivation (288). Emerson *et al.'s* model for collaborative governance defines shared motivation as entailing mutual trust, mutual understanding, and commitment, highlighting the role of interpersonal relationships in collaborative research partnerships (288). The current findings emphasise the usefulness of open, transparent communication in enabling a shared awareness and a mutual understanding (288). However, the experiences demonstrated that expectations of mutual learning were not met.

Expectations for mutual learning, particularly between the LMIC partners were not met. One explanation for this could be that establishing a mutually beneficial relationship takes time, mainly to build trust (104,287,313), given that the partners, UK aside, had not previously worked together. Over time, as a collaboration progresses forward, members demonstrate that they can be trusted, which also helps to promote a mutual understanding (287,288). Given that most of the members had not known each other before on an institutional or individual level, a significant amount of time was most likely dedicated to establishing relationships, and there was limited time dedicated to mutual learning, innovative thinking, and brainstorming.

Syed *et al.* emphasise the importance of identifying the benefits of collaboration on the HIC side of the partnership (54). More effort is needed to determine how HICs can benefit from a collaboration between HICs and LMICs (54). Identifying benefits on the HIC side will help address any imbalances within the relationship and help to form sustainable partnerships (53). In this study, an example of this occurred when a UK senior investigator described their learning from the Ugandan research group, particularly incorporating different stakeholders and listening to other perspectives sensitively (refer to Section 4.5.6.2) This example depicted a senior investigator from the UK group who had visited Uganda on several occasions as part of the planning stages of the programme. This finding reinforces the importance of fostering mutual trust and respect and providing a sound basis for mutual learning, in addition to cementing the relationship with face-to-face visits. Language, raised as a concern, may have affected the capacity for mutual learning, especially amongst the partners.

Another factor that may have impacted mutual learning was an absence of interdependence amongst the partners. Emerson *et al.* describe how interdependency is a crucial factor that can help drive a collaboration (288). Interdependence is necessary for partnerships, as it requires individuals to be reliant on each other to carry out particular tasks (287). However, interdependency was apparent between the UK and the respective partners. The LMIC partners would have been unable

to fulfil their part of the programme without the help and support of the UK group, whereas the LMIC partners were not reliant on each other. Communication occurred mainly between the UK and the partners, respectively, as the UK group was the coordinating centre. This meant that there was less interaction between each of the LMIC partner groups, and there was less reliance on these groups to conduct specific tasks, therefore less interdependency. The planes of the relationship existed predominantly between the UK and respective partner groups. The lack of interdependence may have removed any drive to collaborate and therefore limited opportunities for mutual learning and innovation. For example, a Ugandan senior investigator emphasised that learning would only occur within the relationship between themselves and the UK group. This finding indicates that the partnerships were strongest between the UK and respective LMIC research groups.

Although the partnership was described as a 'democratic research platform' (R-01 Bosnian Senior Investigator experiences) (refer to Section 4.5.5.2), others described instances where the UK's expertise and knowledge took precedence despite having shared ideas and contributions. For example, a Bosnian researcher commented on how their ideas were received – 'if they were good, they were accepted'. (R-04 Bosnian Researcher experiences). Based on this evidence, it may be helpful to establish early on individual strengths and weaknesses to assess who can contribute effectively to different stages of the research process (314,315). Establishing individual strengths and weaknesses could be moderated by senior members within the partner groups, who should identify the gaps in knowledge and skills.

The experiences of contributing to the intervention design were considered partially met. Some LMIC participants felt that the collaboration functioned as a space to contribute ideas; both UK and LMIC members felt more critical when contributing ways to adapt the interventions. In this study, the core intervention designs were conceived in the UK, and the LMIC partners were responsible for adapting them to each context. Recognising the contribution of all collaborators is considered a dimension of promoting equity within a partnership (274). It is demonstrated that acknowledging skills and expertise is vital in reducing inequalities (274). In this study, the interventions were conceived and developed within the UK. The findings indicated less incentive to change the interventions, and the LMICs partners tended to go with 'the flow' (R-37 UK Coordination/management experiences) (refer to Section 4.5.5.2). This finding may have explained why there was less contribution from the LMIC partners in adapting the intervention.

In GMH, there is a strong focus on the cultural adaptation of interventions to ensure their fit within the local context (316). Yet there are implementational challenges to interventions successfully gaining traction in LMICs (317). Qureshi *et al.* highlighted how Western interventions in design and

approach might be challenging to adapt to different settings (317). The GLOBE studies may not have been difficult to adapt to each setting, but the lack of drive to make changes to an intervention designed and created elsewhere may have been the issue. Investing further time and effort into an intervention which has been developed through somebody else's time and effort may be perceived as another barrier to the cultural adaptation of interventions in LMICs. These interventions were not co-designed, but there was an opportunity for LMIC partners to offer input where necessary. Still, it may not have been incorporated into the design, as the UK research group had the final say. Reluctance on the LMIC partners, or going with 'the flow' may have been attributed to a lack of knowledge and understanding or unfamiliarity with these kinds of resource-oriented interventions, which focus on utilising existing social structures in a given setting (92) (refer to Section 1.3.3.1). This finding aligns with literature focused on more co-developed interventions, which means that both LMICs and HICs have stakes in the conception of interventions (318). Co-produced interventions are based on more context-appropriate theories (319), which means that interventions are more locally relevant and are likely to lead to better outcomes (320).

Achieving equitable relationships is crucial for many global health research collaborations (274). The literature highlights how the dynamic imposed by Western funding structures can impact the equality of a partnership, especially with the obligations of meeting the funding expectations (272). Participants initially expressed similar concerns in this evaluation, more so from UK participants than LMICs. Overall, participants in the UK remained sceptical about a true and equal partnership until the end. In contrast, most participants in LMICs felt their initial hopes for equity among partners had been met and this occurred despite the restrictions and potentially paternalistic nature of funding channelled by a HIC that all partners had been aware of from the beginning. Again, communication and relationships appeared to be central to this.

Expectations of contributing to publications were met, and the process's experiences were perceived as equitable and transparent, given there were ongoing, open discussions about it. This finding supports the literature on the need to make collaborations more equitable (321). This finding demonstrated how inclusive the authorship was, something which was achieved by ensuring all those involved in data collection were integral to the writing of publications. This aspect of the collaboration reflected a process that was accurate, 'ethical, and contextually grounded' (p.1) (42). The authorship selection was representative of each member within each group and did not demonstrate tokenism, whereby LMIC researchers are included as authors having not contributed to the writing process (42).

Similarly, with the positive experiences around equity, LMIC partners considered expectations around the capacity building to have been fulfilled, whilst the UK research group did not share the same sentiment. In the literature, capacity building is perceived in numerous ways. Some may view it as the training related to the current research project, whereas others view it as enhancing infrastructural support (274). The programme focused on technical knowledge and skills and addressed the gaps; however, training should also consider the non-technical skills necessary to build a sustainable research career (98).

In this study, the findings show that strengthening research capacity was directed more at the individual level by emphasising the development of technical knowledge and skills (17). If partnerships plan to address research capacity, there needs to be more investment in the knowledge generated during the partnerships to have a long-term impact and enable LMIC institutions to fully contribute to the global community (206). Some members of GLOBE, most notably from the UK, thought that the programme was not equipped to ensure this continuity and better place the partners to compete for research funding (274). Furthermore, targeting capacity strengthening at the organisation and institutional level is a more sustainable approach (282) because it can improve and change infrastructures to accommodate research posts and sustain local leadership (98).

Comparatively, there are examples where capacity building can be developed either independently (i.e. a programme running in parallel) (98) or as fully embedded into the research programme (51). Although training for non-technical skills, such as mentorship, was not emphasised, the findings demonstrate that mentoring skills were developed informally by LMIC senior investigators supervising early-career researchers.

The demand for mentoring is high in LMICs and can address capacity strengthening at the individual level (282). Sustained mentorships are shown to positively influence health research capacity and offer a way to assist knowledge transfer amongst groups contributing to research programmes (282). Research programmes like GLOBE, spanning continents, and bringing together experts from culturally different parts of the world, may offer an efficient avenue to facilitate mentoring, even if it's allowing LMIC senior researchers to mentor LMIC junior researchers. This finding is one small step towards local leadership in LMICs and improving research capacity.

The interpretation of these findings, indicate a universality in the experiences of participating in a GMH research collaboration, despite the varying national contexts (refer to Section 1.3.2.1). Where perhaps there are striking differences were barriers to language, and in this case, the Colombian group were at a disadvantage. Although Colombia may have been at a disadvantage concerning language and interacting in English, they were perhaps considered the most competent with regards

to their research capacity. In which a UK Senior Investigator remarked '*Colombia may be because there was more than enough, the other places to build on some expertise was more to develop, Bogotá was probably the most likely place that if we stop tomorrow, that would keep going and we would have made a difference.'* (refer to Table 3 Appendix 10). Colombia is an upper middle-income country and regarding its mental health system indicators has more psychiatrists and health professionals in comparison with Bosnia-Herzegovina and Uganda (refer to Section 1.3.2.1). This apparent more attentive relationship between the UK Senior Investigator may have put the Colombian researchers at a greater advantage to get more out of the experience in participating in the GMH research programme. It could be said that the new programmes that emerged out of GLOBE - involving the Colombian research group – benefited directly from this close attentive relationship with the UK research group.

Despite the obvious differences in gender relations (refer to Section 1.3.2.1.4), the current findings do not necessarily highlight the differences in experiences across gender in this research collaboration. However, previous research has emphasised the need to improve the representation of women, including - individuals who identify as female – in GMH and global health research (322,323). Research should aim to investigate the nuances around gender relations in-depth, to work towards making GMH and global health more inclusive and representative particularly when taking into consideration the gender relations context of certain countries.

It appeared that the consensus surrounding power relations was that the expectations regarding power imbalances, was partially met, with a comment from a Bosnian researcher, who remarked: 'if they were good, they were accepted'. (R-04 Bosnian Researcher experiences). Power relations infuse global health and GMH research partnerships, and therefore compromise the ability for true collaboration, and encouraging sustainable transformation (324). Therefore, suggesting a degree of inequality. This research collaboration cannot be likened to parachute research (325), where the relationship tends to favour the HIC researchers. Egid et al. introduce the 'Social Ecology of Power' framework, a useful tool for interacting with power imbalances that operate within research partnerships at the micro, meso and macro level (324). More specifically, that although in this current relationship many individuals perceived little to no imbalance, implementing a framework, like the one suggested by Egin et al. can help to unveil the potential for imbalances to occur, and therefore be addressed within the same space (324). The notion of power relations, and the minimisation of them occurring, is integral to the decolonisation of global health, including GMH. Decolonising global health and GMH is currently underway and is referred to as a movement of disassembling structures that sustain power (267). To further add, decolonisation of global health (including GMH) combats against entrenched systems of power and domination in the campaign to

improve health globally (268). The current findings detail how the LMIC researchers perceived and experienced little to no power imbalances, especially when commenting on equity within the partnership. However, the findings did demonstrate that other aspects that are more ingrained structurally, and essentially interfere with the research process, were present. For example, the hierarchical arrangements within each research group, was noted alongside the issues with bureaucracy, impacting the ability to work and receive payment. Bureaucracy in this case could be viewed as a higher power hindering the research process, and therefore considered an active agent working against the decolonisation of the GMH research, especially in the LMIC research groups (268).

4.6.4 Implications for research and practice

This study represented the first empirical component of the GLOBE exploratory case study and has several implications for research and practice. The GLOBE research programme aimed to develop and adapt three different resource-oriented interventions while directing efforts to strengthen research capacity and facilitate mutual learning. The support and maintenance of each component required resources and effort. A limit needs to be set on a single programme's capacity to address each of these components within a given time frame. Instead of promising to address many aims, a single programme could be employed to address one aim: strengthening research capacity and resources and time dedicated to fostering research career pathways for those in LMICs (98). Since funding bodies tend to set research agendas, expecting the investigation of multiple aims, this implication may be more directed at them.

Although involving countries with geographically and culturally contrasting contexts is a novel approach, doing so requires more input from the HIC donor country to coordinate the programme, which risks shifting the power dynamic favouring the HIC (the UK, in this instance). Different intervention research designs, language barriers, and limited interaction inhibited collaborative work across the partner research groups. This study recommends keeping collaborations within specific geographic regions to maximise collective working opportunities while removing the obstacles that impede innovative thinking.

By adopting a prospective longitudinal approach to evaluating partnership dynamics, the study addressed some of the limitations highlighted in the literature (105). A key advantage of qualitative longitudinal research is the improved nuanced understanding of a phenomenon that evolves (111). It can add insight into the dynamic experiences of those engaging in GMH research programmes. For example, achieving equity is multi-faceted and complex (274), and using a longitudinal approach can

help to observe partnership dynamics in real-time to identify crucial factors influencing their success or failure (105). The study, however, did not use the findings from the expectation interviews to help inform the collaboration. Doing so could offer a helpful approach in future collaborations. Future research programmes could establish individual motivations and expectations and monitor these throughout, to ensure that they are, in the first instance, reasonable and correspond to the programme aims and resources (326). Second, these initial expectations could inform and shape the direction of collaboration as long as it is within a grant's parameters.

The current findings indicate how essential open communication, and the formation of strong professional and interpersonal relationships were in different aspects of the collaboration, such as the publication process. The relationships formed within the GLOBE collaboration helped expand research networks and new research opportunities. There should be an appreciation for the time and effort needed to achieve strong professional and interpersonal relationships, especially if the relationships are new (283).

Expectations relating to building research capacity and investing in early-career researchers need to be realistic and proportionate to the amount of funding and time dedicated to a single programme. It may be helpful to foster discussions early on where all expectations can be identified and evaluated against the time frame, the funding requirements, and the available resources supporting a research programme. For example, understanding what can be achieved equitably could be discussed within the parameters of a grant, so all expectations raised are proportionate to the grant awarded.

Furthermore, the current study indicates that the programme targeted capacity strengthening at the individual level, demonstrated by participants developing research expertise. Participants believed that research capacity strengthening was not addressed at the institutional level, which would be needed to support long term research careers. If a programme aims to strengthen research capacity to create more sustainable career pathways for LMIC researchers, resources and efforts need to be targeted at the institutional or organisational level. A more sustainable approach to the capacity building would require more funding and time to address these adequately (98,282). Research programmes should be explicit on the level of capacity building they intend to address to help to manage participants' expectations (327). The cumulative impact of developing individual-level research capacity can lead to benefits at the institutional level (328). However, infrastructural changes are required to build an environment that can accommodate research and supports its financial and administrative needs (17). Investing in local leadership was considered inadequately addressed in the GLOBE research programme. Mentorship did play a significant role during the

programme, usually occurring with the LMIC research groups. Mentorship is considered a vital aspect of career development and acknowledged as a component of capacity building (98). Studies have emphasised the importance of deliberate and systematic mentorship to support their navigation into the research community and sustain momentum (285,329).

Funding bodies should acknowledge the nuanced understanding of capacity building and the resources necessary to address the different levels. Expectations of achieving an equitable partnership were partially met due to the imbalance imposed by the UK as coordinator and grant holder, which changes can only address to the current funding system (53). At the broadest level, funding cultures and government aid need to change and steer away from paternalism; acknowledging the benefits on the HIC side should be at the heart of all partnerships (54).

Although there were no obvious differential experiences from the current findings, regarding gender relations, when evaluating the experiences of research partnerships, such as GLOBE. Given that previous research has highlighted a lack of female representation in GMH and global health research (322,323), funding bodies should focus on prioritising this gender equality.

4.6.5 Implications for this thesis

The study addressed Research Question 2 of the thesis 'What are the initial expectations of researchers participating in a GMH research programme? What are their experiences? Which expectations were met, and which were not?'. This study provides a longitudinal exploration of a global mental health research collaboration involving three LMICs, and the UK as a coordinating group. The study represents the first empirical component of the exploratory case study to evaluate a GMH research programme.

The conceptual review presented in Chapter 3 discussed the significant role of international collaboration in advancing some of the key objectives of GMH, such as strengthening capacity building, creating a representative GMH community, and facilitating mutual learning.

These findings strengthen and extend the GMH framework. Evaluating the GLOBE collaboration has allowed the examination of whether a GMH research programme can achieve the aims it sets out to do, capacity strengthening, mutual learning and providing opportunities for innovation whilst addressing equity challenges within the partnership. The findings indicate that research programmes need to be realistic about what they can achieve in a given period. Many expectations were perhaps beyond the scope of the GLOBE programme.

Despite the evident imbalance in funding, the LMIC partners could still perceive equity in the relationship through ownership and autonomy of their part of the programme due to other aspects

of the collaboration, such as open communication and relationships based on respect and trust. Strong relationships can expand existing research networks and new research opportunities demonstrated by the GLOBE collaboration. Strengthening capacity was only addressed individually due to time and resource constraints. Institutional capacity building is needed to develop adequate career pathways for researchers in LMICs. A research network was established in GLOBE, and during the programme this was expanded, demonstrating the sustainability of the research groups, and the potential for longer term research capacity building.

Chapter 5: A mixed methods evaluation of a multi-family group intervention in patients with severe mental illness in Bosnia-Herzegovina, Colombia, and Uganda.

5.1 Chapter overview

Chapter 4 findings provided an in-depth exploration of members of a GMH research programme's expectations and to what extent these were met. The previous chapter adopted a prospective longitudinal analysis of the GLOBE collaboration. It focused on partnership development by observing the dynamics as they evolved to help identify critical factors that lead to successful, effective partnerships—explicitly focusing on research capacity strengthening, equity, and mutual learning. The current chapter represents the second empirical component of the exploratory case study evaluating the GLOBE case research programme. The present chapter will focus on a mixed methods evaluation of a multi-family intervention exploring the feasibility, outcomes and experiences of a multi-family group intervention delivered in three LMICs, Bosnia-Herzegovina, Colombia, and Uganda. The conceptual framework highlighted the desire for GMH to create a global community and to translate findings from a diverse range of settings (206). The framework also emphasised that limited research exploring the feasibility and acceptability of implementing interventions in LMICs is limited (204,208,210,223,227). The resource-oriented interventions delivered in GLOBE represented exploratory studies with small numbers and therefore aimed to address the lack of research exploring feasibility.

The literature for conducting a mixed-method evaluation is described in the rationale. The findings indicate that the multi-family group intervention is feasible within each LMIC. There were improvements observed in some of the outcomes, particularly when exploring the change in subjective quality of life (MANSA) score after combining the data from each LMIC (n=91). The additional analysis examined whether any key predictors were significantly associated with the change in MANSA score, and almost all of them were found not to be. However, differences were observed in adherence to the interview and experiences. These findings are discussed concerning previous literature, the implications in research and practice, and finally, the wider implications for the thesis are deliberated.

5.2 Rationale

This thesis aimed to evaluate a GMH research programme using the GLOBE research programme as an exploratory case study. Using the GLOBE study as an exploratory case study, this thesis will employ a mixed methods approach to evaluate the multi-family group intervention delivered in three culturally different LMICs.

The conceptual framework - presented in Chapter 3 - demonstrated the diversity of GMH activities. The review emphasised how the GMH movement called for the scale-up of mental health services to address the gaps in treatment provision and reduce the wide treatment gaps in LMICs (57,330). Scaling-up interventions and services initially implied the scale-up of universally packaged evidence-based interventions (331,332), prioritising evidence over local relevance and needs. However, the review highlighted that the GMH research and practice occurring in LMICs had evolved to prioritise innovation, low-cost interventions, and service delivery which is more locally relevant due to efforts in adapting to the local context. The review also highlighted that focusing on and supporting community care improves the capacity to deliver psychosocial care and treatments (57,199,202,241,242). Furthermore, the framework demonstrated the role of communities in GMH endeavours, especially in intervention research and as an integral part of delivering services, especially in LMICs.

Patel and Prince describe scaling up as assuming two distinct routes, integrating mental healthcare and continuing community care to replace institutionalisation (57). Community-based participatory approaches are becoming more commonplace for improving mental health service provision and outcomes (34,333). Community-based care is less centred around an individual's distress but is more concerned about improving and reframing self-image and promoting self-management (334). Thornicroft *et al.* define community mental healthcare as having the ability to adopt a recovery-oriented approach, which recognises individuals' strengths and weaknesses (335). Treatments and interventions focus and boost an individual's capacity to ascribe to a positive sense of self, understand and manage their own illness, and engage with activities beyond the illness (335,336).

The GMH scaling-up agenda emphasises the role of communities in mental health care (34,337). The deinstitutionalised process of mental healthcare has meant that families and other individuals from the community are being placed with the burden of care, which would have been the responsibility of professionals in services (338). There is growing evidence for involving patients and their carers (whether they are family members, friends, or caregivers) and making them integral in managing their illness. Family involvement can occur in many ways, including treatment management and safeguarding effective treatment plans (339). In the context of patient recovery, adverse family environments, where stigma and discrimination are high, can lead to poorer outcomes for those suffering from SMI diseases such as schizophrenia (340). Therefore, involving family members or friends has the benefit of reducing stigma and improving the community's perspective of mental illness, and building an environment that is more conducive for those recovering from mental illness by enhancing family relationships. Hinton *et al.* highlighted that many psychosocial interventions tend to focus on the individual suffering, therefore, ignoring the opportunities to consolidate

treatment by linking with families (341). Collectively this previous research has led to the development of interventions aimed at improving the role of families in patient care (342) to tackle the burden, treatment, management and recovery. The notion of incorporating family members, as a part of community participation, in the advancement of the core objectives of GMH can help bring together the local and global entities and help strengthen their bond (3).

There is a discrepancy between the burden of mental health illnesses and the availability of appropriate evidence-based services being significantly wide in LMICs (2,337), suggesting a need to enhance community mental health care in LMICs. In HICs, every one in five individuals with depression will receive adequate care, whereas, in LMICs, only one out of twenty-seven will receive care (6). Family involvement is recognised as part of community-based healthcare, although the application of its use is limited, especially in LMICs (341). Engaging families in treating and managing individuals suffering from mental distress represents an opportunity to promote positive change by improving stigma and understanding mental health (337). Family engagement could be significant for the changing mental health care in LMICs, as families represent highly regarded social connections entrenched in many countries' cultural traditions (337,341,343). Kohrt *et al.* even consider families as representing a component of non-specialists, such that they are integral to the recovery and management of a mentally distressed family member (337), while also addressing the lack of mental health professionals in LMICs (337). Nevertheless, involving family members does not come without risks, as their participation could harm an individual's mental health by not being supportive or fully engaged (337). Therefore, an intervention must be mindful of this.

It is recognised that family interventions to treat psychosis and schizophrenia show efficacy and effectiveness, yet much of this evidence has been demonstrated in high-income settings (344). A recent systematic review and meta-analysis of community-based psychosocial interventions in LMICs reported Interventions that engage with family members have demonstrated a reduction in relapses and hospitalisation, as well as increasing adherence to medication for those with schizophrenia (345). However, the findings from this review indicate evidence around psychosocial interventions that include some elements of family involvement, but there are few studies in LMICs that examine family involvement alone. Moreover, further research is needed to establish feasibility and acceptability of family interventions in low-resourced settings (341,345).

There are many types of family interventions. The fundamental features of these interventions tend to be around improving skills and knowledge in problem-solving, psychoeducation and communication (346). No family interventions utilising a resource-oriented approach have been tested and developed in LMICs. This thesis will adopt a mixed methods approach to examine a

resource-oriented psychosocial multi-family group intervention in-depth. The intervention utilises a 'trialogue' approach, a form of open communication in groups comprising mental health professionals, patients and their families (347). This approach draws on the components of trialogue and psychosis seminars, where learning occurs through shared experiences, mutual support, and psychoeducation. Given the limited application of multi-family groups in LMICs, this study explores a multi-family group intervention's feasibility, experiences, and outcomes for individuals with SMI. To address the limited evidence exploring family interventions in LMICs, the study will focus on the three countries, Bosnia-Herzegovina, Colombia, and Uganda, and identify the commonalities and differences in how this intervention is delivered.

5.3 Aims

This study was the final component of the exploratory case study, using the GLOBE research programme to explore different aspects of a resource-oriented community-based family involvement intervention. It focused on feasibility, outcomes, intervention fidelity and experiences, and aimed to address the research question 3 outlined in the introduction chapter, with additional sub-questions.

Research Question 3: What are the feasibility aspects, experiences, and outcomes of a multi-family group intervention? How do they compare across three LMICs?

Narrower questions were proposed to help the investigation address this broad research question.

i. How did patients' quality of life and other outcomes change during the intervention period?
ii. How did family members and health professionals' outcomes change during the intervention?
iii. What were the barriers and enablers of delivering the intervention?
iv. How were the groups experienced by participants, i.e., patients, family members/friends and mental health professionals?
v. Whether the multi-family group intervention is feasible in the three contexts, and comparing the commonalities and differences?

5.4 Methods

5.4.1 Study design

This study represents the second component of the exploratory case study, which proposed a mixed-methods evaluation of one of the interventions delivered by GLOBE. The study adopted a process evaluation of a multi-family group intervention being delivered in the three LMICs. The study was mainly informed by the Medical Research Council (MRC) process evaluation framework for evaluating complex interventions, highlighting the following components: implementation, impact

processes, context, and relationships between these components (348). The study utilised both quantitative and qualitative data to conduct a process evaluation, including a patient analysis of the primary and secondary outcomes, and a qualitative meta-synthesis of participant experiences. The former will also pool the datasets from each country to explore the association between the differences in the change of score across any participant-level characteristics, by employing an individual participant data (IPD) meta-analysis.

5.4.1.1 Process evaluation

This study followed the principles in agreement with MRC guidelines (320,348), conducting a mixed method evaluation to evaluate implementation fidelity and establish a contextual analysis and understanding of intervention delivery. The process evaluation involved multiple elements; first, process data analysis - focusing on fidelity and integrating the process and outcome data. The integration of process and outcomes data to help establish implementation variability on the impact of outcomes (348). This quantitative aspect of the process evaluation will be supported by the qualitative synthesis of interviews conducted to capture the intervention experiences of each participant – patient, family member (or caregiver) and health professional.

The quantitative stage of the evaluation focused on quantitative programme activity and process data, fidelity, outcome impact for each participant and, as mentioned, establishing any association between process data (fidelity) and outcome data. The qualitative stage of the evaluation focused on the synthesis of qualitative interviews, whereby all participants (patients, family members, and health professionals) were interviewed about their intervention experiences. In addition to interviews, the topics discussed in each session per group per country were qualitatively analysed to provide more context of the intervention's content (348).

Intervention fidelity partly intersects with some of the elements of process evaluation (349,350), and it can modify the relationship between the intervention and the designed outcome. Intervention fidelity measures focused primarily on adherence, dosage and participant receptivity and were informed by the framework derived from Carroll *et al.* (350). Carroll *et al.* identified five elements that need to be measured in assessing fidelity: intervention adherence, intervention dosage; quality of delivery; participant receptivity; and programme differentiation (350). Adherence refers to how a programme is implemented in the way it was intended initially or stipulated in the protocol (350). Dosage relates to the quantity or duration of the intervention a participant has been given or received; in other words, it refers to the frequency or duration of the intervention being delivered. Quality of delivery represents the more unclear element of fidelity and describes how an intervention is delivered, in some cases being compared to a theoretical benchmark. Participant

receptivity relates to what extent each individual genuinely engages with the intervention, and in the context of evaluation, it is called reaction evaluation (351). Finally, programme differentiation indicates which aspects or features of the intervention are fundamental, and therefore if eliminated from the intervention, it would not have its expected outcome. Based on the framework developed by Carroll *et al.* and the availability of specific data stemming from the GLOBE programme, the elements of fidelity that were evaluated were adherence, dosage, and participant receptivity. The subsequent section will detail how each data corresponds to each component from the intervention fidelity conceptual framework.

The GLOBE programme involved testing and developing three resource-oriented approaches, but only the multi-family intervention was evaluated in-depth. Furthermore, as outlined in the introduction chapter (please refer to Section 1.3.3.1), each country assumed a range of study designs, including non-controlled and non-randomised controlled trials and RCTs. Each country has analysed their country-specific data corresponding to the three resource-oriented interventions, and these findings are published or awaiting publication (352–355). This current evaluation will synthesise findings from the multi-family group intervention, focusing only on the intervention arm from each country, and use the findings to draw more generalisable conclusions.

5.4.2 Multi-family groups intervention

5.4.2.1 Background

The intervention involves family members or friends as a part of the patient's care and functions to improve family communication, overall care, and outcomes. It adheres to the principles of trialogue and psychosis seminars, creating a space for sharing and learning of experiences, support and psychoeducation (356,357).

According to the intervention protocol, the multi-family group meetings were intended to accommodate five to six patients, one or two family members or friends per patient, and one or two mental health professionals (59). In this scenario, mental health professionals included psychiatric community officers, occupational therapists, social workers, nurses, psychiatrists, and psychologists. Therefore, enabling flexibility for each country in terms of the availability of personnel. The groups held monthly meetings, where all participants would meet at health centres or 'easily accessible locations ' (p.4) (59). The mental health professional would usually act as chair to facilitate the trialogue discussion during the sessions. However, on some occasions, a patient or family member would alternate the role, depending on the participants' responsiveness. Each meeting would adhere to a simple framework involving mutual respect, but generally, the sessions offer a space for flexibility in the context where priorities change.

The multi-family groups in this study drew on the fundamental principles of trialogue and psychosis seminars, where learning occurs through shared experiences, mutual support, and psychoeducation. The trialogue represents the convergence of communication arising from the three groups of individuals who are integral in managing and understanding mental disorders – involving the individuals who have a mental illness, the family members, and the mental health professionals (347). An essential principle of the trialogue meetings is that they occur in a neutral setting, outside of any familial, institutional, or therapeutic spheres, to enable a horizontal communication space (347). With this equal footing in mind, the protocol stipulated that the same mental health professional would lead only two groups of multi-group sessions during the intervention as a way to establish trust and continuity (59).

Traditionally, trialogue groups comprise of patients, family members and mental health professionals, and meet frequently to engage in open discussion regarding experiences of mental health and ways to manage problems arising with these. The approach prioritises the rights of both the patients and family members, requires mutual respect from all group members, and encourages sharing experiences and learning within and across families and service providers. The fundamental feature of the multi-family group intervention that distinguishes it from a traditional or usual clinical encounter is communication. Communication in trialogue groups is intentionally detached from prescribed roles and power imbalances, and functions primarily to generate knowledge. Topics of discussion benefit from the wealth of knowledge and experience of those integral in the management and experiences of mental disorders. The meetings provide a unique space to exchange this, offering a comprehensive problem-solving resource (347). This approach promotes various perspectives of those in similar situations within each group, where participants discuss their own experiences and learn from others. Learning is encouraged by hearing different interpretations and managing similar experiences, supported by subjective views and objective knowledge. Skills for effective collaboration can be developed, which can be used to enrich situations beyond the sessions themselves, such as clinical and seeking solutions for daily problems.

The trialogue movement introduced new concepts to a heavily dominated discourse by medicalised mental health and illness models in the early 1990s. The approach offers an opportunity to develop a nuanced understanding of mental disorder experiences for those engaging with it, in this case, patients, family members, and health professionals. It has the potential to improve family dynamics and provide an outlet for these three groups of individuals, integral in the management of a mentally unwell patient, to collaborate on an equal footing. The overarching aim is that these groups of individuals evolve to view each other as experts, either by experience or training.

5.4.2.2 Participants, setting and timescale

Regarding the participants, patients were required to meet a specific inclusion criterion to participate in the study. Patients were eligible if they were 18-65 years of age, had received an SMI diagnosis, were currently outpatients, were not participating in another research study at the time, and could provide consent. If patients demonstrated any indication of cognitive impairment that would impact any of the assessments conducted during the programme, they were excluded. Eligible patients were then asked to select one or two family members or friends to attend the multi-group sessions. Participants were not remunerated for their involvement, only for travel costs and research interviews.

As part of the research programme, each country was responsible for deciding the type of study design to test the multi-family groups. In Bosnia-Herzegovina, the intervention was tested as an exploratory RCT involving 72 patients with schizophrenia and non-affective psychosis (ICD-10 F20-29). These were recruited and randomised into either the intervention or the control group. Those assigned to the control group were offered treatment as usual without offering family involvement. Whereas, in Uganda (controlled) and Colombia (non-controlled), the intervention was tested as an open trial with 30 patients (ICD-10 F20-29, F30-F39) each. For this thesis, due to the different study designs assumed by each LMIC, it was deemed appropriate to focus solely on the participants who received the intervention and disregard any comparison with control groups, mainly as control groups were not uniform in design across the LMICs (Refer to Section 1.3.3.1 for the different study designs across the three LMICs).

