HEALTH EQUITY AS A PRIORITY IN THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT:

A nested qualitative case study of maternal, newborn and child health in Ethiopia

Nicole Bergen

Thesis Supervisors: Dr. Ronald Labonté and Dr. Manisha Kulkarni

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Interdisciplinary School of Health Sciences

Faculty of Health Sciences

University of Ottawa

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List of acronyms and abbreviations

FGD	focus group discussion
FMOH	Federal Ministry of Health
GDP	gross domestic product
HEW	Health Extension Worker
HSDP	Health Sector Development Program
IDI	in-depth interview
IEC	information, education and communication
KII	key informant interview
MDA	Male Development Army
MDG	Millennium Development Goal
MNCH	maternal, newborn and child health
MWA	maternity waiting area
ODA	official development assistance
PHC	primary health care
PHCU	primary health care unit
RL	religious leader
SDG	Sustainable Development Goal
UN	United Nations
WDA	Women's Development Army
WHO	World Health Organization

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I received feedback from my thesis supervisors and thesis advisory committee members (Arne Ruckert, Gail Webber and Sanni Yaya) on preliminary drafts of Chapters 1, 2, 3 and 8 and revised the content of these chapters accordingly. Part of Chapter 3 was adapted from a book chapter that I authored together with Ronald Labonté, Shifera Asfaw and Abebe Mamo; these contributions are detailed in the introduction of Chapter 3. Comments on the first draft of the book chapter were provided by an anonymous peer-reviewer as well as the book editor Logan Cochrane, and the content was subsequently revised.

For the articles that comprise Chapters 4 to 7 of my thesis, co-authorship details are provided at the start of each chapter. In all four articles, I had a leading role in conceptualizing the study, collecting the data, analysing the data, determining the conclusions and preparing the manuscript. For each article, peer reviewers from academic journals provided feedback on the submitted manuscripts, and I made revisions in response to their comments. The articles featured in Chapters 4, 5 and 6 have been published in open-access academic journals and have been modified slightly in formatting and reference style for inclusion in this thesis. The article featured in Chapter 7 has been submitted and has undergone one round of review by anonymous peer-reviewers.

Approval from the University of Ottawa to conduct this research was granted at my thesis proposal defense on January 27, 2017. Subsequently, ethics approvals were obtained from the University of Ottawa Ethics Review Board and the Jimma University Institutional Review Board (Appendix 1).

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Abstract

The 2015 global adoption of the United Nations 2030 Agenda for Sustainable Development places the achievement of health equity as a global priority for health and development. Due to the normative nature of the concept of health equity and the multi-level, multi-sectoral approaches required to advance it, interdisciplinary investigations are warranted to demonstrate how health equity as a policy objective is understood and operationalized. This dissertation is a case study of health equity in maternal, newborn and child health (MNCH) in Ethiopia, using qualitative methods to explore how health equity is conceptualized and pursued by stakeholders across levels of the health system. Ethiopia, a low-income country in East Africa, reported improvements in MNCH during the Millennium Development Goal period (1990-2015), largely attributed to the expansion of health services into rural areas; however, achievements were not realized across all geographies and population groups. Health equity is a stated policy objective for the country. Through a series of four articles, this dissertation addresses: community members' perceptions and experiences related to health inequity and MNCH; barriers and enablers encountered by community-level health workers in implementing an equity-oriented MNCH intervention; subnational health managers' understandings of health equity, and their roles in promoting it; and the characterization of health equity as a policy problem in national-level health discourses. This work deconstructs health equity into three components (health, distribution of health and characterization of the distribution of health) and compares how stakeholders across levels of the health system attribute meaning to each component and imply responsibility and accountability for health equity. The findings detail how diverse experiences related to health equity in MNCH across community, subnational and national contexts are driven by high-level technocratic framings of health equity, which tend to emphasize the delivery of a narrow package of health services to under-served geographical areas. Providing support and recognition for the role of subnational stakeholders in mediating the adaption of national health equity policies to local contexts, and making prominent the

social justice underpinnings of health equity in the implementation of national policies are opportunities to strengthen the advancement of health equity in Ethiopia.

Chapter 1. Introduction

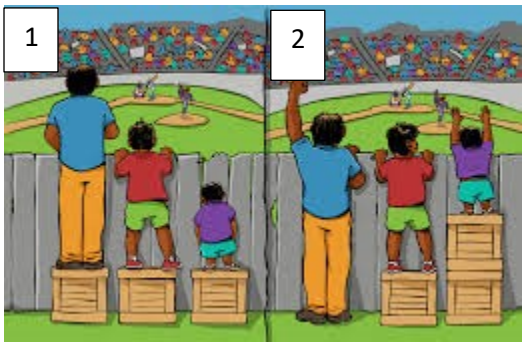
This dissertation work is comprised of a two-part literature review (Chapters 2 and 3), four standalone articles (Chapters 4-7) and a concluding section (Chapter 8), which collectively are designed to address my research questions (described below). Chapter 1, the introduction section, provides a description of health equity, and then gives an overview of the project's main elements – research aims, general theoretical and methodological approaches, and ethical considerations – followed by a reflexivity statement. These elements situate the research within the field of population health, and give an overarching sense of how the research was approached and conducted. Chapters 4-7 provide more in-depth information about the approaches, data and analysis techniques used for the preparation of each of these articles. This introductory chapter reflects the content of my original thesis proposal document, which was approved by my thesis committee in January 2017.

The main body of this dissertation is supported by supplementary material including a glossary of terms (explaining phrases and terms that are specific to, or have particular meanings within, the Ethiopian context) and a series of appendices. The appendices contain information about: research ethics (Appendix 1); recruitment and consent processes (Appendix 2); participant sampling frames (Appendix 3); data collection tools (Appendix 4); knowledge dissemination activities (Appendix 5); and select other works published during the thesis period (Appendix 6).

1.1 What is health equity?

The concept of equity is at first undemandingly simple yet, upon further inspection, is brimming with contention. Simplified depictions of equity, such as the cartoon illustration of three people of different heights using boxes to see over a fence, portray the concept as a straightforward matter of resource optimization (Figure 1). In the first frame, the shortest person on the right cannot see over the fence. In the second frame, while the tallest person has surrendered their box to enable the shortest to see, no

person has had to sacrifice their view on behalf of another. In the absence of any practical sacrifice, everyone's interests have been satisfied to achieve an equitable outcome. Achieving equity, however, becomes contentious when resources are scarce, sacrifices are required, or the nature of the underlying interests or needs are variable – conditions that are highly relevant when applied to health.



Interaction Institute for Social Change
Artist: Angus Maguire; used with permission

Figure 1. Simplified depiction of the concept of health equity

Health equity exists where there are no systematic differences in health across population subgroups based on social, demographic, or geographic characteristics that are judged to be unfair and avoidable through reasonable action; conversely, health inequities exist when there are preventable differences in health. (1,2) Thus, health (in)equity is comprised of three constructs: health, the distribution of health, and the moral or ethical underpinnings of health distribution. In this dissertation, I make deliberate use of terminology related to health equity (which is detailed further in Chapter 2): health *inequality* denotes an unequal distribution of health, whereas health *inequity* is used as a normative term denoting an unequal distribution of health that is considered morally or ethically problematic. My explorations of health equity throughout this research seek to characterize justifications applied to problematize health inequalities as health inequities. In a narrower sense, health equity is influenced by the organization and performance of the health sector, which acts as a gatekeeper of health facilities, health professionals and services, medications, and public health interventions. More broadly, however, health equity is

linked to wealth distribution, social policies, gender, occupation, geographical location, education, and culture, as well as social justice, rights, norms, and values.

Although the exact origins of health equity are unknown, public health, social medicine, and epidemiology have long recognized the role of environmental factors in determining health. The establishment of the World Health Organization (WHO) following World War II was influenced by the vision of René Sand and other founders, who acknowledged that health was shaped by social conditions and saw a role for WHO in tackling the environmental and social roots of illness. (3) The notion of health equity is reflected in the 1946 constitution of the WHO, stating that 'the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition.' (4) The unequal distribution of health by social class began to gain political attention in the United Kingdom in the 1960s and 70s with the Whitehall Studies, commencing in the late 1960s, and the Black report, published in 1980. (5,6) These efforts contributed to the formal entry of health equity in global health discussions as part of the 1978 Alma-Ata Declaration (7) and the Health For All campaign, which promotes primary health care (PHC) as a priority for all countries, including within its conceptualization of PHC acknowledgement of actions on several social and environmental determinants of health. (8)

In more recent years, the two sets of United Nations (UN) development agendas – the Millennium Declaration (2000-2015) and subsequent 2030 Agenda for Sustainable Development (2015-2030) – have again prompted integration of health equity into national health and development plans. While the Millennium Declaration had an implicit focus on benefiting the worst-off by promoting development in poor countries (9), the monitoring and evaluation mechanisms laid out in the Millennium Development Goals (MDGs) did not necessarily support the advancement of health equity, (10,11) a shortcoming that inspired initiatives such as the WHO Commission on Social Determinants of Health and Countdown to 2015. The Commission made contributions to advancing theoretical understandings of health equity and

recommendations for government agencies and policy makers to tackle health inequities. (12) Countdown to 2015 was instrumental in establishing national health inequality monitoring protocols in the topic of maternal, newborn and child health (MNCH). (13) In part a result of these initiatives, there were calls for greater and more explicit inclusion of equity in the Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development – including work to which I contributed that provided recommendations on equity-oriented monitoring approaches for universal health coverage, and strengthened inequality monitoring practices. (14–16)

The theme of equity is indeed more evident in the SDGs than in the MDGs. The 2030 Agenda for Sustainable Development emphasizes equity in the first of its five transformative shifts (i.e. to 'leave no one behind') and names equality as one of its three fundamental principles alongside human rights and sustainability. (17,18) The notion of health equity is implicit in at least three aspects of the SDGs. First, the general health goal, SDG 3 necessitates a pro-equity approach to 'ensure healthy lives and promote well-being for all at all ages.' (19) Second, the importance of data disaggregation for SDG health targets is specified. (20) Third, target 3.8 (to achieve universal health coverage) promotes the increased accessibility of health services for disadvantaged populations, with financial protection, albeit the emphasis on 'coverage' rather than on the principles of PHC has not been without criticism. (21) With all UN Member States signing onto the 2030 Agenda for Sustainable Development in 2015, the SDGs provide a foundation for international, regional and national health sector planning, and constitute a source of optimism for the promotion of health equity. (22) And while the SDGs represent a significant policy window for national governments to adopt or strengthen initiatives to address health equity, the specifics of how (and whether) health equity enters into national and subnational policy and program spaces require further exploration.

1.2 Research goals, questions and objectives

The goals of my research are to study how health equity is understood within a national context, by various actors in the health sector, and to explore how these understandings impact the implementation of health-related policies, programs and practices. This research allows me to reflect on ways that health equity aspects of the 2030 Agenda for Sustainable Development have been operationalized and made relevant within a specific context. It also permits deeper analysis of the accountability and evaluative mechanisms that underlie health equity as a policy objective. To focus the scope of my research, I consider health equity as it pertains to the case of MNCH within the country context of Ethiopia.

My overarching research question is: What are the implications of the conceptualization of health equity on its operationalization in MNCH policies, programs and practices across national, subnational, and community contexts in Ethiopia? Through a nested four-part case study, I explore the following four research sub-questions:

- What are community members' perceptions and experiences related to health, health inequality and MNCH themes? (Article 1)
- What barriers and enablers do community-level health workers (Health Extension Workers (HEWs)) encounter in implementing and promoting an equity-oriented health intervention? (Article 2)
- How do subnational health managers in Ethiopia understand health equity issues and their role in promoting health equity? (Article 3)
- How is the concept of health equity constituted within national MNCH policy discourses in Ethiopia? (Article 4)

In posing these questions, this research has two main objectives. The first is to explore how community members' and health workers' perceptions of health equity guide, and are affected by, the promotion of

MNCH in Jimma Zone (one of 20 zones in the Oromia Region of Ethiopia). This objective is addressed in Articles 1 and 2. The second objective is to explore how health equity pertaining to MNCH is conceptualized and operationalized by different stakeholder groups across subnational and national health sector administrative levels. Articles 3 and 4 address the second objective. As an extension of the two objectives, I return to my overarching research question in the concluding Chapter 8 of this thesis, considering the interconnectedness of health equity conceptualization and operationalization, and its implication for Ethiopia and other settings.

1.3 Theoretical approach

1.3.1 Population health and social determinants of health

This research is conducted as an interdisciplinary, population health study. The field of population health is premised on the assumptions that interrelated factors and conditions affect health over the life course, and that there are systematic patterns in how they occur and are experienced; policies and programs aligned with a population health approach apply knowledge about these factors/conditions to seek improvements in health in populations. (23,24) This research acknowledges and prioritizes that health is influenced by a range of determinants that act at different levels of influence (e.g. broad socio-economic, cultural, and environmental conditions; social and community networks; and individual lifestyle factors (12,25)). Accordingly, this research assumes that the advancement of health equity requires identifying, understanding, and addressing the determinants of health. This research positions the pursuit of health equity as an intersectoral and multi-level endeavour, including actors inside and outside of the health sector. The role of government policies and programs are emphasized, although not exclusively (that is, other, non-government initiatives and actors are also included in the research).

My dissertation work contributes to the field of population health by developing a body of knowledge around the interconnectedness of conceptualizing and operationalizing health equity initiatives. The

findings build on the current theoretical understandings of health equity (see Chapter 2), incorporating the perspectives of different actors across levels of governance. The research methodology adds strength and legitimacy to interdisciplinary approaches used in the population health field. Practically, the research findings help to inform approaches to advancing health equity that are appropriate and relevant to MNCH within Ethiopia.

1.3.2 Philosophical, theoretical and conceptual framing

Philosophical assumptions related to ontology, epistemology, and axiology are embedded in all research, including the qualitative studies presented within this thesis. (26) Ontologically, this thesis simultaneously acknowledges the singular reality implicit in quantifiable measurements of health equity, as well as the multiple and socially-constructed realities surrounding the perception of the concept by various actors. The epistemological positioning that underlies this research is rooted in social constructivism, recognizing the importance of understanding participants' views of reality given their lived experience within a particular context, and my own positionality that is implicitly reflected in the co-construction of the reality represented in the research findings. To lessen the distance between myself and the research subject, I engaged in more than six months of fieldwork, contemplating issues such as how working with language interpreters layered additional subjective meanings onto participant perspectives (27) and how our research team could identify and minimize the impact of social desirability bias (28) (Appendices 6.1 and 6.2, respectively). In terms of axiology, the study explores multiple perspectives and their implications on the operationalization of health equity, recognizing the diversity of values and experiences of the research participants.

The theoretical and conceptual foundations of this research took on dynamic applications over the preparation of the four articles. The first two articles are guided by the use of analytical frameworks: the framework for addressing equity through determinants of health (29) and an ecological model of social

determinants of maternal and child health. (30) Implicit in the application of these frameworks are assumptions about the desirability of health service use, the ability of metrics to reflect reality, and the relevance of ecological framing based on social determinants of health. These frameworks also guided the development of data collection tools (Appendix 4) as well as analysis and reporting approaches. Given the paucity of information about understandings of health equity in the research context, these two papers are exploratory and descriptive in nature. Article 3 and, to a greater extent, Article 4 apply a stronger interpretive lens as an overlay to the aforementioned analytical frameworks. These articles reflect critical social science perspectives; although the research does not subscribe to a single unifying theory, it is influenced by social justice, equity, and critical social science theories.

1.4 Methods and methodological approach

1.4.1 Methodology

I designed my dissertation as a nested case study, consisting of multiple cases bound within a certain place (Ethiopia) and time (the study period, from 2015-2019). Generally, case studies are appropriate for research questions that seek to explain a circumstance, exploring the 'how' and 'why' of a phenomenon (health equity). (31) Case studies can be applied for exploratory, descriptive, and explanatory purposes, which fits with the overarching research question, and can be used as a basis for generalized lessons derived from the overall meaning of the cases. (26) In this research, the nested nature of the case study encompasses four distinct populations: community-level stakeholders; health workers; subnational health managers; and national health sector actors. These populations are spread over three geographical areas with respect to the scope of their work: Jimma Zone (community-level stakeholders and health workers); Oromia Region (subnational health managers); and Ethiopia (national health sector actors).

1.4.2 Study context

For this study, I adopted a country focus on Ethiopia and a topical focus on MNCH. The choice of country and topic was largely motivated by logistical considerations, given that my dissertation work coincided with my tenure as researcher on the Safe Motherhood Research Project, a five-year (2015-2020) research collaboration in Jimma Zone, Ethiopia. That said, however, MNCH in Ethiopia serves as an appropriate context in which to explore my research goal. Ethiopia is a low-income country in East Africa with a population of 109 million, 80% of whom are rural residing. (32) Ethiopia reports high levels of maternal and neonatal mortality (412 deaths per 100,000 live births and 37 deaths per 1000 live births, respectively, according to data from the 2016 Ethiopia Demographic and Health Surveys). (33) Over the past two decades, efforts to improve MNCH in Ethiopia have accelerated progress in areas related to MDGs 4 and 5 (to reduce child mortality and improve maternal health, respectively), however, these achievements have not been realized alongside gains in MNCH equity. (34,35) While Ethiopia has been commended for improving MNCH during the MDG era, (3) it now faces challenges in addressing the broader 2030 Agenda, given large health inequalities, fragmented health information systems, and halted progress in other development markers. Successfully addressing health equity is necessary for Ethiopia to further and sustain improvements in MNCH, a major health priority for Ethiopia and across low- and middle-income countries. Chapter 3 provides more detailed background information about MNCH in Ethiopia.

I conducted my dissertation research in parallel with the Safe Motherhood Research Project, an IDRC-funded cluster-randomized study that explores the implementation and scale-up of two MNCH initiatives in Jimma Zone, Ethiopia: upgrading maternity waiting areas (MWAs) and delivering information, education, and communication (IEC) activities. Briefly, MWAs serve as a resting place for pregnant women nearing their delivery dates. The MWA intervention entails upgrading these facilities to full functionality, as per 11 indicators of MWA function. (36) The IEC intervention, delivered as

participatory workshops with key community leaders, helps participants to identify enablers and barriers to fully implementing safe motherhood practices in their communities and develop strategies to overcome barriers. The two interventions were designed and implemented by researchers at the University of Ottawa and Jimma University, with three rounds of accompanying data collection: pre-IEC rapid needs assessment; qualitative and quantitative baseline; and qualitative and quantitative end line.

1.4.3 Data collection and analysis overview

For my dissertation, I use both secondary data (transcripts from the Safe Motherhood Research Project and national policy documents) as well as primary data, collected for the express purpose of this research. Participant sampling frames and demographic information are provided in Appendix 3, and data collection tools are summarized in Appendix 4.

Secondary data primarily derive from the Safe Motherhood Project pre-IEC rapid needs assessment (conducted in May 2016) and the qualitative baseline data collection (conducted in November 2016 to February 2017). (While I was also involved in the rollout of a third round of data collection for the Safe Motherhood Research Project, which occurred in 2019 to capture the end line results of the study, these data are not formally part of my thesis work, although my experiences during this time continued to shape my interpretation of the data.) Through my involvement as a researcher on the Safe Motherhood Research Project, I co-led the training for data collectors from Jimma University for both pre-IEC and baseline qualitative data collection activities, and supervised the data collection fieldwork for the pre-IEC. For both rounds of data collection, I had a large role in developing the qualitative survey tools (in-depth interview (IDI) and focus group discussion (FGD) schedules) and pilot testing them. The initial survey tools were compiled with inputs from myself and researchers at Jimma University, in consultation with the Safe Motherhood Project Principal Investigators. During data collector training workshops, we reviewed each question set in detail with the team of data collectors, discussing the intended meaning

and how it could be translated into the local language. The team of data collectors pilot tested the tools by performing mock IDIs and FGDs with one another, and then again in the community (with the respective participant types, in a setting similar to the study areas). Throughout this process, minor adjustments to the survey tools were made to clarify the use of language, ensure cultural appropriateness, and ensure that the IDIs or FGDs were finished in a timely manner. My role in the Safe Motherhood Project also entailed cleaning and managing the transcript files, and leading the preparation of internal reports about the findings.

Primary data collection included key informant interviews (KIIs) with participants in leadership positions in the health sector in Ethiopia, who had a national or subnational (regional, zonal, district or Primary Health Care Unit (PHCU)-level) scope of work. Interviews took place between November 2017 and January 2018 and included the following participant types: federal government officials, subnational government health officers, federal research institute staff, Ethiopia-based UN agency staff, civil society organization staff, academia, and donor or implementing organization staff. I developed the semi-structured interview guides for the purpose of my PhD research, focusing on five domains of questioning: perceptions of relevant social determinants of health; health equity within current scope of work; interface with health equity work at national and/or global levels; interface with health equity work at subnational levels; and collaborations with other sectors or groups (Appendix 4.3). Prior to data collection, I received feedback about the interview guides from researchers at Jimma University, who offered suggestions about the relevance and interpretation of the questions within the Ethiopian context. I pilot tested the interview guide with a classmate who had previously worked with the WHO in Ethiopia to get a sense of the length of the interview, the clarity of the questions, and the type of responses that I might expect to hear. Based on these experiences, I made minor revisions to wording and length the interview guides.

In total, I conducted 35 KIIs: 12 with subnational actors (used for the analysis in Article 3), and 23 with national actors (used for the analysis in Article 4) (Appendix 3.3). (Note that Article 4 also included secondary data in the form of policy documents, as specified in Chapter 7.) The KII participants were given the option of doing the interview in English or the local language of their choice, and could decide whether or not to have the interview audio recorded. Three participants, all at the district or PHCU level, requested an interpreter for all or part of the interview. Mr. Abebe Mamo, a Jimma-based researcher from the Safe Motherhood Research Project, agreed to provide interpretation services. Mr. Mamo has an ongoing relationship with the study topic and was briefed extensively beforehand. The interview was conducted using verbatim, real-time translation, (37) and the interpreter subsequently reviewed the audio recordings and transcripts and made minor clarifications. Apart from these three instances, I conducted all other interviews independently, in English. Only one participant did not agree to have the interview audio recorded, and detailed notes were taken instead.

The data analysis approaches employed in this research are described in more detail in the articles of Chapters 4-7. Generally, thematic and content analysis techniques were used, (38) based on code guides developed deductively (derived from the data collection tools and underlying analytical frameworks), and expanded inductively to accommodate emergent concepts. Participant quotes are included to support and enrich the results presented throughout Chapters 4-7. In Article 1 (Chapter 4), the participant ages are provided to give a sense of their seniority in the community. Appendix 3.1 contains more information about participant demographics.

1.4.4 Research participants

I analyzed the 36 transcripts from the pre-IEC data collection for Article 1. These included IDIs with six HEWs, six religious leaders, six Male Development Army (MDA) leaders, and six Women's Development Army (WDA) leaders; six FGDs were held with male community members, and six with female

community members (Appendix 3.1). All of these research participants were recruited from rural or semi-urban kebeles (communities of around 5000) in Jimma Zone, Ethiopia. The living conditions in rural and semi-urban areas of Jimma Zone are basic: typical housing consists of two- or three-room homes with mud exterior walls, corrugated iron roofs and dirt floors. Homes often have no running water and no electricity. Cooking is done over an indoor open-flame stove fuelled by firewood. Traditional foods include injera (a fermented flat bread made from the grain teff), and various types of legume- and meat-based wot (sauces). Coffee is prepared several times each day as part of ceremonies that involve roasting the beans, grinding them and brewing them three (or more) times. Parts of Jimma Zone are not accessible by road, while other parts are accessible seasonally by unpaved roads. Agriculture, including coffee production, is an important source of livelihood. Areas with coffee production (such as Gomma woreda) are more affluent, with higher ownership of consumer goods such as cell phones and motorcycles. (Cell phone coverage, however, is unreliable in mountainous areas of the Zone.) Weekly markets serve as a meeting point for commerce, where women, in particular, buy and sell food and household goods. The main religion in rural and semi-urban Jimma Zone is Islam, and religious leaders are highly-respected members of the community. MDA and WDA leaders have roles in promoting aspects of community development through physical infrastructure or agriculture initiatives (in the case of the MDA) and health initiatives (in the case of the WDA).

Preliminary unpublished data from the Safe Motherhood Project endline quantitative survey (including 3800 women in the study area) suggest that about three quarters of women are unemployed, about half have no education, and 60% are illiterate. Around 70% of women are married before the age of 18 years. The majority of those surveyed reported owning their own house (89%) and owning agricultural land (85%). Half of women sourced water from unprotected springs, while about 13% sourced water from a river. Over a third of women used open pits as a latrine. Other aspects of life in rural and semi-

urban Jimma Zone are captured in the 20-minute documentary 'Journeys in Motherhood' that I produced to accompany this research (Appendix 5.3).

Thirty-one transcripts from baseline data collection with HEWs were analyzed for Article 2 (Appendix 3.2). HEWs are locally-recruited women with at least a grade 10 education, who receive one year of basic health training. They are then deployed in teams of two to serve their communities out of health posts, the lowest tier of the health system. HEWs are salaried, and have a spot on kebele councils. Their role entails doing community health education and promotion, and providing some basic health care services. (See Chapters 3, 4 and 5 for more information about the role of HEWs.) As research participants, HEWs were well positioned to give a sense of the barriers and enablers to MNCH service use in the community, since they interact directly with pregnant women to promote health service use. This allowed me to use shadowed data (capturing the impressions of several people) because they had interactions with women who ultimately did and did not use services such as MWAs.