The analysis assumed a before-after intervention approach, especially when exploring the primary and secondary outcomes. The GLOBE protocol stipulated that the period for this intervention was six months, whereby groups would ideally meet monthly. Those implementing the intervention in the three countries received support from their research groups and the UK coordinating group during the intervention period. There was a flexible period (6-12 months) denoted as the six months after the intervention period, whereby support was reduced, and the decision to continue delivering the intervention was in the hands of the implementers and the intervention recipients. Data were collected during the intervention period concerning fidelity, such as adherence, dosage, and participant receptivity. Outcome measures and other additional variables were collected at baseline, 6-months at the end of the intervention period and 12-month follow-up. Each country's research group conducted qualitative interviews with all participants (patients, family members, and clinicians) at the six-month time point. Each research group developed topic guides to capture data on experiences of the intervention, barriers and enablers, proposed adaptations and any issues relating to implementation.

Pakistan joined the GLOBE collaboration much later, and they published the findings of their delivery of the multi-family group intervention (358). However, the Pakistani research group members were not included in the analysis in Chapter 4 due to joining later. Moreover, the Pakistan study focused on patients with depression and anxiety, as opposed to patients with SMI as was the case for the three LMICs in this current study. Therefore, it was decided not to include them in the analysis of this study to be consistent.

5.4.2.3 Ethical considerations

Given that the GLOBE study captured all data used in this study, applying for further ethics was not required. However, ethical approval and positive ethical opinions were obtained from the relevant ethics committees in the LMICs and the UK. For studies in Bosnia-Herzegovina: (1) The clinical Centre University of Sarajevo School of medicine research ethics committee (Eticki Komitet), approval received on 18/09/2018; (2) Queen Mary ethics of research committee: positive opinion received 30/10/ 2018, ref: QMERC2018/66. For studies in Colombia: (1) IRB of Javeriana University, approval received on 19/09/2018, Ref: 2018/122; (2) Ethics Committee of the Hospital Departamental Psiquiátrico Universitario del Valle, Cali, approval received on 08/10/2018; (3) Ethics Committee of Clínica La Inmaculada, approval received on 16/07/2018; (4) Ethics Committee of Clínica Fray Bartolomé: approval received on 14/11/18; (5) Queen Mary Ethics of Research Committee: positive opinion received 30/10/2018, Ref: QMERC2018/59. For studies in Uganda: (1) Makerere University College of Health Sciences, School of Medicine Research Ethics Committee, approval received on 19/09/2018, Ref: 2018–096; (2) Uganda National Council for Science and Technology, approval received on 01/11/2018, Ref: SS 4807; (3) Queen Mary Ethics of Research Committee, positive opinion received 30/10/2018, Ref: QMERC2018/67.

5.4.3 Measures

The objective of the current study was to evaluate the feasibility, outcomes, and experiences of a multi-family group intervention. The MRC process evaluation framework and implementation fidelity framework (348,350) was used to help inform the data to be utilised.

Socio-demographic and clinical characteristics were collected at baseline only. As mentioned, the quantitative stage of the evaluation focused on quantitative programme activity data, fidelity, and outcome impact and measuring any association between intervention components and outcome score. These involved the primary, secondary, and additional outcome measures and variables associated with implementation fidelity. The qualitative stage of the evaluation focused on synthesising the interviews conducted to establish the participant's experience with the intervention. Data were collected for all participants at baseline, at the end of the intervention

period (six months) and at follow up (twelve months). They were captured using standardised case report forms (CRFs) and entered into a REDCap database by each research group.

5.4.3.1 Socio-demographics and clinical characteristics

At baseline, all participants reported their socio-demographic and clinical characteristics. The socio-demographic measures included gender, age, ethnicity, educational attainment, employment, and mental and physical diagnoses.

5.4.3.2 Primary and secondary outcome measures

The primary and secondary assessments were collected at the baseline, six- and twelve-month stages.

(1) ***Subjective quality of life*** using the Manchester Short Assessment of Quality of Life (MANSA) (359). The MANSA comprises 12 life domains, each measured using a Likert scoring, and an overall mean score is generated to indicate the subjective quality of life. Subjective quality of life was the primary outcome of the original study.

(2) ***Mental health symptoms*** were assessed using the 24-item Brief Psychiatric Rating Scale (BPRS). Similarly, to MANSA, the BPRS rates items between 1 (not present) and 7 (extremely severe). The BPRS assessment was translated into local languages, researchers were trained in delivering the assessment, and interrater reliability was established before baseline (59).

(3) ***Objective social situation*** was assessed using the Objective Social Outcomes (SIX), measured from 0 (poorest social situation) to 6 (best social situation) and determines whether patients are employed, in accommodation and living with others and socialise with friends (360).

(4) ***Mental health service use*** was captured on a modified version of the Client Service Receipt Inventory (CSRI) (361). Hospitalisations, medication use, and consultations with mental health professionals within the last three months were collected.

5.4.3.3 Additional outcome measures

The primary and secondary measures listed above were collected uniformly across countries. Additional outcomes were captured in only some countries to accommodate local priorities and are reported in Table 5.1. Family members, patients and health professionals completed assessments at baseline, six months (at the end of the intervention period), and twelve months (at the end of the flexible period).

Table 5.1 Additional outcome measures collected by country

	Additional Outcome Measures	Bosnia-Herzegovina	Colombia	Uganda
Patients	Internalised Stigma of Mental Illness Inventory (ISMI) (362)			✓
	Self -esteem Rating Scale (SERS) (363)	✓		
	Insight and Treatment Attitudes Questionnaire (ITAQ) (364)	✓		
	Medication Adherence Rating Scale (MARS) (365)			✓
Healthcare professionals	Scale to Assess Therapeutic Relationships in Community Mental Health Care (STAR-C) (366)	✓		
Family Members/Friends	Burden Scale for Family Caregivers (BSFC) (367)	✓		
	Community Attitudes Towards Mental Illness Scale (CAMI) (368)	✓		
	Zarit Burden Interview (ZBI) (369)			✓

5.4.3.4 Intervention fidelity measures

Data on fidelity measures were collected independently from the CRFs, therefore not entered in the REDCap database, and were recorded on an Excel spreadsheet. Each country organised the data by multi-family groups over the course of the intervention period, capturing session attendance, the reasons for not attending, the duration of each session in minutes, and the topics discussed in each session. These data were consistent with the implementation fidelity framework (350), focusing on adherence, dosage and participant receptivity. The candidate requested this data, which was cleaned, and merged with the datasets exported from the REDCap database and prepared in advance of analysis.

5.4.3.5 Experiences with the intervention

As a part of the GLOBE programme, after the six-month intervention period, a subset of participants who received the intervention were invited to a semi-structured in-depth interview. The interviews served to capture the participants' experiences, which would be used to triangulate with the quantitative data and provide a qualitative component to the evaluation. Purposive sampling was used to capture a range of perspectives determined by the level of engagement of the participants. The interviews were audio-recorded, transcribed, and uploaded to the REDCap database. Each country utilised thematic analysis to identify and develop overarching themes (197). Bosnia-Herzegovina and Colombia conducted their interviews in their native language, whereas Uganda conducted them in English. Given that each country had planned to qualitatively analyse and translate the findings into English to prepare the manuscript, it was deemed appropriate to conduct a qualitative meta-synthesis (370), which will be described in detail in the next section.

5.4.4 Data analysis

5.4.4.1 Quantitative

The quantitative stage of the analysis was conducted largely in Stata 14.1. Descriptive statistics of demographic variables were reported as the mean and standard deviation for continuous data and percentages for categorical data. Shapiro- Wilk and kurtosis tests were used to assess for normality and skewness of the outcome variables (371). Paired t-tests were used to assess changes in outcome measures which were normally distributed over time. A p-value < 0.05 was considered statistically significant. Furthermore, where outcomes failed to meet normality assumptions, the non-parametric test, Wilcoxon Signed Rank Test, was used to test whether there were significant differences between dependent groups (372). McNemar's test was used to determine any statistical difference between paired proportions (373). Pearson's correlation coefficient was used to establish the presence of correlation between baseline scores and the change in score of outcome measures (374).

The effect size was calculated to determine the intervention's change on the primary and secondary outcome measures. It helps compare country-level outcomes to refer to effect size and identify similarities and differences in the level of improvement across the three countries. Cohen's d represents one example of the effect size computed in this current study by paired t-tests (375). Other effect sizes were employed when conducting non-parametric tests (e.g., Wilcoxon Signed Rank Test).

Given that part of the aim was to explore the impact of the intervention on outcomes, it was of interest to quantify the change in score for the primary and secondary outcomes, using the difference between the patient's baseline and 6-months scores. Due to these outcome measures being uniformly captured across the countries, it was helpful to combine the data to explore the differences in change scores at a country level and overall. As part of the process evaluation, integrating process and outcome data is crucial to identify whether implementation variability impacted the outcome data (348). In addition to exploring outcome change scores, it was considered valuable to examine whether there were any associations between the differences in the change of score across any participant-level characteristics. Therefore, based on these interests and having access to each country's individual-level data, an IPD meta-analysis was conducted.

Individual participant data (IPD) meta-analysis

The rationale for employing an IPD meta-analysis over a traditional meta-analysis was to access individual-level data for each country. An aggregate data (AD) meta-analysis is a statistical approach

that combines the findings from multiple studies to quantify effect sizes and their uncertainty to produce summary (pooled) results that can inform clinical decision making (376).

The main reason for pursuing an IPD meta-analysis is that estimates can be adjusted for baseline factors, where only unadjusted estimates can be produced in AD meta-analysis. This improves the statistical rigour, as well as allowing for an assessment of potential confounding variables (377). In this study, estimates produced from the IPD meta-analysis were adjusted for baseline primary and secondary outcome scores, and other variables such as sex, age, and fidelity factors were explored for their confounding or explanatory influence on the change in score. Furthermore, AD meta-analysis quantifies the genuine differences in the effect across studies, known as 'between-study heterogeneity', and identifies factors that can modify the effect.

Yet, there are many disadvantages to AD meta-analysis. The approach collapses participant level information into study-level summaries, such as mean age and proportion of males, and therefore loses power to explain any participant-level variation. AD meta-analysis can demonstrate the level of heterogeneity but not what causes it. Furthermore, you cannot examine whether some individual participants improve better than others with an AD meta-analysis approach.

An IPD meta-analysis utilises the original, raw, individual-level data from primary studies and synthesises this to summarise evidence. The advantage of conducting an IPD meta-analysis is that it can produce adjusted estimates that may reduce the heterogeneity of the effects. It also can obtain meta-analysis results for specific subgroups of participants and assesses differential effects across individuals (377). Despite the advantages, there are challenges to employing an IPD meta-analysis. They usually relate to its time-consuming and collaborative factor, the latter involving lengthy discussions with research groups to obtain the required data (378). Yet, given that the data for the three countries were readily available via having access to the REDCap database, these challenging aspects of an IPD meta-analysis were fortunately avoided.

In order to obtain summary estimates, specifically the mean differences and corresponding standard errors for the change in score of the primary and secondary outcomes of the differences between time points baseline and 6-months, a two-stage IPD meta-analysis was conducted (379). A two-stage inverse-variance random-effects meta-analysis (via the *ipdmetan* command) using Stata version 14.0 (380) was used to estimate pooled mean differences in the score and explore the individual-level characteristics. The first step analyses the effects within each country before aggregating them across the countries. This technique involved fitting a specified model to the data from each country to obtain the summary estimates. For the change in score, a linear regression was used to regress the difference in score. Each participant-level predictor was added to the model to test for associations, adjusting for the baseline and change scores as dependent variables. The patient

characteristics included: age, sex, employment, living situation and baseline MANSA score. Age was included as a continuous variable to not remove any variation by collapsing into categories. Employment and living situation were dichotomised into 'paid employment vs unemployed', 'alone vs with family/friends/partner', respectively. The second step uses the summary estimates derived from the first step and combines them across the countries, using a random-effects meta-analysis. Using a random-effects meta-analysis implies that the true effects are allowed to differ across the countries (due to unexplained between-study heterogeneity).

Forest plots were produced to visually present the heterogeneity and establish the certainty of each effect size by plotting the confidence intervals (CI). Heterogeneity was assessed using the Cochran's Q homogeneity test and I^2 statistic (381,382). The former, Cochran's Q test, is the traditional test for heterogeneity in meta-analyses and is based on the chi-square distribution. When the result is large, it indicates greater variation across studies than within studies. However, the test can be limited when a small sample of studies is small.
The latter, the I^2 statistic, which estimates the percentage of between-study variability, has limitations similar to Cochran's Q. When the sample is small, the point estimate generated needs to be handled cautiously, and interpreting the confidence intervals rather than the actual point estimate is favoured (383). Therefore, if the I^2 statistic yields wide confidence intervals, it may not be accurate in its ability to estimate heterogeneity. When there is no overlap between studies in a forest plot, heterogeneity between the studies is considered doubtful.

5.4.4.2 Qualitative

This study aimed to capture a resource-oriented multi-family group intervention's feasibility, outcomes, and experiences. The intervention was centred around the participants engaging in a trialogue and discussing pre-determined topics. Topics for each group were qualitatively analysed using content analysis. A meta-qualitative synthesis was conducted using the existing manuscripts from each country to capture the experiences of those who received the intervention, comparing them across the three LMICs. The findings and interpretation of these manuscripts were synthesised to develop and identify overarching themes relating to the participant's experiences. NVivo 12 was used to import and manage the publications or manuscripts from each country to conduct a meta-qualitative synthesis.

The topics discussed were extracted from the Excel spreadsheet used by each research group to record the information relating to attendance and session duration. Each topic was entered as a brief description of no more than one sentence. The candidate organised the topics discussed by each of the six groups per country into a matrix. Qualitative content analysis was used to identify

common topics across the groups and break them into categories defined by the key topics discussed (196). Qualitative content analysis was deemed appropriate as it offered an unobtrusive but valid approach to analysing this type of data (196). The data was free-text, so it did not require an in-depth analysis (187). Further advantages of, and alternatives to, using qualitative content analysis can be found in Chapter 3 Section 3.4.5.

Qualitative data were collected, analysed, and reported for the meta-qualitative synthesis according to the Enhancing Transparency in Reporting the Synthesis of Qualitative Research (ENTREQ) statement (384). Although many framework items were not applicable for this synthesis, a search was unnecessary, and all the manuscripts were available to the candidate. The appraisal item was omitted because the aim was to synthesise the manuscripts from the three LMICs, to establish the participants' experiences of the multi-family group intervention.

GLOBE expanded the collaboration to include Pakistan, and they published their findings on the multi-family group intervention for patients with depression and anxiety (358). This study demonstrated that multi-family groups were feasible and exhibited positive findings, reflected by large effects sizes. Participants reported how the groups were perceived as a safe environment for shared learning. The meetings helped improve a sense of belonging and contributed to better emotional and behaviour management.

Although data from this study were available when the candidate was conducting the analysis, this paper was not included in the study for consistency. For the intention of this study to correspond with the earlier Chapter 4, purposive sampling was used to select the manuscripts of the original three LMICs. It is useful in qualitative analysis to have a secondary reviewer to help review and analyse manuscripts (385). However, various factors relating to the time and availability of additional researchers prevented this from occurring. The candidates' supervisors reviewed the findings. The ENTREQ item list can be found in Appendix 11.

This part of the study aimed to synthesise the participant's experiences of a multi-family group intervention**.** This approach involved a secondary analysis of the findings and interpretation of each country's manuscript or publication. This element of this study adopted a meta-qualitative synthesis due to transcripts being in the native language of each country (Bosnian, Spanish and Luganda). Yet, the publications were all written in English, making them more accessible for the candidate to analyse.

Qualitative meta-synthesis was deemed appropriate for synthesising and incorporating findings from qualitative studies, as it seeks to identify themes or constructs common across qualitative studies

(370,386). This study used the three-stage thematic synthesis method outlined by Thomas *et al.* (387). This method involved the line-by-line coding of the findings of the original manuscripts, the arrangement of these free codes into descriptive constructs or themes, and then the inductive development of these descriptive themes into analytical themes (387). The themes derived in this study reflected the experiences of the intervention, such as the feasibility and acceptability. But also capturing views on the specific components of the multi-family group intervention, examples including but not exhaustive: the *engagement in a trialogue* and the *formation of horizontal relationships*. The approach is ideal for identifying the barriers and facilitators of intervention delivery and uptake (388), which is helpful in this study to determine what was perceived as positive or negative in the experiences of the multi-family groups for each country.

This method allowed for a comparison of whether the experiences across the different countries, capturing the views of the various stakeholders, could potentially explain some of the differences in the changes in outcomes of the multi-family group intervention. Hypotheses were derived thematic synthesis and were used to support and complement the quantitative findings. The advantage of the approach is that it provides an in-depth understanding of a specific phenomenon, in this case, by exploring the experiences, meanings, and perspectives of participants (386). Meta- syntheses can build on and enhance existing knowledge and interpretations of specific areas of research or research phenomena (389).

5.5 Results

5.5.1 Demographic and clinical

The CONSORT diagram illustrating the flow of participants through the trial can be found in Appendix 12. Tables 5.2-5.4 display participant characteristics across the three countries. The patient cohorts exhibited similarities with an average age of 43, 40 and 36 in Bosnia-Herzegovina, Colombia, and Uganda, respectively. Regarding patients, Colombia and Uganda had similar rates of disorders, with bipolar disorder being the most common disorder in both countries at 52% and 40%, respectively. In Bosnia-Herzegovina, the most common disorder was schizophrenia, represented by 97% of patients. Family members in Bosnia and Colombia predominantly consisted of the patients' parents, 54% and 58%, respectively. In Uganda, family members were represented by both parents and siblings at 29% and 24%, respectively.

Table 5.2 Patient characteristics

	Bosnian patients **n = 36**	Colombian patients **n = 31**	Ugandan patients **n = 30**	Total **n= 97**
Mean age in years (sd)	43 (13)	40 (12)	36 (14)	40 (13)
Sex n (%)				
Male	12 (33)	16 (52)	9 (30)	37 (38)
Female	24 (67)	15 (48)	21 (70)	60 (62)
Marital status n (%)				
Single/unmarried	17 (48)	22 (71)	19 (63)	58 (60)
Married	15 (42)	2 (6)	8 (27)	25 (26)
Divorced	3 (8)	1 (3)	0 (0)	4 (4)
Other	1 (3)	6 (19)	3 (10)	10 (10)
Education n (%)				
No formal education	0 (0)	0 (0)	3 (10)	3 (3)
Primary or less	4 (11)	3 (10)	5 (17)	12 (12)
Secondary	22 (61)	8 (26)	18 (60)	38 (39)
Tertiary or higher	10 (28)	12 (39)	4 (13)	26 (27)
Other	0 (0)	8 (26)	0 (0)	8 (08)
Housing status n (%)				
Lives alone	2 (6)	5 (16)	1 (3)	8 (8)
Lives with partner, family, or friends	34 (94)	26 (84)	29 (94)	89 (92)
Employment n (%)				
Full time	8 (22)	4 (13)	7 (23)	19 (20)
Part time	1 (3)	1 (3)	3 (10)	5 (5)
Unemployed	13 (37)	18 (58)	15 (50)	46 (47)
Student	2 (6)	2 (6)	2 (7)	6 (6)
Other	11 (31)	6 (19)	3 (10)	20 (21)
Primary diagnosis n (%)				
Schizophrenia	35 (97)	11 (35)	5 (17)	51 (53)
Acute and transient psychotic disorder	1 (3)	0 (0)	0 (0)	1 (1)
Bipolar affective disorder	0 (0)	16 (52)	12 (40)	28 (29)
Depressive disorder	0 (0)	4 (13)	3 (10)	7 (7)
Mania without psychotic symptoms	0 (0)	0 (0)	6 (20)	6 (6)
Epilepsy	0 (0)	0 (0)	4 (13)	4 (4)

Table 5.3 Family member characteristics

	Bosnian relatives **n = 28**	Colombian relatives **n = 43**	Ugandan relatives n = **49**	Total **n=120**
Sex n (%)				
Male	15 (54)	8 (19)	17 (35)	40 (33)
Female	13 (46)	35 (81)	32 (65)	80 (67)
Marital status n (%)				
Single/unmarried	3 (11)	8 (19)	12 (24)	23 (19)
Married	19 (68)	17 (40)	27 (55)	63 (53)
Divorced	3 (11)	3 (7)	1 (2)	7 (6)
Other	3 (11)	15 (35)	9 (18)	27 (23)
Education n (%)				
No formal education	0 (0)	0 (0)	2 (4)	2 (2)
Primary or less	1 (4)	10 (23)	15 (31)	26 (22)
Secondary	22 (79)	2 (5)	20 (41)	44 (37)
Tertiary or higher	5 (18)	21 (50)	12 (24)	38 (32)
Other	0 (0)	9 (21)	0 (0)	9 (8)
Employment n (%)				
Full time	13 (46)	1 (2)	30 (61)	44 (37)
Part time	1 (4)	20 (47)	4 (8)	25 (21)
Unemployed	5 (18)	2 (5)	4 (8)	11 (9)
Student	1 (4)	1 (2)	3 (6)	5 (4)
Other	8 (29)	19 (44)	8 (16)	28 (23)
Relationship n (%)				
Parent	15 (54)	25 (58)	14 (29)	54 (45)
Spouse	8 (29)	1 (2)	4 (8)	13 (11)
Child	2 (7)	2 (5)	5 (10)	9 (8)
Sibling	1 (4)	5 (12)	12 (24)	18 (15)
Other	2 (7)	11 (26)	14 (29)	27 (23)

Table 5.4 Clinician characteristics

	Bosnian clinicians **n =14**	Colombian clinicians **n = 8**	Ugandan clinicians **n = 6**	Total **n= 28**
Sex n (%)				
Male	4 (29)	6 (75)	3 (50)	13 (46)
Female	10 (71)	2 (25)	3 (50)	15 (54)
Marital status n (%)				
Single/unmarried	2 (14)	1 (13)	2 (33)	5 (18)
Married	10 (71)	6 (75)	4 (67)	20 (71)
Divorced	2 (14)	0 (0)	0 (0)	2 (7)
Employment n (%)				
Full time	14 (100)	2 (25)	6 (100)	22 (79)
Part time	0 (0)	6 (75)	0 (0)	6 (21)

5.5.2 Intervention fidelity

As per Carrol *et al.'s* framework on fidelity (350), the fidelity factors explored were adherence, dosage, and participant receptivity. This section presents the quantitative data focusing on adherence to and dosage of the intervention. Participant receptivity was examined using participants' attendance and presented as part of the synthesis of participants' experiences.

Over the 6-month intervention period, Bosnian groups met on average five times (range 4-6). The mean number of sessions attended was 3.5 per patient (range 0-6) and 2.6 per family member (range 0-6). Patient attendance was 72% in the first session and 56% by the final session. The mean duration of each session was 95 minutes (range 60-110), and the mean number of attendees at each session (patients, family members and clinicians) was 7 participants.

Over the six months, Colombian groups met five times (range 5-6). The mean number of sessions attended was 3 per patient (range 1-6). Patient attendance was 80% in the first session and 60% by the final session. The mean duration of each session was 69 minutes (range 47-90).

Over the six months, all six Ugandan groups met six times. The mean number of sessions attended was 4.5 per patient (4-5) and 7.3 per family member (range 5-9). Patient attendance was 87% in the first session and 91% by the final session. The mean duration of each session was 93 minutes (range 60-125), and the mean number of attendees at each session (patients, family members and clinicians) was 12.8 participants.

In Bosnia-Herzegovina, follow-up assessments were completed by 29 patients (81%) at 6-months and 30 patients (83%) at 12-months. In Colombia, follow-up assessments were completed by 26 patients (84%) at 6-months and 25 patients (81%) at 12-months. In Uganda, follow-up assessments were completed by 27 patients (90%) at 6-months and 26 patients (87%) at 12-months.

5.5.2.1 Topics discussed during the meetings

All topics discussed by all groups in all countries were analysed using content analysis. Nine overarching themed topics were derived from this analysis displayed in Table 5.5. There were commonalities with discussions around medication, disease management, the impact of illness on family/friends, future plans and understanding more about the illness. The Colombian groups discussed crisis care management, psychosocial interventions, and non-pharmacological alternatives.

Table 5.5 Topics discussed in meetings

Theme	Bosnia-Herzegovina	Colombia	Uganda
Medication, side effects, risks of discontinuation etc	✓	✓	✓
Disease management and coping strategies	✓	✓	
Attitudes of society to the mental ill/Societies perception of mental illness	✓		✓
Crisis care management		✓	
Psychosocial interventions and non-pharmacological alternatives		✓	
Patient experience of the illness		✓	
Impact of illness on family and friends	✓	✓	✓
Plans and actions for the future	✓	✓	
Understanding more about mental illness	✓	✓	✓

5.5.3 Primary and secondary outcomes

Primary and secondary outcome measures at all time points are shown in Table 5.6. All countries exhibited improvements across the outcomes at varying effect size levels. The primary outcome of MANSA at six months showed a difference in score for Bosnian, Colombian, and Ugandan patients, with an effect size of 0.64, 0.26 and 0.83, respectively. For secondary outcomes at six months, the differences in the SIX score were reflected by effect sizes of 0.31, 0.33, and 0.18. Differences in BPRS score were demonstrated by effect sizes of 0.03, 0.42 and 0.78, respectively. All patients experienced reductions in psychiatric hospitalisation at six months.

MANSA at twelve months showed a difference in score for Bosnian, Colombian, and Ugandan patients, with an effect size of 0.40, 0.45 and 0.85, respectively. For secondary outcomes at twelve months, the differences in the SIX score were reflected by effect sizes of 0.04, 0.21, and 0.01. Differences in BPRS score were demonstrated by effect sizes of 0.19, 0.80 and 0.86, respectively. All patients experienced reductions in psychiatric hospitalisation at twelve months.

Table 5.6 Primary and secondary outcomes

Country	Assessment	Baseline	6 months	12 months	Effect size		P-value[1]	
					Baseline vs 6 months	Baseline vs 12 months	Baseline vs 6 months	Baseline vs 12 months
		n=36	n=29	n=30				
Bosnia-Herzegovina	MANSA (mean score, SD)	4.2 (0.8)	5.2 (1.3)	4.7 (1.6)	0.64	0.40	0.001	0.030
	SIX (mean score, SD)	4.1 (1.1)	4.5 (1.2)	4.2 (1.4)	0.31	0.04	0.091	0.847
	BPRS (mean score, SD)	32.3 (5.9)	31.6 (5.0)	30.5 (3.9)	0.03	0.19	0.854	0.302
	Psychiatric hospitalisations (n, %)	14 (39)	2 (7)	2 (7)	-	-	0.004	0.004
		n=31	n=26	n=25				
Colombia	MANSA (mean score, SD)	4.4 (1.1)	4.6 (1.0)	4.7 (1.1)	0.26	0.45	0.201	0.035
	SIX (mean score, SD)	3.7 (1.2)	4.0 (1.4)	4.2 (1.1)	0.33	0.21	0.091	0.288
	BPRS (mean score, SD)	34.9 (7.8)	30.8 (7.7)	28.8 (8.2)	0.42	0.80	0.042	0.001
	Psychiatric hospitalisations (n, %)	13 (42)	4 (15)	2 (8)	-	-	0.035	0.003
		n=30	n=27	n=26				
Uganda	MANSA (mean score, SD)	3.4 (0.8)	4.6 (0.7)	4.5 (0.6)	0.83	0.85	0.000	0.000
	SIX (mean score, SD)	4.4 (1.3)	4.8 (1.2)	4.4 (1.2)	0.18	0.01	0.341	0.969
	BPRS (mean score, SD)	58.5 (17.1)	39.7 (11.4)	33.3 (8.7)	0.78	0.86	0.000	0.000
	Psychiatric hospitalisations (n, %)	18 (60)	0 (0)	1 (4)	-	-	0.000	0.000

[1]Wilcoxon Signed Rank Test; Paired t-test; McNemar's test
MANSA= Manchester Short Assessment of Quality of Life; SIX= Objective Social Outcome index; BPRS= Brief Psychiatric Rating Scale

5.5.3.1 Summary of clinical and social findings

This section summarises the changes in primary and secondary outcome measures for patients in the three LMICs. Patients from each country demonstrated an improved subjective quality of life, particularly Bosnian and Ugandan patients observing medium and large effect sizes at six and twelve months. Improvements in the objective social outcome scores exhibited a small effect size at six and twelve months. Mental health symptoms improved for all countries, with the differences in Ugandan and Colombian patients reflecting medium and large effect sizes. There was a reduction in patient hospitalisations during the 6-month intervention period.

5.5.4 Additional outcome measures

5.5.4.1 Patients

For patients in Bosnia-Herzegovina, additional variables were collected on the Insight and the Treatment attitudes Questionnaire (ITAQ) and the Self-esteem Rating Scale (SERS)), reported in Tables 5.7 and 5.8. Table 5.7 reports that levels of insight improve significantly at 6 months (d=0.75, p<0.001) and 12 months (d=0.88, p<0.001). This level of insight was consistent when the score was stratified by awareness of illness and awareness of treatment.

Table 5.8 shows that self-esteem was measured using the positive and negative dimensions of the SERS. The scale comprises two subscales, positive and negative self-esteem, and higher scores on the positive subscale mean a higher level of self-esteem. In contrast, a higher score on the negative subscale means a lower level of self-esteem. The table shows a statistically significant reduction at six months (d=0.69, p<0.001) and 12-months (d=0.83, p<0.001) on the positive self-esteem subscale, indicating a decline in self-esteem. Regarding the negative self-esteem subscale, there is a statistically significant reduction at 12 months (d=0.59, p0.001), suggesting an improvement.

Table 5.7 Insight and Treatment attitudes Questionnaire (Bosnia-Herzegovina)

ITAQ score mean (SD)	Baseline	6-months	12 - months	Effect size		P-value[1]	
	n=36	n=29	n=30	Baseline vs 6 months	Baseline vs 12 months	Baseline vs 6 months	Baseline vs 12 months
Total score	13.6 (4.8)	19.1 (4.8)	21.6 (2.0)	0.75	0.88	0.000	0.000
Awareness of illness (items 1-6)	7.0 (2.8)	10.5 (2.5)	11.8 (1.1)	0.79	0.87	0.000	0.000
Awareness of treatment (items 7-11)	6.6 (2.5)	8.6 (2.3)	9.8 (0.9)	0.60	0.81	0.001	0.000

[1]Wilcoxon signed rank test

Table 5.8 Self-esteem Rating Scale (Bosnia-Herzegovina)

SERS score mean (SD)	Baseline	6-months	12 - months	Effect size		P-value[1]	
				Baseline vs 6 months	Baseline vs 12 months	Baseline vs 6 months	Baseline vs 12 months
	n=36	n=29	n=30				
SERS: Positive dimension	2.3 (0.6)	1.8 (0.6)	1.5 (0.5)	0.69	0.86	0.000	0.000
SERS: Negative dimension	2.5 (0.7)	2.4 (0.5)	2.1 (0.6)	0.03	0.59	0.863	0.001

[1]Wilcoxon signed rank test

For patients in Uganda, additional variables were collected on the Internalised Stigma of Mental Illness Scale (ISMI), and Medication Adherence Rating Scale (MARS) reported in Tables 5.9 and 5.10. Table 5.9 reports the ISMI for Ugandan patients, observing a score representing a mild internalised stigma at baseline, to a minimal to no internalised stigma at 6 months (d=0.87, p<0.001) and 12 months (d=0.59, p=0.002). Table 5.10 reports medication adherence in Ugandan patients decreases at 6 months (d=0.83, p<0.001), reporting a similar score at 12 months (d=0.83, p<0.001).

Table 5.9 Internalised Stigma of Mental Illness Scale (Uganda)

ISMI score	Baseline	6-months	12 - months	Effect size		P-value[1]	
				Baseline vs 6 months	Baseline vs 12 months	Baseline vs 6 months	Baseline vs 12 months
	n=30	n=29	n=26				
ISMI score mean (SD)	2.5 (0.4)	1.7 (0.5)	2.1 (0.2)	0.87	0.59	0.000	0.002

[1]Wilcoxon signed rank test

Table 5.10 Medication Adherence Rating Scale (Uganda)

MARS score	Baseline	6-months	12 - months	Effect size		P-value[1]	
				Baseline vs 6 months	Baseline vs 12 months	Baseline vs 6 months	Baseline vs 12 months
	n=30	n=29	n=26				
MARS scores mean (SD)	6.1 (1.8)	4.2 (1.9)	4.3 (1.2)	0.83	0.83	0.000	0.000

[1]Paired t-test

5.5.4.2 Family members/friends/caretakers

For family members in Bosnia-Herzegovina, variables were collected on the Burden Scale for Family Caregivers (BSFC) and Community Attitudes Towards Mental Illness Scale (CAMI), reported in Tables 5.11 and 5.12. Table 5.11 reports a small non-significant decrease in family burden at 6 months (d=0.12, p=0.617), and a small non-significant increase at 12 months (d=0.18, p=0.442). As indicated

in Table 5.12, there were no significant differences between baseline and six- and twelve-month scores. Small effect sizes reflect an overall improvement in attitudes to mentally ill individuals.