Transcripts from subnational and national actors were analyzed for Articles 3 and 4, respectively. While all of the subnational actors were recruited from subnational government health offices (at regional, zonal and district levels) or health facilities (Primary Health Care Units), national actors were recruited from a wider selection of organizations. This included: five participants from the Ministry of Health; one participant from the Ministry of Women and Children Affairs; two participants from federal research institutes; three participants from Ethiopia-based offices of UN agencies; two participants from civil society organizations; five participants from academic institutions; and five participants from donor or implementing organizations. To protect the anonymity and confidentiality of the participants, the names of the organizations and ministry directorates are withheld from reporting. The Ministry of Health participants represented more than three directorates, and the UN participants were recruited from two agencies. The two civil society organizations from which participants were recruited both had health-focused mandates: one was a professional association and the other was a consortium. Participants

were recruited from three different academic institutions and, of the five donor and implementing partner organizations, two were donor organizations and three were implementing partners, all with active health programming in Ethiopia.

1.5 Ethical considerations

I obtained ethical permission or clearance for the use of secondary and primary data. The secondary data that were originally collected as part of the Safe Motherhood Research Project included FGD and IDI transcripts. These transcripts were the data sources for Articles 1 and 2. The Safe Motherhood Research Project had obtained ethical clearance for this research from Jimma University College of Health Sciences Institutional Review Board (reference number RPGE/449/2016) and University of Ottawa Health Sciences and Science Research Ethics Board (file number H10–15-25B). Dr. Manisha Kulkarni, Safe Motherhood Research Project co-Principal Investigator, granted permission for me to use the data in the form of qualitative interview transcripts for this dissertation (Appendix 1.1).

The primary data collected for this dissertation, which were used in Articles 3 and 4, included KIIs with subnational and national stakeholders in the health sector. Ethical approval for these research activities was obtained from University of Ottawa Health Sciences and Science Research Ethics Board (file number H04-17-10) and Jimma University College of Health Sciences Institutional Review Board (reference number IHRPGJ/777/2017) (Appendices 1.2 and 1.3, respectively). All of the research activities were conducted in accordance with the protocols outlined in the ethics application, including the use of recruitment scripts for interview participants, where applicable (Appendix 2.1). Informed, written consent was obtained from all interview participants using the standardized participant informed consent form (Appendix 2.2).

1.6 Reflexivity statement

1.6.1 Journey to the PhD

My interest in studying health equity qualitatively developed over the course of my work with the (then) Department of Information, Evidence and Research at the WHO headquarters, where I contributed to the development and promotion of a systematic approach to quantify and monitor health inequalities. The approach was primarily designed for stakeholders in low- and middle-income countries, and its initial application addressed topics related to MNCH, aligning with data availability, as well as global health and development priorities of the MDGs and SDGs. My role in this work included contextualizing the results of these analyses, requiring me to learn more about the political, economic, and social situations within the countries or regions where health inequality monitoring was conducted. My first co-authored publication with WHO colleagues, which I prepared as an intern with the Organization in 2010, quantified wealth inequalities in maternal and child health indicators across 28 countries in sub-Saharan Africa. (39)

While I worked remotely with the WHO from Central and South America in 2011-2012, the period that I was stationed in Geneva, Switzerland, 2012-2015, coincided with negotiations for the 2030 Agenda for Sustainable Development and was particularly formative. With peripheral involvement in some of the health equity-related aspects of these processes, such as generating recommendations for universal health coverage monitoring and targets, (14) I had exposure to some of the challenges, complexities and limitations of operationalizing health equity as part of the global 2030 Agenda. My understanding of the national implementation of this global agenda and its health equity components, however, lacked a practical grounding.

In 2014-2015, I visited sub-Saharan Africa for the first time on a six-week, self-directed trip to South Africa, Namibia and Zambia. Anticipating that I would be starting a PhD program later that year, and that

the country focus of my research would likely be an African nation, I sought out this experience as a type of exploratory mission to gain insights into another region of the world and other ways of life. My impressions from that trip, and separate experiences travelling and living abroad, helped to prepare me for some of the different realities that I would face during my research in Ethiopia. These experiences have helped me to gain skills in forging meaningful connections with people from diverse backgrounds, and adopt practices of regular journaling and personal reflection, especially in the face of different cultural and socio-economic surroundings. Further, they have prompted me to become cognizant of the biases and assumptions inherent in my upbringing in a rural, middle class, Canadian context.

1.6.2 Positionality and partnerships

Examinations of researcher positionality lend insights into how researcher identities and biases shape various aspects of the research process. (40) Cross-cultural research, in particular, brings both challenges and opportunities to explore the role of the researcher in co-creating knowledge alongside research participants. As a white, Canadian, non-married, female, graduate student in my late 20s-early 30s (among other traits), I hold many identities, which variably affected my engagement in the research process. Doing field work, certain aspects of my identity, such as my Canadian nationality and white skin colour, occasionally worked to my advantage. For instance, I was able to gain access to high-level stakeholders who would make time to speak with foreigners and forgive some of the usual formalities. I used my position as a graduate student and as someone with WHO experience to establish rapport with stakeholders in academia and international organizations. In other scenarios, however, these identities introduced complexities. My presence during fieldwork in rural areas of Ethiopia prompted some participants to request extra compensation for their participation, or expectations that, as an international researcher, I would bring supplies or resources to their community. As a result, during the baseline data collection period of the Safe Motherhood Research Project I limited my accompaniment of the data collection teams to the field sites. I have written in more detail about my positionality during

data collection activities in Jimma Zone in the article 'Narrative depictions of working with language interpreters in cross-language qualitative research' (Appendix 6.1). (27)

In many ways indicated above, I was an outsider in the research environment, a reality that I accepted and acknowledged in my interactions with others. The personal and professional relationships that I developed over the course of the research study were instrumental in my sense-making process, especially with regards to navigating socio-cultural differences that I encountered. Over the course of the research, I had several exchanges, some brief and others ongoing, with other foreigners who had experience living or working in Ethiopia and could help me process some of the interactions and situations that I encountered. For instance, during my fieldwork in Addis Ababa, I shared living quarters with a female white European, who had lived in Ethiopia intermittently for over seven years, and with whom I could discuss sensitive situations relating to gender and race dynamics.

I established fruitful partnerships with research colleagues and others involved in the Safe Motherhood Research Project, including data collectors, coordinators and other support staff. These partnerships opened doors during my primary data collection for my PhD research: colleagues helped me to secure ethics approvals from Jimma University, they revised my interview guidelines, they facilitated introductions with key stakeholders, they did translation during interviews, and they provided guidance and insight during data analysis. In return, I have helped these colleagues in ways that draw on my strengths, such as editing their English-language texts, assisting with international conference submissions, and securing funding for videography training and equipment donations to enhance the establishment of an audio-video program within their institute (Appendix 5.3). As I worked closely with colleagues at Jimma University on various aspects of the Safe Motherhood Research Project – delivering trainings, preparing research reports, publishing papers, troubleshooting hiccups in project implementation – I became increasingly familiar with, and personally invested in, the research context.

1.6.3 Anticipated outcomes

In undertaking this research as part of a PhD program, I aimed to develop my professional capacity as a global health specialist and cross-cultural researcher. I approached the PhD program as an opportunity to both expand and deepen my perspectives surrounding development, population health issues and health equity, specifically. As a researcher on the Safe Motherhood Research Project, I sought to gain experience doing fieldwork, and to explore the aspects of international partnerships that contribute to successful research collaborations. I consider my progression through the PhD program as part of my career path, and have remained engaged in the work of the Health Equity Monitoring team at the WHO, as well as other emerging opportunities to contribute to global health spaces in Canada and Africa.

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Chapter 2. Literature review: health equity

In this chapter I provide an overview of how health equity issues have been framed, discussed, and debated in academic literature, and how health equity is featured as part of the United Nations (UN) 2030 Agenda for Sustainable Development. I aim to present a breadth of perspectives about how health equity has been understood and conceptualized, drawing primarily from the fields of public health, epidemiology, and social science. Where relevant, I highlight how my own work has made contributions.

My review of the literature begins with an overview of health equity definitions and related terminology. Next, I detail the three underlying constructs of health equity – health, distribution of health, and characterization of the distribution of health – before turning to approaches to reduce health inequity. I then introduce the UN 2030 Agenda for Sustainable Development, a contemporary unifying effort to promote equity in health and development globally. After providing a brief history of its development and attempts to account for the equity shortcomings of the preceding Millennium Development Goals (MDGs), I discuss challenges and opportunities for the implementation of the 2030 Agenda and its 17 Sustainable Development Goals (SDGs). This review sets the stage for explorations of health equity in Ethiopia, featured in the subsequent chapters of this dissertation.

To conduct this review, I performed searches in PubMed using indexed MeSH terms, selected academic journals, Google Scholar, and websites of key organizations; many additional sources were identified through extensive additional reading, including hand-searching reference lists of relevant articles.

2.1 Defining health equity and related terminology

The principles that underlie health equity stem from diverse fields such as philosophy, ethics, economics, medicine, public health and the social sciences. (1) The terminology used to discuss health equity and related concepts (health inequity, inequality, disparity, differences, variation, etc.) are often ill-defined and inconsistently applied. While some terms have common usage in certain domains (for

example, health *disparity* is frequently used in literature from the United States of America whereas health *inequality* is widely used in Europe), others may, intentionally or unintentionally, imply technical distinctions (for example, health *differences* denote a subtraction whereas health *variation* may be interpreted as a range). Asada (2) differentiated between several of these related terms through a concise depiction of their interlinkages (Figure 2). Notably, the distribution of health – whether equal or unequal across individuals or population subgroups – when subjected to an ethical/moral determination, may result in health inequity.

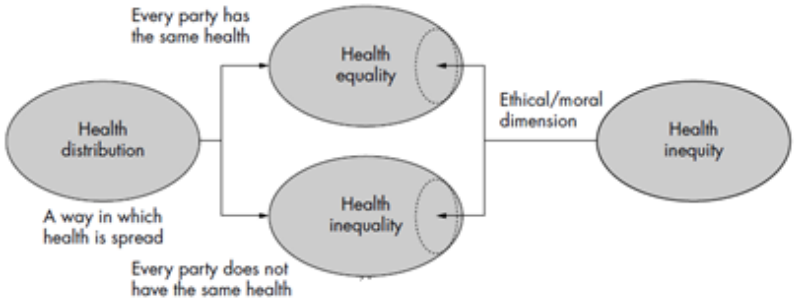

Figure 2. Terminology related to health inequity (2)

Most descriptions of health equity encompass both the notion of health distribution (or health (in)equality) as well as the ethical/moral characterization of its distribution. In a seminal paper by Whitehead, (3) health equity was defined as the absence of health inequalities that are unfair, unjust, unnecessary and avoidable. Whitehead specified that health inequalities that stem from biological variation or freely-chosen health behaviours are unlikely to be considered inequitable, as they do not qualify as 'avoidable' (in the case of biological variation) or 'unfair' (in the case of freely-chosen health behaviours). Further, she notes that everyone should have a fair chance to achieve their full health potential without encountering disadvantage, if it can be avoided. (3) Starfield, (4) seeking a more explicit definition focused on justice, described equity in health as the absence of systematic differences in health status across population subgroups, based on social, demographic or geographic

characteristics. Braveman and Gruskin (5) extended this definition for the purposes of operationalization and measurement, adding that population subgroups occupy different positions in a social hierarchy, with different levels of social advantage or disadvantage – and thereby, health inequity compounds upon other forms of social disadvantage.

Given that health equity implies a moral or ethical judgement, concepts of fairness, avoidability, and justice require further consideration. Dimensions of health equity encompass both procedural justice (equality of opportunity, or horizontal equity) and substantive justice (equality of outcome, or vertical equity). Horizontal equity requires that equals are treated the same, whereas vertical equity prioritizes individual needs, in which those with greater needs are provided unequally greater opportunities (generally taken to mean access to the resources required for healthy living). While neither type of equity is objectively better – achieving both dimensions is optimal – resources may be variably directed towards achieving one or the other in a given context. For instance, many high-income countries have achieved both horizontal and vertical equity in the use of primary care services when people with greater health needs receive proportionately more primary care services. Few countries, however, have achieved vertical equity in the use of specialist services, which tend to be less accessible to disadvantaged subgroups. (6,7) Indeed, in my co-authored publication exploring monitoring frameworks for universal health coverage, we reported that the tools developed for low- and middle-income country settings were largely irrelevant in high-income countries. (8)

2.2 Three constructs of health equity

2.2.1 Health

Health equity is encompassed by three broad constructs, namely (a) health (b) the distribution of health and (c) the moral or ethical characterization of the distribution. The first construct (health) prompts considerations such as: what is health and how is it described for individuals and/or groups of

individuals? Fedoryka (9) and Sen (10) have explored the assessment of health status through a theoretical dichotomy of a predominantly descriptive (objective) position and a predominantly evaluative (value-based) position – both authors concluded that the most credible assessment of health requires the combination of both approaches. Based on descriptive definitions, health is considered a value-free concept, as a measurement of physiological processes, or a statistical normality of function. (11) Major limitations of this perspective include failure to acknowledge the holistic functioning of the human body and the benign heterogeneity that exists between individuals. The application of the descriptive approach in practical domains necessitates normative judgements (for example, which aspect of physiology should be measured, and what is determined to be a 'healthy' threshold of functionality?), thereby compromising the purported objectivity of the measure. An evaluative approach, in contrast, has a holistic-humanistic perspective: it prioritizes the well-being of the individual, and embodies the subjective assessment of a given state of health as good or bad. (12) The aggregate meaning derived from an evaluative approach, however, is limited, and health may become indistinguishable from the notions of happiness or contentedness. (9)

In addition to health status, the health construct can also include health service access, coverage (i.e. utilization), and quality. (3) For instance, the World Health Organization (WHO) resource 'Monitoring, evaluation and review framework for national health strategies' (13) outlines four health indicator domains: system-wide inputs and processes, such as health financing and governance; outputs, such as service access and readiness; outcomes, such as intervention coverage; and impact, such as health status. In the 2019 WHO resource 'Inequality monitoring in immunization: a step-by-step manual' (14) – to which I was a contributor – we highlighted examples, from each indicator domain, of health constructs relevant to the topic of immunization.

2.2.2 Distribution of health

The second construct addresses the distribution of health; that is, health inequality. The determination of health distribution may be done on an ungrouped, individual basis (total inequality) or on the basis of social groupings (social inequality). The ungrouped approach, proposed in the late 1990s, measures the distribution of health among individuals of a population regardless of social groupings (e.g. using measures such as standard deviation or variance). (15,16) This approach, which borrows from economic theories of income inequality, has been criticized for rejecting the premise that health inequality is linked to social disadvantage. (17) Thus, at present, studies of health equity are typically based on the notion of social inequalities. (18) Distinctions must be made about the relevant dimension(s) of inequality to form population subgroups, and the criteria upon which to base these categorizations. (19,20) In 2013 I contributed to the development of the WHO 'Handbook on health inequality monitoring: with a special focus on low- and middle-income countries', (20) which outlines a systematic approach for national monitoring of inequalities in health. Subsequently, this approach has been widely applied across numerous settings and health topics, including our 'State of inequality' report series, (21–23) and other health inequality analyses. (24–26)

The practical task of measuring health inequality has been argued by some to be a value-free undertaking, whereby moral and ethical judgements are introduced only in the interpretation of results. (27) Others, however, have made convincing cases to demonstrate how moral/ethical judgements are embedded in technical decisions surrounding measurement. (28–30) For example, measures that make relative versus absolute comparisons implicitly endorse a position of strict egalitarianism (relative measures) or egalitarianism alongside other considerations, such as level of health (absolute measures). (30) Other examples of technical decisions that express different value judgements in determining health distribution include: the construction of population subgroups; the choice and use of reference points; the use of weighted versus unweighted measures; and the treatment of subgroups as ordered

versus unordered. (20,30–32) Reporting practices, such as including multiple types of health inequality measurements (i.e. both absolute and relative) and presenting disaggregated data estimates for subgroups, can help to make the implications of these technical decisions more transparent. (33)

2.2.3 Characterization of the distribution of health

The third construct considers the values, parameters and assumptions evident in determining the equitable distribution of health. Moral and ethical judgements about health distribution are a reflection of societal values; (19) however, these judgements are pluralistic. Labonté (34) elaborated on the two theorized axes of general values that exist within individuals, the so-called freedom/equality divide: while individualism emphasizes freedoms, and national strength/order, communalism emphasizes equality and international harmony. While individuals may espouse values from both axes, the prominence of one axis over the other will likely emerge in accordance with previous individual experiences and influences. (34) Similarly, competing utilitarian and egalitarian perspectives favour the maximization of aggregate health or the maximization of the equal distribution of health, respectively. Taken to extreme, a utilitarian approach may justify the advancement of the well-off group and abandonment of disadvantaged minorities, and an egalitarian approach may result in poor – though more equal – health for everyone. (28) Social justice theories outline various perspectives on how to rectify this divide, which extend into ideologies regarding social arrangements and the obligations of government and other actors. Table 1 describes established approaches to conceptualizing health equity. The following section 'Approaches to reduce health inequity' returns to some of these ideas in the context of setting policy agendas.

Table 1. Approaches to conceptualizing health equity (35)

Approach	**Description**

Egality	Refers to the equalizing of individual net benefits, such as health status, or the individual opportunities to realize such benefits.
Distribution according to entitlement	Procedural theory premised on the notion that one is entitled to what one possesses (health or health care), provided that it was acquired justly, i.e. through inheritance, earnings, or government redistribution.
Decent minimum	Establishes a basic minimum standard (for health or health care) for all individuals.
Utilitarianism	Resources are allocated to maximize the aggregate utility: serves the greatest good for the greatest number.
Rawlsian maximin	Social policy should seek to maximize the position of the least advantaged in either heath or health care, according to 'veil of ignorance' rationale.
Envy-free allocations	An individual's relative advantage is judged according to whether they would prefer to have the resources (that is, health care) enjoyed by another person.
Equity as choice	Addresses individual agency and the 'avoidability' of ill health: if ill health results from factors beyond an individual's control, it is inequitable, whereas if it results from factors within an individual's control, it is equitable.
Maximization of health	Health care distribution is equitable only if it serves to maximize the health of the community (emphasizing efficiency over distribution).

2.3 Approaches to reduce health inequity

In practice, actions taken to reduce health *inequalities* can generally be regarded as actions to reduce health *inequities*, as they necessitate implicit judgements about fairness through the unavoidable question: in a given population, who do (or should) actions (policies, programs) prioritize? To expand on this line of questioning, Arcaya (36) raised a number of key considerations when setting policy agendas that tackle health inequities: Should the goal be to reduce absolute or relative health differences? Should emphasis be placed on improving health for the worst-off or for the largest group (overall mean)? What benchmarks should be set? How should cost effectiveness be factored in? Do some groups deserve more attention than others (e.g. due to historic injustices or other factors)?

Implicit in the above set of questions are two fundamental tensions. First is the reconciliation of equity and efficiency (also termed selectivity versus universality). Equity interests are those focused on gains in disadvantaged subgroups ('egality'), with efficiency interests often focused on population-wide gains ('utililitarian'). Often, policymakers, such as those in national governments, are charged with satisfying both interests. What constitutes the 'desirable' balance on this continuum has been a subject of debate by some economists, (37) and outright rejected by others, on the grounds that equity and efficiency are categorically different. (38)

A second tension when taking action to reduce health inequity is the extent to which the approach is vertical (shorter term and narrowly focused) versus horizontal (longer term and broadly focused). These two approaches may be described as a continuum where actions may lie more towards one approach or the other. Ultimately, there is consensus about the need for action across the continuum to facilitate equity gains through multiple entry points and across long and short time periods. (39,40) Historically, global trends in health sector reform since the 1940s suggest an oscillating pattern between a focus on the broad versus the narrow. (41,42) Broad, contextual initiatives include establishing national health care systems (done in many countries in the 1940s and 1950s) and pursuing primary health care (PHC), health for all, and universal health coverage (prioritized in the 1970s with the Alma Ata Declaration, and again in the 2000-2010s with the WHO Commission on Social Determinants of Health and the SDGs). More narrowly-focused initiatives are characterized by vertical, disease-specific programming (popular in the 1950s and 1960s, but still ongoing), and market-driven approaches that emphasize cost-effectiveness as a key criterion (popular in the 1990s).

2.4 The UN 2030 Agenda for Sustainable Development

2.4.1 A new global development agenda

The UN 2030 Agenda for Sustainable Development, consisting of 17 SDGs and 169 targets, was adopted by the UN General Assembly in September 2015 and came into effect in January 2016. The 2030 Agenda adopts a central focus on eliminating poverty – with SDG1 striving to 'end poverty in all its forms everywhere' – and promotes sustainable development by integrating economic, social, and environmental dimensions. (43) The 2030 Agenda has a 15-year time window (2015-2030) and is applicable to all countries. The development of the 2030 Agenda relied on a succession of conferences, summits, consultations, and other engagements that aimed to capture a diverse representation of stakeholder inputs. (44) The 2030 Agenda calls for national ownership and leadership, and adaptation of the SDGs to national and local contexts. The SDGs are, by design, interlinked and indivisible, necessitating an approach that is coordinated across levels of governance, as well as multiple sectors and actors. (45)

The 2030 Agenda represents a continuation of the work of the preceding MDGs (1990-2015). (44,46–48) The eight MDGs, offering measurable targets that are concise and straightforward, are credited for bringing attention and resources to global development issues and mobilizing action from diverse groups of stakeholders; on the other hand, the MDGs are criticized for their reductionist and fragmented nature. (49–51) The 2030 Agenda, while building on the momentum of the MDGs, addresses unfinished business and introduces other components that were not captured in the MDGs. In maternal, newborn and child health (MNCH), for instance, the MDGs addressing child mortality and maternal mortality were unrealized, and thus the 2030 Agenda includes a sustained and expanded focus on MNCH: the SDGs specify additional targets for the reduction of neonatal mortality, as well as a wider selection of child malnutrition indicators (Table 2).

Table 2. Selected MDG and SDG targets and indicators related to MNCH (46,52,53)

Theme	MDG target	SDG target	SDG indicators
Malnutrition	Target 1.C: Halve, between 1990 and 2015, the proportion of people who suffer from hunger *Note: this target was measured as the percent reduction in proportion of underweight children under five years of age; a global reduction of 44% was achieved*	SDG Target 2.2: By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under five years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons	Indicator 2.2.1: Prevalence of stunting (height for age <-2 standard deviation from the median of the WHO child growth standards) among children under 5 years of age Indicator 2.2.2: Prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the median of the WHO child growth standards) among children under 5 years of age, by type (wasting and overweight)
Child mortality	Target 4.A: Reduce by two thirds (67%), between 1990 and 2015, the under-five mortality rate *Note: a global reduction of 53% was achieved*	SDG Target 3.2: By 2030, end preventable deaths of newborns and children under five years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1000 live births and under-five mortality to at least as low as 25 per 1000 live births	Indicator 3.2.1: Under-five mortality Indicator 3.2.2: Neonatal mortality rate

Maternal mortality	Target 5.A: Reduce by three quarters (75%), between 1990 and 2015, the maternal mortality ratio *Note: a global reduction of 44% was achieved*	SDG Target 3.1: By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births	Indicator 3.1.1: Maternal mortality ratio Indicator 3.1.2: Proportion of births attended by skilled health personnel

A major criticism of the MDGs is their omission of certain fundamental principles and values, including equity. While the MDGs implicitly strive to benefit the worst-off by promoting development in poor countries (as stated in the UN Millennium Declaration (54)), progress towards achieving the MDGs was prone to sustaining or even exacerbating inequities. This was evident on several levels:

- First, by specifying improvements in terms of overall average, the MDGs do not require a dedicated focus on the worst-off populations (who may be the hardest and most resource-intensive to reach); rather, averages may be elevated by further gains among the middle or even the best-performing populations. (55) In the absence of a dedicated focus on addressing inequities, the tendency towards improving the situation of the better-off is indeed plausible, (55) evoking Hart's (56) inverse care law: 'the availability of good medical care tends to vary inversely with the need for it in the population served' (pg 405). Retrospective analyses demonstrate that countries showed variable progress in terms of equity during the MDG period, even when overall improvements were reported. (57)
- Second, the one-size-fits-all nature of the MDG targets means that countries with the lowest baseline performance would need to realize the most considerable improvements to meet targets based on proportional improvement (including the three targets listed in Table 2). (51) This places an unreasonable (and inequitable) burden for accelerated improvement in countries

that may be least likely to achieve them, contributing to the unwarranted 'Afro-pessimistic' notion that the MDGs will be unachieved due to slow progress in sub-Saharan Africa. (50,51)

- Third, the MDGs fall short of addressing deeply-engrained, unequitable excise and distribution of power and resources. For example, the target for MDG3, which addresses gender equality and empowerment, is to eliminate gender disparity in primary and secondary education. (53) Kabee (58) and others (50) acknowledge that the indicator is woefully inadequate to capture systemic and intersectional influences that impede women's empowerment. The perceived reduction and oversimplification of gender equality and empowerment risks further alienating women's rights movements from mainstream development initiatives.

2.4.2 The emergence of equity as a priority

As the shortcomings of the MDGs gained attention, initiatives to highlight equity considerations took hold, including the WHO Commission on Social Determinants of Health, which garnered attention for health equity in global and national arenas. (59) Owing to the MDG focus on MNCH in two of the eight goals, and the emergence of high-quality and internationally-comparable data on the topic, many of these equity initiatives centered on MNCH. Notably, the Countdown to 2015 initiative, established in 2005 and comprised of academic institutions, governments, international agencies, professional organizations, donor organizations and non-governmental organizations, was the first to systematically report within-country inequalities in MNCH topics. Through biannual reports, the Countdown to 2015 initiative produced a series of country profiles for 75 countries, charting progress towards select MDG indicators. (60)

The promotion of country-level monitoring of health inequalities was increasingly apparent in the latter years of the MDGs, with a strong emphasis on quantifying socioeconomic inequalities (e.g. differences between wealth quintiles, or on the basis of education level). (61,62) In 2013, I was part of the WHO

Health Equity Monitoring team when we launched the Health Equity Monitor database and theme page, with a repository of data from 90 countries for 30 reproductive, maternal, newborn and child health indicators, disaggregated by education, economic status, place of residence and child's sex. (63,64) We also produced accompanying resources, such as the 'Handbook for health inequality monitoring: with a special focus on low- and middle-income countries', (20) and held national and regional workshops on health inequality monitoring to build health inequality monitoring capacity. (65)

The reduction of inequality is a cross-cutting theme across the 17 SDGs, articulated most explicitly in SDG 10 (to reduce inequality within and among countries), but also in goals related to specific forms of inequality: SDG 1 (to end poverty), SDG 4 (to ensure inclusive and equitable quality education), and SDG 5 (to achieve gender equality). (52) Equity is also positioned as a key consideration for monitoring progress on the health-related SDGs, with the WHO continuing to emphasize the importance of reporting within-country health inequalities. (46,66,67)

2.4.3 Implementing the SDGs and advancing health equity

Although the SDGs have relevance at a global level – 193 countries have committed to the 2030 Agenda – the impetus for enacting and achieving the goals falls largely to national and subnational levels. In its preamble, the 2030 Agenda states that the implementation of the goals and targets will require global solidarity and partnerships, collaboration between multiple actors, and large-scale mobilization of resources (with an emphasis on financing); it also highlights the importance of national circumstances, priorities and policies. (43) The WHO acknowledges that national and regional actors will have a key role in SDG follow-up, review, accountability, and action. (46) The formulation of strategies to implement the SDGs within country contexts should therefore consider factors at the national and/or subnational level, including governance style, traditions, culture, socio-demographic factors, geography, and economic landscape.

A great deal of political and academic discussion about implementing SDGs has focused on promoting national ownership and integration of the SDGs with national and subnational priorities. Meuleman and Niestroy (68) elaborate on the concept of common but differentiated governance, the notion that different levels of administration develop tailored approaches to tackle global policies and targets. The authors highlight the importance of policy coherence and translating the SDGs into the national context through concrete multi-level governance frameworks and suggest that countries consider a combination of governance styles to pursue bottom-up and top-down approaches towards sustainable development aims, in accordance with their unique national situation.

To guide the implementation of the SDGs through national policy, Bowen et al. (69) raise three key governance-related challenges: fostering collective action through inclusive decision-making spaces that promote engagement across diverse stakeholders; prioritizing equity, justice and fairness, especially when faced with difficult trade-offs; and creating accountability mechanisms for societal actors regarding decision-making, investments, action and outcomes. Each of these considerations raises questions pertaining to health equity, requiring policymakers to grapple with, for example: how (and whether) to identify and capture the interests of marginalized populations; how (and whether) to include privileged populations in decision spaces; how to manage and prioritize among multiple interests that have consequences for equity at different time horizons; and how to synergize efforts towards equitable improvements in health.

In studying the processes surrounding health equity policymaking, researchers have identified a bottleneck between the stages of describing/diagnosing the problem – where most efforts tend to focus – and the less-studied implementation stages. (70,71) Extensive characterization of the problem, while important, should be accompanied by in-depth explorations of the related policy processes, which shed light on factors that contribute to and/or hinder meaningful policy adoption. (71) Rasanathan and Diaz (70) call for the reorientation of health equity research towards an agenda that prioritizes policy and its

implementation, echoing a recommendation of the WHO Task Force on Research Priorities for Equity in Health. (72)

Issues of measuring and reporting progress on health-related SDGs have also garnered attention. Efforts to create an index to assess progress on health-related SDGs have been somewhat mixed, tending to be more useful to major international donors interested in assessing the impact of their programs than to governments in low- and middle-income countries, where modelled, aggregate estimates may have little relevance to policy planning processes. (73) Countries are encouraged to submit Voluntary National Reviews to facilitate knowledge exchanges regarding success, challenges, and lessons learned, (74) though to date these reviews have mostly been vehicles to express political commitment to the SDGs, and lack standardized approaches to ensure meaningful reporting. (75)

2.5 Conclusion

In this chapter I have drawn from key literature to provide an overview of how health equity is conceptualized and operationalized, both theoretically and practically. The 2030 Agenda for Sustainable Development, which brings renewed global attention to issues of health inequity, provides an opportune entry point for research on the topic. Not only has the lead up to the 2030 Agenda galvanized efforts to better understand the underlying causes of health inequity and solutions for its improvement, but it also serves as an opportunity for stakeholders across health and other sectors to devote attention to the promotion of health equity on national stages. On whole, the SDGs leave room for various contextual representations of inequality, ranging from individual well-being to global inequality, and framings of development debates (whether through relatively radical or incremental reforms). (76) Close examination of the interpretation of health equity within a country case study will begin to unpack how actors understand and approach health equity in light of its inclusion in the SDGs.

Much of the literature reviewed in this chapter adopts a global scope in attempt to universalize the concept of health equity and demonstrate its applicability across diverse contexts (such as global development agendas). Fewer efforts have been made to assess the relevance and impact of these ideas on national stages, especially within low-income countries, and moreover, ones located in sub-Saharan Africa. Thus, subsequent chapters of this dissertation reflect the application of these concepts within the case study context, referring to, for example: community understandings of the three constructs of health equity; determinants of health; approaches to reduce health inequity and their consequences; and the evolution of health equity in national policies as a result of global development initiatives. The following chapters also address related issues, such as establishing targets and monitoring indicators, improving data collection systems and reporting practices, allocating resources, and advancing intersectoral action.

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Chapter 3. Maternal, newborn and child health in Ethiopia

In this chapter I provide background information about the context of my case study, maternal, newborn and child health (MNCH) in Ethiopia, to situate the four articles (Chapters 4-7) and the overarching study conclusions (Chapter 8). I begin with background information about Ethiopia, Oromia region, and Jimma Zone, and an overview of the Ethiopian health sector, including the roles across different levels of administration, and major health policies, strategies, and guidelines. I then highlight the historical context of MNCH in Ethiopia, and describe the MNCH achievements during the Millennium Development Goal (MDG) period between 1990 and 2015, amidst mounting concern regarding inequities in MNCH. Next, I address Ethiopia's commitments to promote equity in MNCH, with a closer look at equity considerations within the Health Extension Program and a community-based MNCH initiative promoting maternity waiting areas (MWAs). Finally, I conclude by outlining gaps in knowledge with regards to equity in MNCH, and how the subsequent articles address these gaps.

Where indicated, parts of this chapter are adapted from the text of a book chapter that I co-authored with Ronald Labonté, Shifera Asfaw and Abebe Mamo for the book 'Ethiopia: social and political issues' (Appendix 6.7). (1) Our contributions to the book chapter are as follows: I wrote the first draft of the book chapter, which was reviewed and revised by RL. The book chapter underwent one round of peer review, with subsequent revisions by me and RL. At this point, SA and AM were invited to critically review the text and provide comments, and they were included as co-authors. The book chapter was accepted in its revised form after the first round of peer review. All authors read and approved the final manuscript.

3.1 Federal Democratic Republic of Ethiopia

Ethiopia, a low-income country in East Africa, has a population of 109 million, of whom 79.2% are rural residing. (2) The country is geographically diverse, featuring mountainous highlands, low-lying semi-

desert and desert, the Rift Valley, and several river systems. Since the adoption of ethnic federalism in its 1994 Constitution, the country is administratively divided into nine regions and two chartered cities that are administered separately from regions. These divisions roughly correspond to ethnolinguistic cleavages, and were designed to allow for a large degree of regional autonomy to promote ethnic peace and unity. (3) In practice, however, the federal state retains a large degree of centralized administrative control, including managing ethno-regional relations, and economic and budgetary activities. (4) Regions are subdivided into *woredas* (districts of about 100,000 people), which are further subdivided into *kebeles* (municipalities of about 5000 people), the smallest administrative division. In populous regions, zonal administrations are in place between the region and woreda levels.

Ethiopia has one of the fastest growing economies in the world – with gross domestic product (GDP) growing at an annual rate of 8-11% between 2006 and 2016 – and reports the lowest level of income inequality in Africa, with a Gini coefficient comparable to the Scandinavian countries. (5) The Ethiopian government has been implementing economic reforms, as detailed in its 'Growth and Transformation Plans', with the aim of attaining lower middle-income country status by the year 2025. While services is now the predominant sector contributing to GDP (accounting for 43.6% of GDP in 2017), nearly three quarters of the labour force (72.7%) is employed in agriculture, which accounts for 34.8% of the GDP. (5) Women are major contributors to agricultural activities, however, their roles tend to be unpaid or underpaid and highly insecure, as they often work under another family member. (6)

The country is comprised of numerous ethnolinguistic groups: Oromo (34.4% of the population) and Amhara (27.0% of the population) are the largest, followed by Somalie, Tigrie, Sidama, Guragie, Welaita, Affar, Hadiya, Gamo and others. (7) According to the latest census (2007), 43.5% of the population ascribes to Orthodox religion, 33.9% are Islam, 18.5% are Protestant and 2.7% are part of traditional religions. (7) Nationally, the 2007 literacy rate among men and women over 15 years is 39.0%, and 28.9% among women. (2) In 2016, 40.3% of women were first married by the age of 18 years, and 14.1%

were first married by 15 years; 12.5% of women ages 15-19 years had children or were currently pregnant. (2)

3.1.1 Oromia region

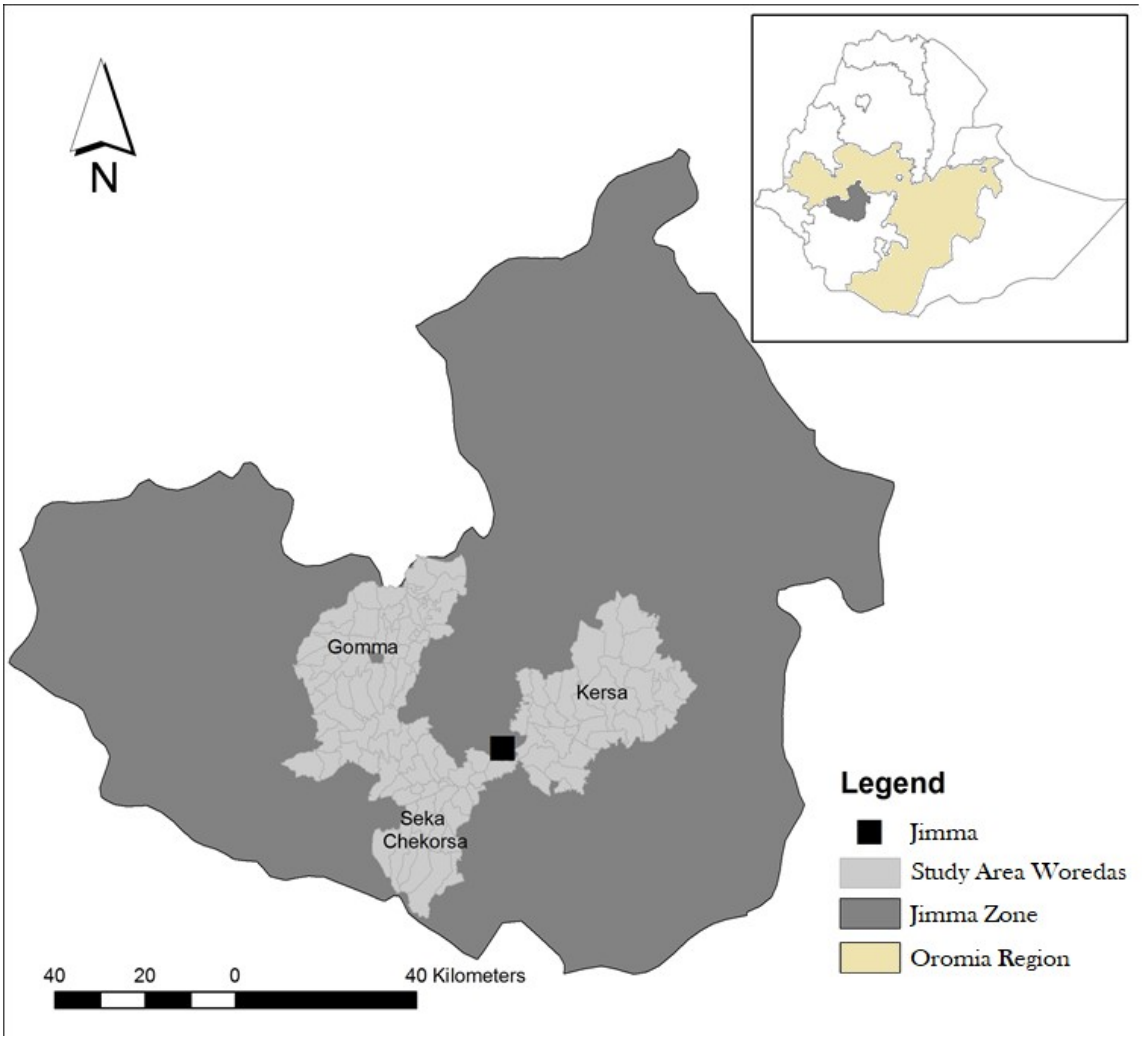
The region of Oromia is the largest of the nine Ethiopian regions, both in terms of population and landmass. Oromia's population is 87.7% rural residing, and 87.8% are of Oromo ethnicity (noting that there is differentiation amongst Oromo communities). (8) The capital of Oromia region is Addis Ababa (also the national capital), which is the location of the regional government offices, including the Oromia Regional Health Bureau. Historically, governments led by Amhara and Tigre ethnic groups have exercised political and economic control over the Oromo land and people. The Oromo Liberation Front, formed in 1973 as part of the national Oromo liberation struggle, promotes self-determination for Oromo people, and was classified as a terrorist organization by Ethiopia in 2011. (9) In 2018, the government led by newly-elected Dr. Abiy Ahmed released thousands of political prisoners, lifted the ban on the Oromo Liberation Front (10) and brokered a peace deal with Eritrea. In 2019, Dr. Abiy Ahmed was awarded the Nobel Peace Prize. (11)

In Oromia Region, 2% of facilities had fully functioning emergency newborn care, 87% had partially functioning and 11% had no emergency newborn care. There were 844,287 births in 2016. (12) The 2016 Ethiopian Demographic and Health Survey reported that half of women received antenatal care from a skilled provider: a nurse/midwife (32.4%) or a Health Extension Worker (HEW) (13.8%). (13) Nearly one in five (18.8%) of births in the five years before the survey occurred at a health facility and 80.5% occurred at home. Traditional birth attendants attended 45.1% of births, 19.8% of births were attended by no one, 15.6% were attended by a nurse or midwife and 14.1% were attended by a relative/friend/neighbour. Most (88%) institutional births took place at a health centre, with 45% in urban locations and 55% in rural locations. (12) In Oromia region, 9.0% of women received a postnatal

check during the first two days after the birth, usually by a doctor/nurse/midwife (7.8%), and nearly all children (96.1%) were breastfed. (13) Among children in Oromia born in the 3 years prior to the 2016 survey, the mean duration of any breastfeeding was 22.7 months, and the mean duration of exclusive breastfeeding was 2.8 months. (13)

3.1.2 Jimma Zone

Jimma Zone is one of 20 administrative zones within Oromia, located in southwest Ethiopia, 355 kilometers outside of Addis Ababa (Figure 3). Jimma Zone consists of 21 woredas, and 559 kebeles, and is known as the original land of coffee Arabica. The total projected population of Jimma Zone in 2019 was estimated to be 3,425,206 (14) with 94.5% residing in rural areas as of 2007. (8) Compared to national averages, the religious representation in Jimma Zone is more predominantly Islam (85.6%), with 11.2% of the population identifying as Orthodox and 3.0% as Protestant. (8) Migrants comprise 14.1% of the zonal population and, of the population over five years of age, 68.8% have never attended school. (8)



Note: The country of Ethiopia is shown in the top right insert

Figure 3. Map of study area

In Jimma Zone, at the time of the latest (2007) Ethiopian census, 5.5% of the population resided in urban area and 94.5% resided in rural areas. There were 548,571 women between the ages of 15-49 years, comprising 22.1% of the population. The total fertility rate in Jimma Zone (women aged 15-49 years) was 5.520: 2.990 in urban areas and 5.700 in rural areas. The birth rate for women aged 15-19 years was 0.081 (8.1% gave birth in the year prior to the census). (8) In 2019, projections by the Jimma Zone Health Office indicated that there are 118,855 pregnant women and 616,537 non-pregnant women who are in need of family planning; the projected care provision for 2019 for Jimma Zone included: 12,825

abortions; 128,248 ANC; and 128,248 PNC. (14) As of 2019, Jimma has 3 general hospitals, 5 primary hospitals, 122 health centers, 566 health posts, 10 private medium clinics, 101 lower clinics, 31 drug stores and 41 rural drug venders. The Women's Development Army is comprised of 14,500 women and 75,832 are part of one-to-five women development army networks. These groups promote community engagement with and ownership of health programs. (14)

3.2 Health sector

3.2.1 Organization and financing

Ethiopia has a three tier public health care delivery system. (15) Primary health care (PHC) is delivered through primary hospitals, health centres and, in rural areas, health posts. By design: primary hospitals are planned to serve populations of 60,000 to 100,000 and are found in each woreda; health centres are designed to serve 40,000 people in urban areas and 15,000 to 25,000 people in rural areas; and health posts are planned for every 3,000 to 5,000 people. In rural areas, Primary Health Care Units (PHCUs) consist of five health posts associated with one health centre. Secondary care is provided at general hospitals, which provide inpatient and ambulatory services. General hospitals, designed to serve between 1 and 1.5 million people, are financed and managed by regional-level health authorities. Tertiary care is provided at specialized hospitals, financed and managed by the Federal Ministry of Health (FMOH). Specialized hospitals are planned one for every 3.5 to 5 million people.

The administration of health care in Ethiopia is decentralized along political structures, with shared government responsibilities between the FMOH, the regional health bureaus, zonal health offices (where applicable), and woreda health offices. Briefly, the FMOH leads the development of national strategies and plans, as well as matters pertaining to resource mobilization, donor coordination (through joint coordination structures, discussed below), and monitoring and evaluation. (15) The major health sector programs are run by the corresponding directorates at the FMOH: the maternal and child health

directorate, clinical service directorate, health service quality directorate, health systems special support directorate, health extension and primary care directorate, emergency care directorate, and disease prevention and control directorate. Sub-nationally, regional, zonal, and woreda health offices are responsible for planning, financing and delivering services within their respective catchment areas. Regional health bureaus are responsible for implementing national policies within their regions, as well as licensing health facilities, and ensuring the availability of safe and affordable medicines and supplies; they also provide technical supports to zones and woredas. (15)

Health financing in Ethiopia is characterized by a heavy dependence on external sources, with national efforts to combat aid fragmentation and increase public funding. (16) In 2017, Ethiopia was the top recipient of official development assistance (ODA) of any African country, at 4,177 million USD (or 7% of all assistance to African countries), and the fourth African country recipient for ODA to health (649 million USD). (17) Between 2000 and 2016, government expenditure for health has increased more than threefold, from 2.2 to 7.6 USD per capita. Although health spending is increasing, it is insufficient to fulfill the national health policies, and falls below the globally recommended amounts specified in the 2001 Abuja Declaration. (18) Recommendations by the Working Group on Health Financing at the Chatham House Centre on Global Health Security established recommendations for governments to commit to spending at least 5% of GDP on health (relative measure) and at least 86 USD per capita on health (absolute measure); (19) accordingly, Ethiopia is performing better on the relative measure than the absolute measure. With the aim of coordinating joint health financing and harmonizing donor activities, Ethiopia has institutionalized 'One Plan, One Budget, One Report' principles, operationalized through joint coordinating structures such as pooled financing funds, joint committees structures and standardized monitoring protocols. (16,20)

3.2.2 National policies and programs

Ethiopia's current national health policy, adopted in 1993, emphasizes the expansion of PHC, strengthened intersectoral activities, and participation of non-governmental actors. (21–23) Starting in 1997, the policy has been enacted through a series of four- to five-year plans. The first of these plans, spanning 1997/98-2002, was the Health Sector Development Program I (HSDP-I), which focused on disease prevention and decentralizing health service delivery. After those targets went largely unmet, subsequent plans introduced greater emphasis on financing mechanisms and inclusion of non-governmental organizations. (22) During the HSDP period, which ended when HSDP-IV came to a close in 2014/15, regional health bureaus assumed greater responsibility and authority in efforts to improve the efficiency, equity and sustainability of the system. Mechanisms have been established to ensure harmonization of the health sector throughout the country, including: holding national annual review meetings; forming joint steering committees in which FMOH and regional health bureau stakeholders meet every two months; and a combination top-down/bottom-up planning process to create alignment between woreda-based plans and national plans. (24)

In 2003, Ethiopia introduced its flagship Health Extension Program, which was part of HSDP-II and continued under HSDP-III and HSDP-IV. (25,26) The Health Extension Program aims to 'improve equitable access to preventive essential health services through community-based health services with a strong focus on sustained preventive health actions and increased health awareness.' (27) The Health Extension Program has two main components: expanding health facility access in rural areas through the construction of health posts across kebeles; and recruiting and training an all-female cadre of government-salaried HEWs to work at the health posts in their respective communities. As of 2009/10, more than 14,000 health posts have been constructed, and more than 34,000 HEWs have been deployed, halving the population-to-health human resource ratio from 1:3038 (not including HEWs) to 1:1394 (including HEWs). (15) In 2006, the Health Extension Program was adapted for deployment in

pastoral settings, and in 2010 it was adapted for urban settings. (15,28) The activities of the Health Extension Program are focused on four program areas: disease prevention, family health, environmental hygiene and sanitation, and health education and communication (see additional discussion of health equity and the Health Extension Program later in this chapter).

The current national policy is the 2015/16-2019/20 Health Sector Transformation Plan, which is based on the Growth and Transformation Plan II (the country's overall development plan). (24,29) The Health Sector Transformation Plan is the first phase of a 20-year plan titled 'Envisioning Ethiopia's Path to Universal Health Care through strengthening of Primary Health Care'. It seeks to build on the gains of the Health Extension Program, and transform the health sector through its four main agendas: equity and quality of health care; information revolution; woreda transformation; and caring, respectful and compassionate health workforce. (24) Highly target-oriented in nature, the Health Sector Transformation Plan takes into account the median values of lower middle-income countries for its 2025 health targets (in some cases, which the country is on track to meet or exceed), and the median values of upper middle-income countries for its 2035 targets, in line with its economic development ambitions (Table 3).

Table 3. Select MNCH targets from the 2015/16-2019/20 Health Sector Transformation Plan (24)

Indicator	**Status in 2013**	**Global average in 2012/13**	**Base case target for 2025***	**Best case target for 2035****
Maternal mortality ratio (deaths per 100,000 live births)	420	210	240	57
Under five mortality (deaths per 1000 live births)	64	51	62	20
Neonatal mortality rate	29	22	28	10

(deaths per 1000 live births)

*Base case target for 2025 is the median of lower middle-income countries
**Best case target for 2035 is the median of upper middle-income countries

3.2.3 Community mobilization and ownership

The enhancement of community mobilization and ownership is a common strategy across health sector policies and programs, including the Health Sector Transformation Plan and the Health Extension Program. A key aspect of this strategy is establishing citizen networks within and across communities to strengthen the reach of the health sector. The Ethiopian government has developed a network of community volunteers across the country known as the Male Development Army (MDA) and the Women's Development Army (WDA). While the MDA members are mainly engaged in agricultural and infrastructure projects, the WDA members work closely with the HEWs, and have a role in health education and promotion activities. (30) One woman out of every five households is a WDA member, responsible for promoting health among the group of households. Within their communities, members help to identify and support 'model families' (early adopters of health behaviours or interventions) by teaching them about healthy behaviours and encouraging the adoption of these behaviours in the community. (31)

Community mobilization in the health sector also implies a responsibility to contribute financially or in-kind to health infrastructure, projects or supplies. For instance, the shared financing arrangements for the Health Extension Program sees communities contributing labour, food and accomodation for HEWs. (15) In the early stages of the Program, the community was involved in the recruitment of HEWs, defining priorities and ensuring accountability. (31) The construction and upkeep of MWAs – residential facilities for expectant mothers located near hospital delivery units in rural areas – is typically the responsibility of the community members, which is linked to greater buy-in for the use of the facilities by the community members, but also a lack of standardization across facilities. The 'one-birr-one-

mother' campaign encourages community members to contribute a minimum amount of money and/or in-kind donations (such as coffee or cereals) for MNCH activities. Although the government has programs to fully or partially cover the cost of ambulances, in some areas, community contributions have been used to purchase and maintain the vehicles.