Table 5.11 Burden Scale for Family Caregivers (Bosnia-Herzegovina)

BSFC score	Baseline	6-months	12 - months	Effect size		P-value[1]	
				Baseline vs 6 months	Baseline vs 12 months	Baseline vs 6 months	Baseline vs 12 months
	n=28	n=18	n=20				
BSFC score mean (SD)	34.7 (7.4)	33.8 (7.3)	35.3 (12.6)	0.12	0.18	0.617	0.442

[1]Paired t-test

Table 5.12 Community Attitudes Towards Mental Illness Scale (Bosnia-Herzegovina)

CAMI score mean (SD)	Baseline	6-months	12 - months	Effect size		P-value[1]	
				Baseline vs 6 months	Baseline vs 12 months	Baseline vs 6 months	Baseline vs 12 months
	n=28	n=18	n=20				
Overall CAMI score	31.1 (1.1)	31.3 (0.6)	31.5 (0.9)	0.14	0.25	0.571	0.284

[1]Paired t-test

Burden-related variables were collected on the Zarit Burden Interview (ZBI) for family members in Uganda, reported in Table 5.13. Table 5.13 reports that mild to moderate burden at baseline improved to no burden experienced at six months (d=0.82, p<0.001) and 12 months (d=0.81, p<0.001).

Table 5.13 Zarit Burden Interview (Uganda)

ZBI score	Baseline	6-months	12 - months	Effect size		P-value[1]	
				Baseline vs 6 months	Baseline vs 12 months	Baseline vs 6 months	Baseline vs 12 months
	n=49	n=44	n=43				
ZBI mean (SD)	38.2 (15.8)	20.4 (7.9)	18.5 (9.4)	0.82	0.81	0.000	0.000

[1]Wilcoxon signed rank test

5.5.4.3 Health professionals

Variables relating to the therapeutic relationship between the patient and clinician were captured on the Scale to Assess Therapeutic Relationships in Community Mental Health Care (STAR-C). Table 5.14 reports no significant differences at 6 and 12 months.

Table 5.14 Scale to Assess Therapeutic Relationships in Community Mental Health Care (Bosnia-Herzegovina)

STAR-C score	Baseline	6-months	12 - months	Effect size		P-value[1]	
				Baseline vs 6 months	Baseline vs 12 months	Baseline vs 6 months	Baseline vs 12 months
	n=14	n=9	n=9				
STAR-C mean (SD)	30.9 (2.1)	31.9 (2.4)	32.0 (1.9)	0.41	0.43	0.256	0.231

[1]Paired t-test

5.5.4.4 Summary of clinical and social findings

This section presented the findings concerning the additional outcome measures collected by Bosnia and Uganda. Patients in Bosnia-Herzegovina experienced improved levels of insight regarding their treatment and illness, respectively, represented by medium and large effect sizes. Regarding self-esteem in Bosnian patients, the SERS assessment measures positive and negative feelings about oneself. Although there is no observed improvement in positive feelings, there is improvement in negative feelings concerning the self, reflecting a medium effect size. Patients in Uganda experienced improvements in levels of internalised stigma, representing a large effect size at six months. Patients reported a decreased level of medication adherence reflecting a large effect size at six and twelve months.

Family members in Bosnia experience a small decrease in burden reflected by a small effect size at six and twelve months. Family members stigmatising attitudes improved, again reflected by small effect sizes. Ugandan family members (caretakers) experienced an improvement in burden, reflected by large effect sizes.

Clinicians in Bosnia observed a slight improvement in the perceived therapeutic relationship with patients, reflected by a small effect size at six and twelve months.

5.5.5 Individual participant data meta-analysis

Once the patient data was combined, there were 91 patients. Although 91 patients provided baseline information, 12 (13%) patients were not assessed at the six months. Therefore, the total sample consisted of 79 patients. Table 5.15 shows the number of patients included in each study and their characteristics.

Table 5.15 Demographic variables of patients across studies

Characteristics	Bosnia-Herzegovina n=26	Colombia n=26	Uganda n=27	Total n= 79
Age, mean (sd)	44.9 (12.9)	41.1 (12.2)	36.6 (13.4)	40.8 (13.1)
Male, n (%)	6 (23.1)	13 (50.0)	8 (29.6)	27 (34.2)
Employment, n (%)				
Paid employment	7 (26.9)	3 (11.5)	9 (33.3)	19 (24.1)
Unemployed	19 (73.1)	23 (88.5)	18 (66.7)	60 (76.0)
Living situation, n (%)				
Living alone	1 (3.9)	5 (19.2)	1 (3.7)	7 (8.9)
Living with partner/family/friends	25 (96.2)	21 (80.8)	26 (96.3)	72 (91.1)

5.5.5.1 Forest plots exploring change scores for primary and secondary outcome

Forest plots found in Appendix 13, Figures 1-3, summarise the mean change score difference for primary and secondary outcome measures, MANSA, BPRS and SIX, to compare countries and establish an overall intervention effect. The overall effect of the intervention on the MANSA differences is statistically significant (p=0.004), and between-study heterogeneity is high (I^2=83.8%, p=0.002). The overall effect on the BPRS differences is not statistically significant (p=0.089). Between studies, heterogeneity is high (I^2=91.7%, p>0.001). The overall effect of the intervention on the SIX differences is not statistically significant (p=0.089). Between study heterogeneity is low (I^2=0.0%, p=0.885).

5.5.5.2 Relationship between mean difference score and baseline score

Pearson's correlation coefficient and scatter plots were employed to establish any association between baseline scores and the change in scores. These are displayed as scatter plots, Figures 1-3, corresponding to MANSA, BPRS and SIX scores, respectively, presented in Appendix 14.

Figure 1 plots the change in the MANSA score against the baseline MANSA score. It displays a moderately negative relationship (r=-0.5). As the baseline MANSA score increases, the difference in score increases, suggesting that the difference in score depends on the starting baseline score. Those individuals starting the intervention with a low MANSA score see a greater change score than those with a higher score at baseline. Figure 2 plots the change in BPRS score against the baseline BPRS score. It displays a strong negative relationship (r=-0.8). As the change in BPRS score decreases, the baseline BPRS score increases, indicating that the change in score depends on the baseline score. A cluster of individuals who started the intervention with a low score and observed little change in

the score, compared to those who started with a high score, see a greater reduction in psychiatric symptoms. Figure 3 plots the change in SIX scores against the baseline SIX score. It displays a moderately negative relationship (r=-0.5). As the change in SIX score decreases, the baseline SIX score increases, indicating that the change in score depends on the baseline score. Furthermore, those individuals beginning the intervention with a higher score are observing a less defined score reduction than those with a lower SIX score.

5.5.5.3 Associations between individual-level characteristics and change in score

The IPD meta-analysis was conducted to combine all uniform process and outcome data and establish any relationship between them. Since the findings show a correlation between each change in score and baseline score, the baseline score will be adjusted for each primary and secondary outcome measure. All associations between individual level and change in outcome score are displayed in Table 5.16. The results displayed in Table 5.16 indicate no significant differences whilst exploring the associations between individual-level characteristics and change in score. Only one statistically significant association is noted when exploring differences in SIX score change when comparing sexes whilst adjusting for the baseline SIX score. Even though a lack of statistical significance is demonstrated, there is still evidence of an effect. The differences here show unstandardised differences, indicating a relationship between the change in score and the patent level characteristics, but a very weak one.

Table 5.16 Associations between individual-level characteristics and change in score

	Change in MANSA score			Change in BPRS score			Change in SIX score		
Baseline variable	Mean difference (95%CI)	p-value	Heterogeneity (I^2)	Mean difference (95%CI)	p-value	Heterogeneity (I^2)	Mean difference (95%CI)	p-value	Heterogeneity (I^2)
Age	-0.00 (-0.02, 0.01)	0.811	0	0.05 (-0.08, 0.18)	0.456	0	0.02 (-0.6,0.02)	0.406	75
Sex(women-reference)	0			0			0		
Sex(men)	0.30 (-0.11,0.71)	0.148	28	-1.23 (-4.70,2.24)	0.487	0	0.71 (0.16,1.25)	0.011	0
Unemployed (reference)	0			0			0		
Employed	0.05 (-0.97, 1.06)	0.928	75	-0.99 (-5.96, 4.00)	0.698	31	0.69 (-0.07,1.44)	0.073	0
Living alone (reference)	0			0			0		
Living with partner/family	-0.59 (-1.32, 0.14)	0.111	0	-0.26 (-6.29,5.77)	0.933	0	-0.07 (-1.04, 0.90)	0.893	0
Total number of sessions	0.20 (-0.08,0.47)	0.160	64	-1.31 (-4.59,1.97)	0.435	88	-0.02 (-0.19,0.15)	0.787	0
Average duration	0.02 (-0.02,0.06)	0.259	29	-0.13 (-0.43,0.17)	0.383	0	-0.03 (-0.08,0.01)	0.118	0

5.5.6 Experiences with the intervention

Three studies (including two in manuscript form) were included in this review, corresponding to each country's data. In Bosnia-Herzegovina, interviews were conducted with participants from all three groups (patients, family members and clinicians). A total of 98 participants were interviewed in total. In Bosnia-Herzegovina, this included 15 patients, 12 family members, and four clinicians. In Colombia, this included, 15 (50%) patients, 10 (24%) family members, and 6 (100%) clinicians. In Uganda, this included 15 patients, 15 family members, and six clinicians. Four main themes were yielded from the qualitative meta-synthesis, relating to the intervention experiences, barriers and enablers and proposed adaptations. Illustrative quotes are used to support each theme, and the participant identifier has been derived from the original manuscript. I have added the country of origin for clarity.

5.5.6.1 Practical aspects and acceptability

This theme describes the participants' response to the practical aspects of the intervention, such as issues about group attendance, scheduling, concerns raised about the specific location of the meeting, and how topics were determined.

In Bosnia-Herzegovina and Colombia, acceptance and feasibility of the intervention were discussed in the form of attendance, particularly regarding reasons for not attending.

> *'The truth is, I felt good, but a little astonished because of the 5 times that 6 of us went, in the second meeting only I attended… I wanted to meet new people, but because they didn't come back, well, I got a little discourage just being alone [laughs]'* (Colombian patient 030).

In Colombia, participants perceived attendance as a vital aspect of the functioning of the groups. They noted that attendance directly impacted the group dynamics and the capacity for the group to achieve a trialogue. The lack of attendance would discourage participants from attending due to the group not having enough to form a trialogue. Remuneration was considered a pulling factor by some patients.

> *'I think that it is a good stimulus, and I mean, it is not a stimulus that I'm like I'm gonna go get my fifteen, but instead I see it more like a help to facilitate that the individuals to get to where we will meet up, because we still don't know where each person lives, Saturdays, you know, the traffic is so crazy so I think it's a good idea'* (Colombia patient 05).

The issue of group attendance was resolved once modifications to the meeting schedule were made, which saw an improvement in overall attendance in Colombia. Bosnian patients talked about having family concerns preventing attendance, while others noted that a reason for non-attendance was that patients were 'afraid of the psychiatrists and psychologists' (Bosnian patient 038).

> *'Well, for me personally, to start first of all, it is difficult because I am obliged to the children and the school, the home obligations that I have'* (Bosnian patient 067).

Some Bosnian patients felt that the meetings could have been more frequent for a proposed modification.

> *'Maybe more frequent meetings would be more effective after all.'* (Bosnian Patient 004).

Although the original protocol stated that discussion topics would be pre-determined by the group – especially by the patients- this may not have occurred in the Bosnian cohort, with patients feeling like the meetings could be more structured.

> *'Well, maybe it would have been better if the topics had been somehow planned, if they had been determined in advance'* (Bosnian Patient 008).

A Colombian clinician also remarked on increasing the frequency of meetings to maximise therapeutic impact. Clinicians also would have liked to have seen more discussion around psychoeducation, rehabilitation activities and social reintegration.

> *'I would say that for this format once a month, it would be fine, but if someone wants to have a more structured therapeutic intervention, between one time a week or every fifteen days.'* (Colombian clinician 03).

Colombian family members suggested that incorporating different ways to articulate and communicate experiences using other mediums, such as writing or drawing, may have been helpful. Remuneration was noted to be a facilitator, especially for Colombian clinicians.

In Uganda, participants mentioned that the venue was convenient and relatively accessible for patients and caretakers. This may have helped maintain high attendance of meetings held in a private location away from external interference.

> *'We always had only one meeting place. The place had no big problem because we managed to have all our meetings in peace. We were able to finish all the 6 months meetings and freely shared ideas among caretakers, patients and clinicians*.' (Ugandan family member IDI, MFM 2)**.**

Yet, one participant had to travel long distances to the venue and raise money for the transport to get there. The distance proved to be a challenge to get organised each month.

> *'There was travelling for long distance, yet we had other responsibilities; some other activities would be on a standstill, but we still came with the patient to continue knowing more about this illness'* (Ugandan caretaker, IDI, MFM 2).

> *'The first thing is transport; raising money for our transport is a challenge. For example, if they stop giving us this facilitation for transport, we will end up not coming for the family'* (Ugandan caretaker, IDI, MFM 2).

Regarding frequency, Ugandan participants were satisfied with the monthly frequency, giving them time to reflect on the topics discussed in each session, prepare for the next meeting, and resume everyday living and jobs. They considered the time between appointments short enough to remember what was discussed and long enough to ensure sufficient rest between each meeting.

> *'The frequency enabled proper arrangement for the next meeting since it was once a month. We were also able to rest before the next meeting'* (Ugandan patient IDI, MP 22).

Ugandan participants were generally content with the way groups were managed, and how topics were determined was a collaborative effort.

> *'They were well organized because we would elect a chairman and he would introduce the topic and we would focus on it for discussion and we would exhaust it well'* (Ugandan patient, IDI, MP 26).

There was the issue of language that was unique to the Ugandan groups, the primary language within the group was the Luganda language. Yet, some participants were not local to the area but were still recruited into the study.

5.5.6.2 Establishing horizontal relationships

The trialogue aspect of the intervention meant that participants had to form horizontal relationships, where all participants were on an equal level. Despite the principle of the intervention to locate meetings in a neutral setting, this was not apparent in the Bosnian study. Patients here stated they would have preferred if the meetings were held in a space away from a hospital setting to facilitate relationship formation.

> *'It was an unusual place for me, I didn't mind being in the hospital, but maybe it would have been more natural if we were in a different environment, but I didn't mind'* (Bosnian patient 015).

In Colombia, clinicians remarked how they would have to remind the group of the intention to form a horizontal relationship to engage in a trialogue, as patients and family members would expect to receive medical advice. It was clear that maintaining this dynamic without imposing hierarchical dynamics was challenging.

> *'As a psychiatrists, they give you a number of responsibilities, decision-making. […] The experience was pleasant because somehow you feel like one of them. […] However, there were times in which the group fell into that [vertical] dynamic, and I hope I rescued myself each time […] I imagine that some opportunities I was not fully aware that the dynamic was being established again'* (Colombian Clinician 02)

In contrast to Bosnia, Colombian participants were appreciative of the interventions being held away from a hospital setting and considered this a positive aspect of the intervention. For Ugandan participants, it appeared that those clinicians and patients who had an existing relationship were considered a positive aspect of the intervention before the intervention.

5.5.6.3 A space for sharing and learning

Bosnian patients appreciated how informative they were and their guidance regarding the meetings themselves. One patient discusses the benefits of having group discussions, where at least one person may be able to offer a possible solution to a problem.

> *'I expected to hear other people's stories, and that's how it was, and there was also advice ... how to get through something, for example. From my point of view, say, in my position, I didn't have a solution, and someone opposite me might have had a better solution for my life situations'* (Bosnian patient 067).

Others appreciated the social aspect of meeting with a group and having the opportunity to share and hear others' experiences.

> *'I listened to a lot of other people, how they are and what they went through in life and so on. That's a nice socializing, story and that's all, that's how I expected and imagined and assumed that it would be like that before it started'* (Bosnian patient 033)

In Colombia, participants felt like the intervention provided the opportunity to talk about issues or feelings that would not commonly be broached in typical situations or during consultations. Clinicians highlighted how the diversity within the group was a positive aspect of the intervention in Colombia. They also remarked how their knowledge during the sessions helped improve their practice.

> *'I thought it was useful because different point of views arose, different questions, and I thought it was interesting that although there were patients with completely different pathologies, a lot of what was discussed and a lot of the resources that were proposed applied equally to all'* (Colombian clinician 06).

Some Colombian family members felt that the sessions were too patient-centered. The topics would revolve around patients' issues, not issues relating to how families experience life with a mentally unwell family member. In Uganda, all participants valued the information shared during the meetings and felt it had positively influenced their lives. Contrastingly, Ugandan participants did not appreciate the heterogeneity of the groups and considered it a barrier preventing some participants from fully benefiting from the group discussions. Furthermore, there were challenges relating to balancing the discussion to ensure everyone had the opportunity to share their views.

> *'There are others who over-talk, the patients and even the family members; you would say it is time when they felt they still wanted to continue. So, they felt like they needed more time while others wanted the meeting to come to an end.'* (Ugandan clinician, IDI, MC 31)

Whereas Ugandan clinicians felt that despite being an exploratory study, the intervention should have spread more, enabling more people to benefit from the information being shared in the group.

> *'These family groups; the thing I didn't like was involving only a few people. They needed to give chance to other people because the families benefitted from the program. Involving few people doesn't make it practical. The sample size was (too) small*.' (Ugandan clinician, IDI, MC 34)

5.5.6.4 Impact on relationships/family dynamics

Patients discussed how the intervention influenced their existing relationships. Many Bosnian patients felt the intervention improved quality of life due to improved family relationships, with the family members feeling less alone and equipped with more compassion.

> *'It was very important that my wife was there at the beginning, later she could not miss work, but it was very important to me that she be present at least sometimes because she is my support in everything. I think the same goes for other patients.'* (Bosnian Patient 046)

In Colombia, participants noted that the family members who were actively engaged in learning from other perspectives developed a better understanding of the illness and, therefore, a better relationship with their mentally unwell family member.

> *'I was interested in participating because it included the family. All of my life I have had a psychologists, my psychiatrist. All the time, from the age of 16 […], they always tried to intervene directly with the patient […] But really, the family … Is like they did not form part of the formula for the person to improve. So they are always very isolated from the recovery process, and sometimes well the family can also be a trigger for a crises or a conflict that affects the person'.* (Colombian patient 026).

Colombian patients realised the burden being placed on family members and thus recognised the need to be more compassionate towards them and acknowledge their role in patient recovery. Colombian family members expressed their comfort in feeling less alone and knowing that other people are experiencing similar challenges with taking care of mentally unwell family members.

> *'I thought I was the only person who felt like this, so tired. I felt very tired, without resources, total hopelessness. And I think that being there helped me to feel supported, even though we only had the time of the session, not outside. But, listening to the moms of the other patients, I identified with a lot of what had happened to them'* (Colombian family member 14).

Similarly, Ugandan patients felt like they had developed their understanding of the role of family and the local community in providing care. Ugandan participants described that being able to focus more on patients and less on the issues that emerge due to family burden was a positive impact of the

intervention. Recognising the role of family was perceived to have influenced the relationship between patients and family members, such as improving communication.

> *'As a caretaker, it has added a lot to me. Our relationship is now good, we can talk and I can advise him accordingly; I now know how to rebuke him when he makes a mistake. I now know how to handle a mentally ill person'* (Ugandan family member, IDI, MFM 9).

Furthermore, a Ugandan participant highlighted changes in attitude towards those who are mentally unwell, such as being more supportive and helping more in everyday tasks.

5.6 Discussion

5.6.1 Main findings

This study represents the second empirical component of the exploratory case study, using the GLOBE research programme. This chapter explores the feasibility, outcomes and experiences of a multi-family group intervention delivered in three LMICs.

Overall, the intervention was shown to be feasible in each country, demonstrated by high fidelity, improvements in outcomes, and positive experiences. All countries adhered to the original protocol of meeting monthly over the six-month intervention period regarding intervention fidelity, and each country demonstrated a high average intervention duration in terms of dosage. Participant receptivity was explored partly by data on attendance. Attendance was high for all countries for the first sessions but declined in Bosnian and Colombian groups in the last session. Ugandan groups met all six times and maintained a high attendance in the first and last sessions. Ugandan participants were given a financial incentive which may have influenced their attendance. The percentage of patients who completed follow-up assessments was high for all countries. When exploring the topics discussed across countries, it was clear that there were commonalities and differences, including in the discussions revolving around medication management, future plans and actions, and understanding more about the illness. Differences arose surrounding crisis management and discussing the in the intervention as an alternative to pharmacological approaches.

When exploring patient outcomes, each country revealed improvements in the primary and secondary outcomes, with varying levels of effect size. Bosnia-Herzegovina and Uganda observed changes in subjective quality of life, reflecting a medium and large effect size. Mental health symptoms improved significantly for Ugandan patients, again reflected by the large effect size. All countries demonstrated changes in the objective social situation revealing a small effect size across each country. Hospitalisations were also significantly reduced in each country. The findings indicated a high degree of heterogeneity, particularly when exploring the combined patient outcomes, again shrouding the validity of the overall effects of each outcome. Heterogeneity undoubtably results

from country-level differences, indicating that further caution is needed when considering the impact of the intervention on mental health and quality of life outcomes.

Only Bosnia-Herzegovina and Uganda collected additional outcome measures for patients, family members/caretakers and clinicians. The level of insight and internalised stigma improved for Bosnian and Uganda patients, exhibiting medium and large effect sizes. Bosnian patients observed improvements in perceived negative feelings about themselves. Bosnian and Ugandan family members observed an improvement in perceived burden, demonstrating small and large effect sizes. The stigma surrounding mentally ill people also improved in Bosnian family members. The perceived therapeutic relationships between Bosnian clinicians and patients improved, reflected by small effect size.

Analysis exploring the association between fidelity factors, such as dosage and adherence (total number of sessions and average duration) and patient-level characteristics established no statistically significant associations. The absence of an association between the change in outcome measures and individual-level predictors suggests that the effect of the intervention is perhaps more generic and does not depend on specific characteristics. Moreover, the lack of variation in the combined sample may not have been sufficient to detect any effect in the primary and secondary outcome scores.

Findings relating to the experiences of the intervention suggest that participants generally felt positive about the intervention. Regarding practicality, attendance was discussed and perceived as a crucial part of the intervention's function. This issue was acknowledged by Bosnian and Colombian participants, noting that the dynamics changed considerably when attendance was low, and therefore proving more difficult to conform to the trialogue discussion. Horizontal relationships were challenging to maintain, and Colombian clinicians recognised how easy it was to revert to the traditional vertical feature as a part of normal consultations between clinician and patient/family member. Bosnian patients felt that they could have benefited more from the sessions if they were located from a clinical setting. Colombian participants acknowledged and appreciated how meetings were held in a neutral place. Existing relationships helped to facilitate relationships better in the Ugandan meetings. All participants were appreciative of the space the meetings enabled and the formation of horizontal relationships. All participants felt the meetings offered a rare opportunity to share and learn from each other. Furthermore, Colombian, and Bosnian participants felt the diversity of experience added value to the meetings, whereas Uganda participants considered too many voices a barrier. Finally, all participants described positive improvements to their relationships with family members.

5.6.2 Strengths and limitations

This study has several strengths. To the candidate's knowledge, this is the first mixed-methods study exploring the feasibility, outcomes, and experiences of multi-family group intervention in three culturally different LMICs. By synthesising findings across three countries, this study provides preliminary support for using multi-family group interventions in low resource settings, particularly for individuals with SMI. The findings support the feasibility of this type of multi-family intervention, which utilises trialogue discussion and conforms to horizontal relationships between the participants. Although the studies were small and exploratory, the findings show that the intervention is feasible and associated with improvements in most outcome measures. A key strength is that this study adopted a mixed-method approach that enabled an in-depth evaluation of the intervention. The participant and fidelity outcomes corroborated the qualitative data regarding the participants' experiences. The process evaluation's qualitative component helped establish a more comprehensive understanding of the participants' experience and engagement with the multi-family group intervention. It allowed the examination of how elements directly and indirectly related to the multi-family group intervention's contents influenced the participant's engagement with the meetings and trialogue discussion. For example, the qualitative component highlighted how important it was to hold the meetings in a neutral place, away from a hospital setting for Colombian participants. This level of nuance enabled a better understanding of participant receptivity and, therefore, reinforced the intervention's feasibility.

Another strength relates to how each country adopted a different research design, from Bosnia-Herzegovina delivering an exploratory RCT to Uganda and Colombia implementing controlled and non-controlled exploratory proof- of- concept studies respectively. Evaluating a GMH research programme that involves such diversity in design indicates a more experimental approach to GMH research. This evaluation aimed to establish whether the exploratory studies as part of the GLOBE programme were able to have an effect on specific outcomes, alongside exploring the feasibility and acceptability of a European derived multi-family group (356,357). Establishing the feasibility and acceptability of this intervention in three culturally different countries increases the generalisability of the findings. It suggests that there is a possibility of feasibility in countries with similar cultural profiles, levels of health system resources and infrastructure to the three LMICs. The positive findings concerning the outcomes and experiences support implementing small scale exploratory studies establishing feasibility and acceptability in LMICs and low resource settings that accommodate adaptation and identify what works for them (169).

However, the study has several limitations. This study's process evaluation aimed to identify whether implementation variability had any impact on outcome data by integrating process and

outcome data, yet there were no statistically significant findings. Despite combining the data to assess for changes in outcomes across specific subgroups (377), the variation at the subgroup level may not have been sufficient to observe any significant change in outcome scores. Further research is needed to explore the specific components or 'key ingredients' of an intervention that influence specific subgroups (390) and establish statistically rigorous associations between patient-level characteristics and changes in outcome. This current study assumed a before and after design, meaning that the main limitation is the lack of comparison or control group. Not having a control group means that it is difficult to establish whether the effects observed here happened because of the intervention or occurred because of another factor. It is challenging to interpret changes in an outcome measured before and after the intervention without a control group, although having qualitative data can offset this issue by providing detailed accounts of participant experiences. This notion is especially relevant because much of the intervention delivery occurred during the COVID-19 pandemic.

Another limitation is that the variation in attendance made establishing feasibility challenging. Although attendance was high for all countries, it was not necessarily maintained throughout the intervention. In addition, the issue with attendance was identified as a crucial aspect of the intervention based on the participants' experiences. Previous literature highlights participant attendance, particularly of family members or caregivers, is a barrier to evaluating feasibility (391). Although participants did receive remuneration, participant absence was still an issue in this study. Loss of follow-up was also an issue. Though comparable to other psychosocial interventions (392), the loss of follow-up may have influenced the outcomes, given that the numbers were already small.

A further limitation is that the countries were conducting the twelve-month follow-up during the COVID-19 pandemic. For Bosnia-Herzegovina, restrictions resulting from the pandemic are considered an explanation for the lack of improvement in objective social situation (354). The Ugandan objective social situation findings in this study align with the country-level findings from the Bosnian study, particularly by exhibiting a worsening score at twelve months. The Colombian findings show an improvement which may be explained by the difference in when COVID-19 became a significant issue in Colombia compared to Uganda and Bosnia-Herzegovina.

A final limitation was the method used to synthesise the qualitative findings concerning the participants' experiences. The candidate conducted the qualitative meta-synthesis alone and relied on their subjective interpretation of the findings from the three existing manuscripts. However, the candidate's supervisors in the GLOBE study reviewed the findings and country-specific publications. Only the Bosnian article has been published in this study, while the other papers were in manuscript

format. Therefore, the Colombian and Ugandan papers had not been through peer-review at the time of the synthesis, meaning that the findings may not be the final iteration, however, the data themselves remain reliable.

5.6.3 Interpretations and comparisons with the existing literature

The findings in this study add to the growing literature on involving family members in the care and management of patients with severe mental illness (393), especially in a resource -constrained setting. Previous literature has highlighted the potential of involving family members in addressing some of the issues in GMH (337,394).

The qualitative findings support how the trialogue approach can aid better understanding and establish new ways of communicating, and can help to form equally balanced relationships that exist outside of the hierarchical context of a clinical setting (395). Participants reported how they were grateful to have an opportunity to make sense of their experiences by sharing and learning as a part of a group (396). In the current study, Colombian clinicians acknowledged how the group sessions offered an opportunity to gain further insight and review their role and practice (396). These findings support the applicability of the trialogue in different cultures. There is evidence of how it has been adopted in other parts of the world, including Buenos Aires, Beijing and Istanbul, revealing a similar positive experience in different cultures (395,397). Although the qualitative findings suggest a positive experience relating to the trialogue approach, systematic research is needed to evaluate the benefits (395). Amering admits that it may be challenging to assess because it is an unconventional approach that does not align with didactic, psychoeducation or group psychotherapy (395), which adds complexity. However, there is evidence from the qualitative and some quantitative findings that the intervention is beneficial, such as, the improved level of insight and slightly improved therapeutic relationships perceived by Bosnian patients and clinicians. Attendance was generally high, particularly in Uganda, though this may have been due to each country's financial incentive. This aspect of the intervention makes it difficult to determine whether participants would have attended the sessions based on their personal choice and self-perceived needs (398). The participants' experiences demonstrate the acceptability of the intervention by providing a safe space to share. Yet, the financial incentives may have encouraged the attendance and, therefore, influenced the results by making the intervention appear more feasible without a financial incentive.

Psychoeducation represents a crucial element of family interventions and aims to improve patient and family members' knowledge of mental illness, communication skills, and coping mechanisms. Previous literature about how family psychoeducation can contribute to better overall functioning and reduced symptoms (399). Reviews comparing treatment as usual with psychoeducation interventions, like this multi-family group intervention, demonstrated a reduction in relapse and

rehospitalisation (400,401). The current findings showed improvements in the subjective quality of life and reduced mental health symptoms. All three countries observed improvements in psychiatric symptoms, although Colombia and Uganda were significant. This finding aligns with the literature: Pharoah *et al.* compared different types of family intervention, and demonstrated a general reduction in psychiatric symptoms (402). Colombian and Ugandan patients observed large effect sizes at twelve months regarding changes in subjective quality of life and mental health symptoms. These large effect sizes observed are rare findings for research exploring psychosocial interventions, especially given how brief the intervention period was and how the intervention was low intensity. Similar findings were observed in the Pakistan group, also a part of GLOBE, yet they explored outcomes in patients with depression rather than SMI (358). The patient outcomes indicate a significant and clinically relevant improvement during the intervention in the current study. However, these results should be considered and interpreted with caution as there was no control group to establish whether these changes were unique to the intervention.

Stigma can prevent individuals from seeking and accessing care, manifesting in different ways: internalised or expressed (9). Internalised stigma refers to how an individual applies stigma to oneself (403). Ugandan patients observed improvements in internalised stigma, indicated by a large effect size (d=0.87). Internalised stigma is recognised as a barrier to accessing treatment in LMICs (404) and, moreover, is negatively associated with quality of life and general functioning (405,406). Studies have established that internalised stigma is associated with poorer medication adherence (407,408). In Ugandan patients, medication adherence was shown to have decreased, a change reflected by a large effect size. This result contradicts the findings in the literature, which demonstrate that involving families in patients care can be beneficial in regards to medication adherence (409,410). However, since the sample is small, this finding should be considered cautiously.

Stigma can also be the result of a lack of understanding and knowledge about mental illness (411). The stigma of Bosnian family members improved slightly, reflected by small effect sizes. Research has demonstrated how interaction and engagement with mental health service users, offers one avenue to reduce the rates of stigma in communities (412). Incorporating this form of intervention, which enhances understanding and compassion, can have a beneficial impact on the community for those who suffer from SMI.

Schizophrenia and other SMI disorders represent severe chronic illnesses for individuals that significantly burden their families (413). Only Bosnia-Herzegovina and Uganda evaluated family member burden. Ugandan caregivers experienced a significant reduction in burden reflected by

large effect sizes at six and twelve months. This finding supports the literature on how family interventions can help improve family members' ability to manage stress and reduce burden (346,414,415). The improvements observed in Ugandan findings support literature concerning how psychoeducation can benefit family members (416). Contrastingly, the burden on Bosnian family members reduced at the six-months follow-up but then increased at twelve-months follow-up. This finding could either suggest that the effects of the intervention were not sufficient to sustain beyond the six-month intervention period or that attending meetings increased the perception of burden. This observed increase in burden may also be due to the family intervention placing emphasis on the patient and family member dynamic, thereby adding to the burden, rather than diminishing it (417).