3.3 Maternal, newborn and child health

The following sections of Chapter 3 (including 3.3, 3.4 and 3.5) are adapted from a published book chapter. (1) Note that I have revised the content slightly, including reordering, removing or updating content, and introducing new ideas and citations.

3.3.1 Historical context of health, with a focus on MNCH

The history of health in Ethiopia is interwoven with the country's political past, and affected by international development initiatives, demographic trends, and natural disasters. During the 1950s and 1960s - when Ethiopia's population, under 30 million, totalled less than a third of what it is today (2) - Ethiopia's first medical schools opened, and the country published its first national policy and strategy for health. This policy, enacted in 1963, envisioned a decentralized network of basic preventive and curative services throughout the country; however, given the short supply of trained health professionals and inadequate funding, the ambitious plan went largely unrealized. (21) In the 1970s the Derg political regime came into power and developed a promising comprehensive health policy that emphasized disease prevention and control, expanded access in rural areas, and community involvement. Again, unfortunately, the policy was not achieved, as the survival of the totalitarian political system over its 13-year rule consumed most of the nation's resources. (23)

Throughout the 1980s, Ethiopia experienced some of its highest fertility rates since the 1960s (when, at 6.9 births per woman, the World Bank Database began reporting fertility rates in Ethiopia), peaking at over 7.4 births per woman. (2) The life expectancy at birth for the Ethiopian population surpassed 45

years in 1986. (2) As of 2017, the fertility rate across the country was 4.4 births per woman, and life expectancy was 65.9 years. (2) Severe and recurring droughts in the 1970s and 1980s claimed the lives of more than 400,000 people and had long-term impacts on population health for generations. (32,33) The first cases of HIV/AIDS were reported in Ethiopia in the late 1980s, escalating into an epidemic that would disproportionally affect populations in small urban areas and market centers, and young, unmarried women. (34,35) MWAs were spearheaded in the 1970s in some communities, and the country launched the Expanded Programme on Immunization with the aim of increasing immunization coverage by 10% annually. (36)

Since the 1990s and the fiscal and political decentralization initiatives by the Ethiopia People's Revolutionary Democratic Front, the annual number of maternal deaths has declined steadily (from 30,000 in 1993 to 11,000 in 2015), while primary education has increased more than 8-fold (from 1.9 million pupils enrolled in 1993 to 16.2 million in 2015). (37) The Ethiopia-Eritrea conflict on the northern border of Ethiopia in the late 1990s brought casualties, displacement and instability to many communities, and was a setback to MNCH and other health, education, and economic outcomes in the affected communities. (38) Elsewhere in the country, divisions stemming from cultural and health distinctions between settler-farmers and pastoralists in the south, east and west of Ethiopia hampered progress in MNCH.

In the 2000s, having committed to the UN MDGs, Ethiopia redoubled its efforts to improve MNCH. A new era for MNCH in Ethiopia was ushered in with the introduction of the Health Extension Program in 2003 and the following National Child Survival Strategy (2005-2015). The Strategy strengthened the coordination, partnerships, resources and scale-up of high-impact child health interventions, including: the reduction of malnutrition; the expansion of vaccination services; improved water and sanitation; and increased use of vitamin A supplements, insecticide-treated bed nets and family planning services. (39) The FMOH began to orient towards the adoption of major national reforms of the health information

system landscape in the late 2000s to advance the quality and availability of electronic health data. (40,41) Still, data quality issues call into question the extent to which health information systems are designed and oriented to uphold certain narratives of progress. (42) In 2012, three years ahead of schedule, Ethiopia achieved MDG4 by reducing the 1990 level of under-five mortality by two thirds. (13,43)

3.3.2 MNCH during the MDG period: mixed success

By many measures, Ethiopia made substantial progress in MNCH during the MDG period (1990-2015), with remarkable progress in relation to other sub-Saharan African countries (Table 4). In addition to the reduction of maternal, under-five and neonatal mortality, the country also achieved impressive increases in MNCH service coverage. For instance, the percentage of women receiving antenatal care from a skilled provider increased from 27% in 2000 to 62% in 2016, and the percentage of women having institutional deliveries increased from 5% in 2000 to 26% in 2016. A smaller percentage of women reported having problems accessing health care in 2016 (70%) than in 2005 (96%). (13) These achievements have been attributed to a conflux of factors including increased spending on health (by governments, international development partners, and households), the implementation of multipronged strategies for health sector development, and gains across other development sectors (poverty, education, water and sanitation, peace and security, etc.). (43–45)

Table 4. Maternal, child and neonatal mortality in Ethiopia and sub-Saharan Africa countries in 1990 and 2015 **(37)**

Indicator	**Ethiopia: 1990**	**Ethiopia: 2015**	**Sub-Saharan Africa: 1990**	**Sub-Saharan Africa: 2015**
Maternal mortality (deaths per 100,000 live births)	1250	353	987	547
Under-five mortality (deaths per 1000 live births)	203.2	61.3	180.4	81.3

Neonatal mortality (deaths per 1000 live births)	59.7	28.5	46.2	28.3

Despite improvements in MNCH, by the end of the MDG period certain challenges were apparent. Progress across sub-Saharan African countries, including Ethiopia, was inadequate among poor, disabled and marginalized population groups in fragile countries, rural areas, urban slums and conflict zones. (46) In Ethiopia, a major challenge stemmed from the shortage of human resources for health, which limited the scale up of health services. (47,48) For example, the second indicator (births attended by skilled health personnel) for MDG target 5A (to reduce maternal mortality), emphasized establishing competent personnel and enabling environments for delivery, placing large demands on the country for a resource-intensive intervention based on evidence from weak study designs (i.e. population-level correlations, given the non-feasibility of randomized trials), (49–51) and, in some cases, in conflict with existing birthing preferences. (52)

3.3.3 Inequities in MNCH

As Ethiopia and other countries experienced rapid national improvements in MNCH, growing global awareness of the uneven distribution of health gains across national populations brought attention to issues of health inequity. At the end of the MDG period Ethiopia reported large inequalities across MNCH. (53) According to data from the 2016 Ethiopia Demographic and Health Surveys: urban areas reported more than 30 percentage points higher coverage of women who received antenatal care from a skilled provider than rural areas (90% vs. 58%); nearly all women in Addis Ababa (97%) gave birth at a health facility, whereas in Affar, Somali and Oromia Regions, this figure was less than one in five women (15%, 18% and 19%, respectively); and care-seeking for children with fever was higher in urban areas (59%) than rural areas (32%). (13)

Inequities were also apparent in other aspects of the health sector. In 2017, the Ethiopian Public Health Institute published a comprehensive assessment of Emergency Obstetric and Newborn Care services in Ethiopia, updating the prior 2008 assessment. (12) Overall, the assessment revealed general improvements in the national availability, utilization and quality of MNCH services and facilities, with two caveats: although progress was reported, further gains are needed; and in many cases, there was uneven progress between subnational regions. Additionally, the report demonstrated a deficit in the availability and training of certain MNCH professionals such as medical doctors, emergency surgical officers and obstetricians/gynecologists.

Theoretical models have been developed and applied to better understand the factors related to MNCH service use and outcomes in Ethiopia, including the three delays model. The three delays model posits that the prevention of maternal mortality can be enhanced by addressing three types of delays in receiving life-saving obstetric care: delays in the decision to seek care; delays in arriving at a health facility; and delays in receiving adequate care at the facility. (54) Applying the model to maternal and perinatal mortality, multiple factors that underlie each delay have been identified, noting that the first delay emanates largely from health-related norms and beliefs, the second delay reflects distance and transportation issues, and the third delay is mainly linked to health worker shortages as well as poor quality of care or disrespectful treatment (Table 5). (55)

Table 5. Factors related to constructs of the three delays model in the Ethiopian context (55)

Delay	**Explanatory factors**
1. Delay in health care seeking behaviour	Custom of delivering at home
	Religious beliefs
	Family influences
	Negative previous experience at health facility
	Lack of awareness of pregnancy-related problems

2. Delay in arriving at a health facility	Lack of transportation
	Far distance to travel
	Cost of transport
	Labour started at night
	Visiting several accessible but non-functioning health facilities
3. Delay in receiving adequate care at the facility	No senior health personnel
	Poor leadership
	Demotivated staff
	Wrong diagnosis
	Lack of equipment or supplies
	Lack of/inadequate electricity and water supply
	Family refusing to donate blood
	Disrespectful care

3.4 Promoting equity in MNCH

Through recent global and national commitments, Ethiopia has expressed a continued intention to address equity in health and development. Globally, Ethiopia is a signatory of the 2030 Agenda for Sustainable Development, where equity is one of the three fundamental principles alongside human rights and sustainability. (56) Ethiopia has additional commitments to health equity through the African Union Agenda 2063, which stresses the 'right to development and equity' and underscores the importance of ensuring 'equitable access' to financially sustainable health care systems. (57) The Agenda 2063 has a high degree of convergence with the 2030 Agenda, as it informed the Common African Position on the Post-2015 Development Agenda, which in turn influenced the outputs of the Sustainable Development Goal (SDG) Open Working Group. (58) Ethiopia seems well-positioned to achieve the ambitious poverty reduction aspirations of the Agenda 2063, (59) though some worry that

certain population groups (such as those with low levels of education or those living in remote areas) may be inadvertently excluded from the processes. (60)

Nationally, equity in MNCH resonates throughout national health sector plans, policies and strategies. The Health Sector Transformation Plan (2015/16-2019/20) specifies quality and equity as key considerations in advancing universal health coverage, stressing the importance of ensuring equal access to essential health services, equal utilization by equal need, and equal quality of care for all. (24) The National Strategy for Newborn and Child Survival in Ethiopia (2015/16-2019/20) aims to strengthen aspects of universal health coverage related to MNCH, with the ultimate goal of eliminating all preventable childhood deaths by 2035. The Strategy has provisions for contexts with 'specific needs,' acknowledging that certain regions and population subgroups (including pastoralist and cross-border communities) require specialized delivery strategies and approaches for MNCH services. (61) In the civil society sphere, Ethiopia hosted the 2012 World Congress on Public Health in Addis Ababa, which issued the 'Addis Ababa Declaration on Global Health Equity: A Call to Action,' urging attention to promote and achieve health equity globally. (62,63)

3.4.1 Health equity and the Health Extension Program

By design, the Health Extension Program is intended to further health equity by addressing certain determinants of health largely concentrated at the individual, family and community levels. These include, for example: enhanced geographical access to health facilities and health workers; community-level education to encourage health-promoting knowledge, attitudes and practices; and improved self-efficacy for adoption of healthy behaviours through model families. The diffusion of health promoting activities from HEWs to community members strengthens social supports and community networks, which may help to promote health equity.

Through its emphasis on disease prevention and health education, the Health Extension Program aims to influence personal health practices, health beliefs and customs, knowledge and healthy child development. The Health Extension Program has been credited with increasing the use of MNCH services, especially in rural areas, and HEWs are generally well accepted by communities. (64–66)

Some studies acknowledge that certain benefits of the Health Extension Program may not be realized equally by all population groups, or in all aspects of health. Age, education and distance from the nearest health facility were factors that corresponded to coverage by Health Extension Program outreach activities. (67) While the Health Extension Program appears to be successful in increasing child immunization services, (68) the proportion of deliveries attended by skill health professionals has shown less improvement. (69–71) Further, certain issues pertaining to the operation of the Health Extension Program are not regularly evaluated or reported. For instance, the extent to which the population size of kebeles exceeds 5000 is unknown, as is whether additional HEWs are assigned to these areas. Details about the contribution of the volunteers in the WDA, thought to be integral to supporting the aims of the Health Extension Program, remain largely unexplored, though some studies suggest that this role may be distressing. (72)

The Health Extension Program is positioned to reshape gender norms in the country in part through elevating the income and social status of the women who serve as HEWs. By some accounts, HEWs feel empowered by their position, while other HEWs report feeling overburdened as a result of having to work in under-resourced conditions, do uncompensated overtime, and maintain household duties in addition to their HEW work. (73–75) In other respects, the adoption of a woman-to-woman approach for HEWs to provide information about family health matters reinforces the gendered role of women as caregivers (a position of low societal importance); (75) this approach also overlooks the opportunity to engage with men, who usually hold the decision-making power within families, even in matters directly related to women such as place-of-birth decisions. (76)

The integration of HEWs into local governance activities facilitates intersectoral collaboration and encourages increased community capacity and empowerment. HEWs and other community volunteers are aptly positioned to garner community participation in matters of health and related domains (e.g., bringing together communities to build and maintain health posts and latrines), and to promote democratic processes within their local communities (e.g., through kebele councils). But the extent to which HEWs have engaged with stakeholders outside of their local communities, however, seems more limited. In ethnographic explorations of the lives of HEWs, Maes (73,77) acknowledges the limited ability of HEWs to self-organize, form collectives, and negotiate with higher levels of government or non-governmental organizations, pursuits that are not viewed favourably within the Ethiopian socio-political environment. Thus, apart from institutional changes that occurred as a result of employing female HEWs, the Health Extension Program has made little progress in challenging existing social, economic and environmental conditions on a societal level.

3.4.2 Health equity and MWAs

MWAs are a response to high maternal morbidity and mortality, especially in rural and remote populations, and are part of efforts to replace the continued practice of giving birth at home with giving birth in health facilities. Using MWAs helps to ensure that women do not need to traverse difficult geographical terrain during labour and promotes timely access to health care should obstetric complications arise. Noting that, in some circumstances, women may use MWA in different ways (such as resting throughout labour), the ideal use of MWAs can be described as follows:

- During pregnancy, a woman (and her partner/family) receives information about MWAs during early antenatal care visits or meetings and decides whether to use the facility.

- A few weeks before her estimated delivery date, the woman arrives at the MWA where she receives regular visits from a health worker – monitoring the status of her pregnancy – and where meals and accommodation are provided.
- When the time comes, the woman is transferred to the adjacent health facility where she gives birth with the assistance of a skilled birth attendant.

While giving birth at a health facility has been shown to reduce the neonatal mortality rate by nearly one third, (78) studies to date, all observational in nature, have yielded positive but insufficient evidence that MWA use lowers maternal and neonatal mortality, (79) with a review of the best available evidence suggesting 'the available literature describing the effect [of MWAs] provides limited insight into their potential benefit' and pointing to the need for randomized controlled trials. (80) In Ethiopia there is presently a renewed emphasis on building MWAs at the PHCU level due, in part, to the FMOH's goal for all women to give birth at a health facility that is staffed by skilled personnel. The 2015 MWA guidelines have a stated purpose to 'increase skilled birth attendance at health facilities, and to standardize the maternity waiting homes services where pregnant mothers in areas with difficult transportation will stay as their due date is approaching in order to rapidly access delivery and post natal services and reduce maternal and newborn mortality.' (81) The Jimma Zone Health Office has developed a list of facility and service criteria to improve and standardize the functionality of MWAs, based on the 'Guideline for the establishment of Standardised Maternity Waiting Homes at Health Centers/Facilities' (Figure 4). (81) As of 2016, one in five health facilities had a standalone MWA and an additional third of facilities had a room within the health facility where pregnant women could stay and sleep until labour started. (12)

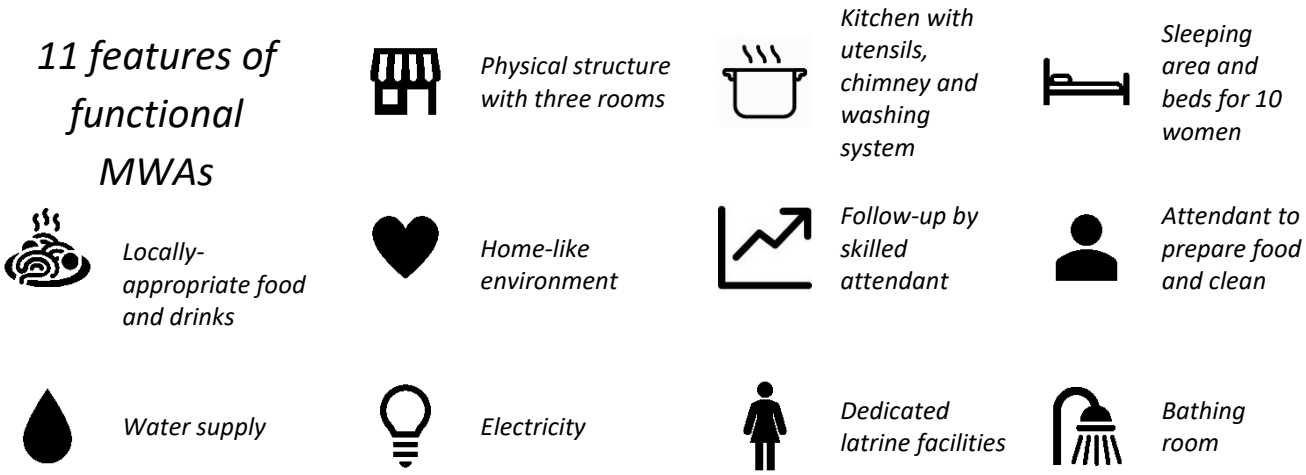


Figure 4. MWA functionality indicators

MWAs can be considered an equity-oriented initiative as they explicitly address geographical barriers to accessing health facilities; that is, their intended use enables pregnant women in rural and remote communities to access health services and facilities. The model for MWA construction specifies joint contributions from communities and the government, thereby promoting a sense of community ownership and obligation to maintain them. The extent to which MWAs are successfully implemented, however, depends on a number of contributing factors. (82–84)

For MWAs to be accepted and used by women in rural and remote communities requires that HEWs, the WDA or other community actors raise awareness about MWAs and promote their use among the potential beneficiaries, including providing referrals. Thus, women and families who have limited contact with the health system (for example, women who do not attend antenatal care visits or pregnant women conferences) are less likely to be aware of or encouraged to use an MWA. A study in Eastern Gurage zone, Southern Ethiopia, for instance, found that just 7% of women had heard of MWAs, though after learning about the concept 55% were receptive to using the facility. (84) In that study, the researchers reported a positive correlation between intended MWA use and the education level of the

pregnant woman and her partner, suggesting the importance of community mobilization efforts in marginalized populations.

MWA use is contingent on the support available through formal and informal community networks, such as members of the WDA, neighbours or extended family members. In Ethiopia, community support networks are powerful influences in maintaining or shifting social norms surrounding MNCH practices. (66) The success of the MWA initiative, particularly in traditional communities, relies heavily on the willingness of the community networks to endorse and enable the adoption of practices such as using MWAs and giving birth at health facilities.

In situations where MWAs are not fully functional (e.g., lacking food or water), community networks may be required to attend to certain needs while the woman is staying at the MWA, such as bringing meals or water. Women who are not used to staying away from their home may turn to community networks for companionship while they are at the MWA. Pregnant women from rural and remote areas whose networks cannot reach the MWAs may thereby face challenges in staying there. In some cases, it is women who reside closer to the facility whose community networks are more readily able to support their stay at the MWA.

On the home front, pregnant women may face barriers to staying at MWAs, such as obligations to care for other children at home, lack of support from husbands or family members, and norms that discourage women from staying outside the home. (83) Navigating these culturally- and socially-embedded barriers may, again, require active and effective community support networks. Neighbours may be called upon to provide childcare or health workers may be required to advocate the benefits of using an MWA to husbands or family members.

3.5 Moving forward an agenda for equity in MNCH?

While MNCH has long been a priority for the health sector in Ethiopia, equity is a relatively new area of focus, emerging during the end of the MDG period when increased availability of MNCH data revealed large geographical and urban-rural divides, particularly in health service availability and use. Accordingly, initiatives such as the Health Extension Program and MWAs have made commendable strides in making health services closer and more accessible to rural and remote populations. The emergent challenge, however, lies in tackling the broader political, social and economic forces that underpin inequities in MNCH.

The history of MNCH in Ethiopia demonstrates the fragility and complexity surrounding major health reforms. While political, economic and social forces have derailed ambitious health plans in the past, a cautiously optimistic perspective can point to the substantial progress in MNCH that has already been realized over the past two decades. Importantly, Ethiopia's gains across several MNCH indicators have been noticed and substantiated by various stakeholders, who now reinforce the need for more action to reduce health inequities (for example, through the 2030 Agenda and Agenda 2063, as well as national policies and programs). Building on these successes, cultivating meaningful partnerships and shared visions amongst groups of diverse stakeholder groups (i.e., globally, regionally, nationally and subnationally) can serve to fortify current and forthcoming equity-promoting initiatives. Likewise, given the array of non-health factors that play heavily into health equity, multisectoral collaboration and civil society and community engagement will be key to pursuing equity in MNCH.

With health equity now enshrined in its national health policies and strategies, Ethiopia is confronted with the opportunity to promote more sustainable and equitable improvements in the area of MNCH – but it also must contend with the challenges. By nature, health inequities are multipronged and deeply rooted, and progress to reduce them is likely to be slow and ongoing. Further, methodologies for

studying the reduction of inequities are not straightforward, given that the notion of what is inequitable may shift over time. Encouragingly, however, the importance of addressing broader contextual forces in discussions about health is increasingly acknowledged, (85) recognizing that the political context is far too often overlooked in health research and discourse in Ethiopia. (86)

3.6 Conclusion

In this chapter, I provide a general overview of Ethiopia, highlighting administrative, economic, and population characteristics, as well as describing operational aspects of the health sector across levels of its administration. In situating MNCH as a top concern for the health sector, I outline how health equity has emerged as a priority for the health sector and for MNCH initiatives in particular, and weigh considerations for how the country is moving forward on these aims.

The following four articles each enrich and enhance the state of knowledge on health equity in MNCH in Ethiopia in different ways. The first article (Chapter 4) speaks to community experiences of health and health equity, reflecting in part, the impact of the rural Health Extension Program, as well as longer standing socio-cultural norms and beliefs. The second article (Chapter 5) is a detailed exploration of the MWA initiative from the perspective of HEWs working to promote it. This article yields layered insight into themes surrounding community mobilization and ownership. The third article (Chapter 6) looks at the experiences of subnational health managers, who navigate the under-resourced, middle levels of administration of the health system in efforts to promote health equity. The fourth article (Chapter 7) calls into question the meaning behind health equity as a policy problem, delving into why certain representations of the concept prevail in current policy discourses. In the final chapter of this dissertation (Chapter 8) I return in more detail to several of the themes mentioned here – including political and economic realities, ethnic tensions, and health sector policies and programs – as a means to expound upon the findings of my research.

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If relatives help each other, what evil can hurt them? -Ethiopian proverb

Photo: Nicholas Castel

Caption: Members of a rural community in Jimma Zone, Ethiopia

Chapter 4. Exploring health and health inequality among rural communities in Jimma Zone

Article #1

Perceptions and experiences related to health and health inequality among rural communities in Jimma Zone, Ethiopia: a rapid qualitative assessment

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Author contributions

The authors of the article, in order, are: Nicole Bergen (University of Ottawa), Abebe Mamo (Jimma University), Shifera Asfaw (Jimma University), Lakew Abebe (Jimma University), Jaameeta Kurji (University of Ottawa), Getachew Kiros (Jimma University), Muluemebet Abera (Jimma University), Gebeyehu Bulcha Duguma (Jimma Zonal Health Office), Kunuz Haji Bedru (Jimma Zonal Health Office), Manisha A. Kulkarni (University of Ottawa), Ronald Labonté (University of Ottawa) and Sudhakar Morankar (Jimma University). All authors contributed to the conceptualization and design of the study, which was led by NB. NB and RL led the development of the research instruments. Data collection activities were directly overseen by NB, AM, SA, LA, GK and SM. NB led the data analysis, in consultation with AM, SA and JK and guidance from RL, MAK, SM and LA. NB wrote the first draft of the article and oversaw the revisions; all authors read and approved the final manuscript.

4.1 Abstract

Background: The Safe Motherhood Research Project studies the implementation and scale-up of maternal, newborn and child health (MNCH) initiatives in Jimma Zone, Ethiopia. This qualitative rapid assessment study was undertaken to explore community perceptions and experiences related to health, health inequality and other MNCH themes.

Methods: We conducted 12 focus group discussions (FGDs) and 24 in-depth interviews (IDIs) with community stakeholder groups (female and male community members, Health Extension Workers (HEWs), members of the Women's Development Army (WDA) and Male Development Army (MDA), and religious leaders) across six rural sites in Jimma Zone. Data were analyzed through thematic coding and the preparation of content summaries by theme.

Results: Participants described being healthy as being disease free, being able to perform daily activities and being able to pursue broad aspirations. Health inequalities were viewed as community issues, primarily emanating from a lack of knowledge or social exclusion. Poverty was raised as a possible contributor to poor health, however, participants felt this could be overcome through community-level responses. Participants described formal and informal mechanisms for supporting the disadvantaged, which served as a type of safety net, providing information as well as emotional, financial and social support.

Conclusions: Understanding community perceptions of health and health inequality can serve as an evidence base for community-level initiatives, including MNCH promotion. The findings of this study enable the development of audience-centered MNCH promotion activities that closely align with community priorities and experiences. This research demonstrates the application of rapid qualitative assessment methods to explore the context for MNCH promotion activities.

4.2 Keywords

Social determinants of health; health equity; meaning of health; maternal and child health; qualitative methods

4.3 Background

Since the mid-1990s, the health sector in Ethiopia has undergone major transformations, changing the landscape of how health services are delivered by prioritizing community-based interventions that focus on MNCH and disease prevention in underserved populations. (1–3) Notably, through the training and deployment of paid community health workers (HEWs), the country's Health Extension Program has been successful in reaching rural communities and improving several health indicators. (4–6) For instance, the percentage of women who received any antenatal care from a skilled provider increased from 27% in 2000 to 62% in 2016; over the same period, the percentage of live births delivered in a health facility has increased from 5% to 26%. (7) Despite remarkable improvements to overall health in Ethiopia (8), the country continues to face large health inequalities (9) and halted progress in certain development markers. (10) For instance, the underutilization of MNCH services constitutes a major challenge, with barriers stemming from delays in the decision to seek health care, inability to access a health facility, and failure to receive timely and appropriate medical treatment. (11–13)

The Ethiopian Federal Ministry of Health (FMOH) has recognized the need for a revitalized approach to health promotion that: develops context-specific health program communication strategies, builds upon detailed situational analyses, and accounts for community-level diversity. (14) In low-resource settings such as rural Ethiopia, however, community-level evidence is often limited in scope, dated or lacking altogether.

This study was undertaken during the initial phase of a five-year (2015-2020) research project, The Safe Motherhood Project[a], to inform the design and delivery of its two MNCH promotion interventions:

information, education and communication (IEC) activities in rural communities, and improved infrastructure and functionality of maternity waiting areas (MWAs) at rural health facilities. This study aims to deploy a rapid qualitative assessment approach to better understand community stakeholders' perceptions and experiences with regards to health, health inequalities and MNCH. As applied in other studies, perception refers to how people understand a phenomenon and its causes and effects, which in turn, influences how they experience the phenomenon. (15) In our study, we explore stakeholder perceptions of health and health inequality generally, and also drawing from their experiences (personal encounters) related to MNCH. In this article, we report on findings from community members and groups across three districts of Jimma Zone. While this exploration has implications for health promotion activities across various health topics, the findings of the research are primarily considered in their application to MNCH promotion.

4.4 Methods

4.4.1 Sampling and participant recruitment

The study was conducted at six rural health posts, located in the three districts of Jimma Zone. A convenience sample of two kebeles (communities of about 5000 people served by one health post) per district participated; the criteria for kebele selection included location (proximity to Jimma and/or passable roadways), previous contact with personnel at the health post, and willingness to participate in the study. We conducted 12 FGDs with 6-12 participants, and 24 semi-structured IDIs. FGD participants included female and male community members. HEWs, members of the WDA [b], members of the MDA[c], and religious leaders all participated in IDIs. Participant recruitment for the FGDs and IDIs was done through the HEWs at each kebele health post.

4.4.2 Data collection

Data were collected in the local language (Afan Oromo) using semi-structured FGD and IDI guides. The guides were prepared in English by the research team, translated into Afan Oromo, and pilot tested in an area that was not included in the study. The FGDs and IDIs included questions about demographics, what it means to be healthy, factors that explain why some are healthier than others, and feelings/responses to inequalities in health (Appendix 4.1). The IDIs with community stakeholders additionally asked participants about their role in promoting health, and related barriers and enablers. Nine bilingual individuals (seven males and two females) from Jimma University were employed to assist with data collection, and participated in a two-day induction workshop.

Data collection took place over six weeks in May-June 2016. FGDs were facilitated by teams of two data collectors, and there was one data collector per IDI. A member of the research team obtained written or oral informed consent from all participants. Data collectors worked independently, and at least two researchers with the Safe Motherhood Project were present in a supervisory capacity. Daily debriefing sessions with the researchers and data collectors were held to discuss key findings, refine the FGD and IDI guides, and identify strategies to enhance data collection. To document their experiences and impressions, data collectors and researchers kept field notes, and researchers conducted an exit interview with each data collector to further probe the content of the field notes and debriefing sessions. All FGDs and IDIs were recorded and transcribed into English by the assigned data collector. A random sample of transcripts was checked against the recordings by a bilingual researcher.

4.4.3 Data analysis

An initial code guide was developed by two of the researchers (NB and AM), and expanded to incorporate emergent ideas from an initial selection of transcripts. Following multiple readings of all transcripts, a final version of the code guide was developed through consensus by NB and AM. The final code guide allowed us to capture all major ideas raised by the participants in each thematic category.

Transcript coding was done in Atlas.ti software (version 7.5.12) by three researchers (NB, AM and SA). To enhance inter-coder reliability, the researchers independently applied the code guide to a selected transcript, and then reviewed and resolved any differences. Reports of quotations for selected codes were generated in Atlas.ti software, and the researchers prepared content summaries of findings.

4.4.4 Ethical clearance

Ethical clearance for this research was obtained from Jimma University College of Health Sciences Institutional Review Board and University of Ottawa Health Sciences and Science Research Ethics Board; the research was conducted in accordance with the prevailing ethical principles.

4.5 Results

4.5.1 Meaning of health

Across all participant groups, health was frequently referred to as an asset that was a prerequisite to living, thriving and deriving pleasure from life. Overall, participants emphasized the importance of having good relationships within the larger community, supporting each other emotionally and financially, and working with different sectors of the community (e.g. the WDA, MDA, religious leaders, HEWs and other bodies). Belonging to a community enabled individuals to be healthy, as the community collectively encouraged and advocated for one another's health. One male community member expressed how community relationships were related to his own health condition:

> I am healthy if I live in peace, when my mind and my body parts are free from problems, when my family is in good condition, and when I have good relationships with my community. When I live a favourable life, I can say I am a good and healthy man. -Male community member, Gomma district, age 49

4.5.2 Biomedical concepts

Participants expressed that being healthy meant being free from disease and disease symptoms, citing examples such as AIDS, malaria, diarrhea, the common cold and gastritis; additionally, individuals who had mental health issues or physical disabilities were not considered to be healthy. Participants mentioned the use of both preventive and curative measures to avoid or mitigate disease. These included: following the advice of health workers, getting treated for ailments, taking medication as directed, and using available health services and facilities. For instance, a male community member from Kersa district (age 40 years) credited the use of health services and facilities for the better health of his second child.

4.5.3 Ability to perform daily activities

Many participants spoke about health as the capacity for physical functioning – the ability to complete daily activities, walk and move freely, and be productive. A female community member explained:

> A healthy person is someone who has functional hands and legs, who has a peaceful mind, who is able to produce and eat, who is able to move to where he wants, and who is able to learn and produce. Unless he is healthy, he can't accomplish anything or produce for survival. -Female community member, Kersa district, age 25 years

For women, key daily activities included taking care of their children, preparing food and maintaining the household. For men, daily activities were related to working and ensuring the livelihood of the family (e.g. ability to plough the fields). Religious leaders, HEWs and members of the WDA and MDA made references to daily activities related to their respective roles within the community.

4.5.4 Opportunities for advancement

Participants across several study sites related health with notions of peace, security, education, wealth, and development. In general, participants perceived that health is a prerequisite for broader, societal

aspirations, and a community must achieve a certain threshold of health among its members to live in harmony and advance. For example, the health status of the community was linked to the ability of its members to protect themselves, support one another during happy and sad times, and secure sufficient wealth to provide for their families. The relationship between health and peace was described by one man as:

> Health is peace; if there is no peace, not all people are healthy. In the community, if there is health but no peace, it is difficult to do our daily activities like keeping our personal and environmental hygiene as well as keeping our children clean and healthy. So health and peace have a strong relationship. -Male community member, Gomma district, age 40 years

4.5.6 Perceptions of health inequality

Participants acknowledged that not everyone is in good health, even within the same community. Participants generally believed they had agency over their health status, though certain conditions were viewed as unavoidable, such as congenital disabilities attributed to the 'will of God.' Inequalities in health were largely viewed as community issues: although they sometimes traced back to individual characteristics or behaviours, the community was ultimately responsible for supporting individuals in achieving and/or maintaining health.

4.5.7 Root causes of disadvantage

Participants highlighted three main reasons why some people were less healthy than others. First, individuals may lack awareness or knowledge in areas such as how to practice safe sex, how to keep themselves and their homes clean, and how to eat nutritiously. Moreover, participants emphasized the importance of understanding how and when it is appropriate to use health services and/or take medication. One male community member explained:

> People have problems in taking their sick families to health facilities. Some wait longer before they take their family members to the health facilities. This emanates from a lack of awareness. The Health Extension Worker tries what she can, but the people do not have awareness. -Male community member, Kersa district, age 35 years

Second, social exclusion – a state where people or groups are excluded from social systems or relationships (16) – may lead to poor health. Individuals who are outsiders in the community do not have access to the support structures that promote and enable healthy behaviours. Further, those in conflict with others, or who lack love from others, suffer health problems. One community member explained the importance of addressing loneliness, especially among the poor:

> What matters is loneliness. We have to convince everyone to live together because living together is an asset itself. If the poor live alone, they lack social support. We can support them, then in any situation, a person has an asset. Even for the rich, living alone is not good. -Female community member, Kersa district, age 25 years

Financial poverty was cited as a third factor that could result in some individuals having worse health than others. Being poor made it difficult to gain access to resources and services required to lead health lives. A female community member provided an example of how not having money was a barrier to securing better living conditions, which in turn, compromised health:

> There are some diseases like cough. If we relate this with wealth, a poor family that lives in small unventilated house can't prevent the cough from spreading because of overcrowding. If they had money, they could build a house with ventilated windows. -Female community member, Kersa district, age 22 years

Being poor also made individuals feel worried and stressed, putting them at risk for mental health problems. Several participants, however, explained that the negative effects of poverty could be

overcome by being knowledgeable about health and/or having access to social supports; that is, having financial resources did not guarantee better health unless those resources were used in a way that promoted health.

4.5.8 Community responses to health inequality

When questioned about what should be done to address health inequalities, participants usually identified responses at the community level. A collectivist approach to addressing problems was evident in a proverb quoted by a participant:

> *Namnni tokko yoo dhukkubsate yoo namatti himate dawaa argata*. This means that a person could get relief for his problem only if he told it to others. Because of this, our community networks get involved to share the problem and help each other to encourage the person to visit a health facility. It is better to help each other to live in this world. -Female community member, Seka Chekoresa district, age 28 years

Participants described formal and informal mechanisms for supporting the disadvantaged, which serve as a type of safety net, providing information, as well as emotional, financial and social support. Formal mechanisms included health insurance programs (implemented at some study sites), a program that identifies model households, and the one-to-five networks. Informal mechanisms varied across study sites. For instance, a female community member from Kersa district identified two groups in her community:

> We have two women organizations: the support group *garee wal-gargaarsaa* and the money saving group *garee qusannoo*. Using these organizations, we can help. We use the money collected if the individual with problems are poor. If the person has no awareness, we have to advise, be with him and encourage him to take all of the prescribed medicine. And we support

> them emotionally. So, it's possible to use either organization to help a person in trouble. - Female community member, Kersa district, age 26 years

HEWs, religious leaders and members of the development army identified aspects of their respective roles that served to promote health in their communities, often with intersecting roles that encouraged a community approach. A religious leader, for example, explained how he encouraged his followers to support those in need:

> When someone from the community becomes ill, the followers have a responsibility to help that person by taking him to the health facility as well as by supporting him economically until he improves. So, it is our responsibility and we [religious leaders] teach our followers about their duties. -Religious leader, Kersa district, age 39 years

4.6 Discussion

4.6.1 Key findings and contributions

The findings of this study add to the current body of literature in two important ways. First, our exploration of the general meaning of health and health inequalities provides a scoping overview of the context for the Safe Motherhood Project, extending beyond the specific topic of MNCH. This is a valuable contribution, as no previous studies, to our knowledge, have published this type of community-level, empirical research in rural Jimma Zone. To date, needs assessment activities in Ethiopia have tended to adopt a vertical focus, capturing a narrower range of health topics. Further, previous research has called attention to key differences between areas throughout the country related to how communities experience delays in receiving MNCH care. (13)

Second, our application of qualitative methods in a community setting is a novel approach to explore the context for MNCH promotion activities, especially in rural Jimma Zone. Our results complement and extend findings of previous studies, which have tended to rely more heavily on quantitative-based

survey methods. For instance, one study, undertaken as baseline research for the Communication for Health Project (covering four regions in Ethiopia, including Oromia region where Jimma Zone is located), reported lower MNCH service use among women with high vulnerability scores, which were constructed based on food, shelter and monetary resources. (17) The qualitative methods employed in our study allowed us to probe deeper about the notion of vulnerability, highlighting the risks associated with lack of awareness and social exclusion. We also gained insight into diverse formal and informal community mechanisms to encourage and enable health service use.

Several other studies have administered structured questionnaires to individuals in Jimma Zone on topics related to reproductive health, with the aim of identifying knowledge gaps, information sources and/or provider preferences. (18–20) Our results illustrate the rich context in which such knowledge, attitudes and practices develop and are reinforced. A more complex appreciation for how and why health is valued, and the benefit that good health brings to a community, can serve as considerations in the planning phases of research and/or program development and implementation. For example, efforts to promote facility births may be strengthened by harnessing the support of the community in referring and/or transporting rural and remote women to facilities; to this end, initiatives such as MWAs (residences near health facilities that accommodate women in their final stages of pregnancy (21)) may be positioned to achieve greater reach if promoted by the community.

In this study, the importance of community was a predominant theme that shaped participants' understandings of health and health inequalities. This was unsurprising, as Ethiopia is generally considered a highly collectivist society that emphasizes relationships, group obligation, and interpersonal harmony. (22) Like our study, other research in Ethiopia has reported a diversity of perceptions and experiences on health matters. (23) Our study, however, revealed that responses were more similar by setting than by stakeholder role; that is, community-level interests and experiences

were prioritized over individual roles. Even participants that convened regularly at more centralized levels (e.g. HEWs and religious leaders) did not necessarily express shared ideas.

Participants in this study expressed that, as a community, they experienced a strong sense of agency over their health. Community networks that pooled/redistributed money and provided social support were ubiquitous across study sites. Generally, participants felt that most of the resources necessary for good health were already available within the community, and that health could be improved by sharing or mobilizing those resources. For example, HEWs were viewed as a trusted source of information about health, and an access point to obtain basic services or referrals to higher levels of the health system, which has also been reported elsewhere in Ethiopia. (24–27) Others, however, have highlighted the top-down nature of Ethiopia's Health Extension Program, and questioned the extent to which local health workers are expected to remain subordinate. (28) Indeed, social desirability tendencies and the complexity of situating health interventions within specific local cultural and social forces remain important considerations that further support the need for contemporary, context-specific research.

4.6.2 Strengths and limitations

This research benefited from the use of semi-structured FGDs and IDIs, which allowed for open-ended questioning and probing, and generated rich descriptions of community perceptions of health and health inequality. The inclusion of multiple and diverse community stakeholders across six study sites enriched the breadth of the data, and allowed for exploration of how themes emerged across and between study sites. Another strength of this study was the collaborative approach to working with data collectors, whose impressions and observations helped the researchers to understand and situate the findings, and enhanced the transparency and trustworthiness of the research.

Possible limitations included the method of participant recruitment (through the HEWs), which may have led to the selection of participants that would speak favourably about the HEWs. This recruitment

method was used because HEWs served as the main contact between the research team and the community, and the HEWs were able to access participants through their community networks. Other researchers, however, have acknowledged that political context has important implications on health research methodology. (29) In effort to account for and minimize potential bias, we worked closely with the data collectors before and during data collection to develop strategies to encourage participants to speak freely. These included: providing participants with detailed explanations of measures to ensure confidentiality and anonymity; conducting FGDs and IDIs in private areas; and using question probes and different entry points to elicit responses (e.g. use of shadowed data where participants were asked to refer to other's experiences in addition to their own (30)). Additionally, field notes and data collector exit interviews were read alongside transcripts during data analysis to add depth and context.

4.7 Conclusions

Our approach to doing a rapid assessment of the meaning of health and health inequalities in rural Jimma Zone upholds principles outlined by the National Health Promotion and Communication Strategy for Ethiopia, and supports the community-level action in the Strategy's framework. (14) The findings of this research enable the development of audience-centered health promotion initiatives, such as MNCH promotion through the Safe Motherhood Project.

Moving forward, the MNCH promotion activities of the Safe Motherhood Project will foster a sense of community ownership and participation, as key messages will be closely aligned with existing community systems, priorities and experiences. The findings from these data are positioned to serve as an evidence basis from which to monitor and improve the health promotion activities of the Safe Motherhood Project, as well as other initiatives by the Zonal and Regional Health Bureaus.

4.8 End materials

4.8.1 Ethics approval and consent to participate

Ethical clearance for this research was obtained from Jimma University College of Health Sciences Institutional Review Board (reference number RPGE/449/2016) and University of Ottawa Health Sciences and Science Research Ethics Board (file number H10-15-25B). A member of the research team obtained written or oral informed consent from all participants for participation in the research and digital recording of the FGD or IDI.

4.8.2 Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

4.8.3 Competing interests

The authors declare that they have no competing interests.

4.8.4 Funding

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4.8.5 Acknowledgements

We gratefully acknowledge the team of skilled data collectors from Jimma University that participated in our study, and thank Corinne Packer, who provided feedback on early drafts of the manuscript.

4.8.6 Endnotes

[a] The Safe Motherhood Project is an intervention trial that supports the implementation and scale-up of MNCH initiatives in selected districts of Jimma Zone. For more information about the Safe Motherhood Project, please see: https://www.idrc.ca/en/project/promoting-safe-motherhood-jimma-zone-ethiopia-imcha

[b] The WDA is a voluntary community health workforce that supports the work of HEWs. One woman out of every five households is a WDA member, responsible for promoting health among the five households under the supervision of HEWs.

[c] The MDA has a similar structure to the WDA, with a greater focus on aspects of community development related to physical infrastructure or agriculture.

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4.10 Bridge

Chapter 4 (Article 1) explored the health experiences of a selection of community members, probing their perspectives about the meaning of health and health equity. The community participants underscored the importance of health both intrinsically and instrumentally, and expressed a sense of community agency and responsibility over health matters. With both formal and informal means of attaining access to the resources to be healthy, individuals who were outsiders to the community were at risk of poorer health.

Chapter 5 (Article 2) entails a closer look at the promotion and uptake of a community-level, equity-oriented initiative, maternity waiting areas (MWAs), and the experiences of Health Extension Workers (HEWs). The article builds on the findings presented in Chapter 4, examining how the work of HEWs accounts for the community members' experiences and perspectives, and in turn, seeks to shape them. This article also studies how HEWs are situated within the health sector (as the most decentralized healthcare providers), and describes how they interface with other health sector actors (explored in more detail in Chapters 6 and 7).

For if medicine is really to accomplish its great task, it must intervene in political and social life -Rudolf Virchow

Photo: Nicole Bergen

Caption: A Primary Health Care Unit Director and maternity waiting area in Jimma Zone, Ethiopia

Chapter 5. Barriers and enablers to a maternal health intervention in Jimma Zone: HEW perspectives

Article #2

Maternity waiting areas – serving all women? Barriers and enablers of an equity-oriented maternal health intervention in Jimma Zone, Ethiopia

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Author contributions

The authors of the article, in order, are: Nicole Bergen (University of Ottawa), Lakew Abebe (Jimma University), Shifera Asfaw (Jimma University), Getachew Kiros (Jimma University), Manisha A. Kulkarni (University of Ottawa), Abebe Mamo (Jimma University), Sudhakar Morankar (Jimma University) and Ronald Labonté (University of Ottawa). All authors contributed to the conceptualization and design of the study. NB led the development of the research instruments, and co-led data collector training with RL. Data collection activities were directly overseen by SA, GK and AM, with guidance from NB, LA, MAK, SM and RL. NB led the data analysis, with inputs from SA, AM, and RL. NB wrote the first draft of the article and oversaw the revisions; all authors read and approved the final manuscript.

5.1 Abstract

In Ethiopia, maternity waiting areas (MWAs) – residential areas near health facilities where women can stay while waiting to give birth – are community-based, equity-oriented interventions to improve maternal outcomes among rural populations. In this qualitative study we sought to explore the barriers and enablers that Health Extension Workers (HEWs) encounter when engaging with communities about MWAs. We conducted semi-structured interviews with HEWs across rural sites in Jimma Zone, Ethiopia. Drawing from an ecological model of social determinants of maternal and child health, we analyzed data using thematic coding methods. HEWs reported a variety of factors that determined MWA use, including the number of children at home, previous childbirth experiences, community support networks, decision making practices within families, the availability and acceptability of health services, geographical access, and health beliefs. HEWs worked to increase the use of MWAs by engaging with husbands and communities, raising awareness in target groups of women, and managing community participation. Policies and practices that support enhanced training for HEWs, increased resources for communities, and greater opportunities for HEWs to liaise with decision makers at various levels of influence are possible ways forward to improve MWA use, specifically, and maternal and neonatal/child health outcomes more generally.

5.2 Keywords

Maternity waiting area; health equity; maternal health; social determinants of health; Ethiopia; qualitative research

5.3 Introduction

The reduction of maternal and neonatal mortality remains a major challenge in many low-income countries. (1) In Ethiopia, the maternal mortality rate in 2015 was 353 deaths per 100,000 live births, and neonatal mortality was 29 deaths per 1000 live births, representing a considerable improvement

since 2000, when these rates were 897 per 100,000 live births and 48 per 1000 live births, respectively. (2) The country has seen recent gains in coverage of key maternal health services, such as receiving antenatal care (increasing from 27% to 62% from 2000 to 2016) and delivering in a health facility (increasing from 5% to 26% from 2000 to 2016). (3) Women from poor households, in rural areas, with low levels of education and/or with closely-spaced children, however, were less likely to benefit from these services – and so, too, their children. (3)

MWAs are an equity-oriented intervention to improve maternal and neonatal survival by addressing geographical barriers to accessing health facilities. MWAs are residential structures built near health facilities where women can stay during the final weeks of pregnancy, giving them access to maternity care, and allowing them easy access to the facility when labour begins. In Ethiopia, the first MWAs of the 1970s and 1980s were built near hospital delivery units and pioneered by faith-based organizations. (4,5) In more recent years, with the Federal Ministry of Health (FMOH) goal for all women to give birth at a primary health care unit (PHCU) or hospital, renewed MWAs at PHCUs are being initiated through the support of local governments (who are responsible for monitoring the construction and implementation of MWAs) and communities (who contribute money, supplies and/or labour). (6) In 2016, 20% of health facilities had a standalone MWA, and an additional 32% had a MWA room within the facility. (7) Although giving birth at a health facility has been shown to reduce the risk of neonatal mortality rate by nearly one third, (8) studies have yielded inconclusive evidence that MWA use lowers maternal and neonatal mortality. (9,10)

The Safe Motherhood Project, a collaborative research project between Jimma University and the University of Ottawa, is currently underway in the Jimma Zone of Ethiopia to evaluate the implementation and effectiveness of renewed MWAs in improving the rate of health facility deliveries and, in turn, maternal and neonatal health outcomes. In 2016, the Safe Motherhood Project undertook a quality assessment of 24 MWAs in Jimma Zone based on the indicators in Figure 4, and found high

variability in the materials, infrastructure and services available. (6) At this time, none of the 24 MWAs was considered fully functional (that is, none satisfied all 11 indicators).

Given that renewed MWAs target women with limited contact with the health system, MWA use is contingent on community-based agents to raise awareness, promote their use, and refer pregnant women. (11) In Ethiopia, the predominant health workforce in rural and remote communities is HEWs. HEWs were introduced as part of the Ethiopian FMOH's 2003 Health Extension Program, which aimed to recruit, train and deploy two female HEWs at each rural health post (serving approximately 5000 people). (12) HEWs' work mainly centers on disease prevention and health promotion through community mobilization and health education, including a large role in demand creation for maternal, newborn and child health (MNCH) services. (13) HEWs are deeply embedded in families, communities and the health system and, as such, are integral to the success of community-level health initiatives. To date, little is known about the present role that HEWs have in the promotion and implementation of renewed MWAs. This article aims to explore the barriers and enablers that HEWs encounter when engaging with communities about MWAs, and the strategies that they use.

5.4 Methods

This study is part of the Safe Motherhood Project, a mixed-methods, randomized cluster-intervention trial aimed at improving access to, and use of, MWAs as a strategy to reduce preventable maternal and neonatal mortality. The Project is being carried out across 24 study sites (PHCUs) in three rural districts of Jimma Zone, Ethiopia (Gomma, Kersa and Seka Chekoresa districts). Each study site consists of about five health posts, where two or three HEWs are stationed to serve the surrounding community. For the Safe Motherhood Project, the 24 study sites were randomly allocated into three study arms: a control arm; an arm receiving an information, education and communication (IEC) intervention; and an arm receiving both an IEC intervention and upgraded MWAs.