This study explored the feasibility and acceptability of a multi-family group intervention. Eassom *et al.* highlight the challenge of engaging family members, often due to cynicism and a rejection from the family members before the intervention (393). The qualitative findings regarding participants' experiences highlighted how the family members who were engaged (participant receptivity), particularly in learning other perspectives within the group, enhanced their understanding of the illness and, therefore, improved the patient's relationship with family members. Failing to engage family members could be a systemic issue within the family itself or a problem with the intervention practitioners failing to effectively motivate at the initial stages of engagement by 'presenting the approach enthusiastically' (p.7) (393). Furthermore, variability in family member attendance aligns with literature highlighting the barriers to participating in family involvement interventions, indicating that a 'context-specific' approach to engaging families should be integral to the intervention design (391).

Qualitative and quantitative findings indicated that patients developed an improved sense of insight. More specifically, the qualitative findings detail the impact of the intervention having a positive impact on existing relationships by developing patient and family members' insight and learning. Bosnian patients were assessed on their level of understanding and exhibited significant improvements in their awareness of illness and treatment. The literature highlights how developing insight and acceptance is a crucial part of the recovery process and essential to becoming more independent from a patient perspective (418,419). Macdonald *et al.* highlighted that to gain understanding, it is necessary to spend time with those who also understand the processes involved in caring for an ill family member (419). This point supports the qualitative findings about sharing and learning and how participants were interested in learning about others' experiences. Colombian participants appreciated hearing a wide range of experiences and felt that added to the group's discussion, whereas Ugandan participants preferred to learn from others with similar experiences. All participants reported improved communication with family members due to the intervention.

This finding aligns with previous studies that have demonstrated how family interventions have a positive impact on the level of expressed emotion, which is associated with fewer relapses (402,420). In the current study, the levels of compassion were improved based on the qualitative findings.

The intervention helped patients to realise how significant family members are in the recovery process, to improve relationships within families and overall quality of life. Evidence suggests that adverse family environments can prevent recovery and lead to relapse for those who have schizophrenia (340,421). A qualitative study conducted by an Iranian group exploring caregivers' perspectives on individuals with schizophrenia identified stress as a key reason for relapse (422). The point is that this kind of intervention, which aims to improve and strengthen family relationships and therefore diminish family tension, is vital for an individual's recovery. This intervention allowed the patients to recognise how their recovery depends on their relationship with their family members.

The qualitative findings highlighted that participant appreciated learning from meetings, in particular the value of hearing different solutions to the same problem. The concept of problem-solving was a key component of the trialogue approach. The meetings allowed people to discuss their issues openly, creating a space for all participants to share and listen. The problem-solving model offers a way for individuals, patients, and family members, to learn how to better cope with the issues they face. Being better equipped with coping skills improves confidence in the ability to address future problems. Cotton *et al.* emphasised that disregarding coping strategies were linked to more psychological distress, carer burden, and over involvement of family members (423). Developing coping strategies were identified as one of the most common elements of family interventions in a systematic review of family and parenting interventions in LMICs (343).

Regarding experiences, Bosnian patients reported that organising the sessions away from a hospital setting would have improved their experience. This qualitative finding aligns with previous literature about choosing an environment that promotes and encourages engagement with the intervention (343,424). Pedersen *et al.* highlighted how future research should explore the specific therapeutic components of interventions and the individual implementation features, which could help scale these interventions in LMICs (343). In general, there is limited evidence concerning the mechanisms of the action of family involvement interventions, such as understanding the main component of an intervention that influences its effect (390). Participants had the ability to learn from the experiences of others and benefitted from an intervention that was separate from traditional hospital settings; this provided a space for all groups to talk about their problems.

Exploring the association between patient-level characteristics and outcome score changes revealed no significant effect. This analysis failed to demonstrate the causal relationship between specific intervention elements and patient outcomes (343). There was also no significant association between specific fidelity factors (number of sessions attended and average duration of sessions attended) and change in outcome score, although, generally, the higher the total number of sessions attended, the larger the improvement, particularly with MANSA and BPRS, when comparing average duration. The findings were not significant but may suggest that number of sessions attended has a greater impact on the outcome than the total average duration. These findings conflict with the literature, demonstrating that a longer period is more beneficial than the actual number of sessions attended (398,425).

Given that the studies were generally exploratory, and that the formal intervention period lasted only one year, this may not be sufficient to influence participants' long-term outcomes. Studies have shown mixed findings on whether family interventions can incur long-term effectiveness (415,426,427). The point of time is a crucial aspect of many psychosocial interventions (398). Therefore, more time is needed to dedicate to psychosocial interventions to evaluate the long-term outcomes.

When comparing this study, conducted as part of the GLOBE research programme, with other studies, no country collected data on assessing changes in the mental health of family members. Given that families are increasingly considered a vital resource in patients' mental health issues, in the advancement of global mental health (428), perhaps more emphasis is needed to ensure their mental health. It has been reported that caregivers to individuals with severe mental health issues are at higher risk of developing depression and anxiety (429,430). Furthermore, no country collected outcome measures on family function; assessments were directed at the individual level. It could be useful to assess how relationship dynamics improve over time (431), address issues around family tension, and maximise recovery. Exploring the effects of family function could offer helpful insight into how interventions improve family cohesion, communication, and flexibility.

Overall, the intervention was feasible in these three culturally different LMICs. Although the delivery of family interventions in the care and treatment of those with SMI has been shown to be a promising approach, supporting research is still limited (393). The intervention offers a cost-effective and innovative approach and may add to the growing literature about involving families in the care and management of those who have a mental illness to advance the core objectives of GMH (341). Furthermore, GMH is conceptualised as aiming to create an environment conducive to individuals

experiencing mental distress (432). Overall, the current findings support the call for further research in engaging families in the advancement of GMH in LMICs (341).

Finally, these findings outline the outcomes, feasibility, and experiences of a multi-family approach intervention. However, it is also useful to note that there is an established link between the mental health of a parent and that of a young person (433). It is evidence that targeting interventions at the household level, and not just one or two family members, can prevent the intergenerational diffusion of mental health (434), by influencing protective factors, such as stability and harmony within a family structure (435). Further research and practice could explore combining the principles of a trialogue approach at the household level, with the aim of improving harmony within a single-family structure.

This current study demonstrates the feasibility of a multi-family group intervention delivered only in urban areas. Yet there remains still a significant proportion of those living in rural communities, particularly in Uganda (refer to Section 1.3.2.1.3). Literature has highlighted how there is a disparity in the access to mental health treatments in rural settings (4,436). With this in mind, the findings must be viewed with caution with regards to generalisation, as delivering the multi-family group intervention in a rural setting may be more challenging, and therefore require separate testing to assess its feasibility.

In the current study, only the Colombian group captured data on ethnicity, therefore making it impossible to compare the intervention's effect across groups. Each country possesses a mixture of ethnic groups (refer to Section 1.3.2.1.1). For this reason, it would be useful to stratify the experiences of individuals from different ethnic groups to establish any cultural differences in the intervention's effect, particularly in the context of cultural adaptation (437). Moreover, it may be useful to see how effective the groups function in a mixed ethnicity group, compared to a more homogenous ethnicity group, in term. As the findings did highlight a preference for more heterogenous experiences for Colombian participants, compared to a preference for more homogenous experiences for Ugandan participants.

The findings do assess whether there were differences in the intervention's effects on outcomes across sex, yet the analysis did not show any significant differences. However, there is a disparity between gender and mental health, where women are twice as likely to suffer from mental illness (438) Furthermore, it is important to consider how gender inequality also incorporates domestic violence, and therefore an intervention which is involving family members – including spousal partners- needs to be wary of this (439).

There are differences in the mental health systems of each LMIC (refer to Section 1.3.2.1.5). Therefore, it is useful to link these indicators of mental health system with the findings. For example, interestingly Uganda allocates a higher proportion of the health budget into the mental health budget, compared to Colombia. The discrepancy in mental health systems across each country needs to be considered when generalising the current findings. This variation in mental health systems increases the generalisability of findings, and the increased likelihood of a multi-family group intervention being economically feasible in other low resource regions. In general, the findings indicate that, despite the clear differences in the national context of each country, the multi-family group intervention was feasible and accepted by participants.

Explanatory model (EM), as a term, was initially introduced by Kleinman et al. (440), referred to as the 'complex, culturally determined process of making sense of one's illness, ascribing meanings to symptoms, evolving causal attributions, and expressing suitable expectations of treatment and related outcomes.' p.106 (441). Moreover, EMs refer to the prior knowledge, and perception of mental illness - individuals possess, since these are rooted in culture and religion (442). Given the nature of the intervention, there is a need to acknowledge the different explanatory models that are possessed by the different stakeholders involved, patients, clinicians, and family members. Linking the idea that different ethnic groups may harbour different EMs, is also a notion to consider, particularly when different EMs have been shown to influence treatment preference and outcome (442). The concept of explanatory models could be discussed explicitly as part of the discussion within the groups, or alternatively something to be considered when planning and adapting the intervention in different cultural settings.

5.6.4 Implications for research and practice

This study represented the second empirical component of the GLOBE exploratory case. This study has several implications for research and practice. The qualitative findings suggest that the resource-oriented multi-family group intervention is feasible and was widely accepted by participants in each country. The findings showed that involving family members in the care and treatment of those with SMI can improve and strengthen relationships, particularly between patients and family members or caregivers. Creating a safe space where participants can talk openly about their experiences, challenges, and needs can generate a better understanding for the patient and family members.

The findings demonstrate how feasible the multi-family group intervention is in three culturally different resource constraint settings. Therefore, it could be tested for feasibility and acceptability in other settings, to establish an evidence base to support its use globally. Regarding feasibility, the

findings in this study demonstrated variation in family member attendance, which, according to the qualitative data, impacted the level of engagement. The more a family engaged with the intervention, the more benefits they would experience. Failing to engage family members has been identified as a barrier in family interventions (391,393). Therefore, there is a need to incorporate a culturally and 'context-specific' approach to engaging family members embedded as part of the intervention design (391). For example, studies that have demonstrated improvements in family attitudes have also provided more psychoeducation and homework to participants to encourage learning outside of the sessions themselves (343). This could supplement the sessions and help to improve overall engagement. Better engagement from the beginning may also mitigate the loss of follow-up.

The intervention demonstrated improvements in primary and secondary outcomes, which reflect unusually medium and large effect sizes. If studies are interested in exploring the intervention's effectiveness in different LMIC settings, an RCT design approach would be required to compare the intervention to treatment as a usual or active control. Establishing the effectiveness is needed if the aim is to inform policy in scaling up an intervention like this.

As part of a process evaluation, it is interesting to explore the variation in the delivery of an intervention on the impact of outcomes (348). In addition, to establish any correlation between certain patient-level characteristics and changes in outcome. This current study did not demonstrate any significant association between patient-level characteristics, fidelity factors (number of sessions attended and average duration of sessions attended) and changes in outcomes. A larger sample may be required to detect any association and determine essential features of the intervention. Future research should prioritise the evaluation of which specific components of the multi-family group impacts mental health outcomes. Identifying the 'active component' of an intervention can help facilitate what particular part of the functionality would be appropriate for different resource-constrained settings, like in LMICs (343). The findings demonstrate that the intervention's effect is generic, which suggests that the intervention can be widely used, and is not associated with specific individual characteristics.

It has been reported that caregivers to individuals with severe mental health issues are at higher risk of developing depression and anxiety (429,430). Given that we have findings relating to individuals and families, respectively, it may be helpful to measure and assess family function using appropriate assessments to understand the changes an intervention has on this. If families are to be considered a vital resource in supporting patients with SMI, and to advance the core goals of GMH (394), then more emphasis should be placed to ensure their mental health.

Although the evidence establishing the effectiveness of psychosocial interventions for schizophrenia and other mental illnesses is increasing, the evidence supporting the feasibility and acceptability of interventions is lacking (391). In GMH, there is a demand for culturally relevant, appropriately adapted interventions, whereby the focus is not solely on effectiveness but prioritises feasibility and acceptability. Failure to understand and capture the perspectives of patients, families, and in GLOBE, the clinicians in assessing the feasibility of an intervention essentially prevent the sustainability of an intervention. Future studies exploring feasibility need to incorporate quantitative and qualitative evaluation to triangulate outcome findings with participant perspectives and identify the enablers and barriers. Although GLOBE explored only participant views using qualitative interviews, studies should combine these with quantitative surveys designed to measure participant satisfaction with the intervention (391).

There is growing evidence that social factors mediate mental disorders (32). Generally, intervention trials focus on the overall-mean differences of groups comparing a treatment group with a control, therefore ignoring the wide variation occurring at the individual level. Research has adopted an IPD meta-analysis approach to capture this variation to identify individual-level characteristics and assess how these influence an intervention's effects (443). Future studies in GMH could collect a standard set of individual-level variables, assessing how subgroups of participants respond differently to interventions (390). Evaluating how individual-level variables influence an intervention's effects can help build up an evidence base for the characteristics of individuals who are better suited to an intervention or not (390).

5.6.5 Implications for this thesis

This study addressed Research Question 3 of the thesis ‘What are the feasibility aspects, experiences, and outcomes of a multi-family group intervention? How do they compare across three LMICs?’. This study provides a mixed methods evaluation of a resource-oriented multi-family group intervention delivered in three culturally different LMICs. The findings highlight a multi-family group intervention's commonalities and differences in outcomes, experiences, and feasibility. The study represents the second empirical component of the exploratory case study looking to evaluate a GMH research programme.

The conceptual review presented in Chapter 3, produced a novel framework for understanding GMH. The framework highlighted the limited research concerning the feasibility and acceptability of interventions being delivered in LMICs. This study addresses this point by an in-depth evaluation of the feasibility and acceptability of a multi-family group intervention. The study incorporates participants’ experiences as part of the evaluation to further support the feasibility and acceptability of the intervention in the three culturally different settings. Involving family members in SMI

patients' care and management can offer a feasible approach to address the treatment gaps in LMICs and low resource settings.

Alongside improvements in patient outcomes, the findings highlight the broader benefits of this intervention, such as improving stigma, increasing understanding and knowledge of mental health disorders, reducing perceived burden, and improving the therapeutic relationship between patient and clinician. The evaluation strengthens and extends the framework reported in Chapter 3, by supporting the use of multi-family group interventions in LMICs. There is emphasis of the importance of exploring feasibility and acceptability to help determine whether the intervention is culturally appropriate. Engaging family members is demonstrated as a feasible option to advance the core goals of GMH, and address the increasing the burden on families, and on mental healthcare services in LMICs.

Chapter 6: Overall discussion

6.1 Chapter overview

This chapter provides an overall discussion of the thesis. It aims to synthesise and derive the overarching significance and implications of the findings presented in Chapters 3, 4 and 5. This chapter will summarise the findings and highlight how they address the research question for each chapter. The research questions and aims will be outlined, and the degree to which the findings address these questions, will be discussed, and related to current and relevant literature regarding GMH. This chapter will subsequently present the strengths and limitations of the thesis in its entirety, along with the implications for wider research and practice.

6.2 Summary of the context and problem

The overall aim of this thesis was to evaluate how a GMH research programme (GLOBE) could promote an equitable and sustainable partnership, address research capacity strengthening and its ability to test and develop an exploratory intervention (refer to Section 1.5). This aim was developed because, since the 2007 Lancet series, there has been a proliferation of research programmes aiming to address the GMH agenda. Despite the numerous research programmes in existence, however, there is limited evidence exploring how effective these programmes are in achieving their aims while tackling the broader GMH goals, especially given that the term is so new on a theoretical and empirical level. To address the lack of clarity and conceptualisation of the term, 'global mental health', Chapter 3 consulted the academic literature to establish the understanding of GMH on a theoretical basis. Chapters 4 and 5 presented an exploratory case study of GLOBE, which enabled a prospective evaluation of a GMH research programme. More specifically, Chapter 4 focused on the partnership development from inception to completion of the programme, while Chapter 5 conducted a mixed-method evaluation of a resource-oriented psychosocial intervention: specifically, a multi-family group intervention.

6.3 Summary of the approach and methodology

This thesis adhered to a pragmatist research paradigm, which embraces pluralism concerning the methodologies selected to explore the research questions. Several frameworks were referenced, including global health collaboration governance frameworks (287,288) and the MRC process evaluation framework (320,348). The overall aim of this thesis was to evaluate the GLOBE research programme focusing on the partnership and intervention development. To achieve this aim, three studies were conducted, each adopting a different perspective and using different methods: a systematic review, a prospective longitudinal qualitative analysis, and a mixed-methods evaluation. By incorporating multiple methods, this thesis aimed to generate findings that addressed the limited evidence supporting the use of GMH research programmes.

Before the evaluation of GLOBE could begin, it was necessary to clarify the meaning of GMH, set the parameters of the term, to help guide the later empirical investigation. The candidate completed a conceptual review to synthesise existing literature on the understanding of GMH (Chapter 3). A conceptualisation is a 'network or a plane of linked concepts' (p.57) (178). The review aimed to construct a novel view of GMH rather than creating a new definition. While multiple definitions of GMH exist, a single definition of GMH may not resonate or be appropriate or across all contexts, individuals, or times. This review identified the diversity in the understanding of GMH and how its meaning exists beyond the local-global debate, going on to highlight specific field components that were explored in-depth in Chapters 4 and 5. The first implication identified was that a need exists for the critical evaluation of collaborative partnerships between HICs and LMICs as a way to explore their success and effectiveness, particularly in terms of their ability to ensure equity, sustainability and address research capacity strengthening in LMICs. Sustainability, in this context, refers to the partnership continuing beyond the current research grant. The second implication was the lack of research exploring the feasibility and acceptability of implementing interventions in LMICs. The candidate selected the GLOBE programme as an exploratory case study to address the two implications raised in the review, which are reflected by the two components (refer to Figure 2.2, reported in Section 2.2.1). First, a prospective longitudinal approach was adopted to compare the initial expectations of participating researchers of the GLOBE research programme with their actual experiences (Chapter 4). Second, a mixed methods evaluation of a multi-family group intervention was conducted (Chapter 5).

A prospective longitudinal qualitative analysis (Chapter 4) was conducted to explore whether and how researcher expectations concerning equity, sustainability and strengthening research capacity in the research groups were fulfilled. The members of the GLOBE collaboration constituted the sample (n=38) used to establish the expectations and experiences of a GMH collaborative research programme. The findings indicated how many expectations were fulfilled during a given research programme, particularly with regard to promoting equity within the partnership and the sustainability of the research groups. Notably, expectations around strengthening research capacity were not achieved at the institutional level. These findings were able to be explored in-depth and used to extend the implications raised in the review.

Chapter 5 presented the second empirical component of the exploratory case study: the mixed methods evaluation of the multi-family group intervention. As recommended by the MRC framework, this chapter also employed a mixed methods approach to answer the research question. Intervention fidelity was generally high throughout, and the impact on outcomes - particularly the primary and secondary outcomes - demonstrated improvements. The study did not establish

whether the intervention influenced certain patient-level characteristics more than others, indicating that it might have a wider generic impact if delivered in other settings. Furthermore, the analysis of participant experiences of the intervention indicated how all participants benefited from being a part of the intervention, particularly with regard to how it created a safe open space for sharing and learning. Despite this study representing a strand of the GLOBE research programme, it also functioned as an individual study, and the approach was not linked to the findings derived in Chapter 4. Instead, the study reported in Chapter 5 addressed the lack of research exploring feasibility and acceptability of interventions in LMICs, an implication raised in the review.

The conceptual underpinning of this thesis (Chapter 3) provided the foundation for the entire thesis and the overall evaluation. It highlighted specific components that the GLOBE case study was able to scrutinise independently and in-depth. The findings reported in the empirical chapters were not triangulated to address the overall aim of the thesis, instead, they focused on the different aspects of GMH research programmes, first by exploring the dynamics of the partnership, and second by evaluating how an intervention was tested and developed.

6.4 Answers to research questions

This overarching aim of this thesis was to evaluate a GMH research programme, using GLOBE as an exploratory case study. To ensure that this evaluation was conducted effectively, an initial step was implemented, which involved improving the clarity of the term, GMH, through the process of conceptualisation. Once the term was fully conceptualised, meaning that the specific indicators of GMH were accordingly defined, the GLOBE programme could be evaluated using multiple research methods. Using multiple methods allowed for triangulation, which facilitated the, nuanced evaluation of a GMH research programme, adding a subjective component to primarily objective reasoning (117,131). Summaries of the findings from the individual chapters, along with the respective methods, are presented below. In this section, the findings of the studies, which were interpreted within each chapter, will be presented alongside a consideration of their combined significance in addressing the primary aim of evaluating a GMH research programme. Table 6.1 summarises the studies constituting this thesis, including an overview of the research question, objectives, methods, and findings for Chapters 3 to 5.

	Chapter 3	Chapter 4	Chapter 5
Problem	Lack of clarity and conceptualisation of global mental health (GMH)	Lack of prospective data evaluating a GMH collaboration	Limited evidence of testing and developing multi-family group interventions in LMICs
Question	RQ 1: How is the term 'global mental health' understood in the academic literature?	RQ2: What are the initial expectations of researchers participating in a GMH research programme? What are their experiences? Which expectations were met and which were not?	RQ3: What are the feasibility aspects, experiences, and outcomes of a multi-family group intervention? How do they compare across three LMICs?
Objectives	▪Systematically identify relevant texts from academic literature ▪Synthesise these texts to construct a conceptual review of the understandings of GMH	▪Establish and identify the initial expectations to generate a framework ▪Use framework analysis to identify which expectations were met, not met, or partially met, based on participant experiences ▪Compare how their later experiences differ to their initial expectations	▪Compare the primary and secondary outcomes before and after intervention delivery ▪Describe the intervention fidelity across LMICs, along with whether and how fidelity correlated with improvements in outcomes ▪Determine whether the intervention has influence on patient-level characteristics ▪Use secondary analysis to condense the intervention stakeholder experience into overarching themes
Method	Conceptual review	Prospective longitudinal qualitative analysis	Mixed methods evaluation
Findings	1. GMH is understood in four ways: *as globalising mental health research*; *as implementation*; as *a way to improve the mental health landscape*; *to support and learn from LMICs.*	2. Expectations met or exceeded were: clear communication; building trustful relationships; developing expertise; publications; commitment to the research; and new research opportunities and extending the network. Expectations partially met were ownership of the research; limitations to partnership contribution; coordination and power dynamics; investing in local leadership; and strengthening research capacity. Expectations not met were opportunities for innovation, and mutual learning.	3. Primary and secondary outcomes improved; additional outcomes reducing stigma and burden were observed. Experiences were generally positive with an emphasis on keeping the sessions separate from clinical practice and better-improved family relationships. Medium to high fidelity suggests that the intervention is feasible in these settings, although adherence and dosage were not associated with more improved outcomes. It was not established that the intervention influenced certain patient-level characteristics.
Implications	This framework offers a novel, simple way of viewing GMH. Researchers and practitioners newly engaging with GMH should consult this framework as a way to position themselves within the GMH discourse.	The findings indicate that initial expectations of a global mental health research programme can be met. Although a funding imbalance was present in this programme, partners in LMICs still perceived equity and fairness in the collaboration, even when the HIC researchers believed otherwise. Regarding strengthening research capacity and developing local leadership, more resources are needed to address this adequately. It should be understood that relationships need time to establish, by gaining mutual trust, before processes such as mutual learning and innovation can thrive.	This multi-family group intervention is feasible in these three LMICs. The intervention had a positive impact on all members, especially the patients. Improving relationships between patients and family members is important for patient recovery. Since the intervention utilises existing resources, it could offer an innovative low-cost approach to mental health care in LMICs and could be scaled up in different countries to serve the key objectives of GMH.

Table 6.1 Overview of chapter

6.4.1 Research Question 1: How is the term 'global mental health' understood in the academic literature?

To answer the question of how GMH is understood in the literature, the eligibility criteria for papers included in the conceptual review were deliberately broad to encompass all current definitions, meanings, and explanations of the term. This approach enabled a wide range of perspectives on what GMH means for those engaging with it, either through research, practice, or critical commentary, to be included. The eligibility criteria specified that authors needed to explicitly define GMH or describe their understanding of the term. In addition to describing their understanding, the criteria also included existing definitions or meanings, such as considering GMH as a domain within the wider global health discipline (57). Given that the eligibility criteria were so broad, the number of included papers was large (n=347); therefore, a random sample of sixty articles was taken for use in synthesising and developing the conceptual framework. From these sixty papers, it was concluded that global mental health could be conceptualised as: (1) 'globalising mental health research', (2) 'implementation', (3) 'improving the mental health landscape', and (4) 'learning from and supporting LMICs'.

The first conceptual understanding of GMH, 'globalising mental health research', is defined by the field's aim to work towards an evidence-base that is inclusive, more explicitly ensuring that research capacity in LMICs is improved. At the same time, however, GMH research acknowledges the mental health needs within HICs, such as within migrant groups. Global health research partnerships, specifically between HICs and LMICs, were identified as a critical strategy to address these needs, enable research capacity building, mutual learning, and reverse innovation (reverse innovation described in Section 3.5.2 and Section 4.2). Furthermore, this conceptualisation focuses more on psychosocial interventions, testing and developing interventions in different cultural settings, and learning from the commonalities and differences identified.

The second conceptual understanding of GMH, 'implementation', emphasises the need to scale up interventions and services globally while focusing on LMICs. This conceptualisation recognises how LMICs experience many barriers to advancing their mental health systems, including the lack of research capacity to monitor and improve them. Programmes implementing or delivering interventions need to be evaluated to understand their feasibility, acceptability, and sustainability in different LMICs.

The third conceptual understanding of GMH, 'improving the mental health landscape', relates to enhancing mental health policies to accommodate adequate infrastructure. This understanding also emphasises the need for policies that acknowledge social inclusion, protect vulnerable individuals' human rights, and reduce stigma and discrimination.

The final conceptualisation, 'learning from and supporting LMICs', articulates the need for research, implementation, and the overall landscape to be improved in LMICs. Global health partnerships are also emphasised here, albeit in relation to the need to address challenges around equity and power dynamics in partnerships between HICs and LMICs. Furthermore, the conceptualisation articulates how HICs can learn from LMICs through processes such as mutual learning and reverse innovation.

The findings demonstrated that many authors used more than one conceptualisation and that each concept was interlinked with the others. Components of innovation, a collaboration between LMICs and HICs, mutual learning, the role of communities, and the local-global debate were common across each conceptualisation. The review aimed to construct a novel view of GMH rather than creating a new definition. While multiple definitions of GMH exist, a single definition of GMH may not resonate or be appropriate across all contexts, individuals, or times. The findings indicate that GMH is associated with a diverse range of research and practice endeavours, which do not necessarily fit within the local-global dichotomy that has characterised GMH since the publication of the 2007 Lancet series. The findings do not ignore the local-global debate; instead, it runs throughout each conceptualisation. Furthermore, there is an emphasis on local-global connectedness, for example, viewing community care as part of scaling up services. Research and practice can be more locally resonant by developing closer links to the community, even shifting towards recovery and resilience factors rather than focusing solely on determinants of mental health.

The findings helped to expand and clarify the meaning of the term 'global mental health' and highlighted specific implications that in turn informed the subsequent research questions. The range of perspectives synthesising the understanding of the term GMH helped set the foundation for the evaluation of GLOBE. The wide range of perspectives suggests there would have been value in taking a narrower approach, focusing on how GMH research is conceptualised rather than GMH in general. Nevertheless, the following sections will describe the implications derived from the conceptual framework that came out of the review which to inform the approach and methodology and to answer the research question.

6.4.2 Research Question 2: What are the initial expectations of researchers participating in a GMH research programme? What are their experiences? Which expectations were met, and which were not?

The conceptual framework highlighted two important factors relevant to addressing this question. First, the review highlighted that a critical evaluation of partnerships between HICs and LMICs is required in order to develop a focus on the non-specific aspects of developing and delivering interventions (224), for example, to explore how the dynamics of collaboration and other contextual

factors contribute to effective GMH research programmes (57,215,224–226). Second, evaluation is needed to address the issues of achieving equity and rebalancing power dynamics in these research partnerships (215). These implications informed the development of these research questions.

These research questions were addressed by adopting a longitudinal prospective qualitative study design, which used semi-structured interviews to capture members' initial expectations and later experiences delivering a GMH research programme. Fourteen initial expectations were identified using framework analysis and are reported in Table 4.2 Section 4.5.2.

The first theme in the thematic framework is defined by expectations for clear, regular communication, relationships built on mutual respect, and commitment by the group members particularly the more junior members. There was also concern that a language barrier would impede contribution and collaborative work. The second theme was defined by expectations of owning the research and contributing knowledge to the design of the interventions. There was an expectation that a balanced power dynamic within the collaboration would be maintained by encouraging the independence of the LMIC partner groups. The third theme concerned expectations for developing research expertise, opportunities for innovation (reverse innovation) and mutual learning and strengthening institutional research capacity. The fourth theme describes expectations for publications, research opportunities and extending networks, and investing in local leadership.

Once the later interviews were transcribed and analysed, the extent to which the expectations identified in thematic framework were fulfilled are reported in Table 4.3 Section 4.5.2. Expectations that were met or exceeded tended to relate to the partnership's ability to facilitate coherent and committed collaboration, mainly due to the open communication, relationships being built on trust and the high level of commitment. These experiences around communication and relationships may have contributed to the positive experiences regarding publications and new research opportunities. However, expectations related to forming an equitable partnership were only partially met. This was due to a divided view of this issue, mainly between the LMIC partners and the UK group. The LMIC partners' evaluation of the ownership experiences, intervention design, and balanced power dynamics were mostly positive. By contrast, the UK group tended to be critical in their views and believed that the grant mechanisms prevented LMIC partners having a sense of ownership of the work and creating power imbalances between HIC and LMIC countries.

Further expectations that were only partially met concerned strengthening research capacity and developing local research leadership. The LMIC expectations of capacity strengthening and developing local leadership were fulfilled, whereas the UK group's views differed, although strengthening capacity was addressed individually, this was not realised on an institutional level.

Finally, the expectations that were not met- namely, mutual learning and opportunities for innovation-, required collaborative working across all groups. Although communication between the UK and the respective partner groups was strong, it was less apparent amongst the partner groups. This lack of communication may have inhibited the flow of knowledge and ideas among the three LMICs. The relationships between the LMIC partners were new, and the language barrier may have prevented them from working collaboratively.

These findings extend and refine the implications identified in the framework. Although the collaboration was dictated by the grant mechanisms, which were led by the UK research group, investing in other aspects of the collaboration allowed the LMIC partners to perceive an equitable partnership through open, clear communication, respectful, trustful relationships, and fair, inclusive authorship practices. Furthermore, individual-level research capacity building was addressed. The cumulative impact of strengthening individual-level research capacity does not necessarily equate to a higher, institutional level building of capacity. The latter is needed to ensure the sustainability of research groups in LMICs and requires extensive infrastructural reform to facilitate research.

6.4.3 Research Question 3: What are the feasibility aspects, experiences, and outcomes of a multi-family group intervention? How do they compare across three LMICs?

The conceptual framework of the understanding of GMH (reported in Chapter 3) identified one important point relevant to addressing this question. Specifically, the review highlighted that research exploring the feasibility of interventions in LMICs is limited (204,208,210,223,227), indicating the need to develop and test interventions while adopting a more exploratory focus. The evaluation of this multi-family group intervention explored this topic, addressed the limited evidence supporting the feasibility of interventions in LMICs, and tested a low-cost innovative intervention focusing on existing resources.

This final question was addressed using an exploratory case study of a multi-family group intervention, trialled as part of the GLOBE research programme. The mixed methods approach explored feasibility, outcomes, intervention fidelity, and experiences of the intervention.

The findings indicated that the multi-family group intervention was feasible and could be offered as a mode of treatment in the three LMICs. Feasibility implies the practicality of a system or intervention within a setting; in this case, the delivery of multi-family group interventions in the three LMICs. Feasibility aside, patients' primary and secondary outcomes mainly demonstrated an improved subjective quality of life (MANSA) and mental health symptoms (BPRS), revealing medium to large effect sizes (refer to Section 5.5.3). The absence of an association between the change in outcome measure and individual level predictors indicate that the intervention's impact does not

depend on specific characteristics (refer to Section 5.3.4.2). Additional outcomes evaluated the burden experienced by family members or caregivers and observed improvements in Ugandan family members only. The findings indicated positive participant outcomes, yet this evidence should be interpreted cautiously, given the lack of control groups.