In this study, we report on results of some of the findings from the qualitative baseline component of the larger project. Our particular interest was to generate an in-depth understanding of HEW perspectives and experiences related to the MWA initiative in Ethiopia. Our framework (Figure 5) is based on the ecological model of social determinants of maternal health, originally developed by Solar and Irwin (14) and adapted by the World Health Organization Commission on Social Determinants of Health; (15) the model has been further adapted and applied to low-resource settings. (16)

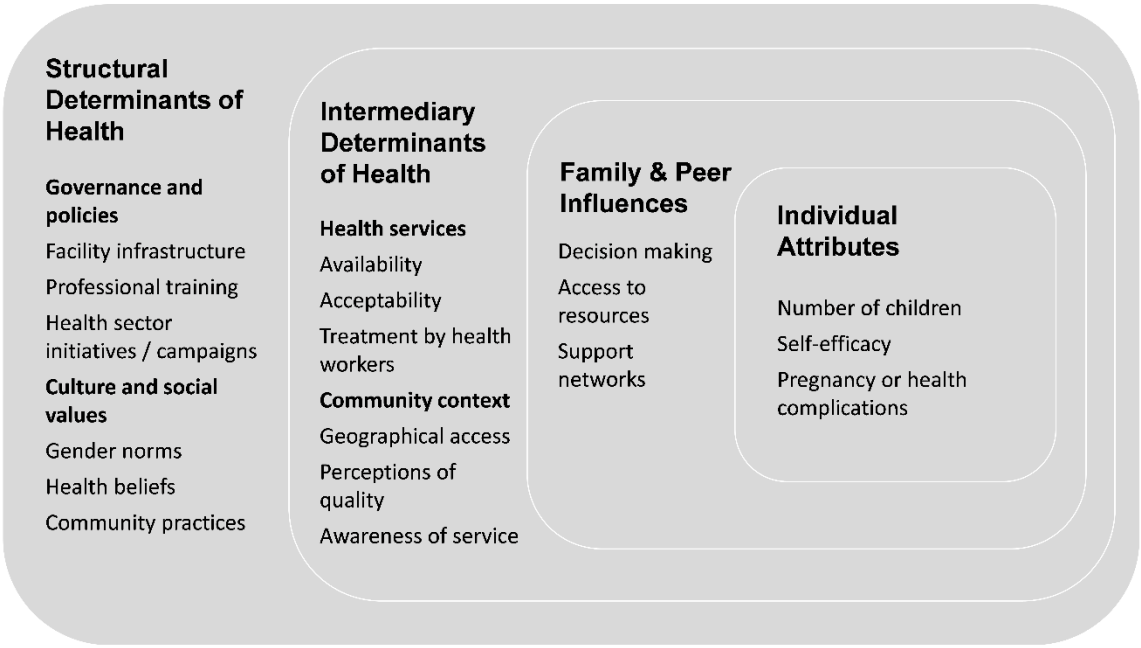

Figure 5. Ecological model of determinants of MWA use in Jimma Zone, Ethiopia

5.4.1 Data collection

From November 2016 to February 2017, we conducted one-on-one, in-depth interviews (IDIs) with HEWs. The study sample frame included 36 HEWs from across the 24 study sites to align with the quantitative data collection of the larger mixed-methods trial. We recruited a minimum of one HEW from each of the 24 study sites; at 12 study sites (4 in each of the three arms, selected at random using Wolfram Alpha software), we recruited two HEWs (Appendix 3.2). Within study sites, we consulted with

PHCU directors to purposively select health posts, and then recruited participants from the HEW (or HEWs) present at the health post at the time of data collection.

We developed an interview guide based on results of a rapid qualitative assessment conducted in May-June 2016. (17,18) The guide consisted of question sets related to: MNCH service provision and use; community participation in MNCH activities; MNCH problems; MWAs; and health education and community interactions (Appendix 4.2).

English-speaking data collectors from Jimma University conducted interviews with HEWs in the local language (Afan Oromo). All of the data collectors were trained to the graduate university level, and several of the data collectors had previous experience working with the study on the rapid qualitative assessment (19) or had conducted interviews or focus groups as part of other research projects. Prior to data collection, these individuals participated in a specialized week-long data collection training and induction workshop facilitated by the research team. Data collectors conducted interviews independently under the supervision of at least two researchers from the Safe Motherhood Project. The data collectors audio recorded the interviews and prepared written transcripts in English. To ensure completeness, researchers fluent in English and Afan Oromo checked a random sample of transcripts against the recordings. Data collectors and researchers kept field notes to document their experiences and impressions, which we read alongside transcripts during data analysis to add depth and context.

5.4.2 Data analysis

We undertook thematic content analysis focusing on emergent concepts and categories (rather than words or phrases) (20) in two stages using Atlas.ti software. In the first stage, following multiple readings of the transcripts, five members of the research team (all of whom were involved with the day-to-day data collection activities, and had previous experience and training with qualitative methods) collaboratively developed an initial code guide (inductive, according to the domains of questioning), and

coded an initial selection of transcripts. A group of six researchers (including three of the data collection supervisors) familiar with the transcripts convened to discuss the preliminary findings and refine the code guide to accommodate emergent themes. The Project co-leads advised on the process and provided guidance as required. After reaching agreement about how to apply the code assignments, and then applying the guide to all HEW transcripts, we generated coding reports of quotes related to aspects of MWAs for the second stage of analysis. The codes specific to MWA included: strengths, weaknesses, promotion efforts, community awareness, community participation, vulnerable populations, and strategies for improvement.

In the second stage, we read the MWA-specific coding reports multiple times to identify emergent subthemes that corresponded with the four domains of the ecological model (individual attributes; family and peer influences; intermediary determinants of health; and structural determinants of health); we added a fifth domain to capture the strategies and solutions that HEWs mentioned about the barriers and enablers to MWA use, which cut across multiple levels of the ecological model. We grouped supporting quotes from all transcripts according to each domain and subtheme, and prepared thematic summaries for the five domains. Through discussion, the research team reached consensus about the key subthemes and conclusions. All members of the research team reviewed and agreed upon the presentation of the findings.

5.4.3 Trustworthiness

To promote credibility, the researchers held regular debriefing sessions with the data collectors to discuss and share strategies to enhance the data collection process. Prior to data collection, the survey tools were pilot tested in a similar context to the study and minor modifications were made to maximize the applicability of the tools. The use of open-ended questions in the semi-structured IDIs and focus group discussions (FGDs) was a way to encourage participants to respond in an uninhibited manner, while retaining the central focus on the topic of interest. Transferability was promoted through

generating sufficiently thick description of the case context, for example, through the use of question probes and detailed field notes. Additional qualitative analyses of the study have been conducted, including the preparation of a detailed internal field report. Confirmability was addressed by discussing the findings with experienced researchers working on related topics within the same zonal area, as well as national experts in the topic area. Researchers remained reflexive in identifying and taking measures to limit potential sources of bias, including social desirability bias. (21) We addressed dependability through having multiple researchers engaged in the data analysis process, and several members of the research team involved in writing up the analyses.

5.4.4 Ethical considerations

We obtained ethical clearance for this research from Jimma University College of Health Sciences Institutional Review Board and University of Ottawa Health Sciences and Science Research Ethics Board. All research participants provided informed consent (verbal or oral) prior to their participation in the study. The research was conducted in accordance with the prevailing ethical principles.

5.5 Results

Thirty-one HEW transcripts were included in the analysis (five transcripts were missing because the interview was not conducted due to logistical limitations or the data collector did not submit the transcript to the research team). The 31 HEWs included in the study represented 22 of the 24 study sites; the two missing sites were from Gomma and Kersa districts. On average, the age of HEWs in the study (where available) was 24.7 years (ranging from 20 to 32 years) and the average number of years served was 5.8 (ranging from 1 to 10 years). Out of the 31 participants, six had received a year of additional training, gaining the accreditation of HEW practitioners. All HEW participants were female.

5.5.1 Individual attributes

Several HEWs acknowledged that the woman's family structure – whether they had children already, and the age of these children – was a determinant of MWA use. Women with younger children at home were less likely to use MWAs because it required them to be away from their children and arrange for childcare, stresses that were compounded by women not knowing how long they would be away; in contrast, women who have older children at home have greater ability to go to the MWA, as the older children could attend to the younger children and household chores.

According to HEWs, women who felt confident about giving birth at home, especially those who previously had problem-free home births, were less inclined to use MWAs; women's male partners echoed this view. One HEW described the non-use of MWAs as 'carelessness', relating that:

> Some of them [pregnant women] say why would I go there? I have given birth at my home previously.

HEWs perceived that MWA use was particularly important for women with complicated pregnancies, such as those with anemia, history of caesarean section or the fetus/baby in a 'bad position', especially if they lived far from the health center.

5.5.2 Family/peer influences

Several HEWs reported that male partners and mothers-in-law made decisions about whether the woman would attend the MWA. In most of these cases, HEWs identified male partners as barriers to use: men did not want their partners to leave the home, especially if they had other children to care for.

> There are husbands who are opposing them going […]. If their husbands do not approve, they will not come for the service.

Women who have poor access to resources, such as money (sometimes required to pay for transportation to the facility and/or to buy food to eat while staying at the MWA) and clothes (to change

into after giving birth), were less inclined to use MWAs, according to HEWs. An HEW acknowledged that a woman staying at a MWA could represent a loss in family income during that period due to costs associated with staying at the MWA.

Family and community support networks played a large role in whether women attended the MWA. Women who have family members or neighbours willing to take over her responsibilities at home (e.g. childcare, cooking, and chores) could attend MWAs; in the absence of these supports, it was difficult for women to attend. Additionally, in areas where the MWA was not fully functional, HEWs described that a woman's family or neighbours would ensure that she is cared for at the MWA, for example, by bringing her food and water, or keeping her company while she is away from home.

> When a pregnant mother stays at the maternal waiting area, three times per day (morning, afternoon and evening) her families should have to bring food for her. She can't get out from the health center or around the kebele to buy by herself, because this is rural. Recently I took three mothers to stay at maternal waiting area and I have seen the problem myself.

5.5.3 Intermediary determinants of health

5.5.3.1 Health services

The availability of other relevant health services factored into whether women used MWAs. Women who have had previous contact with HEWs and the health system (e.g., by attending antenatal care visits) were more aware of MWAs and their benefits, and thus more likely to use them. One HEW mentioned that women who knew their estimated date of delivery could better time their arrival at the MWA. Another HEW recounted that women may stay at the MWA after having false labour because of the availability of health workers at the nearby facility to monitor her condition.

HEWs' opinions about the acceptability of the MWA influenced how they promoted them in the community. HEWs were unlikely to recommend using the MWA if they perceived the services or

facilities to be inadequate or unacceptable to women. A major issue in many areas was the lack of food and water. Other HEWs mentioned that the environment at the MWA was unhygienic, or that the facilities lacked kitchens, latrines, clean bedding, etc. HEWs thus recommended that women bring their own supplies. HEWs spoke about how a good facility attracts women to stay there, for example, by providing good food and services. An HEW described the attributes of the MWA that drew women to attend:

> There is separate home for them, bed made with clean bedding materials, food (injera, different wot types [stews], coffee, tea) cooked and prepared there by the employed server. There is also a water source for them.

Respectful treatment of women by health workers at the MWA and adjacent health facility was a prominent factor. In a few cases, health workers had a reputation for demonstrating exemplary behaviours like bringing food for women at the MWA or being friendly and welcoming. HEWs recognized that mistreatment of women by health workers at the MWA was a deterrent, noting that women from rural or remote areas may be particularly prone to mistreatment.

5.5.3.2 Community context

Issues surrounding geographical access to health facilities were mentioned by nearly all HEWs. Generally, HEWs felt that MWAs were important for women who live far away and were most likely to benefit from them. A few HEWs, however, spoke about how MWAs may be used in unexpected and unintended ways. For instance, at one MWA that lacked food and water, the women who lived close to the facility were more likely to use it, as their families could more easily bring them necessary supplies from home. One HEW spoke about how transportation costs for women to travel to and from the MWA could be a barrier for women who lived far away.

HEWs noted that women who stay at MWAs would share their experience – good or bad – with other women in the community, influencing whether others will use the facility. An HEW recounted how one woman spread word about her bad experience at the MWA, and called into question the value of continuing to contribute money for the initiative:

> She was not getting service, so the mother left the waiting area and went home. Then when she got back home she informed the others that there was no service at the waiting area, despite her contributions to the 'one birr for one mother' campaign – so why do we keep contributing to it?

In areas where MWAs were functional, HEWs worked to create demand for MWAs among pregnant women and in the wider community by raising awareness about the initiative and preparing them for what to expect.

5.5.4 Structural determinants of health

5.5.4.1 Governance and policies

When presented with a standardized list of 11 MWA indicators (Figure 4), the majority of HEWs considered the MWA in their area to be mostly functional but lacking in one or more indicators; just two HEWs considered the MWA in their area to be fully functional, while four HEWs reported that there was no MWA in their area, or that the MWA was non-functional. Some HEWs mentioned that women might attend a MWA outside of their area if it were better equipped. One HEW explained that the infrastructure at the MWA was insufficient for women to stay, and that women close to their estimate date of delivery may be turned away:

> Some women said that the health workers send mothers back to their homes […] at the fourth antenatal care visit. The health workers say to go to your home and come back when you start labouring. So, most have not enough room in the waiting area for the women to stay at health

center. Because of the limitation of waiting area, some of the women deliver on the way to their home for instance. As a result, women are not going to health center for delivery services. In other words, the inadequacy of the waiting area at the health center is discouraging women from receiving delivery services.

Many HEWs expressed that promoting MWA use was part of their job, and something that they were instructed to do during antenatal care visits. HEWs recognized that related policies and initiatives that encouraged health service use – for example, an HEW cited an initiative encouraging all women to give birth at a health facility – could be more easily satisfied if women used MWAs.

HEWs expressed that community members should contribute money and in-kind donations, like cereals or coffee, noting that, beyond a minimum expected contribution (as specified in the one birr for one mother campaign), the community members could give as much as they want. HEWs noted a link between community involvement and support for MWA use, as communities with higher levels of involvement were more likely use the MWA.

5.5.4.2 Cultural and social values

HEWs acknowledged that community members hold certain beliefs related to health and health services that influenced their decision about whether to use the MWA. For instance, HEWs encountered women who blamed the health facility or the MWA for a bad health outcome. Several HEWs expressed that women feel shame for using health facilities, especially if the MWA (or adjoining health facility) was staffed by a male attendant.

Normative gender roles and established community practices were considerations that affected MWA use. HEWs explained that women may not stay at a MWA because the women felt they should stay home to care for their families. HEWs themselves, all women, sometimes were not respected by men

while working in the community. An HEW recounted being challenged by a pregnant woman's husband while advising her about MWA use, and how she deescalated the situation:

> At some places, their husbands disrespect us, even he wants to prohibit us from entering his home […], because he thinks that we will advise his wife to go to maternal waiting area. For example, this was what happened to me a few years ago in one neighbourhood: a husband at his home even wanted to start a fight with me! Even though he […] told me to get out of his home, I treated him patiently. And I advised him what about what his actions would mean in terms of law (that this would lead him to be imprisoned and away from his family). Moreover, I told him the government policy about the right she [his wife] has and the gender equality of today. I calmed him down. I returned back to his house within three days and we agreed to send her to stay there. But […] at that time he wanted to fight me, so this means I needed to show him patience.

One HEW recounted how staying at a MWA may be viewed as an infringement of personal freedom, as women cannot come and go freely from the MWA (as they can from their homes), hindering their ability to be involved in community activities. HEWs recognized that MWA use was not currently part of the community culture. One HEW explained what it would mean for MWAs to be integrated within the local culture:

> As a community, bringing mothers and having mothers stay at the maternity waiting area should be taken up as the culture of the community. They should be actively involved in this regard. A husband should be responsible for bringing his wife to the maternity waiting area and encourage her to receive required services.

5.5.5 Strategies to overcome barriers

HEWs acknowledged that interacting only with pregnant women had limited success in promoting MWA use, and thus negotiated with husbands and other community members to: convince them to allow women to attend the MWA; encourage them to assume women's chores and responsibilities at home; and instruct them about how to support women staying at MWAs (e.g., bringing food and supplies). Directing their efforts at the women's support networks would ensure that the woman's home and family would be cared for, would overcome shortfalls in infrastructure and services at the MWA, capitalize on community support, and change community practices and norms. One HEW explained:

> If we give advice to the women to stay at MWAs, sometimes the husband may not give permission, as she would need to stay far from their home. In this case, we have to convince him and the mother-in-law to accept that the pregnant women should stay at the MWA.

HEWs provided education about MWAs and worked to create demand, focusing their efforts on women who were most likely to benefit from MWAs: those who live far away from the health facility, those with high-risk pregnancies and those with a stressful situation at home (e.g., engaged in physical labour). For instance, HEWs advised women that using a MWA allows them to get rest from their work, and is better than staying at home and being worried about problems that might arise. One HEW underscored the importance of giving education 'in detail' because behaviour change is not an easy process.

When promoting the benefits of MWAs, HEWs also often communicated the possible consequences of non-use. For example, one HEW described how she convinces women to use MWAs by pointing out their advantages, namely, that when staying at a MWA health problems can be addressed quickly, healthy foods and coffee are provided, and delivery services are readily available. Another HEW took the approach of conveying an extreme consequence of MWA non-attendance (death), asking women what their families would do without them:

> We encourage them [women] by saying that if you die, you leave all things [your children and home]. What if you [do not attend and] die? But if you save your life, you can nurture your kids. So, we send mother to the health center after convincing her in such way.

HEWs had ideas about how to make MWAs more comfortable and home-like. At one study site, the HEW suggested that the MWA policy should be changed to allow women to bring their young children with them. Other HEWs thought that giving women clothes to wear at the MWA would encourage them to stay, and that more steps could be taken to create a home-like environment (such as having customary coffee services). Overall, HEWs urged that the necessary infrastructure should be in place to ensure that MWAs are comfortable for women, and that women should be treated nicely when they stay at MWAs.

HEWs advocated on behalf of women to improve aspects of the MWA that women found unacceptable. For instance, one HEW reported negotiating with health centre staff to ensure that women at the MWA would be fed (the normal practice was to only provide food after the woman had delivered). HEWs called upon governments to have a greater role in supporting people who are poor, and to ensure that health facilities are adequately staffed with knowledgeable midwives and nurses. HEWs saw that communities had a role to play in maintaining the facility (e.g. through monetary and in-kind donations) and encouraging women to use it. Some HEWs had an active role in the collection of money or food from community members for MWAs. One HEW explained:

> Regarding the crops and money for the MWA, we ourselves, with the 'gare' [community] leader collect it and submit to the health center.

5.6 Discussion

This study aimed to identify major barriers and enablers to MWA use encountered by HEWs, and strategies employed to address them, in an Ethiopian context. Many of the major barriers and enablers

to MWA use corresponded with previous findings about place of birth decisions. (22–26) Notably, at the individual level, HEWs reported that some women did not see the importance of using an MWA, while others were compelled to prioritize remaining at home to care for their families. Within families and communities, male partners and support networks appear to be instrumental in enabling or deterring MWA use. Prominent factors associated with intermediate and structural determinants of health included functionality and acceptability of the MWA and/or adjacent health facility, geographical access and cultural/social norms.

While MWAs, by design, aim to address geographical barriers to facility birth, access frequently emerged as a barrier. While ambulances, if available and functioning, may be a viable transportation option for women during labour, (24) this service is not available for women attending MWAs.

When compared with decisions about place of birth, decisions about MWA use entail additional considerations, as women face spending a greater amount of time away from home, and adapting to different living conditions at a MWA. These considerations can exacerbate the consequences of determinants across the four domains. For instance, compared to a woman not staying at a MWA, a woman spending several weeks at a MWA would require a stronger support network to care for her family at home and, depending on the functional status of the MWA, to provide supplies to ensure her comfort there. A woman staying at a MWA may also be in stronger defiance of traditions and gender normative roles, which dictate that she obey her husband and limit her time away from home. (22)

In our study, while many HEWs supported or facilitated MWA improvement activities, they expressed different ideas about the responsibilities of various actors and groups, noting that community participation in MWA construction and upkeep may promote its acceptance and use. Nationally, there appears to be little standardization in MWA contribution schemes and functionality, (7) and

consequently, high ambiguity about how MWAs should be constructed and managed, and low accountability for ensuring that the facility is functional.

The findings of this study call into question the extent to which MWAs in Ethiopia are used by the populations to whom they are targeted. MWAs that are poorly equipped (e.g. lacking food and water) unintentionally deter women whose support networks lived too far to bring supplies; likewise, women living in very remote areas or women having very difficult pregnancies find it more challenging to physically get to MWAs. Although HEWs report doing their best to reach vulnerable populations, women who have less contact with the health system are in turn less likely to use MWAs. Unfortunately, this is not an uncommon challenge of equity-oriented health programs, (27) underscoring the need for implementation research to explore equity outcomes. (28)

Within their sphere of influence in the community and at the health facility, HEWs are advocates for pregnant women, and have ideas about how MWAs – and the experience of using them – could be improved by various stakeholders. While the extent to which HEWs can act as advocates outside of the health system and/or to higher levels of government has limits, (29) Maes (30) posits that increased political engagement of low-level health workers is a viable endeavour to further their rights and to promote a more ecological and humanistic approach among higher-level actors.

The strategies adopted by HEWs offer insight into how their position in the community can be harnessed and strengthened to promote the use of MNCH services. Although HEWs routinely engage with community members and have contributed to the expanded use of certain services (e.g. family planning, antenatal care and HIV testing), they have been less successful in increasing the rate of facility deliveries and skilled birth attendance. (31) Indeed, inciting behavioural changes related to childbirth practices poses unique challenges that resonate across multiple levels of influence, from individual attributes to structural determinants. (23,24)

Some HEWs undertake special efforts to include male partners in their education and outreach activities. HEWs recognize that male participation could have cross-cutting benefits: as primary decision-makers in many families, male partners who understand the importance of MNCH services use could encourage attendance, ensure access to adequate resources, and establish positive support networks. HEWs in our study developed their own strategies for engaging with male partners, which sometimes turned into heated exchanges. HEWs may benefit from opportunities to collectively discuss and develop these strategies. For example, the application of popular education approaches with low level health workers in Ethiopia can facilitate greater awareness of the power-based societal structures within which they work. (30) In Tanzania, community health workers received training for involving males in maternal health education, which improved shared decision-making for place of birth decisions. (32) The implications of male involvement in MNCH activities on gender equity in low- and middle-income countries is not well established, and warrants further research. (33)

Due to the complex interactions of the determinants identified in this study, our findings suggest a need for multilevel and coordinated approaches to the promotion of MNCH, encompassing health and non-health sectors. Between 1990 and 2010, an estimated 50% of gains in maternal and child mortality in low- and middle-income countries were attributed to improvements outside of the health sector in areas such as economic growth, good governance, environment, education, fertility and women's empowerment. (34) The rising recognition of the importance of determinants of health has drawn attention to policy processes and the need for more constructive dialogue between policy makers and implementers. (35) Research that links community-level implementers with broader policy environments can lead to greater understanding and theorizing around the actions needed to pursue social determinants of health. (36,37)

As the government of Ethiopia continues to move forward on ambitious commitments (e.g. the United Nations (UN) 2030 Agenda for Sustainable Development, the country's own national Health Sector

Transformation Plan, and the national Growth and Transformation Plan), it will be important to consider how the design and implementation of MNCH initiatives account for equity. At the community level, with strong connections to families, communities and low levels of the health system, HEWs have a unique vantage point to assess barriers and enablers to service use. By the nature of their work, HEWs can offer a nuanced understanding of how determinants of health are experienced at the ground level. With training, resources and opportunities to liaise with higher-level decision makers, HEWs are positioned to play an important role in advancing equity-oriented MNCH initiatives.

5.6.1 Strengths and limitations

This research addresses an urgent need for more evidence about the implementation of MWAs, an equity-oriented MNCH intervention. Our findings were derived from interviews with 31 HEWs across sites in Jimma Zone, Ethiopia, which allowed us to capture data about a range of MWA facilities, communities and families. While we acknowledge that the findings may not necessarily be generalizable across Ethiopia (given the high degree of diversity with regards to MNCH practices, lifestyles, culture, etc.), we believe that our results have general implications for the design, implementation and scale up of MWAs in low- and middle-income country settings. Further, the application of an ecological model allowed for the conceptualization of barriers and enables across the four domains, providing insights into possible entry points and synergies for advancing action on determinants of health.

Previous research with health workers in Ethiopia caution about a social desirability bias, whereby participants are hesitant to raise negative and/or politically sensitive issues. (24,38) We encouraged HEWs to speak freely (by assuring them that their confidentiality and anonymity were protected; conducting interviews in private areas; and using interview techniques such as probing and repeated questioning to obtain more detail); but we cannot eliminate the possibility that such desirability biases existed in our study. Interview data were translated from the local language into English, and it is possible that the cultural meaning of certain words, phrases or concepts were not fully retained through

this process. We attempted to minimize language interpretation issues by working closely with bilingual data collectors before, during and after the study, and being present with them at data collection sites. Forthcoming research from the Safe Motherhood Project will evaluate the effectiveness of MWAs on MNCH.

5.7 Conclusions

For women in rural and remote areas, the decision of whether to stay at a MWA is complex and multifaceted. The advancement of the MWA initiative would benefit from action across determinants of health, such as: improving the adequacy of the MWA facility; promoting acceptance by the community; promoting community contribution schemes; improving geographical access; encouraging shared decision-making between women and their partners; providing education about healthy MNCH practices; and encouraging support networks. HEWs are the primary contact point with the health system in rural and remote communities of Jimma Zone, and they routinely assist women and their families in navigating barriers to health service use. The findings of this study suggest that HEWs are well positioned to advance equity-oriented health interventions by promoting their use among target populations. With additional training, resources and opportunities to engage with policy processes, the roles that HEWs play in expanding health care use in at-risk populations can be strengthened.

5.8 End materials

5.8.1 Ethical considerations

We obtained ethical clearance for this research from Jimma University College of Health Sciences Institutional Review Board and University of Ottawa Health Sciences and Science Research Ethics Board; the research was conducted in accordance with the prevailing ethical principles.

5.8.2 Conflicts of interest

None.

5.8.3 Funding

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5.10 Bridge

Chapter 5 (Article 2) detailed the implementation and promotion of maternity waiting areas (MWAs) in rural communities of Jimma Zone. Drawing from interviews with Health Extension Workers (HEWs), the research describes HEW efforts to generate high levels of community engagement and acceptance of the initiative. These efforts require HEWs to have an intimate knowledge of the community and to identify and develop strategies to overcome relevant barriers to MWA use across individual, family, community and societal levels. While HEWs were confident in their ability to successfully carry out their work within their communities, they cited a lack of opportunities to interact with higher levels of the government and health system.

In Chapter 6 (Article 3), interviews with subnational health managers are analyzed to study how they understand health equity in the context of maternal, newborn and child health (MNCH) and how they undertake their role in promoting it. Given the community-level findings presented in Chapters 4 and 5, this article demonstrates how subnational health managers bridge national-level directives within the realities of the areas where they work.

When the webs of the spider join, they can trap a lion -Ethiopian proverb

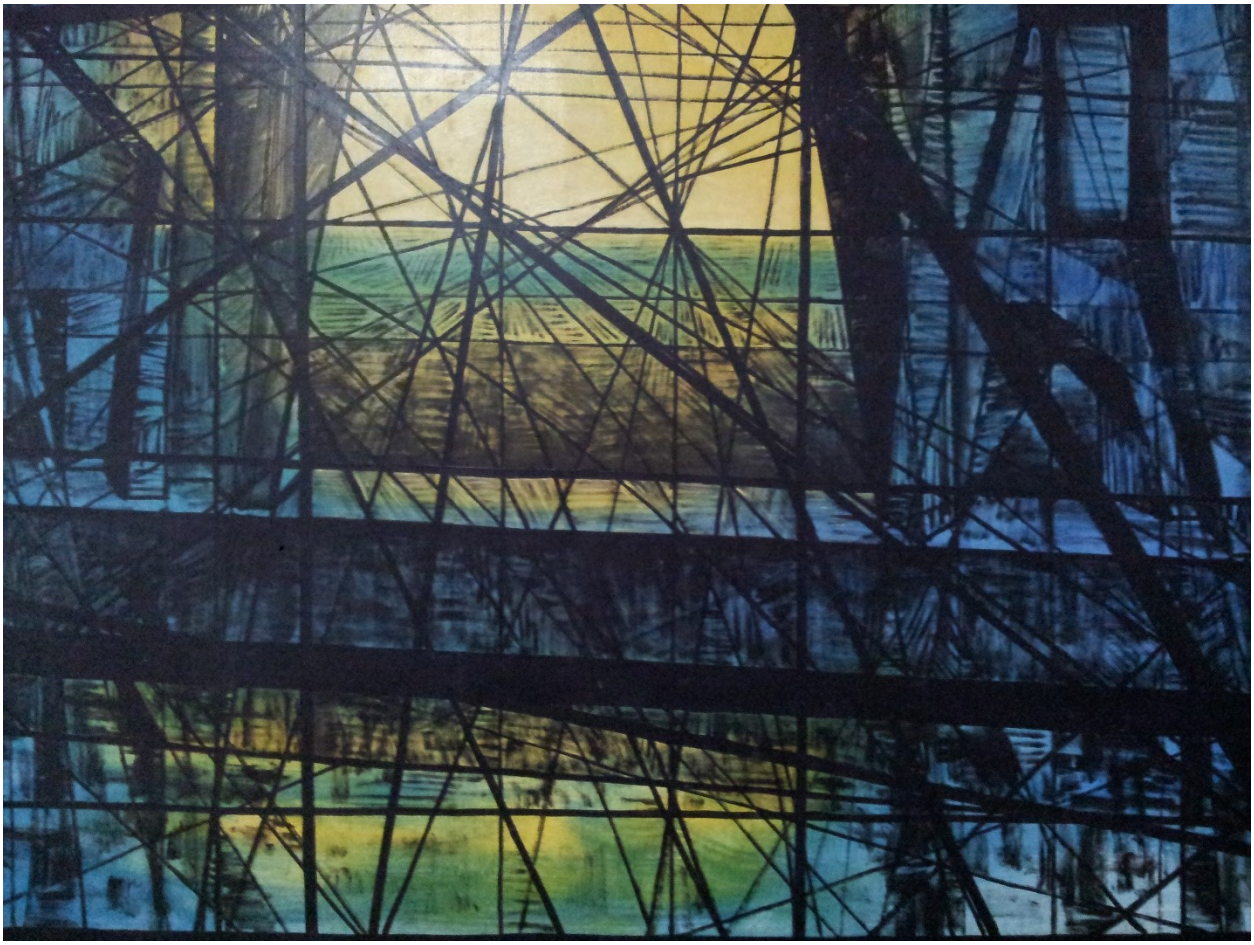

Photo: Nicole Bergen

Caption: Painting by Afewerk Tekele ‘African Heritage’ in the Addis Ababa National Museum

Chapter 6. Subnational health management and the advancement of health equity

Article #3

Subnational health management and the advancement of health equity: a case study of Ethiopia

Publication status

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Author contributions

The authors of the article, in order, are: Nicole Bergen (University of Ottawa), Arne Ruckert (University of Ottawa), Manisha A Kulkarni (University of Ottawa), Lakew Abebe (Jimma University), Sudhakar Morankar (Jimma University) and Ronald Labonté (University of Ottawa). NB led the conceptualization and design of the study, alongside RL and MAK. NB developed the data collection tools and conducted the data collection and analysis, with guidance from RL, AR, MAK, SM and LA. NB wrote the first draft of the article with inputs from RL and AR, and NB oversaw the revisions. All authors read and approved the final manuscript.

6.1 Abstract

Background: Health equity is a cross-cutting theme in the United Nations (UN) 2030 Agenda for Sustainable Development, and a priority in health sector planning in countries including Ethiopia. Subnational health managers in Ethiopia are uniquely positioned to advance health equity, given the coordination, planning, budgetary, and administration tasks that they are assigned. Yet, the nature of efforts to advance health equity by subnational levels of the health sector is poorly understood and rarely researched. This study assesses how subnational health managers in Ethiopia understand health equity issues and their role in promoting health equity and offers insight into how these roles can be harnessed to advance health equity.

Methods: A descriptive case study assessed perspectives and experiences of health equity among subnational health managers at regional, zonal, district and Primary Health Care Unit (PHCU) administrative levels. Twelve in-depth interviews (IDIs) were conducted with directors, vice-directors, coordinators and technical experts. Data were analyzed using thematic analysis.

Results: Subnational managers perceived geographical factors as a predominant concern in health service delivery inequities, especially when they intersected with poor infrastructure, patriarchal gender norms, unequal support from non-governmental organizations or challenging topography. Participants used ad hoc, context-specific strategies (such as resource-pooling with other sectors or groups and shaming-as-motivation) to improve health service delivery to remote populations and strengthen health system operations. Collaboration with other groups facilitated cost sharing and access to resources; however, the opportunities afforded by these collaborations, were not realized equally in all areas. Subnational health managers' efforts in promoting health equity are affected by inadequate resource availability, which restricts their ability to enact long-term and sustainable solutions.

Conclusions: Advancing health equity in Ethiopia requires: extra support to communities in hard-to-reach areas; addressing patriarchal norms; and strategic aligning of the subnational health system with non-health government sectors, community groups, and non-governmental organizations. The findings call attention to the unrealized potential of effectively coordinating governance actors and processes to better align national priorities and resources with subnational governance actions to achieve health equity, and offer potentially useful knowledge for subnational health system administrators working in conditions similar to those in our Ethiopian case study.

6.2 Keywords

Case study; Ethiopia; health equity; health governance; health systems; subnational health managers

6.3 Introduction

Health equity, defined as the absence of avoidable, unfair, or remediable differences in health among subgroups of a population, (1,2) has been widely adopted as a priority for national health sector planning, aligning with commitments such as the UN 2030 Agenda for Sustainable Development. The development and implementation of plans to advance health equity, however, have proven to be a complex and difficult undertaking. (3,4) Meaningfully promoting health equity and addressing the root causes of inequity requires the involvement and coordination of stakeholders across various sectors and levels of governance, each with differing roles and interests. (5) Consequently, the promotion of health equity is beholden to context-specific considerations at national and subnational levels. (6)

Ethiopia, a low-income country in east Africa, has made strong national commitments to advance health equity. Equity is a strategic objective in the national Health Sector Transformation Plan, which aims to promote ‘equal access to essential health services, equal utilization [by] equal need, and equal quality of care for all’ (p.14), while calling attention to issues of fairness and human rights (noting Ethiopia’s constitutional right to health). (7) Having a record of substantial – though not necessarily equitable –

gains in maternal, newborn and child health (MNCH) during the Millennium Development Goal (MDG) period (1990-2015), (8) Ethiopia emphasizes equity as a key focus for MNCH and primary health care (PHC) in particular. (9,10) For example, the expansion of basic health services into rural areas through the Health Extension Program, which stipulates the provision of publicly-funded MNCH services, (11,12) demonstrates a commitment to improve MNCH outcomes among the rural and economically poor.

Bridging the gap between national-level bureaucrats and the health workforce, subnational health managers are a vital component of health system functioning. (13,14) Management of health systems – defined as the process of achieving specified objectives through human, financial, and technical resources (15) – is particularly important in low-resource settings, where such resources are in limited supply when juxtaposed against ambitious objectives. For this reason, subnational managers in the health system in Ethiopia (including facility-based managers, as well as those at district (woreda), zonal and regional levels) (Table 6), are uniquely positioned to further national commitments to improve health equity.

Table 6. Subnational administrative bodies within the Ethiopia system, regional to local, in the Ethiopian health system

Administrative Level	**Name of health administrative unit**	**Key characteristics and administrative responsibilities**
Region	Regional Health Bureau	• Ethiopia has 11 Regional Health Bureaus. (19) • Regional Health Bureaus coordinate and execute all activities in the health sector within the respective region. • Staff at Regional Health Bureaus translate and adapt national guidelines for regional contexts. • Funding is received from the Federal Ministry of Health (FMOH) (allocated based on population size of the region) and mostly earmarked for specific programs.
Zone	Zonal Health Department	• Ethiopia has approximately 86 zones. • Zonal Health Departments convey guidelines and directives from the region to the woredas.

		• They provide technical and administrative support to woredas, and monitor their financial performance.
District (Woreda)	Woreda Health Office	• The total number of urban and rural woredas in Ethiopia is more than 800, each with a catchment population of around 100,000. • Woreda-based health sector planning was introduced in Health Sector Transformation Plan -III (2005/06-2009/10). • Woreda Health Offices (together with PHCU staff) manage health care delivery issues, and perform monitoring and evaluation of health activities in the woreda.
Local: Primary Health Care Unit (PHCU)	PHCU	• A PHCU typically comprises five health posts and a health centre. Each PHCU serves a catchment population of about 25,000. • PHCUs employ directors and coordinators who function in management capacities. Management staff at the PHCU have a direct role in overseeing the delivery of care.

Since the early 1990s, the health sector in Ethiopia has been characterized by the process of decentralization and the transfer of decision-making power from national to lower levels of administration. (16) This is evidenced by the Health Sector Transformation Plan agenda for 'woreda transformation', whereby woreda health offices are largely responsible for the actualization of national governmental priorities such as the delivery of equitable and quality health care. (7) The Health Sector Transformation Plan additionally recommends that each administrative level develop strategic annual plans that contextualize local priorities and harmonize action under the overarching Health Sector Transformation Plan. Although decentralization of the health sector is intended to promote equity through improved responsiveness to local needs, some have suggested that, without adequate financial and human resources, clear guidelines, and continuous monitoring, it may exacerbate inequities. (17,18)

Understanding and supporting the advancement of health equity in Ethiopia requires attention to subnational health managers and the variety of coordination, planning, budgetary, and administration

tasks that they perform. Indeed, the role of subnational actors in furthering global health initiatives is a growing area of interest in health governance scholarship. (13,20) Assessments of the characteristics of well-functioning health systems point to several features that resonate with the roles of subnational actors, including: autonomy and flexibility in managing the health system; responsiveness to diverse population needs; strong district health systems that can reach marginalized populations; and engagement with non-state actors and communities. (21,22)

Through a case study in Ethiopia, this article explores the perspectives and experiences of subnational actors as they relate to the advancement of the nationally established priority to improve health equity. The study aims to ascertain how subnational health managers in Ethiopia identify and understand health equity issues and their role in promoting health equity. This empirical exploration is particularly pertinent within the context of Ethiopia, where the roles and responsibilities across different levels of the health system are not always fully understood by those working within the system. (23) Based on our findings, we suggest opportunities to address health equity bottlenecks at subnational levels of the health system, and discuss how efforts, including future research, can be oriented to better understand and advance equity in health. We anticipate that the lessons from this study may have broad applicability in other low- and middle-income countries, where trends of decentralization of the health sector may too create uncertainty surrounding the role of subnational health managers.

6.3.1 Theorized constructs of health equity

As illustrated in Figure 6, health equity can be broken down into three constructs: health; distribution of health; and moral or ethical characterization of health distribution. The conceptualization of health may focus on assessments of health status, well-being or functioning (24,25); it may also capture any other aspect of the health system (including health governance, health financing, health services access and readiness, and health service coverage) (2,26), determinants of health, or health-related norms, values, behaviours and attitudes. (27) The distribution of health construct addresses the comparison of health

across subgroups, including the question of how subgroups of individuals are defined. (28,29) The third construct addresses whether a specified aspect of health and its distribution is problematic from a moral/ethical perspective. That is: is the distribution of health fair, i.e. are the health differences between individuals or groups unavoidable? (27)

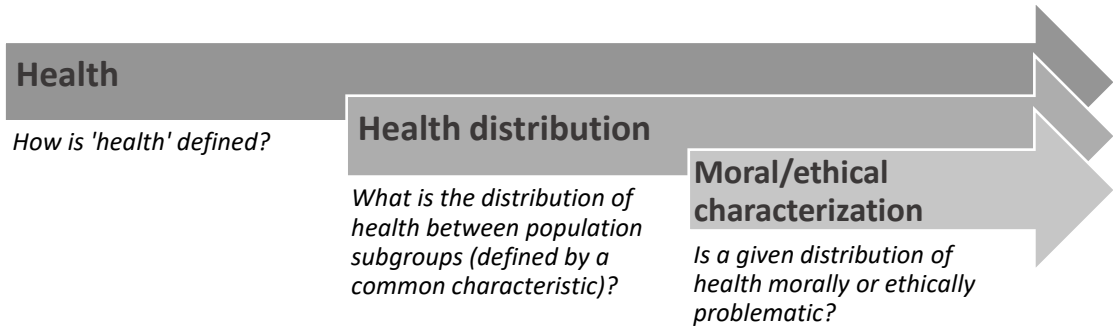

Figure 6. Constructs of health equity

6.4 Methods

We drew from case study methodology to examine the perspectives and experiences of subnational health managers within one zone of Ethiopia, located in the southwest of the country, and corresponding higher levels of the health system. A descriptive case study design was selected to allow for the holistic exploration of a complex social phenomenon (the advancement of health equity) where the context and phenomenon are not clearly distinct. (30) The findings reported here are part of a larger randomized implementation study across several districts within Ethiopia. Ethics approval for this research was obtained in 2017 (in advance of commencement of data collection) from the University of Ottawa Health Sciences and Science Research Ethics Board and from an Ethiopian University

Institutional Review Board. The study was undertaken in compliance with the protocols stated in the ethics approval.

Participants were recruited from purposefully selected government health offices within the region and invited to participate in key informant interviews (KIIs). At each selected office, we invited one senior-level manager and one MNCH manager to participate in the study (except at PHCUs, where in the absence of MNCH managers, only senior-level managers participated). The interviews were semi-structured, allowing participants to respond in an uninhibited manner, while retaining a central focus on the topic of interest. In total, we conducted semi-structured interviews with 12 participants (1 female and 11 male) that held senior leadership, managerial or coordination positions at subnational levels of the health system in Ethiopia. These included directors, vice-directors, coordinators or MNCH focal points across regional (n=2), zonal (n=2), woreda (n=5) and PHCU (n=3) levels of administration. Interviews lasted 30-90 minutes and focused on 5 domains of questioning (Figure 7; also see Appendix 4.3).

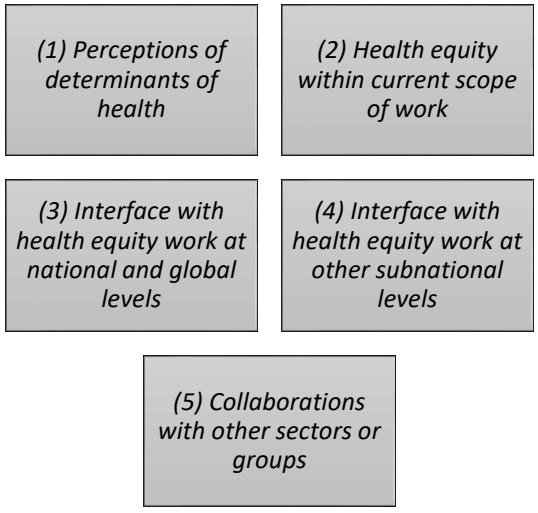

Figure 7. Five domains of investigation in semi-structured KIIs with subnational health managers in Ethiopia

The creation of interview guides was loosely informed by themes presented in two theoretical frameworks (an ecological framework of the social determinants of maternal and child health (31) and the framework for addressing equity through determinants of health (32)). The interview guide was pilot tested prior to data collection and revised for clarity and length. Investigation within the first domain (perceptions of relevant determinants of health) involved the use of a photo card showing a pregnant woman being carried on a traditional stretcher; participants were asked to comment on the acceptability and commonness of the scene, and underlying factors and conditions. To introduce the topic of health equity (domains 2-5), participants were read a description adapted from the World Health Organization (WHO) Commission on Social Determinants of Health (5): 'Health equity exists when everyone has a fair chance to achieve their full health potential. The opportunity to be healthy is available to everyone, regardless of their social, economic, demographic, or geographic characteristics.'

The interviews were conducted in November and December 2017 by one member of the research team, who had prior experience conducting semi-structured interviews, and doing research in the Ethiopian context. All interviews were conducted at a time and place that was convenient for the participant (typically the participant's place of work). Participants were offered the option of doing the interview in English or in the local language of their choice with the assistance of an interpreter. Nine participants chose to do the interview in English, and three requested an interpreter for all or part of the interview. The interpreter, who has an ongoing relationship with the researchers, was briefed extensively about the study beforehand, and did verbatim, real-time translation. (33) All participants gave written informed consent to participate in the study and gave permission for their interview to be audio-recorded. The recordings were subsequently transcribed in written form. For interviews where an interpreter was present, the interpreter listened to the recording and reviewed the English transcript, making minor revisions where necessary.

Data were analyzed through thematic analysis methods, using Atlas.ti software. Following multiple readings of the transcripts, a code guide was developed deductively based on the interview questions and expanded inductively to accommodate emergent concepts. Transcripts were coded, and cross-cutting themes were identified to illustrate understandings of health equity and perceived roles and responsibilities in addressing health inequities. Several researchers were involved in writing up the analysis. The findings of the study were discussed with experienced researchers working on related topics within the same zonal area, as well as national experts in the topic area. Researchers remained reflexive in identifying potential sources of bias and taking measures to limit them. (34)

To ensure anonymity, the participants were assigned pseudonyms and are not identified by their job title or geographical location in the country; identifying details in participant quotes have been removed or altered.

6.5 Results

6.5.1 Understandings of health equity

Participants demonstrated detailed knowledge of government messaging about health equity, as several of them reiterated definitions or explanations of health equity that aligned closely with phrasing in Ethiopian FMOH documents; additionally, many participants linked the concepts of equity and quality, which are grouped together as one of three key features in the Health Sector Transformation Plan. (7) Participants all acknowledged that health equity was a concern within their respective jurisdictions. They provided multiple and diverse examples of health inequities that they had witnessed, which lend insight into how they understand health equity constructs.

6.5.2 Health service delivery, quality and health sector adjacent factors

Participants expressed notions of ‘health’ that related to health service delivery, health service quality and health sector adjacent determinants. Most predominantly, participants provided examples of health

inequity that pertained to health service delivery issues that fall within their scope of work as subnational health managers such as service accessibility, service use, funding/payment for health services, and the health workforce. Participants sometimes described health service delivery issues under the broad umbrella of 'quality', which they related to: the availability of materials, equipment and supplies; health worker training and professional conduct; health facility construction and cleanliness; and adherence to FMOH standards and guidelines. Tedbabe[a], for example, spoke about inequity in the availability of functional ambulances, which he explains, is linked to the ability to mobilize finances locally:

> We have a lot of budget approved from the government to put towards buying ambulances…. but it's not enough to actually put ambulances in all woredas. Woredas are expected to have enough budget for the purchasing and also different maintenance issues and also for different operational costs associated with the ambulance. -Tedbabe

Another participant noted that the supply of material resources at health centers differs based on the extent of support from non-governmental organizations:

> Medical equipment, medicine, drugs: they impact on service quality. Some health centers are equipped by non-governmental organizations. The materials come from non-governmental organizations. The other health centers do not have the chance to get this material. So, there is a barrier. A difference in quality. In our [area], one health centre is [well supported] and three areas are also equipped very nicely because of the non-governmental support. The other health centers are [not because they are further away]. So, there is a difference. -Tahir

In fewer instances, participants raised examples of 'health' that are adjacent to the health system, such as community mobilization and leadership for health, and as Ebise explains, susceptibility to disease:

> Because of different agricultural cultivation, there could be different scenarios. Like there are some areas that are highly cultivated and some areas that are not cultivated – there may be a difference. In those areas where there is a lack of agricultural cultivation, there may be malnutrition. And malnutrition may affect their [the local population] height. -Ebise

6.5.3 Geography and intersecting factors

Geographical dimensions featured prominently in how participants described the distribution of health; that is, health inequities were linked to having geographically dispersed populations with variable contexts and living conditions. While geography itself was considered important in characterizing health inequity, participants also explained how geography intersected with other factors. For instance, geographical remoteness combined with poor infrastructure (especially roads) was identified as a major barrier that affected transportation to health facilities, but also the ability of subnational health managers to provide training to health workers and perform supervisory activities. Mustafa, for instance, describes how the topography of an area is a determinant of health worker retention:

> [The catchment area] is very large, and the topography also makes it very hard to reach some areas… with this challenge, we are going to try to touch each kebele [community of 5000 people]. But there is one kebele that is very hard to reach: there is no road and as of now there is no HEW [Health Extension Worker][b]. -Mustafa

Health centers located in remote settings were also less likely to receive support from non-governmental organizations, while socio-cultural considerations, such as patriarchal gender norms, were sometimes expressed with a geographical dimension based on the presence or absence of them in certain areas:

> In most areas it exists that women are almost neglected and almost considered as a material. In some areas. They [women] are not decision makers, even about their own reproductive health

> issues. Even to get, for example – and this is a life or death issue – even to get skilled birth attendance they have to get their husbands to approve. -Fikereye

An example of a distributional aspect of health inequity that did not have a geographical dimension identified social connectedness as a determinant of the quality of care received:

> Quality of care is not [equitable]. It may be varied from person to person…They [health workers] may give the one he knows very well good service. In other cases, it may be minimized. -Tewdros

6.5.4 Distinguishing between equity and equality

Participants described a range of perspectives surrounding the distinction between equity and equality. For instance, some participants expressed that addressing health inequities required looking at factors beyond equal distribution of health system resources. They problematized attempts to standardize aspects of the health system, explaining how standardization is not responsive to context-specific needs or circumstances from which inequities stem. Illustrating the distinction of potential coverage from actual coverage, (35) Ayana described inequity as a 'difference in service utilization among people while the services are equally available for all community members,' acknowledging that sometimes equality in health system delivery mechanisms does not reflect the varying realities between areas. Relatedly, he described why even an equal allocation of medications to all health centers is not enough to ensure their equitable distribution (which he attributes to inequalities in human resources):

> So, sometimes we received the drugs [back] from remote health centers. Initially we distributed the drugs for all health centers equally. But the community in the remote area may not get the services per their need, because the health professionals are not there to distribute those drugs. -Ayana

In other cases, participants upheld that promoting health equity meant ensuring equality in service delivery irrespective of contextual factors that drive inequities. Najib, for instance, advocated for equality in the delivery of health services to all and the provision of MNCH services for free. For him, broader causes of health inequity (such as education level or place of residence) should not influence how services are provided:

> Since our aim is to give service to all mothers, we don't ask them where they're from. We are serving all mothers equally… And even if a mother, whether she came from a rural area or from the town, if she is educated or not educated, the service is free. And there is no basis for having any differences in how services are given. So, everything is equitable. -Najib

6.5.5 Advancing health equity

Building upon their expressed understandings of health equity, participants described how they approached advancing health equity. These approaches often were related to serving remote populations and strengthening operational aspects of the health system, but sometimes extended beyond this to address demand-side barriers to health service utilization (such as lack of knowledge or awareness), or broader determinants of health (such as gender inequities or lack of community leadership).