The analysis also synthesised the qualitative findings exploring participant experiences from the existing manuscripts of each country, and four main themes were developed (refer to Section 5.5.6). Participants reported experiencing various benefits, such as improved communication with family members, and further highlighted the benefit of the intervention being an exercise separate from usual clinical practice. They noted how helpful and valuable it was to have an open horizontal space to discuss topics they determined themselves and where everyone was equal. These qualitative findings provided a nuanced subjective exploration of participants' intervention experiences and thereby corroborated findings relating to the increased adopting of mixed methods approaches in mental health research.

Again, these findings extend and refine the implications identified in the conceptual framework (Chapter 3). Not only does the findings explore the feasibility and acceptability of an intervention exploratory in design, but it also demonstrated how this intervention could have a significant impact on outcomes, characterised by medium and large effect sizes, and accompanied by positive experiences reported by all participants.

6.4.4 Synthesis across research questions

The overall aim of this thesis was to evaluate a GMH research programme and determine whether it was able to achieve its aims, which included forming equitable, sustainable partnerships, strengthening research capacity in three LMICs, and testing and developing an exploratory multi-family group intervention. Conceptualising the term 'global mental health' before evaluating GLOBE meant that the thesis could consult previous literature and theory related to GMH and understand how it has been defined by other researchers; synthesising the different understandings in academic literature enabled the creation of a conceptual framework, which served as the foundation of the thesis. It was helpful to demarcate the key concepts of GMH and identify the parameters of the term.

When synthesising the findings from each study, an apparent association emerged between the conceptual framework reported in Chapter 3 and the content of Chapters 4 and 5. The evaluation of the GLOBE programme provided an opportunity to refine, strengthen, and extend the understanding of GMH, particularly in the context of GMH research programmes. However, the review adopted a broad scope in exploring the term GMH, rather than specifically considering it within the context of

research programmes like GLOBE. Although the conceptual framework did helpfully highlight specific areas that could be explored in depth by the empirical research, a narrower focus may have helped with the development and overall narrative of this thesis. Alternatively, it may have been more appropriate to adopt a wider perspective when reviewing the literature, especially with regard to the implication of strengthening research capacity in LMICs, which is not unique to global mental health, but is a global health issue in general. The developed framework offered a general perspective of the field of GMH and made it more challenging to examine the research problem. While the framework effectively set parameters for the topic, there was potential to increase specificity, which would lead to a more precise framework for evaluating a GMH research programme. However, the evaluation of GLOBE was still able to draw from and build on the conceptualisation of the term GMH.

When considering how the findings from Chapters 4 and 5 complement each other, it should be noted that the two exist as distinct studies, with a limited relationship. Although the two chapters offer an in-depth examination of collaboration and the development of an intervention, the ways in which the chapters work together to build an overall picture are less apparent. These chapters work more independently rather than complementing each other to address the overall aim. Each chapter addresses a different evaluation strand. Chapter 4 explored how equity, sustainability, and research capacity strengthening were achieved. Chapter 5 addressed the ability of GLOBE to test and develop an exploratory intervention. There was less scope to use the findings from these empirical chapters to validate and corroborate each other and reflects a limitation to the study design. The review could potentially have been either broader and more focused in its approach to effectively accommodate the independent approach of the two chapters, by having a wider scope and identifying components that were relevant to both. The review could have been broader and focused on global health in general. This would have meant a larger number of papers, including areas of global health, such as collaborative research in global surgical health, which would not have been relevant to the examination of a GMH research programme. On the other hand, had the review been more focused in its scope, and one strand of the evaluation had been explored, for example, exploring the partnership development, a narrower focus would have been required to identify the established concepts and theories of global health collaboration. On the whole, a balance was struck between emphasising detail and big picture that allowed for all of the chapters' findings to come together to address the research questions.

6.5 Strengths and limitations

This thesis has many strengths and several limitations. The strengths and limitations of each of the individual studies, the conceptual review, the prospective longitudinal evaluation, and the mixed

methods evaluation are described in Chapters 3, 4, and 5. In this section, the strengths of the overall approach are considered, followed by the limitations of this approach.

6.5.1 Testing and expanding the conceptual framework

A key strength of this thesis is that it was informed by the conceptual framework reported in Chapter 3. Achieving the overall aim of evaluating a GMH research programme required the conceptualisation of the term GMH. Developing a conceptual GMH framework helped to identify the critical characteristics that the evaluation of GLOBE would later examine in detail. For example, the conceptual framework addressed how GMH research programmes provided a strategy to improve mental health research capacity and mental health infrastructure in LMICs. However, there is a need for critical evaluation to understand whether these issues can in fact be addressed using collaborative research programmes while promoting equitable and sustainable partnerships. The importance of a theoretical starting point informed the specification of the methods, the overall research aim, and the related questions, as well as clarifying the nature of the phenomenon under investigation (444). Once the framework identified the components of GMH, these could be tested through the evaluation of GLOBE, focusing on specific areas. This empirical component of the thesis essentially allowed the original framework to be extended and refined (445). Regarding theory-building and testing - the case-study approach provided an ideal platform to test and validate elements of the conceptual framework (121).

6.5.2 Prospective approach

Another key strength of this thesis is its prospective approach, interviewing the GLOBE members both at the beginning and the end of the programme delivery worked to prevent any bias in reporting. The members were interviewed before developing and delivering the interventions, meaning that their views were captured before they learned the study outcomes, which removed the chance this had any influence on their expectations. If interviews had been conducted only after the study outcomes were realised, the data may not have accurately represented the participants' earlier views, as their actual experiences would have introduced bias. The chosen approach enabled an enriched dataset of the GLOBE partnership development to be captured and addressed the lack of prospective longitudinal evaluation of health research partnerships between HICs and LMICs (105). Such prospective longitudinal evaluation can enhance the understanding of research capacity strengthening and aid in scrutinising research partnership dynamics as they unfold in real-time, allowing for the identification of factors that contribute to success or failure (105).

6.5.3 Familiarity with the GLOBE team

Several advantages arose from this thesis being developed alongside the GLOBE research programme. First, this position enabled the candidate to become familiar with the GLOBE members,

therefore, it afforded many opportunities to confer with and seek ongoing support from the members, especially concerning the data collected. On several occasions the group was instrumental in the overall evaluation of GLOBE. For example, Colombian group members helped with translating Spanish articles for the conceptual review, which was necessary for identifying whether they met the eligibility criteria. The cooperation of the GLOBE members, particularly in agreeing to be interviewed at two different time points, represents a significant strength of this thesis. This cooperation has facilitated a detailed examination of how specific factors of international collaboration, such as promoting equity and sustainability, could be enabled, or hindered.

Another advantage related to the members was their capacity for openness during the interviews. This level of candour can be observed in the findings reported in Chapter 4 and added to the richness of detail. A final advantage of working closely with those delivering GLOBE was data availability, which enabled the analysis in Chapter 5. One drawback of IPD meta-analyses is that they are often time-consuming due to the need to request datasets from different research groups (378); in the present study, this issue was avoided due to the data being readily available at the time of analysis. Moreover, the data relating to intervention fidelity was collected separately from the participants' outcomes. Due to the existing familiarity with the GLOBE participants, it was provided quickly and efficiently when requested.

However, although there was familiarity with the participating GLOBE researchers, which proved invaluable throughout the entire process, there was also the limitation of beginning the PhD after the collaboration had already commenced. As mentioned in Chapter 4, a previous researcher led the interviews at the first time point, capturing the participating researcher’s expectations. Not being present during the initial stages may have limited my perspective on the activities carried out in the early phases of the collaboration, such as the workshop conducted to assist with protocol development. Furthermore, not being present at the outset limited my understanding of how the relationships between the partners commenced. I attempted to remedy this by spending time with each team when I joined the project during the teaching week (described in Section 4.4.5.3) and checking in with partners to maintain and strengthen these relationships.

6.5.4 Lack of triangulation

The overall aim of the present research was to evaluate a GMH research programme in terms of its ability to promote equity and sustainability within the partnership, address research capacity strengthening, and test and develop a resource-oriented multi-family group intervention. The GLOBE research programme was selected as a case study to accommodate two empirical studies and address these aims. The findings from each study have refined, strengthened, and extended the understanding of GMH and have demonstrated how a GMH research programme can achieve its

aims. However, when the findings from the empirical studies are considered together, they offer limited scope for triangulating the data. The two components of the case study can be viewed as separate entities. Identifying a common thread between the two was challenging, as the data from each study were very different. As this thesis has demonstrated, these differences in the data highlight some of the challenges faced in triangulation (446). When synthesising the data, however it became apparent that the main objective was to determine how the knowledge generated from the GLOBE case study could strengthen and extend the conceptual framework reported in Chapter 3. The triangulation in this thesis was therefore less about enhancing the validity of data, and more about establishing a complete picture of the overall aim, to evaluate a GMH research programme.

Despite this, more could have been done to develop the study design of the present thesis so as to link these two studies in a more complementary way. Given how the substantial differences in the data from each empirical study, there was limited opportunity for data validation, comparison and confirmation (447).

6.5.5 Single case study design

An essential strength of this thesis is its use of the case study research design. Single case studies such as this one can develop and test theories by acting as a tool that enables an empirical investigation to explore a specific phenomenon in-depth (448). The case study approach examined multiple variables that are crucial to understanding the phenomenon of interest (448). Given that this was a case study of a programme anchored in a real-life context, the selection of GLOBE as a case study facilitated a detailed, rich, and holistic interpretation of a GMH research programme. The evaluation of GLOBE has yielded insights that can be approached as speculative hypotheses that can help inform future research and practice. Although also considered a limitation, the case study design enabled flexibility in the specific methods chosen to evaluate the GMH research programme, which effectively provided insight into the different aspects of GLOBE (120).

However, there are several issues associated with using a single case study in research. The most prominent of these relate to methodological rigour, researcher subjectivity, and generalisability. Concerning the first point, the absence of methodological guidance is viewed as one of the key concerns with regards to case study research (108). Yin describes the lack of rigour within case study designs as due to the lack of systematic procedures to guide a researcher; this can lead to dubious evidence or biased views, likely influencing the findings and conclusion (108). Although the candidate adhered to different frameworks to guide the methodological process within each study chapter, there was no framework available that offered a systematic procedure to help steer the direction of the case study.

A second issue with case study design is that of researcher subjectivity. A researcher selects a case study design based on the nature of the research problem; in this case, the lack of evidence supporting the use of GMH research programme, and the consequent need to evaluate them. Upon beginning the research for this thesis, I possessed a specific positionality that influenced the research process. Positionality refers to the position or worldview that a person assumes when conducting research (449). A researcher's independence often comes under question in case study research, as it is possible to play a more interactive or more distant role under these circumstances (450). When playing a more interactive part, the researcher becomes embedded in the research itself, therefore, by already knowing certain aspects of the phenomenon under investigation, the researcher may unknowingly influence the direction of the study towards those results, thus confirming the results they already knew (450). My role in the present study may have been more interactive than distant (450). For example, when I was interviewing the GLOBE group members to capture their experiences, I already knew information concerning the findings of the GLOBE interventions and the new global health research programmes in which some of the existing LMIC partners were participating. By knowing this information, I may have subconsciously prompted questions seeking to explore these collaboration outcomes and thus guided the GLOBE participants toward certain responses that confirmed what I already knew. One strategy for mitigating this influence over the research is that of practicing reflexivity, which means that researchers should understand the role they play in generating new knowledge (304). Researchers should thus be aware of strategies for minimising their influence over research and the interpretation of findings, such as transparency, particularly in qualitative research (304). Multiple interviews can also extend the engagement, helping to build rapport and trust between a researcher and a participant (304).

The third and possibly the most significant limitation of case study research designs is the problem of generalisability (451). Gerring defines a case study as an 'intensive study of a single unit' (p.347) observed over a specific period (126). Given that case study research is highly specific and only concerned with a particular context, the question of how to generalise the findings and make them relevant for future research remains an active one (108,452). Many researchers consider that studies with a small number of cases lack the evidence necessary to establish the generalisability of the findings (453), therefore, the fact that this thesis represents a single case study that seems to suggest an even lower capacity to generalise. However, Yin argues that rather than providing a source for generalisability, the case study instead enables an analytical generalisation, which involves the researcher comparing data from a single case study with current theories (113). In this thesis, the case study enabled the comparison of empirical findings against the findings from the

conceptual review. The process of comparing and identifying what is different and what is the same is in itself a helpful research process (113).

6.5.6 Language barrier

Another limitation identified in this thesis was the language barrier between the candidate and the partners. This language barrier meant that some interviews in Chapter 4 were conducted with the aid of a translator. The interviews capturing the experiences of those receiving the multi-family group intervention (Chapter 5) were conducted in the LMICs' native languages. The evaluation of the intervention experiences thus relied on the analysis and interpretations of participating researchers in each country rather than being a qualitative analysis of primary data. This may have limited the richness of the data and therefore, somewhat had an impact on the analysis and limited the interpretation of the data. However, using translators meant that the experiences of people who did not speak English could also be accessed and represented (refer to Section 4.4.4). Although it would have been better to conduct interviews in each partner's native language it was not pragmatic or realistic within the limitations and timeframe of the PhD for the candidate to learn three languages to a level sufficient to collect the data in Spanish, Bosnian and Luganda.

6.5.7 COVID-19 pandemic

A final limitation is that the data collection coincided with the COVID-19 pandemic. Pandemic-related restrictions meant that all interviews were conducted over Zoom rather than face-to-face in with participants in their local context. Meeting face-to-face in the respective countries may have helped to reduce the power dynamic imbalance between candidate and participant during the interviews (306). The pandemic also removed the opportunity to visit each country, observe first-hand how the GLOBE programme was led in each country, and appreciate and learn the differences and similarities in how the multi-family group intervention was delivered across the settings.

6.6 Interpretations and comparisons with existing literature

This thesis includes the first research studies to adopt a prospective longitudinal approach to evaluating a GMH research programme, focusing on the collaboration and the delivery of a multi-family group intervention. The conceptual framework presented in Chapter 3 highlighted the demand for collaborative research programmes between LMICs and HICs, in order to improve mental health infrastructure (201,203,211,217,218), and mental health research in LMICs (204,207,209–211,223). However, such collaborations give rise to challenges associated with maintaining and ensuring the equity and sustainability of research. The framework also sheds light on the lack of existing research exploring the feasibility of interventions in LMICs (204,208,210,223,227). Therefore, this thesis consulted GLOBE as an exploratory prospective case study to address these issues. Adopting a prospective longitudinal approach enabled observation of

how partnership development with GLOBE members evolved and a comparison of their experiences with their expectations, with a focus on experiences related to equity and research capacity strengthening. In addition, the case study focused on exploring the feasibility, experiences, and outcomes of a multi-family group intervention using a mixed methods approach. The main findings discussed in this section are as follows (6.6.1) promoting equitable and sustainable partnerships; (6.6.2) strengthening research capacity; (6.6.3) testing, developing, and evaluating exploratory studies.

6.6.1 Promoting equitable and sustainable partnerships

The present thesis contributes to the literature concerning the challenges in achieving equity in research partnerships between HICs and LMICs. Historically, funding for collaborative research has been steered by researchers and funders in HICs, meaning that researchers in HICs set the research agenda. HIC researchers drive the research, and are responsible for allocating the resources and leadership, thus, research relationships between HICs and LMICs have been criticised for being highly inequitable and characterised by imbalanced power dynamics (272,278).

GMH is defined similarly to global health, in that the goal is to improve mental health equity for all individuals across the globe (57,167). The importance of equity in relationships has been highlighted in previous research, and it is considered a key driving force behind GMH (51). The findings in this thesis demonstrate how the LMIC partners of GLOBE perceived equity to exist within the partnership, despite the funding arrangement and unequal power dynamics. There is also a desire to change the funding structures in order to give more financial independence and autonomy to LMICs, which would help achieve equitable, successful, and sustainable partnerships (454). Previous research exploring contemporary partnerships has emphasised the promotion of equity in research partnerships between HICs and LMICs, which would make these partnerships more effective (105). One of the key factors that prevented the UK group from perceiving the partnership formation as equitable was the direction of funding, which originated from an NIHR research grant. When funding stems primarily from one country, the UK, then the power sits with that country (274). Some studies measure equity according to the ability of LMIC researchers to influence how the funding is spent (279,283). The experiences of the GLOBE members suggested that the LMIC partners had little influence over how the money was spent and that the processes of the grant strongly dictated the nature of the collaboration itself. Despite this funding imbalance, the LMIC partners still felt a sense of ownership over the research and that the power dynamics were balanced. This finding disagrees with literature focusing on the ways in which funding imbalance impacts the ability of research partnerships to achieve equitable relationships (104).

A scoping review led by Faure *et al.* identified multiple dimensions that can be addressed to promote equity within research partnerships: for example, open communication, trust, fair authorship practices, and mutual learning (274). The following sections will demonstrate how equity can be promoted by investing significantly in other aspects of collaboration.

6.6.1.1 Open, regular communication

Other studies have demonstrated that ensuring open communication during a research collaboration can contribute to an equitable relationship (274,279,283,455,456). Many researchers have emphasised that facilitating early open communication from the beginning of a partnership helps members feel listened to, sets good intentions and avoids miscommunication (283,456). The literature also highlights the importance of organising collaborations to enable open, honest communication (104,279,283,455). Matenga *et al.* discussed the importance of communication, how it can help maintain group cohesion, and how transparency can avoid tension within partnerships (279). The findings in the present thesis also indicated that levels of communication fulfilled expectations; for example, LMIC early-career researchers acknowledged and appreciated being copied into all emails, even when the subject did not directly concern them. The communication style demonstrated in GLOBE helped to ensure group cohesion and enabled a collective, shared knowledge of what all groups were doing, despite working on different continents. Furthermore, the communication style established from the beginning provided a good base from which the group could overcome challenges such as the COVID-19 pandemic.

6.6.1.2 Trustful, respectful relationships

In addition to communication, the findings revealed positive experiences around forming trustful, respectful relationships, even to the extent that a significant amount of time was dedicated to nurturing these relationships. The existing literature highlights that developing trusting and respectful relationships makes an important contribution to overall equity (274,283). It is further evident from previous literature that trust within research partnerships takes a long time to build and moreover that facilitating open and regular discussions is one way of helping to achieve this (283). Strong relationships were formed in GLOBE due to the communication style and mutual respect, as reflected by relationships that exhibited both a professional and personal element (102). Dean *et al.* evaluated the experiences of both LMIC and HIC researchers (105), finding that issues with achieving equity were sometimes due to newness of the relationships and lack of previous collaboration (105). The findings in this thesis demonstrate an opposing view: specifically, that despite the connections largely being new, the LMIC partners still perceived equity in the relationship.

6.6.1.3 Inclusive, fair authorship practices

According to Faure *et al.* implementing fair authorship practices offers another way of ensuring equity in research partnerships (274). Previous studies highlight the importance of fair authorship practices within collaborative research partnerships (103,455,457,458). Publications were highly anticipated and represented a crucial output for many LMIC partners. The experiences of the publication process were considered very positive and perceived as transparent, equitable, and inclusive, primarily because it ensured that the early-career researchers were integral to the writing process. The positive experiences around authorship and producing publications possibly helped counteract the existing imbalance caused by funding. All publications comprised either a first or last author for each country (352–355). These findings support and extend Kohrt *et al*. who recommended that collaborations between HICs and LMICs should promote contextually grounded and ethical publication development, cultivate understanding, and help strengthen research capacity in LMICs by focusing on early-career researchers (42). In GLOBE, the LMIC researchers were responsible for writing and analysing the data for their respective publications and were also responsible for choosing the journals that manuscripts were sent to. This full autonomy over publications and the transparency of authorship selection helped empower the researchers, especially early-career researchers. Handling this aspect of the collaboration ethically and inclusively contributed to the equity perceived on the LMIC side of the relationship (274).

6.6.1.4 Mutual learning

Alongside these dimensions highlighted by Faure *et al.* (274), there are a multitude of ways to promote equity and help balance power dynamics. Researchers argue that HIC partners need to identify the benefits they are seeking through partnerships, and that the benefit cannot only be an LMIC expectation (54). When there are imbalances in the expectations around mutual benefits, as observed in the current findings, this adds to the issues around power dynamics and, therefore prevents the formation of authentic partnerships (53). Mutual benefits on both sides of the collaboration are needed to help alleviate the differences in power. In other words, there needs to be more recognition of how HIC researchers are benefitting from these research partnerships (54). This finding supports and extends the literature arguing the need to identify mutual benefits as a way to balance power dynamics (54). In GMH, mutual learning is strongly encouraged, particularly in collaborative relationships between HICs and LMICs. Acknowledging mutual benefits can offer a way to make partnerships more equitable by offsetting the power dynamics in the context of the current funding system.

The findings from this thesis established that the LMIC partners perceived an equitable relationship. Despite this, the UK group considered this expectation unfulfilled, particularly due to funding and

uneven power dynamics. However, it is clear from the findings and the literature that other aspects of the collaboration helped to promote equity, such as fair, inclusive authorship practices, open communication, and trustful relationships. The findings indicated that by addressing other dimensions of equity, a collaboration between LMIC and HIC researchers could ensure a feeling of equity, despite the structural imbalance due to the funding disparity. Given how multi-faceted and complex in nature equity is, this thesis supports continued longitudinal qualitative research to evaluate and monitor the changes and struggles in achieving equity within GMH research programmes (105).

6.6.2 Strengthening research capacity

The present thesis also extends the literature regarding the ability of research partnerships to strengthen research capacity in LMICs. The conceptual framework highlighted that improved research capacity could aid LMIC researchers in developing and improving mental health infrastructure and setting their research agendas to reflect local needs. It is essential to build local research capacity in LMICs and support early career researchers to be more competitive for international research funding (56). Supporting capacity building is also a common approach to encouraging equity and empowerment in a partnership (138,274). Research training could help LMIC researchers in generating high-quality research in order to make impactful changes to their local and national health systems, develop sustainable careers, and ensure researcher retention by mitigating brain drain (55,459). Limited data exists concerning capacity strengthening efforts in LMICs (55,56). The findings in this thesis indicated that although individual-level research expertise was developed, the experiences demonstrated that GLOBE did not address capacity building at an institutional level. Specifically, it did not carve out sustainable career pathways to continue the development of early career researchers, which would address an aspect of research capacity.

6.6.2.1 Clarity over the level of research capacity strengthening being addressed

Previous research has indicated that the understanding of capacity strengthening is not fully clear (327). It is a process that can exist at the individual, institutional, network and global levels (17). Capacity building at the individual level is understood as strengthening the following domains: knowledge, skills, attitude, confidence, practice, self-efficacy, abilities, motivation, commitment, competence, leadership, and resources (274,327). According to Finn *et al*. it is broadly assumed that building capacity at the individual level will inevitably lead to building capacity at the organisational level (327). Different studies conceptualise capacity building in different ways, with those studies that refer to frameworks being more likely to structure it comprehensively (327). Clarity is needed regarding which domains are likely to be addressed during a research programme; being explicit in the terminology used to accurately reflect the aims of a given research project may help to improve

this (327). For example, a stated aim of GLOBE was to strengthen research capacity in the three LMICs, although the term was broadly defined. Perhaps the lack of clarity surrounding the strengthening of research capacity should be further addressed, as this might help those engaged in research programmes to position themselves within a framework and be more explicit in their capacity-strengthening approach (328). For example, the WHO's ESSENCE framework for building capacity emphasises the need for a more holistic approach to building career development on an individual level (460). The framework identifies three core areas: (1) conducting research, utilising methods, and technical knowledge; (2) research management, including funding, plans, and reports; and (3) research dissemination and engagement (460). In the context of GLOBE, being more explicit with regard to which domains of individual capacity-building should be addressed may have helped to manage the expectations of its members.

6.6.2.2 Examples of research capacity strengthening programmes

Several research programmes have demonstrated various approaches to career development at the individual level, focusing on developing skills in the aforementioned domains (274,327). Incorporating capacity-building into international collaborative research, alongside delivering intervention research, is becoming more commonplace (461). This embedded research approach is crucial to addressing local health needs by enhancing the ability of LMICs to respond to the health needs of their populations (462). Key examples include Emerging Mental Health Systems in Low- and Middle-Income Countries (EMERALD) and the Partnership for Mental Health Development in Sub-Saharan Africa (PaM-D) (45,99). These two programmes address individual capacity-building, with a focus on both technical skills (such as methods, statistics, and evaluation) and non-technical skills (such as mentoring and grant writing). The literature highlights that technical and non-technical skills are equally important to building a sustainable career (463). Despite the pandemic preventing some grant writing workshops from taking place, the GLOBE research programme addressed both technical and non-technical skills. Developing mentoring skills has also been a part of strengthening capacity programmes (98,464).

6.6.2.3 Mentoring

Regarding mentoring, the findings in this thesis demonstrated that this was an important part of the experience of the more senior LMIC researchers, as it represented an opportunity to support early-career researchers. In the GLOBE programme, mentoring was not a part of any formal scheme, still, mentoring usually occurs when individuals with more research experience and expertise share insight with and guide those with less experience (55). Mentoring is viewed as an integral feature of career development, and is also recognised as a component of capacity building (55). A meta-analysis demonstrated that mentored individuals in academia were associated with higher research

output and grant attainment (465). Although there tends to be a focus on early career researchers, the literature discusses the importance of mentorship for researchers of all levels (55,282).

6.6.2.4 Individual level research capacity strengthening

More investment is needed to sustain research capacity at the individual level, such as in doctoral and post-doctoral programmes, as well as developing skills in leadership, grant writing and networking (17). Previous research programmes such as the African Mental Health Research Initiative (AMARI) consortium aimed to develop the skills of 50 early career researchers, providing Master and PhD programmes in four countries, Ethiopia, Malawi, South Africa and Zimbabwe (98). The consortium has enabled sustained research capacity strengthening at the individual level.

Although individual level capacity is still essential, and the cumulative impact of researchers would undoubtedly impact research output in LMICs, this impact is not easy to measure (328). The lack of an appropriate environment and infrastructure to support career progression in LMICs, may lead to these individual researchers migrating to better paid jobs (55). However, what was lacking in GLOBE was institutional capacity building, which requires advanced development in research infrastructure, In addition to research management reform to support researchers' financial and administrative needs (17).

6.6.2.5 Institutional and network research capacity strengthening

The UK group felt that capacity strengthening at the institutional level did not occur, as the GLOBE programme did not establish sustainable career pathways. To effectively address capacity building in institutional research, it is necessary to develop an environment that can accommodate functioning autonomous research groups, along with an administrative and procurement system to aid in navigating the grant application funding process (17). Changing the award structure would improve equity in research partnerships between HICs and LMICs, as well as contribute to successful and sustainable partnerships (105). LMIC institutions need financial and auditing systems in place that can ensure accountability (105). This reform would require a level of institutional capacity strengthening to develop administrative systems that can engage with funding, as well as human resources to deal with financial management (105,466). While improving individual research expertise still represents capacity building, institutional capacity building is needed to provide the infrastructural that can support research career pathways while mitigating against brain drain (55,459).

The framework discussed creating a global research community to generate novel solutions for shared problems (57,206,226). Sewankambo *et al*. highlight the need for capacity strengthening at the network level (17). The current findings reveal how GLOBE established a professional and

institutional network and expanded this network with new research opportunities. For example, partnerships between the UK and Colombian research groups' have led to further research solely in Latin America. The established network has also attracted further project funding by creating new studies. It accordingly improves the long-term sustainability of the overall research capacity in these LMICs.

The findings from the GLOBE evaluation highlight the challenges associated with strengthening research capacity. Individual research capacity strengthening requires further investment, such as PhDs and, postdoc opportunities which can help to develop leadership, grant writing and network-building skills (17). Institutional capacity building requires significant infrastructural changes to support long-term career pathways (17). Research has demonstrated that capacity strengthening is a process that changes over time (328). This notion supports adopting a prospective longitudinal approach when evaluating GMH research programmes with a capacity strengthening component. Furthermore, individual capacity strengthening was perceived by most members to have been achieved; however the cumulative impact of this may be insufficient to evaluate organisational or institutional-level changes and, may in some cases an unexpected outcome of other components within a programme (328).

6.6.3 Testing, developing, and evaluating exploratory studies in LMICs

The present thesis contributes to the testing of small-scale exploratory studies in LMICs. The field of GMH has been heavily criticised for emphasising the scaling-up of evidence-based interventions in LMICs, as a way to address the wide treatment gap (25,26). The initial response to the 2007 Lancet series was to scale – up evidence-based interventions for LMICs (7,20). For example, the mhGAP-IG, an intervention guide for developing mental health interventions to reduce the treatment gap, recommended that many evidence-based interventions be implemented in LMICs (24). Many of these were interventions that were conceived, designed, and advocated in HICs, despite (in some cases), limited evidence supporting their use (28). This scaling up of evidence-based interventions has led to discussions about how culturally feasible or appropriate these approaches might be in other settings, particularly in LMICs (29). The studies conducted in Bosnia-Herzegovina, Colombia, and Uganda were exploratory, ranging from exploratory RCT to an exploratory controlled and non-controlled studies (see Table 1.2 in Section 1.3.3.1). The findings from the multi-family group intervention demonstrated positive improvements in subjective quality of life, a reduction in mental health symptoms, and improvements in objective social outcomes. Despite the small-scale delivery of the multi-family group intervention, the changes in primary and secondary outcomes exhibited medium to large effect sizes. In this thesis, the mixed method evaluation focused on the countries' intervention arm, which ignore the control group of the original studies.

6.6.3.1 Delivering exploratory trials

Complex public health issues have often required the need for complex interventions which commonplace in high-income settings (467). The costs associated with implementing complex interventions are usually high, while the risk of unexpected harm means that evaluating them is essential. However, evaluating these complex interventions to determine their effectiveness is a costly exercise (468,469). In the UK, for example, there is increased pressure to recognise that effective interventions can often mean that resources are wasted in the commissioning of full-scale effectiveness studies of inadequately designed interventions (468,470). There has been a rush to implementing full-scale interventions to evaluate their effectiveness, which has led to problems that could have been mitigated at an earlier stage (30).

A shared understanding focuses on feasibility and design that can improve the effectiveness of public health interventions (468). Exploratory studies are defined as studies that aim to produce findings needed to determine whether and how to continue with a full-scale evaluation; these are also referred to as pilot or feasibility studies (30,467). By definition, feasibility trials specifically test the feasibility of the intervention and the trial methodology, in addition they are often employed to establish the variability of outcomes, which can be used as the basis for sample size calculation for a full-scale trial. However, the trials used in the GLOBE research programme were exploratory in design, in which the primary outcome was defined; moreover, for the Bosnian study, which was an RCT, a sample size calculation was conducted. Therefore, significance could be established from the Bosnian exploratory RCT, whereas the other studies exhibited improvements in outcomes reflected by medium and large effect sizes.

These pilot studies usually have two aims: to assess for feasibility, and to optimise the evaluation that a larger effectiveness study would utilise (30,467). In resource-constrained settings, such as LMICs, however, not all interventions can be tested for efficacy and effectiveness, as the resources required to support larger and more complicated trials are not available (31). Thus, whether financial or human, there are no resources to support the sustainable scaling-up of interventions. As mentioned, the studies used a range of research designs; for example, the Bosnian research group delivered a small scale RCT, whereas the Colombian study was non-controlled. The recommendation from this thesis would be to encourage the use of exploratory studies in engaging in GMH research in LMICs, including a control group and a sample calculation. This approach offers many advantages, including testing and developing innovative interventions like the multi-family group, to ensure they are suitable for a particular context. Moreover, by encouraging the testing and delivery of exploratory studies may mean that more resources and time are allocated to other aspects of GMH research programmes, such as building relationships and research capacity strengthening. The

findings in this study support the work by Bemme and Kirmayer who emphasise that GMH practitioners and funders tend to be more concerned with implementation, rather than exploratory studies that seek to ensure 'cultural specificity' and identify 'what works' (p.3) (169).

6.6.3.2 Exploring the feasibility of interventions

One of the issues identified by the conceptual framework is the dearth of research exploring the applicability, feasibility, and sustainability of delivering interventions in LMICs (204,208,210,223,227). The current findings contribute to the limited evidence exploring feasibility of supporting the delivery of psychosocial interventions in LMICs (391). Despite being essential for effective resource allocation, data relating to feasibility is underreported (471). Furthermore, by exploring feasibility and acceptability, one can establish how individuals receiving an intervention might perceive and therefore respond to it (31). The experiences captured as part of the evaluation in this thesis gave some insight into the intervention's feasibility and acceptability. The scaling up of interventions as part of the GMH agenda has been criticised for ignoring the experiences of those receiving an intervention (169). The qualitative component of the GLOBE research programme was crucial in capturing the experiences of those receiving the intervention, especially by demonstrating the subtle nuances across each LMIC. This thesis assessed the acceptability of the intervention by synthesising a qualitative analysis of interviews with the intervention participants. Incorporating participants' perspectives is essential for contextualising their acceptance of the intervention. Exploring acceptability using qualitative research can yield in-depth nuance and help to capture the cultural differences in LMICs. The effectiveness of an intervention cannot always be the main priority in evaluating interventions in both HICs and LMICs (472).

6.6.3.3 Generalisability vs diversity

Much of the research in GMH aims to generate generalisable evidence and, therefore, determine how it can be applied to different populations and settings. However, GLOBE embraced the differences noted by the various research designs adopted (59). Priebe *et al.* highlight the need for mental health care and research to move away from this current paradigm and instead focus more on embracing the differences between and within countries (473). This does not mean that commonalties identified across settings will be ignored; rather, it provides an opportunity to find a shared scope for sharing and learning from these experiences (473).

6.7 Implications for research and practice

6.7.1 Promoting equity in partnerships

Equity is a central tenet of GMH, and GMH partnerships must reflect this. Researchers believe that, for relationships to be truly equitable, changes in the funding structures should be made that allow LMIC institutions more financial control and autonomy (454). The findings of this thesis

demonstrated that by addressing other aspects of collaboration, such as maintaining open communication, adhering to inclusive and fair authorship practices, and ensuring the development of respectful and trustful relationships, equity could be promoted effectively within the relationship. The multiple dimensions presented in Faure *et al.* suggest that achieving equity is a multi-faceted and complex task (274). While the funding mechanism is challenging to change and represents an essential domain in achieving equity within a partnership, it is clear from these findings that other areas of collaboration can be addressed to promote equitable partnerships (274).

Researchers should be aware of alternative avenues for promoting equity within a research partnership between LMICs and HICs and ensure these are embedded within collaborative research programmes. Furthermore, when addressing these dimensions, researchers should acknowledge that research programmes comprise early-, mid-, and late-career researchers, each of which have varying levels of expectations. A nuanced approach is therefore required. For example, regular open communication was identified as an expectation of the GLOBE study, which was effectively fulfilled. However, those more senior participants considered that such communication could have been adapted for those at different career levels, indicating that those in junior roles might benefit more from regular discussion than those in senior positions.

To systematically address these other dimensions associated with promoting equity, it may be helpful for those engaging in GMH research to consult frameworks, like the one reported by Faure *et al*. to address the multi-faceted dimensions of equity and to attempt to offset any imbalance that might arise as a result of funding (274).

6.7.2 Strengthening research capacity

Strengthening research capacity is a broad term and concept that can be implemented at the individual, institutional, network, and global levels (17). The GLOBE research capacity strengthening component focused on capacity strengthening at the individual level, but expectations of addressing more advanced levels of capacity strengthening were not fulfilled. There is an assumption that increasing knowledge and skills at the individual level will lead to institutional level capacity strengthening (327). However, significant infrastructural reform is needed to generate sustainable career pathways, including developing robust administrative and financial departments to help manage grant applications (327).

The level of research capacity should be made explicit and relational to the resources and timeframe of a research programme. In GLOBE's case, the time and resources only supported capacity strengthening at the individual level, despite the expectation that institutional level capacity strengthening would take place. If a programme intends to address certain domains of capacity

strengthening, then more research is required on which domains these should be. This improved clarity would help to manage researchers' expectations and ensure that the programme's aims are being met.

The findings indicated that mentoring occurred organically between researchers in the Ugandan research group. Previous research has demonstrated the importance of mentoring to career development and mentoring is recognised as a component of research capacity strengthening (55). Funding opportunities should explicitly promote mentorship between researchers in HICs and LMICs (39) and among LMIC partner groups. Although training opportunities are helpful in research programmes, mentoring can help consolidate both learning and the impact of training (17).

6.7.3 Exploratory studies

The findings from this thesis demonstrate that despite delivering exploratory research designs, GLOBE was observed to encourage participant outcomes, establish feasibility, and capture the nuance of the participant experiences. In this case, the next step would be to design a study to evaluate the effectiveness of the multi-family group intervention in large scale trials in the three LMICs.

Given that much of GMH work is focused on delivering programmes in LMICs, which do not have the resources to support larger and more complicated trials (31), it appears that these findings demonstrate feasibility, improved outcomes, and positive experiences in GMH. The findings further raise the question of whether designing larger studies to establish the effectiveness of GMH programmes would be a useful intermediate step, before wider implementation.

It may be more appropriate for future GMH research programmes to focus more on intervention development and delivering exploratory studies to reduce the expenditure associated with delivering expensive trials, as well as to shift from producing generalisable findings to exploring the unique aspects of locally- driven research (473). Mental health care and research globally should focus on differences rather than striving for generalisable results. Research also needs to consider the differences between and within countries (473). Qualitative research will be integral in evaluating exploratory research, capturing the differences, and using them to inform practice (473).

6.8 Conclusion

This thesis has made several contributions to the literature on how a GMH research programme can address GMH objectives. It has clarified the meaning of GMH, particularly in the context of achieving equitable and sustainable research partnerships. Overall, the evaluation of GLOBE provides encouraging findings that a single programme could achieve its aims. These aims were promoting an equitable and sustainable partnership, which was fulfilled despite the funding arrangements created

some constraints in how the UK research group coordinated the programme. The programme effectively addressed individual-level capacity strengthening, yet it was limited in its ability to address capacity strengthening at the institutional level. The latter required more resources and time to achieve, which the GLOBE programme did not have. Setting more realistic aims during global health programmes, that are proportionate to the level of funding and time, may be helpful in managing researchers' expectations. The positive findings of the multi-family group intervention, improvements in outcomes, and good experiences, raise the question whether larger trials are required before widespread implementation. Larger trials tend to be expensive, and require many non-financial resources, which is not necessarily a plausible option in LMICs.

Future evaluations of GMH, or global health research programmes, could benefit from better triangulation of findings, and ensuring that data from one strand of analysis can help to corroborate findings from another strand. Adopting a prospective approach, like this thesis did, is effective at capturing initial views before they are influenced by anything during their experiences, such as study outcomes. Researchers designing future GMH programmes and preparing applications for funding should use the learnings from this thesis' evaluation of GLOBE in their decision-making process.

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Appendix

Appendix 1 Systematic review publication

Original research

BMJ Global Health

Understanding global mental health: a conceptual review

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ABSTRACT

Background Mental health disorders are viewed as a global concern requiring globally led approaches to address them. Since the publication of the 2007 *Lancet* series on global mental health (GMH), the term has become widespread. Over the last two decades, GMH has become increasingly affiliated with policy reform, academic courses, funding bodies and research. However, it is not always obvious how those working in the field of GMH are using the term, resulting in a lack of clarity. Therefore, work is needed to synthesise the current understanding(s) of GMH to help characterise its meaning.

Aim To synthesise the literature and identify the different ways GMH is understood.

Method A conceptual review, using a systematic search and a content analysis, was conducted to develop a conceptual framework of the different conceptual understandings of GMH.

Results We developed a conceptual framework of four understandings of GMH. These understandings of GMH are as follows: an area of research generating findings to establish a GMH evidence-base; implementation of research into practice; improving the mental health environment; learning from and supporting low-and-middle-income countries (LMICs).

Conclusion Our review proposes a simple framework, clarifying the key characteristics of the GMH landscape. The findings highlight the diversity of usage of the term in the literature, as well as present the wide scope that comprises the field of GMH. Referring to this framework may help those engaged with GMH to be more specific with which aspect of the field they are concerned with.

Key questions

What is already known?

- Global mental health (GMH) is a widely used term, affiliated with policy reform, academic courses, funding bodies and research.
- However, it is not always obvious how those engaged with GMH are using the term, and what they mean by it.

What are the new findings?

- Four conceptualisations of GMH were identified, highlighting the term's wide usage as well as the diversity of engagements within the field.

What do the new findings imply?

- It is crucial for those engaging with GMH to better acknowledge where their work lies within the field's wide scope.

INTRODUCTION

Globalisation has reduced the boundaries between countries, meaning that people are allegedly engaging within one 'global village', yet there is a widening gap between those who benefit from knowledge and technological advancement, and those who do not.[1] The *Global Burden of Disease report*[2] revealed the magnitude of the global burden occupied by mental disorders, followed by the 2001 World Health Report,[3] which highlighted the inequalities in the form of treatment gaps occurring in different countries. Collectively, these developments prompted discussion, among academics, policy makers and practitioners, around mental health being viewed a global priority. Yet more recently, and consolidating some of the principles from these earlier reports, the publication of the 2007 *Lancet* series calling for efforts in scaling up mental health services globally brought the term 'global mental health' (GMH) to the fore, led by psychiatrists and researchers from high-income countries (HICs).[4 5]

Over the last two decades, the term has been used to underpin research, academic training, funding programmes, policy and action. Many educational institutions have established postgraduate programmes dedicated to GMH.[6 7] Funding bodies dedicate substantial amounts to research into GMH. For example, Canada's Grand Challenges has invested $C47.6 million, supporting 95 projects implemented in 32 low-middle-income countries (LMICs).[8] The Global Challenges Research Fund (£1.5 billion) and Newton Fund (£735 million) both support research by UK institutes in partnership with countries around the globe, including GMH projects, which receive significant amounts of this funding.[9] The Medical Research Council

issued new investments amounting up to £20 million, dedicated to addressing the global burden of mental illness, especially in LMICs.[10] The disruption caused by SARS-CoV-2 has also led to funding bodies calling for proposals to explore the effects of the pandemic on mental health globally.[11] Despite momentum, there is no consensus around the meaning of GMH, rather an assumption that those engaging with the term are talking about the same thing.[12 13]

Although there has been an effort to characterise GMH by systematically evaluating its 'implicit priorities',[14] it is not always clear how individuals and organisations engaged in GMH are using the term, resulting in a lack of clarity. While there are different ways GMH can be thought of, such as a domain within global health or as the humanitarian application of psychosocial approaches,[15 16] no single definition can apply to all contexts. Furthermore, the term has been constrained by the criticisms and debate around what it truly means, putting it at risk of reaching an 'impasse'[17] and thus losing all meaning. Consequently, a conceptual framework can help map out GMH's landscape and potentially portray the term's meaning beyond the polemics which it is currently characterised by. It can help to demarcate GMH's content and identify the key parameters that characterise the term, helping to differentiate it from similar fields, as well as help guide evaluation and monitoring of GMH-related activities.[12] This review will consult the different ways the term is used in the academic literature to synthesise and identify how GMH is understood.

METHODS

Overall approach

A conceptual review was conducted to synthesise the different conceptualisations of the term global mental health. As per the recommendations set out by Lilford and colleagues, the review involved multidisciplinary members as part of the review team and used an iterative approach.[18] The main output of this process is to produce a conceptual framework for the relevant stakeholders, defined by Jabereen, as a set of related concepts that provide a comprehensive understanding of a phenomenon.[18 19] This study protocol is registered in the PROSPERO database (CRD42017072594).

Search strategy and eligibility

This review used a systematic search, and three search strategies were employed, electronic database searching, reviewing GMH journal series and hand-searching. The electronic databases search included Scopus, PubMed, Web of Science, Grey literature report and Open Grey. All databases were searched from inception to 6 May 2020, using the term 'global mental health', identified from the title, abstract and keywords. Harvard Psychiatry review 2012 and the *Lancet* series, 2007, 2011, 2018 were hand-searched based on the journal's high impact factors, as well as searching for funding calls for any GMH-specific research opportunities.

Eligibility was assessed on whether the authors explicitly described their understanding of GMH. VR conducted the screening process, and MS reviewed a 40% random sample. Inter-related reliability achieved an 88% concordance rate, and discrepancies were resolved among the review team. Due to the high number of papers meeting the eligibility criteria (see figure 1), a random sample of 60 articles was selected to develop the initial framework using a random number generator, which involved defining the sampling frame (1–347) and the sample size.[20]

Data extraction and synthesis

Interpretations of GMH were extracted, as were related text, such as aims, approaches and criticisms. Content analysis was judged to be the most appropriate methodology, offering a systematic and comprehensive approach in describing a phenomenon in different contexts.[21 22] The process followed an inductive content analysis demonstrated by Elo and Kyngäs[21]:

i. Extraction of key texts was collated in a data extraction form.
ii. Texts were systematically, openly coded, ascribing a descriptive code.
iii. Descriptive codes were grouped into higher-order categories.
iv. Categories were collapsed based on commonalities or differences.
v. Data were reduced to its fundamental characteristics, known as abstraction.

Once the framework was constructed based on the sample of 60 papers, vote counting was used to assess the validity of the framework by applying it against the remaining 287 papers (figure 1).

The multidisciplinary team included the lead researcher (VR, doctoral researcher) and five members forming an internationally diverse, mixed career stage research group (EB, SS, MS, VB, SP), including British, German, Japanese and Pakistani nationalities. The team composed of a social science doctoral student, a global health doctoral student, a global public health researcher, a psychologist, a mental health services researcher and a clinical-academic psychiatrist. EB, SS, VB and SP are involved in the coordination of a number of global health projects focusing on the delivery of co-developed community-based psychosocial interventions in LMICs—spanning across four continents, with both VB and SP acting as principal investigators. All authors are based at a WHO Collaborating Centre.

Patient and public involvement

It was not appropriate to involve patients or the public in the design, or conduct, or reporting or dissemination plans of our research.

RESULTS

Based on the search strategy, 1198 unique records were retrieved. Of the identified records, 516 were excluded

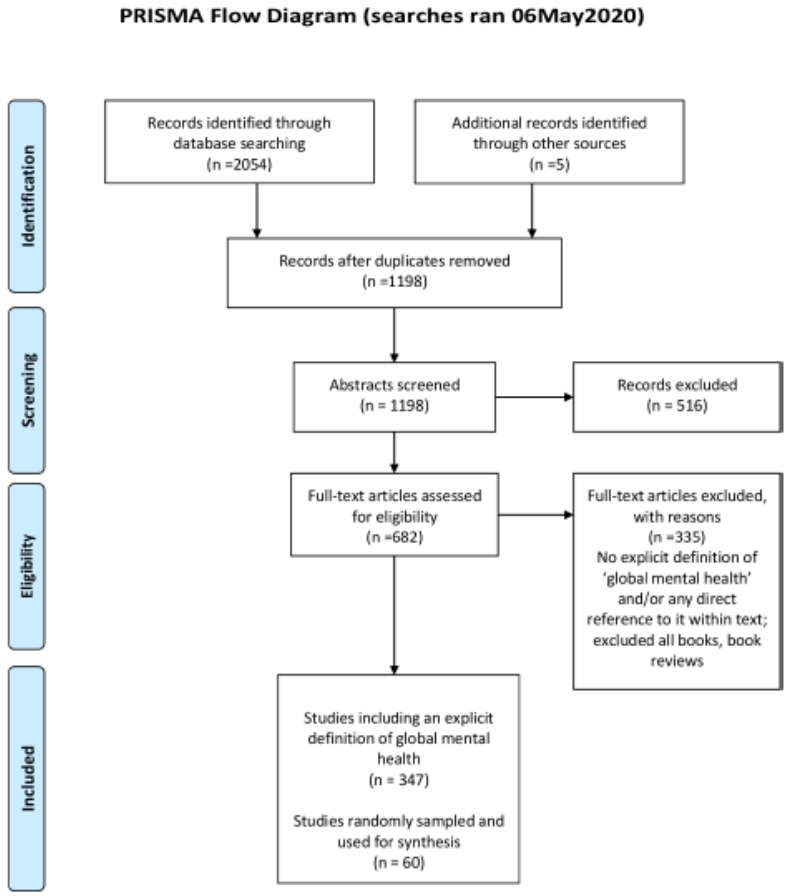

Figure 1 PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flow diagram.

based on abstracts, and the remaining 682 were assessed for eligibility. After the full-text screening of the papers, 347 were identified to exhibit an explicit definition of GMH. Sixty of these were randomly selected and used to synthesise the conceptualisations of GMH. The 60 papers comprised research articles (n=18); comments, editorials or correspondence (n=16); GMH series articles (n=6); reviews (n=6); original articles (n=6); debates (n=2); case study or report (n=2); a symposium article (n=1); a thematic paper (n=1); study protocol (n=1); introduction (n=1). All 60 papers were published between 2007 and 2020, the majority were from the UK (n=28), the USA (n=14) and Europe (n=6), with the remaining papers comprising research from South Africa (n=4), Canada (n=3), Australia (n=1), India (n=1), Norway (n=1), Panama (n=1) and Switzerland (n=1).

A conceptual framework for global mental health

Four conceptualisations of GMH were derived from the 60 randomly selected papers (online supplemental appendix 1). The validity of the framework was assessed with the remaining included papers, by using vote counting, indicating how papers exhibit more than one understanding of the term (table 1). Vote counting concluded that all 347 articles used more than one conceptualisation of GMH, as research (n=213), as implementation (n=239), as landscape (n=170) and LMICs (n=181). Figure 2 displays the results from the

Table 1 Understandings of global mental health

Themes	Number (%) of 347 studies identifying the themes
Globalising mental health research	213 (61.4)
Global mental health is the implementation	239 (68.9)
Improving the mental health landscape	170 (50.0)
Learning from and supporting LMICs	181 (52.2)

LMICs, low-and-middle-income countries.

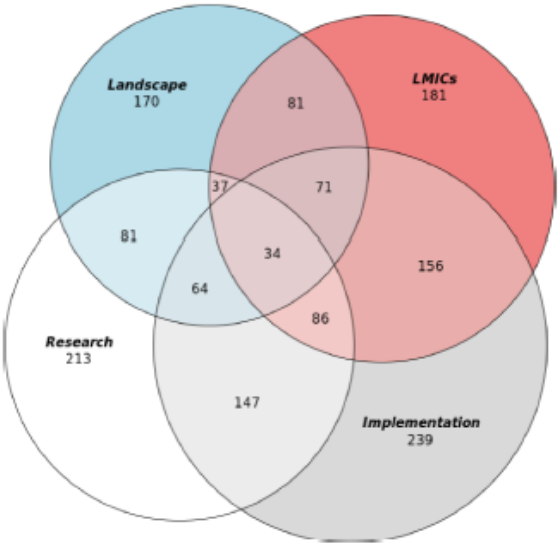

Figure 2 Venn diagram displaying all 347 papers and identified conceptualisations. LMICs, low-and-middle-income countries.

vote counting through a Venn diagram. Table 2 portrays each conceptualisation used by the 60 papers.

Globalising mental health research

Many authors present GMH as a specific field of research that aims to generate findings to develop and expand an effective evidence-base for global practice and guide policy towards making more informed decisions at the local, national and international levels.[15]

Patel and Prince, alongside other researchers, have acknowledged that a global response is needed to address mental health issues that have arisen due to the effects of globalisation.[15 23–32] Supporters of the GMH movement have not only highlighted the ubiquitous nature of mental health issues; they have also illuminated the global disparity in access to treatment being notably wide in LMICs.[15 33–38] In response to these wide treatment gaps, the GMH movement has identified scaling up treatment and delivery as an urgent research priority, particularly pressing in LMICs.[23 39 40] Raghavan *et al*[41] emphasised the importance of addressing the mental health of migrant communities, acknowledging that exploring ways to approach culturally diverse communities living in developed countries due to migration as a part of the GMH's research agenda. This view is supported by other researchers that seek to address mental health issues that exist beyond the boundaries of LMICs and move towards a more inclusive GMH field.[15]

Orešković emphasises the role of global research collaboration to incorporate new ways of thinking,[24] mostly demonstrated by partnerships between LMIC and HIC institutions.[42–45 37 39 42 43] Collaboration offers one approach to strengthening the research capacity of LMICs and subsequently improve their contribution to the GMH evidence-base.[31 35 37–39 44] Critical evaluation of how GMH research is conducted has been emphasised by many researchers.[26 39] More specifically, the assessment of global partnerships has shed light on the crucial role that non-specific factors, such as models of leadership, collaboration and contextual factors, play in forming effective global research partnerships.[15 42 43 45 46] These findings can help refine future international collaborations and improve implementation, primarily when research is conducted in widely different cultural settings.[15 38 39 44 45 47] More recently, the notion of mutual learning has been promoted widely, contending it as a crucial aspect of these collaborations, moving away from the one-directional process that has characterised past partnerships.[15 26 42 44 48 49]

From the perspective of academics aiming to develop GMH as a research field, the purpose is to create a global community, generating and translating findings from a diverse range of cultural settings, moving away from a traditional 'silos' approach. Consequently, there is a desire to see the cross-cultural adaptation of classifications and assessments of mental disorders, which are needed to facilitate research in culturally different contexts and allow for a global comparison.[50–57]

GMH researchers demonstrate a more integrative, resourceful and pluralistic approach to solving mental health issues shared worldwide by seeking novel ideas and solutions to address them.[15 24 46] GMH is a highly interdisciplinary research area, benefiting from evidence generated from disciplines including epidemiology, geography and anthropology.[15 20 26 27 29–33 40] The field of GMH is using more anthropological methodologies, such as ethnographies and participatory approaches, to capture more nuanced data of the experience of mental health disorders.[25 50–58] Jain and Orr discussed how the use of ethnography in GMH can help characterise different mental health perspectives in a diverse range of settings.[53]

Summerfield, along with other anthropological or cross-cultural psychiatrists, has accused the GMH agenda of relying on Western psychiatry and ignoring the role of culture, context and experience in individuals with mental health disorders.[15 20 50 52 53 57–60] This criticism emphasised the need for more culturally resonating research by incorporating local relevant knowledge and conceptualisations of mental health, as well as the narratives of key stakeholders impacted by mental disorders.[15 23 27 28 32 40 51–53 56–59 61 62] In response to the criticism around the absence of local voices, GMH researchers have developed innovative, cost-effective interventions that prioritise local stakeholders.[33 63–65] Asher *et al* demonstrated how collaborating with alternative healing forms, such as spiritual or religious, can be incorporated into the GMH treatment framework.[36]

GMH demonstrates an extending scope for research by shifting its focus to factors that maintain and sustain mental health, as well as looking at determinants.[24 51 61] Research that is being conducted indicates a shift towards

Table 2 Included papers and identified conceptualisations

	Conceptualisations of global mental health			
	Globalised mental health research	**Global mental health is implementation**	**Improving the mental health landscape**	**Learning from and supporting LMICs**
Lancet Global Mental Health Group[34]	✓	✓	✓	✓
Patel *et al*[33]	✓	✓	✓	✓
Patel and Sartorius[39]	✓	✓	✓	✓
Summerfield[57]	✓			✓
Patel and Thornicroft[40]	✓	✓		✓
Patel and Prince[15]	✓	✓	✓	✓
Cutcliffe[23]	✓			
Murray *et al*[44]	✓	✓		✓
Baumgartner *et al*[25]	✓	✓	✓	✓
Petersen *et al*[73]		✓	✓	✓
Skovdal[59]	✓	✓		✓
Swartz[50]	✓			✓
Braathen *et al*[51]	✓	✓	✓	✓
Wildeman[76]			✓	
Bartlett *et al*[52]	✓	✓	✓	
Baumgartner and Burns[72]		✓	✓	✓
Barkil-Oteo *et al*[83]			✓	
Das[68]		✓	✓	✓
Ecks and Basu[55]	✓		✓	✓
Susser and Patel[26]	✓	✓	✓	✓
Jacob and Patel[27]	✓	✓		✓
Eaton *et al*[78]			✓	✓
Mills[60]	✓	✓		✓
Murray *et al*[47]	✓	✓		✓
Bemme and D'souza[28]	✓			✓
Asher *et al*[29]	✓	✓	✓	✓
Kohrt *et al*[20]	✓			
Pinto da Costa[79]			✓	
Jain and Orr[53]	✓	✓	✓	
Alarcón[30]	✓	✓	✓	
Bracken *et al*[58]	✓			
Datta[82]			✓	
Kidd *et al*[45]	✓	✓		✓
Magidson *et al*[81]			✓	
Oreškovič[24]	✓	✓		✓
Swerdfager[56]	✓		✓	
Tennyson *et al*[31]	✓	✓		✓
Varma[67]		✓		✓
Weinmann and Koesters[69]		✓		✓
Barbui *et al*[35]	✓			✓

Continued

Table 2 Continued

	Conceptualisations of global mental health			
	Globalised mental health research	Global mental health is implementation	Improving the mental health landscape	Learning from and supporting LMICs
Gire *et al*[63]	✓	✓		
Grigaite[66]		✓		✓
Howell *et al*[60]			✓	
Murphy *et al*[75]		✓	✓	
Mejia *et al*[62]	✓			
Taylor[54]	✓	✓	✓	✓
Asher *et al*[36]	✓	✓		✓
Carr[77]			✓	
Frankish *et al*[74]		✓	✓	✓
Hanlon *et al*[37]	✓		✓	✓
Tiley and Kyriakopoulos[38]	✓	✓	✓	✓
Priebe *et al*[64]	✓	✓	✓	✓
Hall *et al*[46]	✓			✓
Iemmi[43]	✓			✓
Kong and Singh[48]	✓	✓		✓
Kumar[42]	✓	✓	✓	✓
Lovell and Diagne[32]	✓	✓		
Raghavan *et al*[41]	✓		✓	
Burgess *et al*[71]		✓	✓	✓
White[61]	✓			

LMICs, low-and-middle-income countries.

an epistemological pluralism, where no one dominant paradigm is favoured over another, to accommodate more diverse perspectives, which can help achieve a GMH evidence-base comprising clinical, social and cultural frameworks.[24 30 52 54]

Global mental health is implementation

Other supporters of the term GMH, particularly those involved in implementing healthcare programmes, use the term to imply the activities undertaken to promote the development of mental health infrastructure, especially in LMICs.[27 30 39 52 53] GMH advocate's key focus is to address the lack of mental health infrastructure, particularly in LMICs, by building mental health systems' capacity.[26 39]

The sentiment of action has been endorsed through 'scaling-up' mental health services, which is defined as increasing the provision of evidence-based services for individuals with mental disorders, particularly in LMICs.[15 27 30 34 39 45] Scaling up interventions has been demonstrated in two distinct ways: integrating programmes into existing health systems and replacing institutional care[66–68] with continued community care.[15 29 69]

It has become more recently apparent that research exploring the applicability, feasibility and sustainability of implementing interventions is limited.[31 38 44 47 69] LMICs, in particular, experience many barriers preventing the integration of interventions into existing health systems, including limited government support, scarce mental health professionals, inadequate research capacity and poorly developed mental health systems.[15 33 38 47 69] Therefore, the implementation aspect of GMH aims to understand more about how mental health interventions can be sustainability integrated into different settings, particularly in LMICs.[44 45 47]

Incorporating the evaluation of implementation programmes can help identify the barriers and facilitators to improve the uptake of interventions into health systems further down the line.[31 38 47 69] Moreover, ensuring that these programmes are as much about strengthening research capacity as they are about the effectiveness and efficacy of the intervention is crucial.[36 39 47 64] LMICs receive minimal governmental support, but they do have access to funding through research to improve mental health infrastructure, usually governed by HIC institutes.[69] Yet, there are many barriers preventing the effectiveness of externally led programmes in actually improving LMIC

mental health infrastructure,[38 42 69 70] further supporting the need for locally driven programmes in addressing locally rooted issues with locally led solutions.[44 53]

Burgess and colleagues promote the role of communities in delivering interventions, allowing them to advance and address some of the socio-structural determinants of mental illness, and become a key asset of GMH.[71] Improving community care provision is one way of scaling up mental health practices and has been targeted at LMICs.[25 26 29 53 59 71–74] Community participation has been described as a strategy to improve mental health services' cultural competency by increasing the mental health literacy of community health workers.[71 73] Having closer links to the community can improve mental health awareness and help identify the sociocultural determinants of mental health disorders and protective factors.[25 26 30 59 71–74] Task-shifting, where lay health workers are trained to deliver interventions, has been employed to solve community health professionals' scarcity.[25 26 40 68 69 73 74] Other practices promoted by GMH practitioners include social inclusion programmes[25 26 71 72] and integrating mental healthcare into primary care.[24 29 34 68]

GMH practice has demonstrated expanding scope in collaboration between traditional forms of treatment, such as spiritual healing, and the professional sector.[36 51] Besides collaborating with alternative forms of therapy, GMH seeks to harness innovative technologies to support treatment, diagnosis and education.[63 64 69 74] For example, Murphy and colleagues demonstrate how a peer-to-peer e-learning intervention can improve learning in low-resource areas and facilitate a cross-cultural awareness of mental health.[75]

Within the context of those promoting the growth of mental health infrastructure globally, GMH is characterised by a global–local debate, where there is the generalisable evidence-based biomedical approach to services versus the more empathetic locally embedded service approach.[30 32 45 48 53 60] The global approach has been described as the propagation of Western psychiatry, which is at risk of stifling cultural alternatives to mental healthcare.[30 52 54 60] In contrast, the local approach calls for a bottom-up approach to mental healthcare and prioritises local knowledge and stakeholders engaged in designing and delivering care.[30 32 69]

Improving the mental health landscape

GMH policy recognises a changing world through interconnectedness and shared mental health concerns. Therefore, in response to these contemporary issues, policy makers affiliated with GMH seek to develop the appropriate mental health-enhancing policies that can facilitate supportive environments, strengthen community participation in mental health and reorient mental health services.[51 71 76] Also, GMH advocates recognise that a shared global response is required to develop adequate mental health infrastructure and support research addressing mental health prevention and promotion.

GMH supporters have described the term as a social movement advocating for global change in how mental health is understood and how mental health disorders are treated.[15 26 33 74] As part of changing the way we view mental health, Eaton *et al* and others advocate for policies that recognise social inclusion, protect human rights of vulnerable individuals and reduce the discrimination of those living with mental disorders.[26 39 53 56 76–80] GMH aims to develop policies that recognise this inclusivity, by prioritising vulnerable groups and incorporating the perspectives of service users and other relevant stakeholders.[52 76–78]

The actors coordinating the movement have raised the profile of mental health against the global backdrop by framing it as a global health issue to help it gain attention and resources against other globally prevalent diseases.[26 78 80] In terms of mental health policies, GMH researchers and practitioners are concerned with identifying where there are opportunities and barriers for policy reform in ways that can improve mental healthcare treatment and prevention, especially in LMICs.[33 34 38 39 42 68 76 78]

Training towards effective leadership and management of mental health system development and expertly skilled mental health professionals with close links to the community has been promoted by GMH.[42 81] Community participation has been endorsed in the call for scaling up service delivery.[15 25 26 51 73] The approach aims to mobilise health resources and build capacity by improving mental health literacy, providing culturally competent care and delivering psychosocial care.[15 25 29 72 73] Extending capacity building to policy makers to aid with mental healthcare systems reform has been explored.[37] Training and education programmes are developing culturally competent curriculums, encompassing approaches to care for marginalised populations, such as asylum seekers and migrant communities.[30 41 75 81–83] GMH has noted a shift in focus in mental healthcare, from targeting the determinants of mental disorders through treatment to reorienting care towards more promotion and prevention.[51 64] Priebe *et al*[64] demonstrate how resource-oriented interventions can tap into 'existing resources and social structure in LMICs' as a way to promote mental health within communities.

Policy reform advocated by GMH has been subject to criticism, such that there is a divide between the universal policy promoting evidence-based approaches and policy supporting initiatives which are embedded in the context.[53 76] Therefore, similarly, with research and implementation, there is a drive towards policy to helping more diverse, culturally relevant GMH research and practice.[53–55 80]

Learning from and supporting low-and-middle-income countries

GMH researchers, practitioners and policy makers are guided by where the treatment gaps are the widest, which occur primarily in LMICs.[27 39 44] GMH is concerned with targeting efforts predominantly at LMICs, as a way to

support global development.[33 34 74 78] This understanding of GMH considers the previous conceptual understandings and articulates a sense of priority towards LMICs and less-resourced areas in general.

One of the goals of GMH is to develop a globally representative evidence-base, meaning that all countries can contribute their findings to the GMH evidence-base.[57] Yet, it is well recognised that LMICs experience wide research gaps, where there is limited original research output from these countries to contribute to the GMH evidence-base effectively.[37–39] In addition to constrained research capacity, the access and use of evidence supporting mental health practice are an ongoing challenge for LMICs.[29 35 37 38] Therefore, a pertinent aim for GMH is to strengthen research capacity in LMICs to close the research gaps and support those countries achieving autonomy over setting their research agendas.[34 37–39 44 45 69]

Although Frankish and colleagues claim that the GMH movement is to serve all people worldwide,[74] most of the evidence suggests that the focus is, in actuality, on LMICs.[15 26 33 40] Consequently, anthropologists have criticised the movement as reprising the dynamics of the colonial era by exporting Western concepts and interventions to culturally different contexts and the unidirectional knowledge flow occurring in global partnerships.[15 28 50 59 60] Yet, in response to this criticism, there has been an increasing emphasis on the process of mutual learning, especially between HIC and LMIC academic institutions, where both sides of the partnership cultivate an understanding.[15 24 26 46 48] Furthermore, GMH researchers are growing and expanding frameworks that underpin mental health treatment to incorporate more cost-effective, innovative and traditional therapies, which are often located in LMICs, due to the lack of formal care available.[36 51 54 57] Research conducted in LMICs can offer opportunities for reverse innovation where creativity can flourish in the context of limited resources, therefore providing an environment for innovation.[64]

The integration of programmes into existing health systems has been mostly directed at LMICs to improve and develop their mental healthcare infrastructure.[24 36 38 44 47] More effort is needed to overcome the challenges faced by LMICs, particularly around acceptability, feasibility and sustainability of interventions.[31 36 38 44 47] Strengthening community care[25 68 69 71 73 84] offers an alternative approach to institutionalised care and improves service provision, as well as adding variety to the care available in LMICs.[66–69] Task-sharing is a solution directed at LMICs to address the issues of limited human resources due to the effects of globalisation.[34 40 69]

Governments do not adequately prioritise mental health in LMICs, as well as being highly stigmatised, these countries lack the appropriate legislation to guide mental health services and programmes.[15 39 43 55 69] As previously mentioned, global research partnerships offer one way of redistributing resources to LMICs[31 38 44 69] to improve mental health research and reduce the stigma surrounding mental disorders.[26 29 40 72 73] These partnerships face challenges of equity and overcoming the power dynamics in these relationships, usually between LMICs and HIC academic institutions.[42]

DISCUSSION

Main findings

The present study synthesised four closely related conceptualisations of GMH. First, as research, GMH is defined as a critical investigation that can generate new knowledge that can help to address mental health issues requiring a globally led response, by guiding practice and policy. The findings indicate that this conceptualisation of GMH has evolved over time, responding to criticism, through involving local stakeholders in the research process. Through a multidisciplinary approach, researchers can integrate their expertise to help solve problems. Second, implementation in GMH has also evolved through shifting its focus from institutional forms of treatment to more community-based care, and at the same time providing care that is more locally relevant and working from the bottom upwards. Third, improving the mental health landscape describes the engagement of policy working in GMH to create an environment that prioritises and protects individuals with mental disorders, globally. Lastly, it is evident that the priority, of actors engaged with GMH, is to support LMICs, while being wary of repeating the conditions of colonialism and viewing global research partnerships as an opportunity for creativity and innovation. Almost all actors engage with more than one conceptualisation of the term shown in figure 2.

Strengths and limitations

This review has several strengths and limitations. This is the first review conceptualising how GMH is understood. Given that there are four understandings of GMH taken from the literature, these findings support the discussion around characterising the field beyond the debates that currently surround it.[17] The methodology accommodated an iterative process, allowing the review team to trace back to the source text supporting the concepts, when it was necessary for further discussion or clarification. Content analysis offers a flexible, pragmatic approach, in distilling a large number of articles into their fundamental characteristics, in this case, four clear concepts.[22 85] Comparing the four conceptualisations with the remaining papers, as outlined in the Methods section, through vote counting, reinforced the validity of the framework. However, this review has several limitations. Despite conducting a comprehensive search of the literature, the literature is sourced predominantly from research; therefore skewing the findings towards a more research focus. Although the benefits of using a multidisciplinary team added to the rigour, the concepts derived offer one interpretation of the literature reviewed, and perhaps alternative conceptualisations could have arisen depending on how the 'components' were articulated.[86] Restricting to the use of English language papers only

may have limited the search, and therefore reduced the possibility for different cultural perspectives in the development of the concepts. A further limitation is that there is an under-representation of LMIC authors contributing to research publications that originate from LMICs[87]; therefore, despite conducting a systematic search, there will be a bias towards a more Western perspective on how GMH is understood.

Interpretation and comparisons with existing literature

Despite being connected to numerous activities in research, practice and policy,[88–90] there is equally no shared understanding of the term global health, nor does it have the appropriate frameworks to support such activities.[88 91 92] Yet, many definitions of global health do exist.[92–94] Comparatively, with the findings in this review, global health exhibits multiple roles, each one serving a different purpose and involving different actors.[94] As a discipline, global health seeks for global cooperation in finding solutions for health issues worldwide.[92] The notion of forming a global community resonates with the understanding of GMH in that it aims to translate and generate findings from a range of settings to create a culturally relevant evidence-base. Global health acknowledges the transcendental nature of health determinants in the same way GMH does,[92] as well as the potential for discovering novel therapies that can be adapted and implemented in different settings. Furthermore, global health's primary focus is to achieve equity in health for all worldwide[92 95] and similarly with GMH, it is accused of doing this using predominantly Western approaches to treatment.[96 97]

The meaning of global health will vary depending on the view of the researchers or practitioners working within it,[90] which is apparent considering the different understandings of GMH. Although debates within the field have helped drive it,[17] these findings may offer a novel way of viewing GMH that exists beyond the local–global divide, which could foster ideas and perspectives that emerge along its continuum. Furthermore, the findings support the argument for greater attention of the local–global relationship, particularly in the context of the role that local communities play in driving some of the core aims of GMH.[98]

The understanding of global health has shifted over time, evolving its agenda, from a biomedical focus towards encapsulating a broader interdisciplinary approach, such as linking with anthropology to help form a more holistic view of health on a global scale.[90] This changing agenda is notable in the current findings, where GMH research seeks to accommodate novel and innovative ways to address mental health issues and inequities, and work towards a more nuanced landscape.[99]

Implications for research and practice

Although the review did not attempt to create a new definition for GMH, it has provided a simple framework, which offers a detailed background of what is currently being associated with the term. First, the different conceptualisations presented in this review may remind actors engaging with GMH of its wide usage within the realm of academia, and may present authors with a useful classification scheme to refer to. In addition to the term's varied usage, the framework demonstrates the diversity that exists within the field, such as through its capacity to adopt epistemological pluralism, as well as the potential for the field to become integrative in the manner it addresses mental health problems globally. For example, the potential to develop existing frameworks of formal care to accommodate alternative forms of healing, which are more prevalent in LMICs.[54 97 98] Alongside epistemological diversity, the framework emphasises the interdisciplinary nature of GMH and the capacity for potential linkage with other disciplines such as anthropology and geography.[52 54] It is necessary that those working in the GMH field better acknowledge where their efforts specifically contribute along the continuum of engagement, therefore referencing the proposed framework may help encourage this.

CONCLUSION

This conceptual review has synthesised and identified four overlapping ways GMH is understood in the literature. The simple framework outlines the key characteristics of the GMH landscape, which may serve as a useful guide for monitoring and evaluation. The findings emphasise not only the broad usage of the term within academic literature but also the diversity existing within the field of GMH, which is not confined to the limits of the local–global debate. Referencing a framework like this may help those engaging with the field to clearly delineate where their work fits within the scope of GMH.

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Appendix 2 Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Checklist

Topic	Checklist item	Reported on page
Title		
1. Title	Identify the report as a systematic review, meta-analysis, or both.	42
Abstract		
2. Structured summary	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	42
Introduction		
3. Rationale	Describe the rationale for the review in the context of what is already known.	42-44
4. Objectives	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	44
Methods		
5. Protocol and registration	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	42
6. Eligibility criteria	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	45
7. Information sources	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	45
8. Search	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	45

9. Study selection	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	45
10. Data collection process	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	46
11. Data items	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	46
12. Risk of bias in individual studies	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	45
13. Summary measures	State the principal summary measures (e.g., risk ratio, difference in means).	NA
14. Synthesis of results	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I2) for each meta-analysis.	46-49
15. Risk of bias across studies	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	45
16. Additional analyses	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	NA
Results		
17. Study selection	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	51
18. Study characteristics	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	51 & *appendix 3*
19. Risk of bias within studies	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	NA

20. Results of individual studies	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	50-60
21. Synthesis of results	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	50-60
22. Risk of bias across studies	Present results of any assessment of risk of bias across studies (see Item 15).	NA
23. Additional analysis	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	NA
Discussion		
24. Summary of evidence	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	61-62
25. Limitations	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	62-63
26. Conclusions	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	64-68
Funding		
27. Funding	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	7

Appendix 3 Study characteristics

ID	Author	Title	Journal	Type of paper	Country[1]
1	Chisholm et al. (2007)	Global mental health 6 - Scale up services for mental disorders: a call for action	The Lancet	Series article	UK
2	Patel et al. (2007)	Treatment and prevention of mental disorders in low-income and middle-income countries	The Lancet	Series article	UK
3	Patel & Sartorius (2008)	From science to action: the Lancet series on global mental health	Current Opinion in Psychiatry	Commentary	UK
4	Summerfield (2008)	How scientifically valid is the knowledge base of global mental health?	British Medical Journal	Research article	UK

5	Patel & Thornicroft (2009)	Packages of care for mental, neurological, and substance use disorders in low- and middle-income countries: PLoS Medicine Series	PLoS Medicine	Series article	UK
6	Patel & Prince (2010)	Global mental health: a new global health field comes of age.	JAMA	Commentary	UK
7	Cutcliffe (2011)	Global mental health in an interconnected, reciprocal world.	Archives of psychiatric nursing	Editorial	US
8	Murray et al. (2011)	Building capacity in mental health interventions in low resource countries: an apprenticeship model for training local providers.	International journal of mental health systems	Case study	US
9	Baumgartner et al. (2012)	Measuring social integration in a pilot randomized controlled trial of critical time: intervention-task shifting in Latin America.	Cadernos saude coletiva	Research article	US
10	Petersen et al. (2012)	Understanding the benefits and challenges of community engagement in the development of community mental health services for common mental disorders: Lessons from a case study in rural South African subdistrict site	Transcultural Psychiatry	Series article	South Africa
11	Skovdal (2012)	Pathologising healthy children? A review of the literature exploring the mental health of HIV-affected children in sub-Saharan Africa	Transcultural Psychiatry	Series article	Norway
12	Swart (2012)	An unruly coming of age: The benefits of discomfort for global mental health	Transcultural Psychiatry	Series article	South Africa
13	Braathen et al. (2013)	Understanding the local context for the application of global mental health: a rural South African experience.	International Health	Original article	South Africa/ Norway
14	Wildeman (2013)	Protecting rights and building capacities: challenges to global mental health policy in light of the convention on the rights of persons with disabilities.	The Journal of law, medicine & ethics	Symposium article	Canada
15	Bartlett et al. (2014)	What's in the 'treatment gap'? Ethnographic perspectives on addiction and global mental health from China, Russia, and the United States.	Medical anthropology	Original article	US
16	Baumgartner & Burns (2014)	Measuring social inclusion-a key outcome in global mental health	International Journal of Epidemiology	Review article	South Africa
17	Barkil-Oteo et al. (2014)	Teaching global mental health at home and abroad	The Lancet Psychiatry	Commentary	US

18	Das (2014)	The context of formulation of India's Mental Health Program: implications for global mental health.	Asian Journal of Psychiatry	Review article	India
19	Ecks & Basu (2014)	"We Always Live in Fear": Antidepressant Prescriptions by Unlicensed Doctors in India	Culture, medicine and psychiatry	Original article	UK
20	Susser & Patel (2014)	Psychiatric epidemiology and global mental health: joining forces	International Journal of Epidemiology	Editorial	US
21	Jacob & Patel (2014)	Classification of mental disorders: a global mental health perspective.	The Lancet	Viewpoint	UK
22	Eaton et al. (2014)	A position statement on mental health in the post-2015 development agenda	International Journal of Mental Health Systems	Debate	UK
23	Mills (2014)	Psychotropic childhoods: Global mental health and pharmaceutical children	Children and Society	Original article	UK
24	Murray et al. (2014)	Implementing evidence-based mental health care in low-resource settings: A focus on safety planning procedures	Journal of Cognitive Psychotherapy	Research article	US
25	Bemme & D'souza (2014)	Global mental health and its discontents: An inquiry into the making of global and local scale	Transcultural Psychiatry	Research article	Canada
26	Asher et al. (2015)	Development of a Community- Based Rehabilitation Intervention for People with Schizophrenia in Ethiopia	PLoS one	Research article	Ethiopia/UK
27	Kohrt et al. (2015)	Cross-cultural gene− environment interactions in depression, post-traumatic stress disorder, and the cortisol awakening response: FKBP5 polymorphisms and childhood trauma in South Asia	International review of psychiatry	Research article	US
28	Pinto da Costa (2015)	Global Mental Health: What is Your Role in This Movement?	Acta medica portuguesa	Editorial	Portugal
29	Jain & Orr (2016)	Making space for embedded knowledge in Global Mental Health: a role for social work?	European Journal of Social work	Research article	UK
30	Alarcon (2016)	Global mental health and systems of diagnostic classification: Clinical and cultural perspectives	Acta Bioethica	Research article	Peru/US
31	Bracken et al. (2016)	Primum non nocere. The case for a critical approach to global mental health.	Epidemiology and Psychiatric Sciences	Editorial	Ireland
32	Datta (2016)	The Problem with Education in Global Mental Health	Academic psychiatry	Perspective	US

33	Kidd et al. (2016)	A Multiple Case Study of Mental Health Interventions in Middle Income Countries: Considering the Science of Delivery	PLoS One	Research article	Canada
34	Magidson et al. (2016)	Massachusetts General Hospital Global Psychiatric Clinical Research Training Program: A New Fellowship in Global Mental Health	Academic psychiatry	Educational case report	US
35	Oreskovic (2016)	Breaking down the Silo Mentality in Global Mental Health: The New Role for the Schools of Public Health.	Psychiatria Danubina	Editorial	Croatia
36	Swerdfager (2016)	Theorizing resistance: Foucault, cross-cultural psychiatry, and the user/survivor movement	Philosophy, Psychiatry and Psychology	Research article	US
37	Tennyson (2016)	Challenges and strategies for implementing mental health measurement for research in low-resource settings.	International health	Review article	US
38	Varma (2016)	Disappearing the asylum: Modernizing psychiatry and generating manpower in India	Transcultural Psychiatry	Research article	US
39	Weinmann & Koesters (2016)	Mental health service provision in low and middle-income countries: recent developments.	Current opinion in psychiatry	Review article	Switzerland
40	Barbui et al. (2017)	Cochrane for global mental health	The Lancet Psychiatry	Correspondence	Italy
41	Gire et al. (2017)	mHealth based interventions for the assessment and treatment of psychotic disorders: a systematic review.	mHealth	Review article	UK
42	Grigaite (2017)	The Deinstitutionalization of Lithuanian Mental Health Services in Light of the Evidence-based Practice and Principles of Global Mental Health	SOCIALINE TEORIJA EMPIRIJA POLITIKA IR PRAKTIKA	Research article	Portugal
43	Howell et al. (2017)	The (Mis)appropriation of HIV/AIDS advocacy strategies in Global Mental Health: towards a more nuanced approach	Globalization and health	Debate	UK
44	Murphy et al. (2017)	Problem-based, peer-to-peer global mental health e-learning between the UK and Somaliland: a pilot study	Evidence Based Mental Health	Original article	UK
45	Mejia et al. (2017)	Different Strokes for Different Folks? Contrasting Approaches to Cultural Adaptation of Parenting Interventions	Prevention Science	Research article	Panama
46	Taylor (2017)	Making space for restoration: epistemological pluralism within mental health interventions in Kinshasa, Democratic Republic of Congo	Area	Research article	UK

47	Asher et al. (2018)	Global mental health and schizophrenia.	Current opinion in psychiatry	Research article	UK
48	Carr (2018)	Implementing sustainable global mental health in a fragmenting world	The Lancet	Commentary	UK
49	Frankish et al. (2018)	Mental health for all: a global goal	The Lancet	Commentary	UK
50	Hanlon et al. (2018)	Evaluating capacity-building for mental health system strengthening in low- and middle-income countries for service users and caregivers, service planners and researchers	Epidemiology and Psychiatric Sciences	Editorial	Ethiopia/UK
51	Tiley & Kyriakopoulos (2018)	Evidence-based practice in a multicultural world: changing with the times.	BJPsych international	Thematic paper	UK
52	Priebe et al. (2019)	Resource-oriented interventions for patients with severe mental illnesses in low- and middle-income countries: trials in Bosnia-Herzegovina, Colombia and Uganda.	BMC Psychiatry	Study protocol	UK
53	Hall et al. (2019)	Intersectoral collaboration for people-centred mental health care in Timor-Leste: a mixed-methods study using qualitative and social network analysis.	International journal of mental health systems	Research article	Australia
54	Iemmi (2019)	Sustainable development for global mental health: a typology and systematic evidence mapping of external actors in low-income and middle-income countries.	BMJ global health	Research article	UK
55	Kong & Singh (2019)	The ethics of global psychiatric genomics: Multilayered challenges to integrating genomics in global mental health and disability-A position paper of the Oxford Global Initiative in Neuropsychiatric GenEthics (NeuroGenE).	Neuropsychiatric Genetics	Research article	UK
56	Kumar (2019)	Championing Equity, Empowerment, and Transformational Leadership in (Mental Health) Research Partnerships: Aligning Collaborative Work with the Global Development Agenda.	Frontiers in psychiatry	Review article	UK
57	Lovell & Diagne (2019)	Falling, Dying Sheep, and the Divine: Notes on Thick Therapeutics in Peri-Urban Senegal.	Culture, medicine and psychiatry	Original article	France
58	Raghavan et al. (2019)	Reflections on the use of mental health resilience concepts in migration and global mental health	International Journal of Mental Health	Commentary	UK
59	Burgess et al. (2020)	Social interventions: a new era for global mental health?	The Lancet Psychiatry	Commentary	UK

60	White (2020)	Mental wellbeing in the Anthropocene: Socio-ecological approaches to capability enhancement.	Transcultural psychiatry	Research article	UK

[1]Country of the first author's academic affiliation

Appendix 4 GMH conceptualisations and details of included papers

	Conceptualisations of global mental health			
	Globalised mental health research	***Global mental health is implementation***	***Improving the mental health landscape***	***Learning from and supporting LMICs***
Lancet Global Mental Health Group (2007)	✓	✓	✓	✓
Patel et al. (2007)	✓	✓	✓	✓
Patel & Sartorius (2008)	✓	✓	✓	✓
Summerfield (2008)	✓			✓
Patel & Thornicroft (2009)	✓	✓		✓
Patel & Prince (2010)	✓	✓	✓	✓
Cutcliffe (2011)	✓			
Murray et al. (2011)	✓	✓		✓
Baumgartner et al. (2012)	✓	✓	✓	✓
Petersen et al. (2012)		✓	✓	✓
Skovdal (2012)	✓	✓		✓
Swartz (2012)	✓			✓
Braathen et al. (2013)	✓	✓	✓	✓
Wildeman (2013)			✓	
Bartlett et al. (2014)	✓	✓	✓	

Baumgartner & Burns (2014)		✓	✓	✓
Barkil-Oteo et al. (2014)			✓	
Das (2014)		✓	✓	✓
Ecks & Basu (2014)	✓		✓	✓
Susser & Patel (2014)	✓	✓	✓	✓
Jacob & Patel (2014)	✓	✓		✓
Eaton et al. (2014)			✓	✓
Mills (2014)	✓	✓		✓
Murray et al. (2014)	✓	✓		✓
Bemme & D'souza (2014)	✓			✓
Asher et al. (2015)	✓	✓	✓	✓
Kohrt et al. (2015)	✓			
Pinto da Costa (2015)			✓	
Jain & Orr (2016)	✓	✓	✓	
Alarcon (2016)	✓	✓	✓	
Bracken et al. (2016)	✓			
Datta (2016)			✓	
Kidd et al. (2016)	✓	✓		✓
Magidson et al. (2016)			✓	
Oreskovic (2016)	✓	✓		✓
Swerdfager (2016)	✓		✓	
Tennyson (2016)	✓	✓		✓
Varma (2016)		✓		✓
Weinmann & Koesters (2016)		✓		✓
Barbui et al. (2017)	✓			✓
Gire et al. (2017)	✓	✓		
Grigaite (2017)		✓		✓

Howell et al. (2017)			✓	
Murphy et al. (2017)		✓	✓	
Mejia et al. (2017)	✓			
Taylor (2017)	✓	✓	✓	✓
Asher et al. (2018)	✓	✓		✓
Carr (2018)			✓	
Frankish et al. (2018)		✓	✓	✓
Hanlon et al. (2018)	✓		✓	✓
Tiley & Kyriakopoulos (2018)	✓	✓	✓	✓
Priebe et al. (2019)	✓	✓	✓	✓
Hall et al. (2019)	✓			✓
Iemmi (2019)	✓			✓
Kong & Singh (2019)	✓	✓		✓
Kumar (2019)	✓	✓	✓	✓
Lovell & Diagne (2019)	✓	✓		
Raghavan et al. (2019)	✓		✓	
Burgess et al. (2020)		✓	✓	✓
White (2020)	✓			

Appendix 5 The Consolidated Criteria for Reporting Qualitative research (COREQ)

Domain	Item	Description	Page in thesis
1. Research team and reflexivity	Personal characteristics		
	1. Interviewer/facilitator	Which author/s conducted the interview or focus group?	75
	2. Credentials	What were the researcher's credentials? E.g., PhD, MD	79
	3. Occupation	What was their occupation at the time of the study?	79
	4. Gender	Was the researcher male or female?	79

	5. Experience and training	What experience or training did the researcher have?	79
	Relationship with participants		
	6. Relationship established	Was a relationship established prior to study commencement?	79
	7. Participant knowledge of interviewer	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	79
	8. Interviewer characteristics	What characteristics were reported about the interviewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	80
2. Study design	Theoretical framework		
	9. Methodological orientation and theory	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	77
	Participant selection		
	10. Sampling	How were participants selected? e.g. purposive, convenience, consecutive, snowball	74
	11. Method of approach	How were participants approached? e.g. face-to-face, telephone, mail, email	73
	12. Sample size	How many participants were in the study?	69
	13. Non-participation	How many people refused to participate or dropped out? Reasons?	75
	Setting		
	14. Setting of data collection	Where was the data collected? e.g. home, clinic, workplace	75
	15. Presence of non-participants	Was anyone else present besides the participants and researchers?	76
	16. Description of sample	What are the important characteristics of the sample? e.g. demographic data, date	80 & Appendix 9
	Data collection		
	17. Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?	76 & Appendix 8
	18. Repeat interviews	Were repeat interviews carried out? If yes, how many?	76

	19. Audio/visual recording	Did the research use audio or visual recording to collect the data?	77
	20. Field notes	Were field notes made during and/or after the interview or focus group?	NA
	21. Duration	What was the duration of the interviews or focus group?	76
	22. Data saturation	Was data saturation discussed?	78
	23. Transcripts returned	Were transcripts returned to participants for comment and/or correction?	77
3. Analysis and findings		Data analysis	
	24. Number of data coders	How many data coders coded the data?	NA
	25. Description of coding tree	Did authors provide a description of the coding tree?	NA
	26. Derivation of themes	Were themes identified in advance or derived from the data?	78
	27. Software	What software, if applicable, was used to manage the data?	77
	28. Participant coding	Did participants provide feedback on the findings?	78
		Reporting	
	29. Quotations presented	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? e.g. participant number	82-100
	30. Data findings consistent	Was there consistency between the data presented and the findings?	82-100
	31. Clarity of major themes	Were major themes clearly presented in the findings?	81
	32. Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?	81

Appendix 6 Participant information sheet

Information sheet
Global health research group experiences:
Information for participants

I want to invite you to participate in this research project if you would like to. Although, if you choose not to participate, there will not be any consequences for you, and you will not be included in any further correspondence.

Please read the following information carefully before you decide to take part. This information will tell you

why the research is being done and what you will be asked to do if you take part. Please ask if there is anything that is not clear or if you would like more information.

If you decide to participate, you will be asked to sign the attached form to say that you agree and be given this information sheet to keep. You are still free to withdraw at any time and without providing a reason.

What is the purpose of the study?

The lead researcher, Vian Rajabzadeh, compares research across three countries conducted by a Global Health Research Group, developing and testing different psychosocial interventions. This Group is called the 'Global Health Research Group on developing psychosocial interventions for mental health care'. This particular study looks at individuals' views and experiences of being a part of the Global Health Research Group.

Why have I been invited to take part?

You have been invited to participate because you are currently directly involved in the Research Group's activities. You will have received this information sheet directly from the researcher.

What will happen in the study?

This particular study involves a one-to-one individual interview with a researcher. If you decide to take part, you will meet with the researcher remotely via online audio/video messaging software, such as Zoom. The researcher can help in advance of an interview by downloading, setup and use of any software for the discussion.

The interview will last approximately 45 minutes, depending on how long the participant wants to stay. The researcher will ask various questions and guide the conversations. All of the discussions will be audio-recorded to capture everything that is said and then later analysed by the lead researcher.

What happens to the data provided?

The researcher will keep any information provided in this study confidential and secure. Whilst complete confidentiality cannot be guaranteed due to individual roles' unique nature; every effort will be made to anonymise information. Audio recordings will be transcribed, and all identifiable information will be removed from the final transcripts. All voice recordings will then be deleted once transcribed and analysed. Quotations from the anonymised transcripts may be published in the final report and scientific papers.

Are there any potential risks in taking part?

I believe that this study is safe and do not expect there to be any risks in taking part.

Are there any benefits in taking part?

This research may help inform work associated with global health work, specifically within the domain of mental health. It also may provide further insight into how to conduct effective global health partnerships, working across different countries. I hope you enjoy contributing your knowledge, experience, and opinions about this topic.

Further information and contact details

If you have any questions or concerns, please contact Vian Rajabzadeh or vian.rajabzadeh@qmul.ac.uk.

If you have any questions or concerns about the way the study was conducted, please, in the first instance, contact the researcher responsible for the study. If this is unsuccessful or not appropriate, please contact the Secretary at the Queen Mary Ethics of Research Committee, Room W104, Queen's Building, Mile End Campus, Mile End Road, London or research-ethics@qmul.ac.uk.

Appendix 7 Consent form

Consent form

Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research.

Title of Study: Global health research group experiences (Queen Mary Ethics of Research Committee Ref: QMREC2047a)

Thank you for considering taking part in this research. The person organising the research must explain the project to you before you agree to participate. If you have any questions arising from the Information Sheet or explanation was already given to you, please ask the researcher before you decide whether to join in. You will be given a copy of this Consent Form to keep and refer to at any time.

- *I understand that if I decide at any other time during the research that I no longer wish to participate in this project, I can notify the researchers involved and be withdrawn from it immediately.*
- *I consent to the processing of my personal information for the purposes of this research study. I understand that such information will be treated as strictly confidential and handled in accordance with the provisions of the Data Protection Act 1998.*
- *I consent to the audio-recording of this interview*

Participant's Statement:

I _____ agree that the research project named above has been explained to me to my satisfaction and I agree to take part in the study. I have read both the notes written above and the Information Sheet about the project, and understand what the research study involves.

Signed: Date:

Investigator's Statement:

I _____ confirm that I have carefully explained the nature, demands and any foreseeable risks (where applicable) of the proposed research to the volunteer.

Signed: Date:

Appendix 8 Topic Guides

Work package 2. GLOBE expectations

In-depth Interview Topic Guide

INTERVIEWER INTRODUCTION

Aim: To introduce the research and set the context for the proceeding discussion

- Introduce self and my role in the Research Group
- Introduce what this interview aims to achieve
- Explain why they were approached for the study
- Talk through key points:
    - length of interview
    - interview like a discussion, although specific topics to cover
    - no right or wrong answers, your views are important
    - participation is voluntary and right to withdraw
    - recording interview so can listen and for accuracy
    - confidentiality and anonymity
- Thank for taking part
- Any questions?

BEGIN AUDIO-RECORDING

1. Introductions and icebreaker

Aim: to understand the individual's roles and experiences, and begin to link these to their participation in the research group

To start, please tell me a bit about yourself and your professional role(s).

Example prompts:

- What are your research interests?
- What research experience do you have?
- What clinical experience do you have?

Have you previously worked on international projects, or 'global health' projects?

If so, please describe your experience working on such projects?

Example prompts:

- What did you learn from working as part of an international/'global health' project?
- Have you previously worked on any global mental health projects?

- Who else was involved in these projects?

2. Motivation for involvement in the Group

Aim: to establish the individual's role in the current Research Group and then understand reasons for participation in the Research Group

Why were you interested in getting involved in this specific Research Group?

Example prompts:

- How did you become involved in the current Research Group?
- What motivated you to get involved?
- [If applicable] In what ways, if any, are these motivations linked to previous global health collaborative experiences?
- [If applicable] How do you think your previous global health collaborative experiences will contribute to this Group?

3. Understandings of the Group's aims

Aim: to explore the individual's understandings and perceptions of the Group's aims

From your perspective, what are the key aims of the Research Group?

Example prompts:

- How important do you think these aim(s) are?
- Why do you feel these aims are important?
- Which one of these aims do you identify as most important?

How do you think these aims will be achieved?

What things do you feel will be important in achieving these aims?

- [If multiple aims identified] Explore each aim individually

Example prompts:

- In what ways, if any, do you see your role in the Research Group helping to achieve these aims?

4. General expectations

Aims: (1) to introduce the notion of expectations and encourage the interviewee to take a prospective outlook, and (2) to explore the individual's general expectations regarding the Research Group

From now on, I would like you to think about the development of the Research Group over the next few years, and what you expect your experience of being part of the Research Group to be like.

In general, what do you expect your participation in the Research Group will involve?

Example prompts:
→ How much interaction and communication do you think you will have with other individuals in the Group?
→ [If applicable] How do you think this may be linked, if in any way, to your previous involvement in international research?

Thinking about the GLOBE research programme, there may be potential for both advantages and disadvantages of taking part in it. I will ask about both these advantages and disadvantages, both for yourself as a member, as well as others affected by the group. Firstly, can you let me know what some of the advantages might be?

Example prompts (to explore expected advantages at various levels):

- Can you think of any advantages for:
  - Globally
  - Nationally
  - Community-level
  - Institution-level
  - Colleagues
  - The interviewee themselves

Could you now let me know what you think may be some of the disadvantages?

Explore same levels as above

5. 'Mutual learning' expectations

Aim: to explore the individual's perceptions of partnership and mutual learning in the context of this international collaboration

In international research collaborations, mutual learning is used as a term to describe processes of knowledge transfer and exchange between different people and countries. You may have heard of similar terms such as, 'knowledge exchange', 'co-development' and 'reverse innovation'. In this part of the interview, I would like to talk to you about what you hope to both contribute and learn through being part of the Research Group.

Firstly, can you give me a quick overview of what your understanding of mutual learning is?

What do you feel that others may be able to learn from you over the next few years?

What do you feel you may learn from others over the next few years?

Example prompts:

- What do you feel others could learn from your expertise?
- What do you hope to learn from others' expertise?

How do you see this process of 'mutual learning' working in practice?

Example prompts:

- How do you expect this to be communicated between individual members of the Research Group?
- What communication methods do you think will be helpful in the process of mutual learning?
- What potential barriers do you foresee as part of this process?
- What potential facilitators do you foresee as part of this process?
- What do you think will be helpful in this process?

6. Closing the interview

We are now getting to the end of the interview. Is there anything you would like to add, or anything you feel we have not discussed that may be important?

Thank you so much for your time. I will now stop the audio-recording

STOP AUDIO-RECORDING

Work package 3. GLOBE experiences

In-depth Interview Topic Guide

INTERVIEWER INTRODUCTION

Aim: To introduce the research and set the context for the proceeding discussion

- Introduce self and my role in the Research Group
- Introduce what this interview aims to achieve
- Explain why they were approached for the study
- Talk through key points:
    - length of interview
    - interview like a discussion, although specific topics to cover
    - no right or wrong answers, your views are important
    - participation is voluntary and right to withdraw
    - recording interview so can listen and for accuracy
    - confidentiality and anonymity
- Thank for taking part
- Any questions?

BEGIN AUDIO-RECORDING

1. Introductions and icebreaker

Aim: to understand the individual's research interests and their role within the GLOBE research group

To start, please tell me a bit about yourself and your role within GLOBE

Example prompts:

- What are your research interests?
- What research experience do you have?
- Did your role in GLOBE satisfy your interests?

Have you previously worked on international projects, or 'global health' projects?

If so, please describe your experience working on such projects?

Example prompts:

- How did your experiences in these projects differ from working on GLOBE?

2. Motivation for involvement in the Group

Aim: to establish whether the participant's overall motivations for participating in the GLOBE research programme were met

Why were you interested in getting involved in this specific Research Group

Example prompts:

- What were your motivations for getting involved in the GLOBE research programme?
- Were these motivations met?

3. Understandings of the Group's aims and whether these were achieved

Aim: to explore the individual's understandings and perceptions of the aims now having experienced the GLOBE programme

Now having experienced the project, what do you believe to be the key aims of the GLOBE research programme?

Example prompts:

- Do you think any of these aims have been achieved?
- How did your role help achieve these aim(s)?

4. General expectations/experiences

Aims: (1) to explore the individual's general expectations regarding the GLOBE research programme; (2) to explore how explore the individuals' experiences regarding the GLOBE research programme

Please describe your initial expectations of working in the GLOBE collaboration.

Please describe your experiences of working in the GLOBE collaboration.

Example prompts:

- How much interaction and communication did you have with the other GLOBE members?
- How did your experiences in these projects differ from working on GLOBE?

Can you share with me any advantages you experienced or observed being a part of GLOBE?

Example prompts (to explore expected advantages at various levels):

- Can you think of any advantages for:
  - Globally
  - Nationally
  - Community-level
  - Institution-level
  - Colleagues
  - The interviewee themselves

Can you share with me any disadvantages you experienced or observed being a part of GLOBE?

Example prompts (same as above)

5. 'Mutual learning' expectations

Aim: to explore the individual's experiences of the partnership and mutual learning in the context of this international collaboration

Do you think others learnt from your expertise?

Example prompts:

- Have you been able to use these skills and experiences in other roles?

Do you feel the process of mutual learning took place during the project?

Example prompts:

- How did this happen in practice?

6. Closing the interview

We are now getting to the end of the interview. Is there anything you would like to add, or anything you feel we have not discussed that may be important?

Thank you so much for your time. I will now stop the audio-recording

STOP AUDIO-RECORDING

Appendix 9 GLOBE participants' characteristics

Respondent ID	Country	Position	Expectation interviews	Experience interviews
R-01	Bosnia-Herzegovina	Senior Investigator	✓	✓
R-02	Bosnia-Herzegovina	Researcher	✓	
R-03	Bosnia-Herzegovina	Researcher		✓
R-04	Bosnia-Herzegovina	Researcher		✓
R-05	Colombia	Senior Investigator	✓	✓
R-06	Colombia	Senior Investigator	✓	✓
R-07	Colombia	Coordination/management		✓
R-08	Colombia	Coordination/management		✓
R-09	Colombia	Researcher	✓	✓
R-10	Colombia	Researcher	✓	✓
R-11	Colombia	Researcher	✓	
R-12	Colombia	Researcher	✓	
R-13	Colombia	Researcher		✓
R-14	Colombia	Researcher		✓
R-15	Colombia	Researcher		✓
R-16	Uganda	Senior Investigator	✓	✓
R-17	Uganda	Senior Investigator	✓	✓
R-18	Uganda	Senior Investigator		✓
R-19	Uganda	Senior Investigator		✓
R-20	Uganda	Coordination/management		✓
R-21	Uganda	Coordination/management	✓	✓
R-22	Uganda	Senior Investigator	✓	
R-23	Uganda	Senior Investigator	✓	
R-24	Uganda	Coordination/management	✓	

R-25	Uganda	Researcher		✓
R-26	Uganda	Researcher		✓
R-27	Uganda	Researcher		✓
R-28	Uganda	Researcher		✓
R-29	Uganda	Researcher		✓
R-30	Uganda	Researcher		✓
R-31	Uganda	Researcher		✓
R-32	UK	Senior Investigator	✓	✓
R-33	UK	Senior Investigator	✓	✓
R-34	UK	Senior Investigator	✓	
R-35	UK	Senior Investigator	✓	
R-36	UK	Coordination/management	✓	✓
R-37	UK	Coordination/management		✓
R-38	UK	Researcher		✓

Appendix 10 Additional illustrative quotes

Expectations met		
	Expectations	**Experiences**
Clear, regular transparent communication	*It's about clear communication, making sure people understand, and that there's no sort of misunderstandings. (R-33 UK Senior Investigator)*	*Even authorship has been discussed during all these meetings. Then, as the programme went on and we discussed more things, I was delighted to see that it was done fairly. Yeah, it has been transparent. (R-18 Ugandan Senior Investigator)*
		I think that definitely is a local issue is the issue that I was talking about earlier about how the, how the research in general in Colombia works. So, it is hard to communicate with senior investigators because they have very tight schedules. (R-15 Colombian Researcher)
		I had to know so many times about a project from, from Bosnia team or from UK team, because in here they don't give me, and they didn't give me any information about it. (R-10 Colombia Researcher)
Developing research expertise	*The people are more organised, methodical more punctual you do what you propose. (R-10 Colombian Researcher)*	*There are so many things I have learned doing SOPs, following ethics of research, and then reporting adverse events, learning how to keep documents, learning how to maintain it, that like every data is important. (R-20 Coordination/Management)*
Publications and dissemination	*And uh, then the having a strong partnership, I think we would hope where people could really applied for, for more grants. Yeah, and also improve on, uh, their research, have publications out. (R-24 Ugandan Coordination/management)*	*We tried to publish in local languages, there's definitely a push to publish in English […] the group is doing some really good high-quality research that does have a global reach because it talks the language that's understood by many countries. (R-33 UK Senior Investigator)*

	And knowing that if you're in a country where the clinicians don't have access to the journals, then you've got to come up with a new of disseminating that research. Or it just becomes an academic exercise. (R-33 UK Senior Investigator)	

Table 1. Additional quotes supporting expectations being met

Expectations exceeded		
	Expectations	**Experiences**
New research opportunities and extended networks	*Cause at some point you, we know that this is a timed exercise and at some point, they're going to pull out. … so how do we integrate it in our mainstream working to ensure that what we are gaining from it is actually ongoing. (R-26 Ugandan Researcher)*	

Table 2. Additional quotes supporting expectations being exceeded

Expectations partially met		
	Expectations	**Experiences**
Ownership of the research	*Sometimes partnerships don't do so well because the local people feel like they're not being treated fairly. They don't give you a chance to voice, to be active participants and they are relegated to data collectors. (R-16 Ugandan Senior Investigator)*	
Coordination and power dynamics		*I had a strong relationship with Colombia to start with because that's how we divided amongst us. And the multi-family groups, they were not familiar with. The was the whole approach and I supervise intervention. So, the clinicians, I had monthly, roughly monthly supervision meetings with the clinicians as I was in a way, I was part of the intervention because I supervise them. (R-32 UK Senior Investigator)*

		And until there is a conversation between the researchers and the PI, then we can't move forwards with a specific issue. (R-36 UK Coordination/Management)
		Their timelines really didn't factor in how long some of these contracts and sort of, you know, the administrative bureaucratic processes, how much time they actually take up. (R-33 UK Senior Investigator)
		Sometimes we've had finances bouncing on down and that takes us a long time. Then we drag, sometimes we request for funds, and they have to work through, so your request for funds. And then before you request, you have to finish your accountabilities for the fund, then request for more funds. And because of the slowness of our processes, it takes us some time. (R-20 Ugandan Coordination/Management)
Strengthening research capacity		*So, we had like weekly teleconferences every week partners will update us, but they will also be asking us a lot of questions. Like, how would you do this? How would you do that? So, it felt like a lot of the time that we were helping them or like mentoring them to be able to like completely the research. (R-38 UK Researcher)*
		Colombia may be because there was more than enough, the other places to build on some expertise was more to develop, Bogotá was probably the most likely place that if we stop tomorrow, that would keep going and we would have made a difference. (R-32 UK Senior Investigator)

Table 3. Additional quotes supporting expectations being partially met

Expectations not met		
	Expectations	**Experiences**
Mutual learning	*It's about learning. It's about working together. It's about being on the same page. I think all groups have an equal contribution to make. (R-23 Ugandan Senior Investigator)*	*One of the things I've personally learned from Uganda approach is how better to include different stakeholders. They're very good at hearing multiple voices in the research and to deal with that in a sensitive way that everybody feels heard (R-33 UK Senior Investigator experiences)*

Table 4. Additional quotes supporting expectations not being met

Appendix 11 Enhancing Transparency in Reporting the Synthesis of Qualitative Research (ENTREQ)

Item	Description	Page in thesis
1. Aim	State the research question the synthesis addresses.	115
2. Synthesis methodology	Identify the synthesis methodology or theoretical framework which underpins the synthesis, and describe the rationale for choice of methodology (e.g. meta-ethnography, thematic synthesis, critical interpretive synthesis, grounded theory synthesis, realist synthesis, meta-aggregation, meta-study, framework synthesis).	126
3. Approach to searching	Indicate whether the search was pre-planned (comprehensive search strategies to seek all available studies) or iterative (to seek all available concepts until they theoretical saturation is achieved).	126
4. Inclusion criteria	Specify the inclusion/exclusion criteria (e.g. in terms of population, language, year limits, type of publication, study type).	NA
5. Data sources	Describe the information sources used (e.g. electronic databases (MEDLINE, EMBASE, CINAHL, psycINFO, Econlit), grey literature databases (digital thesis, policy reports), relevant organisational websites, experts, information specialists, generic web searches (Google Scholar) hand searching, reference lists) and when the searches conducted; provide the rationale for using the data sources.	NA
6. Electronic Search strategy	Describe the literature search (e.g. provide electronic search strategies with population terms, clinical or health topic terms, experiential or social phenomena related terms, filters for qualitative research, and search limits).	NA
7. Study screening methods	Describe the process of study screening and sifting (e.g. title, abstract and full text review, number of independent reviewers who screened studies).	NA
8. Study characteristics	Present the characteristics of the included studies (e.g. year of publication, country, population, number of participants, data collection, methodology, analysis, research questions)	141
9. Study selection results	Identify the number of studies screened and provide reasons for study exclusion (e,g, for comprehensive searching, provide numbers of studies screened and reasons for exclusion indicated in a figure/flowchart; for iterative searching describe reasons for study exclusion and inclusion based on modifications t the research question and/or contribution to theory development).	126
10. Rationale for appraisal	Describe the rationale and approach used to appraise the included studies or selected findings (e.g. assessment of conduct (validity and robustness), assessment of reporting (transparency), assessment of content and utility of the findings).	NA
11. Appraisal items	State the tools, frameworks and criteria used to appraise the studies or selected findings (e.g. Existing tools: CASP, QARI, COREQ, Mays and Pope [25]; reviewer developed tools; describe the domains assessed: research team, study design, data analysis and interpretations, reporting).	NA

14. Data extraction	Indicate which sections of the primary studies were analysed and how were the data extracted from the primary studies? (e.g. all text under the headings "results /conclusions" were extracted electronically and entered into a computer software).	126
15. Software	State the computer software used, if any.	125
16. Number of reviewers	Identify who was involved in coding and analysis.	126
17. Coding	Describe the process for coding of data (e.g. line by line coding to search for concepts).	127
18. Study comparison	Describe how were comparisons made within and across studies (e.g. subsequent studies were coded into pre-existing concepts, and new concepts were created when deemed necessary).	126
19. Derivation of themes	Explain whether the process of deriving the themes or constructs was inductive or deductive.	126
20. Quotations	Provide quotations from the primary studies to illustrate themes/constructs, and identify whether the quotations were participant quotations of the author's interpretation.	141-146
21. Synthesis output	Present rich, compelling and useful results that go beyond a summary of the primary studies (e.g. new interpretation, models of evidence, conceptual models, analytical framework, development of a new theory or construct).	147

Appendix 12 Consort diagrams

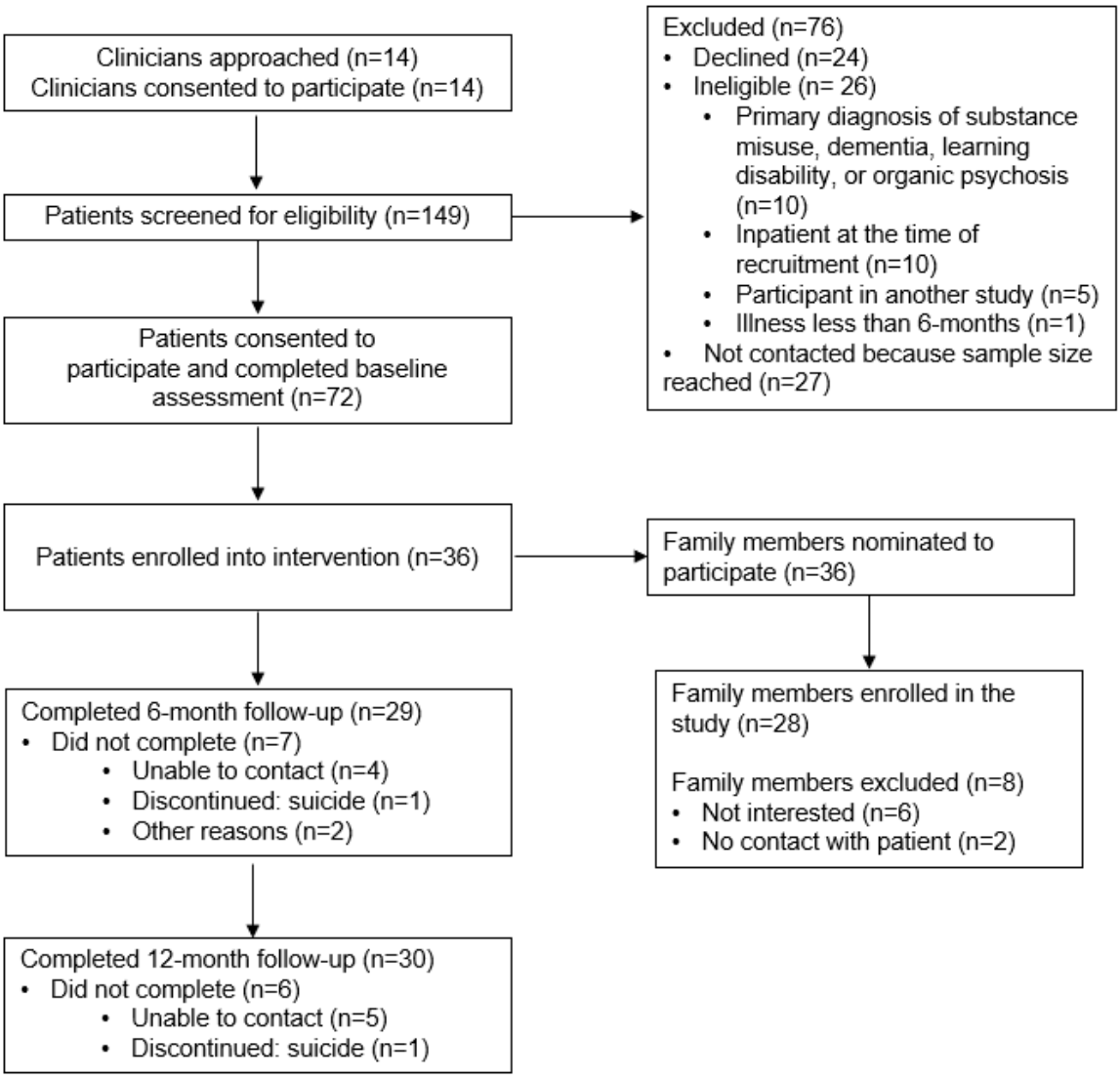

Figure 1. Participant flow for Bosnia-Herzegovina

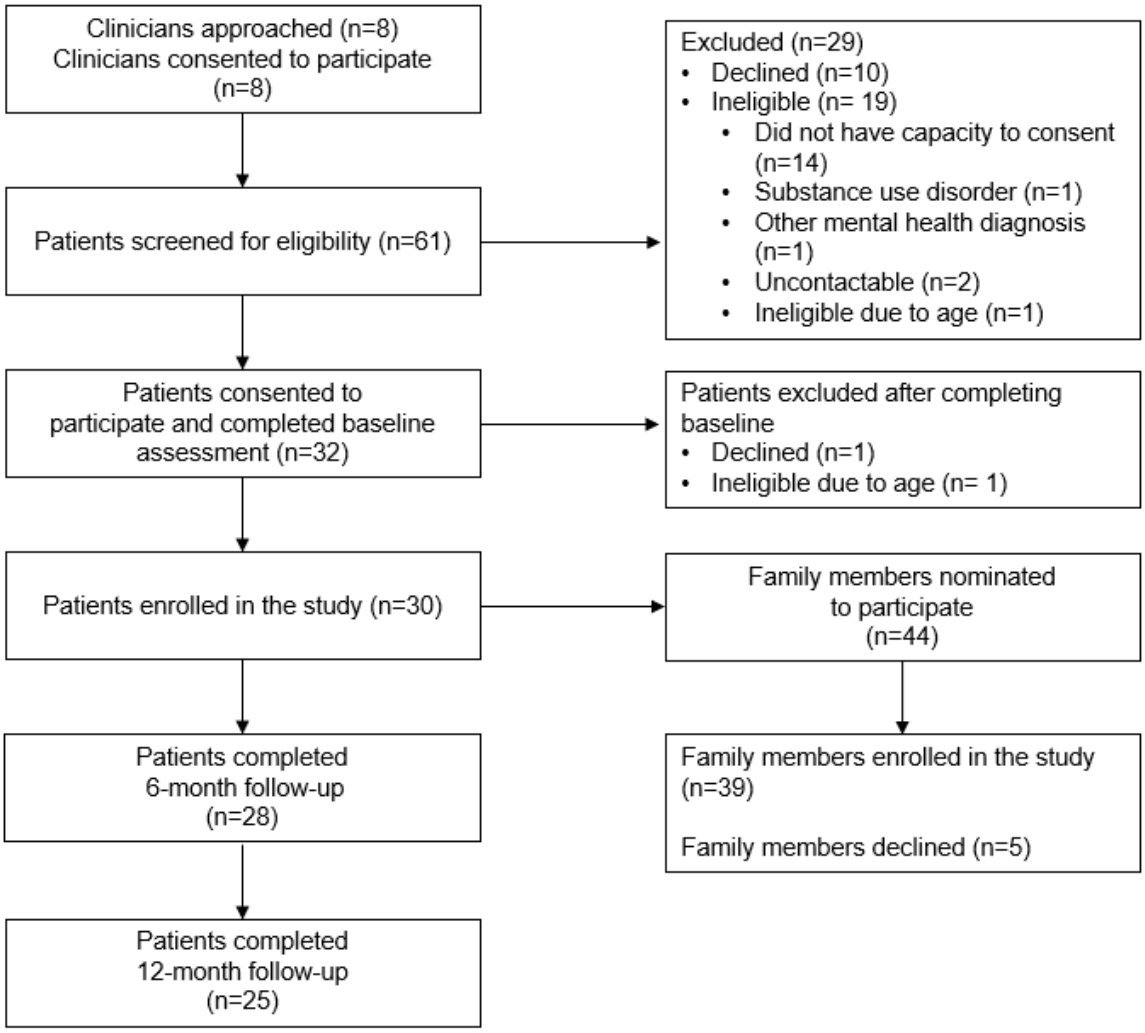

Figure 2. Participant flow for Colombia

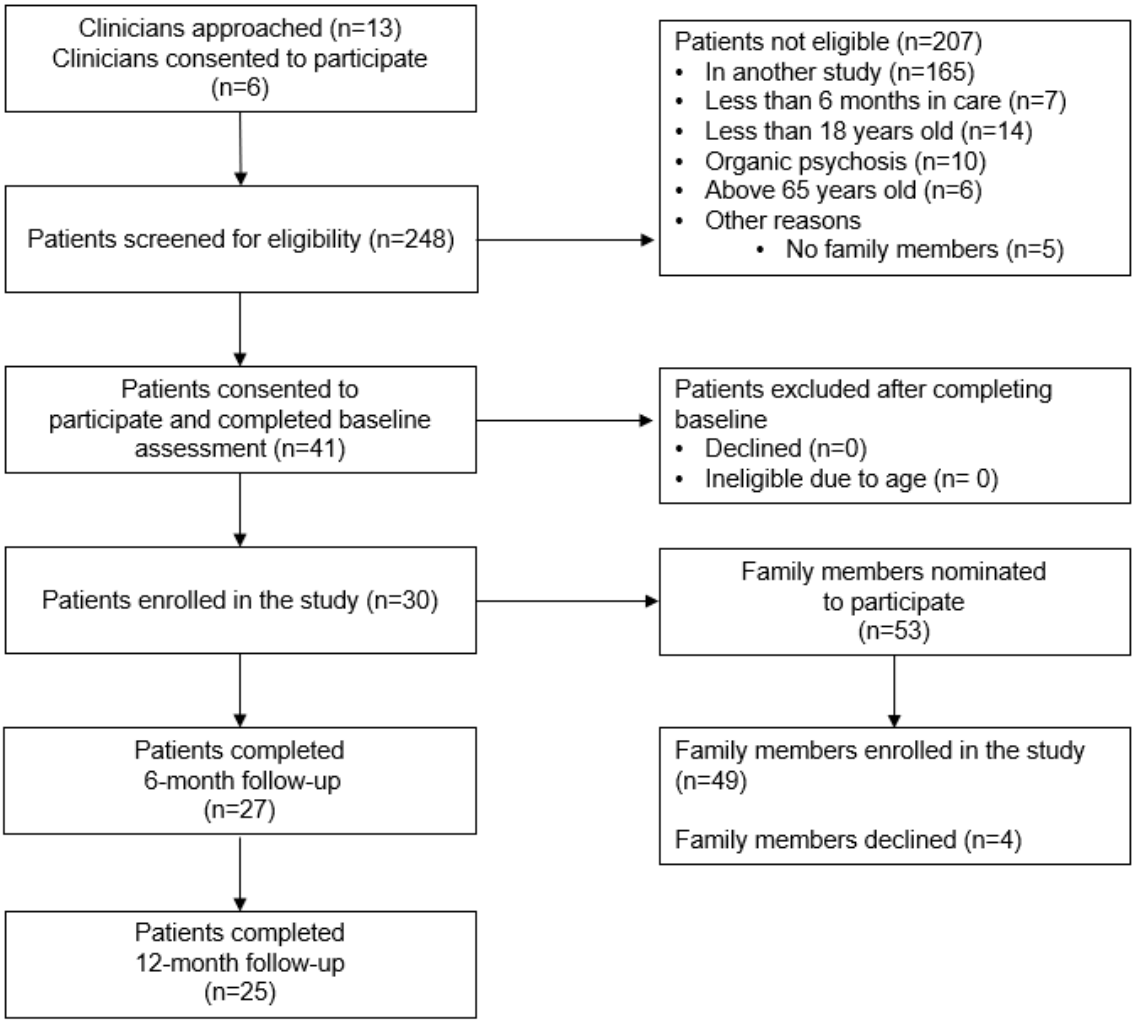

Figure 3. Participant flow for Uganda

Appendix 13 Forest plots

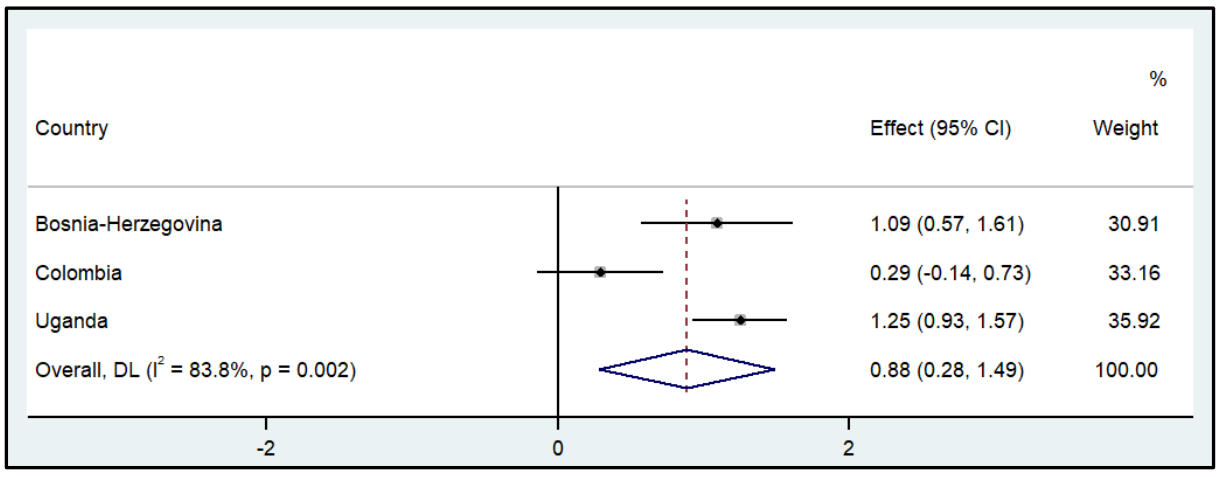

Figure 1 Forest plot of MANSA mean differences across countries

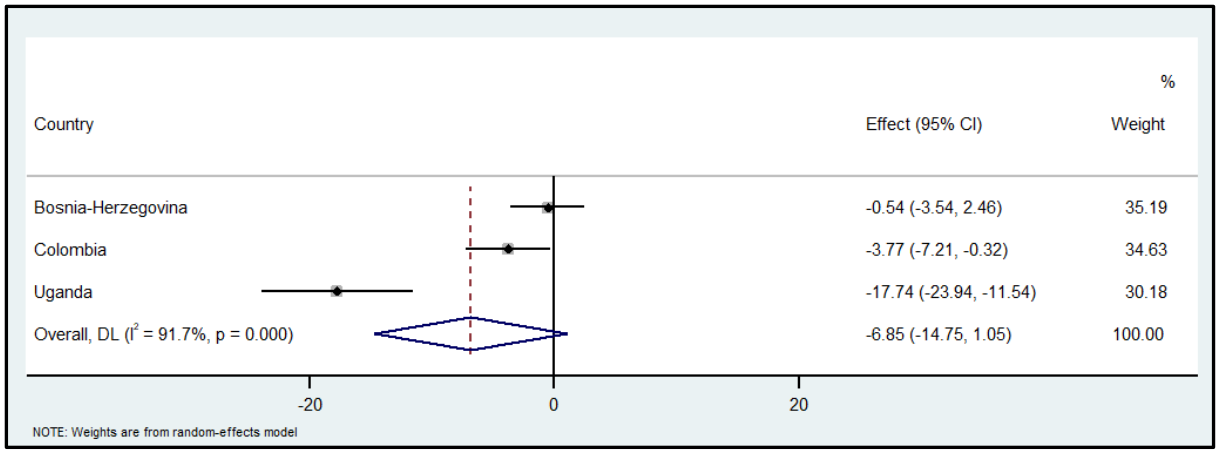

Figure 2 Forest plot of BPRS mean differences across countries

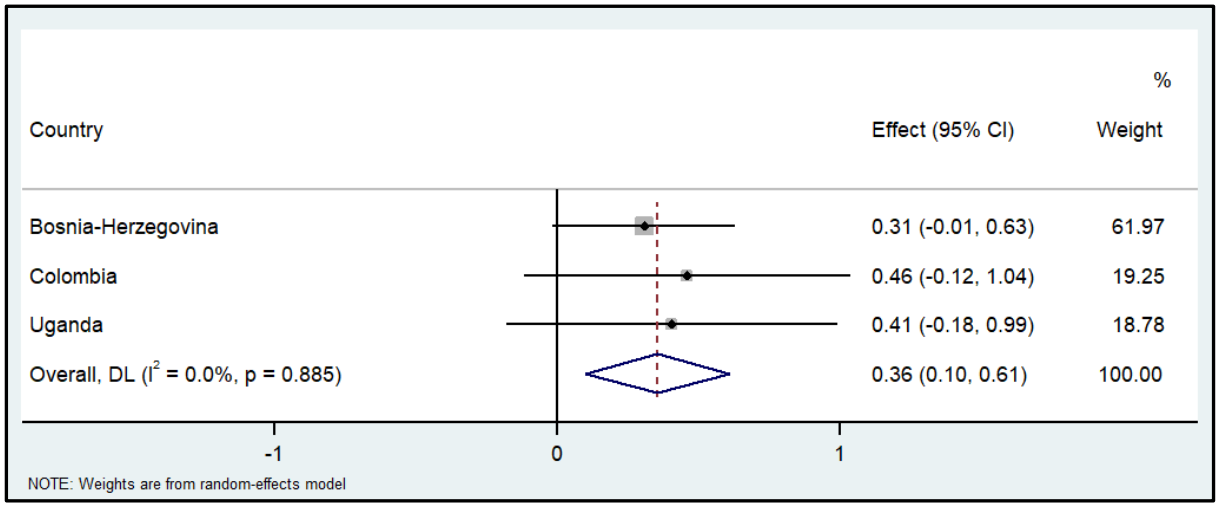

Figure 3 Forest plot of SIX mean differences across countries

Appendix 14 Scatter plots

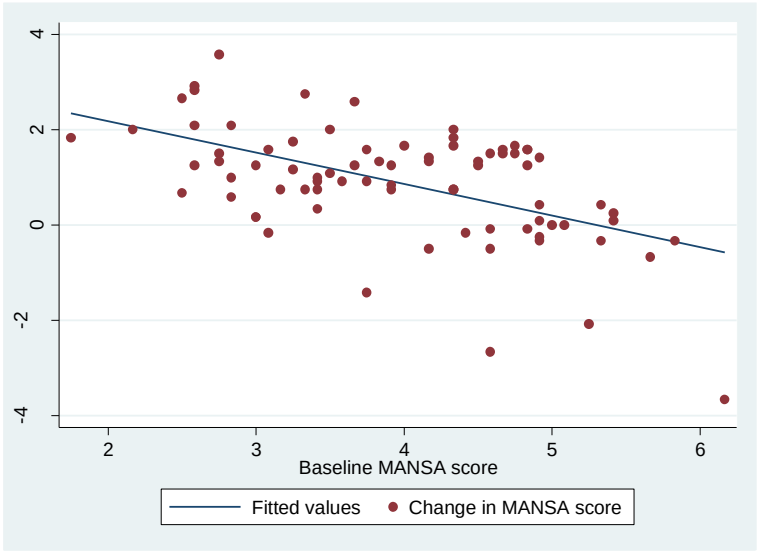

Figure 1 Scatterplot of change in MANSA score and baseline MANSA score

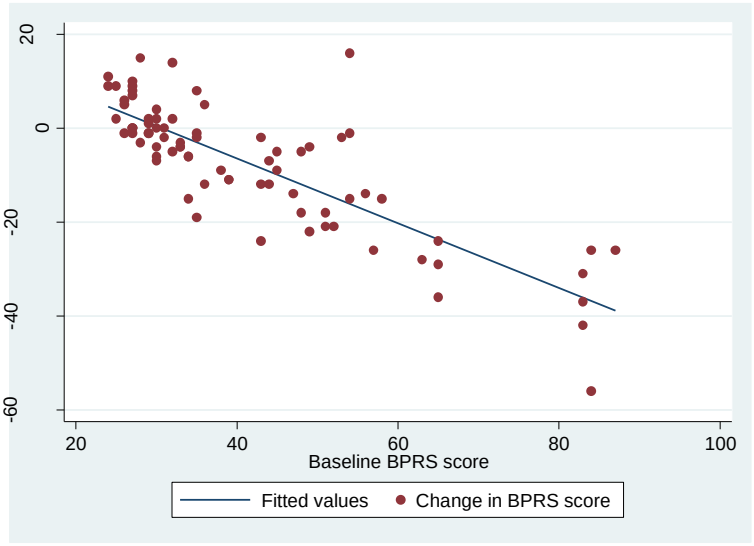

Figure 2 Scatterplot of change in BPRS score and baseline BPRS score

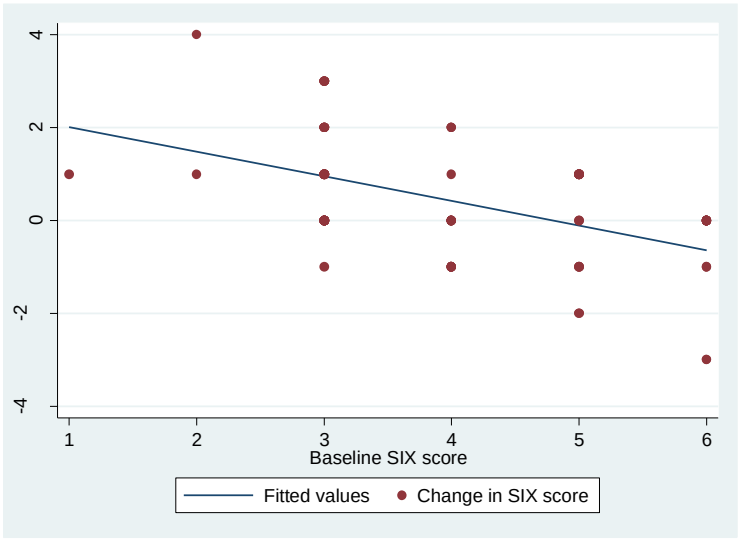

Figure 3 Scatterplot of change in SIX score and baseline SIX score