6.5.6 Reaching underserved populations and low-performing areas

Foremost, all participants recognized that serving all people within their catchment area was an important aspect of their role as a subnational health manager. Many of these efforts centered on reaching geographically remote populations. For instance, Tahir described how, although health posts[c] are designed to serve 5000 people, some health posts in remote areas could have catchment populations of up to 8000 people, spread over a vast area. To address this, Tahir explained how he, on his own initiative, used local budgets and fundraising to establish temporary health posts near remote

villages; HEWs in these areas then worked out of multiple health posts (temporary and permanent). Tahir, whose efforts are not formally recognized by higher levels of the health system, commented, 'by this method, we should get to equity.'

Tewdros explained how he promotes different approaches, depending on the setting and circumstances, to ensure that pregnant women arrive safely at health centers to deliver their babies. His recommendations are tailored based on the woman's proximity to passable roads and ambulance accessibility.

> When labour happens they try to take her to the health centre. If there is any ambulance near to the household they may take her by using this. This is mainly if there is a road accessible. They take them to the road and they call the ambulance and the ambulance will give service to them… If there is no ambulance access, and if the road is not accessible, we recommend them to carry her using what we call a stretcher. -Tewdros

6.5.7 Strengthening health service delivery

Participants explained how, in many cases, their role in promoting health equity was to strengthen operational aspects of the health system such as maintaining an adequate and effective health workforce, ensuring availability of medications and services, and facilitating supportive supervision. Specific mechanisms to strengthen aspects of health service delivery mentioned by participants at the zonal level included: publicly recognizing both high- and low-performing areas; providing continuous training and encouragement to health workers; establishing transparent channels to receive and respond to public feedback; and hiring more health workers in remote areas where they are needed, and focusing on their retention.

Gali described how his team at the PHCU level lacked the resources to acquire transportation to perform supervisory visits to health posts in his catchment area. He explained how he pieced together resources (including contributions from his own salary) to address the issue:

> We have difficulty to go to the community because we have only one motorcycle. And that I see as a barrier… We do not have enough budget… We need for transportation for [many reasons], and we need the money. We can make it work by [redirecting] a small amount of the overall budget or using our own salary to do this work. Because it has an impact on our work. -Gali

According to participants, both positive public recognition and punitive measures were commonly used to promote improved health service delivery. While national FMOH policies strongly discourage displays of disrespect or shaming towards patients (i.e. by health workers at the facility level) (7), subnational health offices routinely and openly engage in public shaming of under-performing areas. In detailing how his office encourages improvements of lower-level health offices, Fikereye explains:

> One thing, one initial thing is something that we do during the review meeting. We recognize some high performance [areas], and we prepare a sort of shame in low performing [areas]. This is one way. -Fikereye

Likewise, another participant, at the PHCU level, described that health workers could sometimes be punished for not doing their job correctly or not following guidelines.

Participants also frequently mentioned the importance of improving quality as a means to address health service inequities. They reported addressing quality issues through a variety of mechanisms such as making strategic budget allocations, increasing supportive supervision, and initiating explicit discussions about quality issues. Tariku explains how, in areas where the quality of antenatal care is poor, he facilitates extra visits from health workers with the expectation of inciting quality improvements:

> Not all health facilities give equal antenatal care: one is very excellent and the other is very lazy… The community is going to the [better health facility]. Through time, we give supportive supervision to improve the [other] health facility. What do I mean? We assign a health worker to go to the low performing facility and support them…. They [the health workers performing supportive supervision] will go weekly. -Tariku

Tahir, who works in a geographically large area, recognizes variable quality across communities in terms of health service delivery. He explains how connecting key stakeholders from the different communities encourages them to share their experiences, which in turn motivates them to advance service quality:

> The [catchment area] is huge… If all religious leaders and other community leaders came together to discuss this [health quality issues], they could learn about the experiences of the others… Why? [They know] how they teach the community, how they attract the community [to use services], how they engage the population to use the health services. Delivery is different from one [area] to the other. If they came together to discuss, one gets experience from the others. And this would improve the service quality. -Tahir

6.5.8 Addressing non-health determinants of health

Health equity was also addressed by participants through factors peripheral to the health system. While non-health factors were commonly considered in participants' efforts to reach remote populations, strengthen health service delivery, and improve service quality (as detailed above), participants also described taking actions to directly address wealth- and gender-based inequalities that impacted health. Tedbabe, acknowledging urban-rural differences and wealth inequalities, spoke about the contribution of the health sector in providing extra support to rural areas and helping to address food security issues:

> We try to intervene in…rural areas to address differences based on wealth issues and so on. It's another challenge that will not only be addressed from the health sector, but the overall goals

> of the country, really. … But in the health sector we have our programs and we are trying to give extra support to families that cannot afford to buy food and so on. We try to give priority for people who cannot afford these things. In certain areas they [food and other health-related expenses] are provided for free. -Tedbabe

For Fikereye, his role as a health manager included promoting female empowerment and encouraging greater participation of men in reproductive and maternal health issues. For instance, he encourages male partner involvement at medical appointments and community pregnancy forums.

> Now we, as government, are addressing [female] empowerment to make women equal to males… As part of the government we are getting the male partners to be involved in reproductive health issues and understand their partners and make decisions together… For example, when women come in to have HIV screening tests during pregnancy, we tell her to bring her husband for engagement in HIV partner tests. While the partner does the test we also discuss many issues about pregnancy… for example, [telling them] about things like her personal hygiene, and about basic care during pregnancy. Like maternal nutrition… At the community level there are different meetings, like the pregnancy forum hosted by midwives. Although the primary targets are pregnant women, if male engagement is needed we call for males and we make a discussion… we need the engagement of men to care for their wives and their partners. -Fikereye

6.5.9 Aligning with other sectors or groups

Participants described working with other government sectors, community groups, and non-governmental organizations to advance health equity. Work with community groups had a heavy focus on demand creation for health services, while non-governmental organizations collaborations typically

involved receiving education or training as well as material or equipment inputs. Participants also expressed having close ties with higher and lower levels of governance within the health sector.

6.5.10 Government sectors

Working with sectors like agriculture and education was also raised by participants. While aligning with agriculture was a way to address hunger and malnutrition, the education sector was seen as important in promoting health literacy at the local scale, and ensuring high-quality training of health workers in adequate numbers. In some cases, these inter-sectoral collaborations were quite informal and ad hoc, such as sharing transportation to perform supervisory visits to remote areas; in other instances, these collaborations were institutionally formalized through programs focusing on, for example, nutrition or water, sanitation and hygiene.

One participant, Yared, provided details about how health and agriculture sectors work together, underscoring that when the population has poor agricultural outputs it strains the health system. He also acknowledged that financial constraints limit the potential of these collaborations, as finances are needed to cover per diems and travel expenses.

6.5.11 Community groups

Another issue that surfaced in the interviews was how community groups were perceived as instrumental in efforts to promote health equity, and complementary to the work of the health sector. The Women's Development Army (WDA), a cadre of community volunteers with a mandate to support the work of the HEWs at the local level, was mentioned frequently. Members of the WDA identify pregnant women to HEWs, who then follow up to provide antenatal care and to promote facility-based delivery. Najib describes how the WDA is very effective in parts of his catchment area – and less so in other parts: 'If they work, really, they are very active. The problem is that normally they are not active and just staying home.'

For Mustafa, and several others, strengthening the WDA is a way to reach out to areas that do not presently have sufficient HEWs:

> The WDA is the closest to the community. We are strengthening their capacity as well as the creation of their awareness on health… this WDA training, which is to reduce maternal deaths, has reached around 84% of the WDA [in my catchment area] at this time. -Mustafa

6.5.12 Non-governmental organizations

Several participants described how contributions from non-governmental organizations were beneficial (especially in the health topics that were prioritized by the non-governmental organizations) by helping to fill gaps in expertise, leadership, finances, and resources. Areas where non-governmental organizations worked benefited from an increased sense of commitment and community mobilization (e.g., through non-governmental organization-run programs that facilitate community mobilization). Several participants, however, discussed how the distribution of non-governmental organization contributions, while important, perpetuated geographical inequities. Tedbabe, who has interacted with non-governmental organizations in determining where they will work, described certain challenges that he encounters in trying to direct NGO engagement to remote areas:

> The challenge, for one, is the unfair distribution of the partners [non-governmental organizations]. It's not fair that most of the partners are distributed by the towns and urban areas…usually they don't want to go very far [outside of the cities]. We try to push them out into these areas actually – and they accept, but they don't want to stay there. They come back. We are trying. Still, most of the non-governmental organizations and partners are in the central parts of the country, but we are managing to push them out a bit. -Tedbabe

Tedbabe also spoke about the challenge of aligning non-governmental organization priorities with the priorities of the Ethiopian health system, noting that non-governmental organizations may have interests and priorities that do not fit within the political agenda for health.

6.6 Discussion

6.6.1 Perceptions of health equity in Ethiopia

Ethiopia's advancement on its global and national commitments to health equity relies on managers at subnational levels of the health system to realize improvements in equitable access to and delivery of quality health services. These improvements, in turn, rest partly on subnational health managers' perspectives on health equity and how they can act to improve it. We are unaware of prior research probing this specific aspect of subnational health system responsibilities, hence undertook the study reported on in this article, as part of a larger implementation study. (37)

Study participants easily recognized health inequities in their surroundings, which largely concerned issues embedded in the delivery of health services, and the geographical framing of health distribution. This finding is unsurprising, given that it reflects the administrative organization of the health system (hierarchically, across geographical divisions), and their mandate to increase health service coverage (see Table 6). Interestingly, geographical divisions were also the basis for comparing socio-cultural considerations such as gender norms. These findings add support to previous assertions that highlight the practical advantages of an area-based conceptualization of health inequity (38,39), though as the authors of those studies caution, this can perpetuate ecological fallacies (that is, making undue assumptions about all individuals in an area based on population-level patterns).

The moral/ethical characterization of health distribution was conveyed through participants' expressed unacceptability that the distribution of health disproportionally affected certain geographical areas, and their ongoing efforts to ameliorate this. Participants had a solid knowledge base about what was needed

to improve the functioning of the health system in these areas, as stipulated in government standards and guidelines surrounding human resources for health, facilities and equipment, quality measures, etc. However, given the general lack of resources, the ability of subnational health managers to effect change was often limited, calling into question that the unequal health distribution was practically 'unavoidable' – at least from the position of the subnational health managers. A previous study highlighting the differences across higher- and lower-performing PHCUs also noted resource and operational deficits in lower-performing facilities, which manifested in that study as: lack of data or mistrust of data quality; strained relationship between health facility staff, health workers and the community; and low contact and limited coordination with higher-level regulatory and financing bodies. (40)

6.6.2 Roles and responsibilities in tackling health inequities

While there is general agreement about the need for multipronged action to facilitate health equity gains through multiple entry points, (5,32) the role of the health system, and subnational health managers in particular, is less apparent. Baum (2007), like many others, advocates for top-down and bottom-up action on health equity (the 'nutcracker effect'), calling for increased pressure from high-level policy makers and grassroots citizen groups, begging the question: what is the role for those in between?

In our study, subnational health managers expressed mixed views about their role in addressing causes of health inequities that extended beyond the health system. Some participants described taking initiative to address certain non-health factors, which often centered around transportation or access issues, though these tended to be more akin to 'quick fixes' than long-term solutions. Many of the mechanisms that subnational health managers used to advance health equity were applied inconsistently, relying on personal ingenuity and close familiarity with the populations and environments where they worked. Further, these mechanisms did not appear to be formally recognized

or supported by the health sector in Ethiopia. Research in eastern Uganda reinforces the merits of encouraging subnational health managers to work creatively and flexibly to attain goals and collaborate with others (41), capacities that others suggest should be supported through institutional design and financing. (13)

Shaming of under-performing subnational health offices emerged as part of a strategy intended to motivate performance improvements, as captured through select quantifiable outcome measures. The merit of stigmatization in public health has been questioned, as it places burden on those already in positions of social disadvantage. (42) Research in Ethiopia has explored the implications of shaming at the health facility level, finding that such approaches cause undue suffering for women, and may serve as a deterrent to service use. (43) In a similar way, we question how this approach might be non-facilitative at subnational levels of the health system. We highlight the possibility, for example, of obscuring the integrity of reporting practices, which are already known to be poorly coordinated and prone to quality concerns. (44)

As part of their efforts to address health inequities, the subnational health managers in this study aligned their efforts with other sectors or groups in a variety of arrangements. These collaborations were valued (especially as a way to use resources more efficiently or to acquire new resources) though this sometimes introduced competing interests and unwanted complexities that led to exacerbated health inequities (notably, the role of non-governmental organizations in defining priority health topics, and geographical locales in which they were willing to provide resources). Indeed, coordination and collaboration with non-state actors is a recognized challenge across global health efforts, (45) particularly since development partners may contribute substantially to health financing (in the case of Ethiopia, development partners contributed 15.30% of total health expenditures in 2015). (46) Over the past two decades, the Ethiopian FMOH has benefited from strong leadership in rolling out certain donor coordination reforms (47); however, our findings suggest a need to extend these efforts subnationally to

ensure that non-governmental organization activities are better oriented to further health equity. Likewise, the scale-up of the WDA initiative should be informed by where gaps exist geographically, heeding the impact of the program design on the well-being of its participants. (48)

6.6.3 Decentralization in the health sector

Facing challenges when addressing health equity at the subnational governance level is not unique to Ethiopia. Other studies at the subnational level have previously found a general mismatch between policy responsibilities bestowed upon subnational governance actors and the financial resources provided to them for implementing an equitable policy agenda. (49) A similar criticism has long been raised in relation to the decentralization of health service more generally, which led to a rise in responsibility for lower level governance actors without matching (new) financial resources.

While decentralization was intended to improve operational efficiency while also contributing to more equitable health outcomes, in practice this has not been borne out. As one review study, which assessed decentralization across Latin American, African and Asian contexts, found: 'the quality and equity of access have not improved with the decentralization of health and education services; and equity and efficiency outcomes are closely related to the availability of financial resources and local government capacity.' (50) This mirrors some of our empirical findings which indicate that lack of fiscal capacity at the subnational governance level is a substantial impediment to achieving better health equity outcomes. At 5.98% of the government budget, health financing in Ethiopia remains, overall, below the Abuja target of 15%. (46)

The challenges highlighted in our study speak to a larger issue, namely how to effectively coordinate governance actors and processes across multiple levels, in order to achieve better alignment between national policy priorities (such as Ethiopia's Health Sector Transformation Plan), and subnational governance actions designed to achieve health equity. One particular concern in the context of

Ethiopia's resource scarcity is the accelerating capital flight (legal and illegal outflow of capital reaching over 1 billion USD annually) which undermines the ability of the central government to transfer resources to other government levels to achieve health equity-oriented policy objectives. This has led some to suggest that, in order to address health equity, more resources have to be mobilized domestically through progressive forms of taxation (51) (which, as of 2011, constituted 9.2% of gross domestic product (GDP) revenue in Ethiopia (46)). However, even if domestic resource mobilization could generate some of the much-needed, additional resources, acknowledging national level fiscal constraints to tackling health equity, others have explicitly called for international assistance for health as a way of strengthening equitable access to health service provision in the context of progressively implementing universal health coverage. (52,53) This could be achieved through a Global Fund to finance universal health coverage which would transfer resources to national governments in low-income countries, (54) which could then be used to allay the financial pressures experienced at the subnational level.

In this study, we explored how health equity is understood and pursued by subnational health managers across regional, zonal, woreda and PHCU levels in Ethiopia. We note that health system issues may resonate differently within each of these subnational levels, or in different regions across the country, as has been suggested in a previous comprehensive national assessment of all facilities that provide services for childbirth. (55) Our findings, while suggestive, should not be taken as generalizable across the whole of the Ethiopian health system.

6.6.4 Implications and further research

Focusing on the three constructs of health equity – health, the distribution of health and the ethical/moral characterization of health distribution – allowed us to gain insight into how subnational health managers perceive and address health inequities. Subnational health managers are attuned to inequities, both within and adjacent to their work, and often rely on personal ingenuity to circumvent

deficits in material, infrastructure, human and financial resources. By acknowledging, legitimizing, and supporting local solutions, the health sector can improve efficiencies, although localizing issues of distributional justice can lead to ignoring national or even global political and economic policies that exacerbate resource inequities far beyond the capabilities of local or subnational levels to mitigate. (56) Further explorations of such local solutions and means of facilitating knowledge sharing between subnational stakeholders within and between countries are warranted.

Geographical inequities in health are a prominent concern in Ethiopia and indeed, a major ongoing challenge for the health sector in Ethiopia lies in extending high quality, essential health services to rural and remote populations. (7) However, the meaning of 'health equity' is likely to evolve over time as its three constructs noted above shift to reflect changing contexts and priorities. Pragmatic approaches have been developed to help governments navigate the practical integration of health equity considerations into national health policies and/or policy-making processes, using participatory approaches to ensure that diverse stakeholder perspectives are captured. (57,58) Interestingly, our findings suggest subnational health managers to be very familiar with government messaging around health equity, and therefore policy documents and strategies are promising opportunities to harmonize understandings and establish norms surrounding the advancement of health equity. But, given that one of the major limitations to improving health equity at the subnational governance level is resource endowment, an important consideration going forward will be to ensure that expectations about health equity oriented policy actions at the subnational level are matched with appropriate financing, so as to avoid the decentralization of responsibilities without matching resources.

6.7 End materials

6.7.1 Ethics approval and consent to participate

We obtained ethical clearance for this research from the University of Ottawa Health Sciences and Science Research Ethics Board and an Ethiopian University Institutional Review Board in the region where the research was conducted. All participants provided written informed consent to participate in the study.

6.7.2 Consent for publication

By submitting this document, the authors declare their consent for the final accepted version of the manuscript to be considered for publication.

6.7.3 Availability of data and material

None.

6.7.4 Competing interests

The authors declare no competing interests.

6.7.5 Funding

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6.7.7 Endnotes

[a] All participants were assigned pseudonyms to protect their anonymity.

[b] HEWs are locally-recruited, female community health workers that are paid to deliver disease prevention and health promotion activities at the kebele (village) level, predominantly through community mobilization and health education.

[c] Health posts are the most decentralized level of health facility, designed to serve kebeles of 5000 people and be staffed by at least two HEWs. Strategies to account for kebeles that have more (or less) than 5000 people are not uniform across the country. (59)

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6.10 Bridge

Chapter 6 (Article 3) explored the unique roles of subnational health managers in promoting health equity through the variety of coordination, planning, budgetary, and administration tasks that they perform, often amid under-resourced conditions and diverse community considerations (as detailed in Chapters 4 and 5). Reflecting their professional mandates, subnational health managers deployed strategies to advance government health equity agendas, including achieving metrics and targets. These strategies were often discretionary, informal and context-specific, motivated by a sense of immediacy of providing services to people in need.

In Chapter 7 (Article 4), national health actors are probed for their understanding of health equity as a policy problem. Chapter 7 integrates findings from across the nested case study (Chapters 4, 5 and 6) as well as policy documents to elucidate why certain representations of the concept prevail in current policy discourses.

The eye of the leopard is on the goat, and the eye of the goat is on the leaf
-Ethiopian proverb

Photo: Nicole Bergen

Caption: A child in rural Jimma Zone watches as older members of the family prepare coffee.

Chapter 7. Problematizing 'health equity' as a national health sector priority

Article #4

Problematizing 'health equity' as a national health sector priority in Ethiopia

Publication status

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Author contributions

The authors of the article, in order, are: Nicole Bergen (University of Ottawa), Arne Ruckert (University of Ottawa), Manisha A. Kulkarni (University of Ottawa) and Ronald Labonté (University of Ottawa). NB led the conceptualization and design of the study, alongside RL and MAK. NB developed the data collection tools and conducted the data collection and analysis, with guidance from RL, AR and MAK. NB wrote the first draft of the article, which was critically reviewed by AR, RL and MAK. All authors read and approved the final manuscript.

7.1 Abstract

In Ethiopia, health equity is resonant within maternal, newborn and child health (MNCH), a health priority for the country and a major focus for international organizations. To date, there has been little characterization of the 'problem' of health equity per se, and the normative assumptions implicit in the representation of the problem. Yet, such insights have implications for shaping the framing, incentivization, and implementation of health policies and their wider impact. In this article, we draw from Bacchi's 'what is the problem represented to be' approach to explore how national-level actors in the health sector and health policy documents constitute the problem of health equity. Our analysis of 23 key informant interviews (KIIs) and six policy documents suggests that equity is a normalized and inevitable concern, that is actionable but not fully resolvable. Operationally, health equity is viewed as a technocratic matter, reflected in the widespread use of metrics to motivate and measure progress. These representations are shaped by Ethiopia's rapid expansion of health services into rural areas during the 2000s and the positive international attention and funding the country received for improved MNCH indicators. Expanding the coverage and efficiency of health service provision, especially in rural areas, is associated with economic productivity. Ethiopia has adopted approaches to address health equity by identifying and targeting under-performing areas, which reinforce identities of subordination and may have negative implications for health equity. The metrication of health equity may detract from the normative underpinnings of the concept such as fairness, justice, and morality.

7.2 Keywords

Ethiopia; health equity; maternal, newborn and child health; policy analysis; poststructuralist theoretical approach

7.3 Introduction

Health equity, although long a part of public health policy and practice, became a formal part of global health policy discussions with the 1978 Alma-Ata declaration and the subsequent launch of the *Health for all* campaign, which made health equity a priority for all countries. Since this time, efforts to define, quantify, assess, and promote health equity have proliferated. Health equity is part of global United Nations (UN) development agendas, with the Countdown to Equity Working Group prompting a greater focus on the concept during the implementation of the Millennium Development Goals (MDGs), and its more explicit inclusion in the subsequent Sustainable Development Goals (SDGs). Equity is embedded in mission and purpose statements of numerous health and health-adjacent institutions, and is a growing area of academic research across various disciplines. (1)

On national stages, countries such as Ethiopia have adopted equity as part of health planning and policy objectives. (2) In Ethiopia, the concept of equity is particularly resonant within MNCH, a top health priority of the country and a major draw for international donor organization interest and funding. While health equity is part of Ethiopia's international and national health and development commitments, stakeholders in the civil society sphere brought attention to equity during the 2012 World Congress on Public Health in Addis Ababa, issuing the *Addis Ababa Declaration on Global Health Equity: a call to action.* (3,4)

Health equity in the academic literature is generally defined as the absence of systematic differences in health across population subgroups, based on social, demographic or geographic characteristics that are judged to be unfair and avoidable by reasonable action. (5,6) Unlike the concepts of health inequality or health disparity – which evoke an objective representation of difference in health – health equity is normative in nature and as such, implies moral and ethical judgements about distributive fairness and the obligations of governments and other actors. (7) Concepts of human rights and social justice have been widely associated with health equity. (8,9)

Analyses of health equity that are rooted in a realist perspective probe a deeper understanding of the processes, reasons and contextual factors that contribute to equity. These types of analyses focus on building and refining theory about the drivers of health equity, identifying causal mechanisms and proposing solutions to ameliorate inequities. (10) The assumption that health equity constitutes a problem (or, to some, a 'wicked' problem (11)) motivates responses in health policy spaces; characterization of the problem itself is often left unexplored and unquestioned. In contrast, this article addresses the problematization of health equity, posing the question: how is the problem of health equity constituted within MNCH policy discourses in Ethiopia? Specifically, in our analysis we aim to characterize how health equity is represented as a policy issue, how this representation came about, and the assumptions that underlie it. We conclude with a discussion of the implications of our findings for the pursuit of health equity within Ethiopia, and how these may be more transferrable in other low- or middle-income countries.

7.4 Methods

7.4.1 Theoretical approach

We undertake a deep evaluation of the problematization of health equity by national-level actors in the Ethiopian health sector. We draw from Bacchi's (2016) poststructuralist theoretical approach ('what is the problem represented to be?'). This approach seeks to uncover normative assumptions embedded in policy problems, in this instance 'health equity,' that appear obvious and taken for granted. The approach highlights the silences and implications of particular problem representations, offering new insights into how policy responses are constructed, justified, and implemented. The 'what's the problem represented to be' approach has been widely used in health research as a theoretical basis to explore the problematization of topics such as gender mainstreaming, (12) drugs, (13) alcohol, (14) and trade policy. (15)

Following the 'what's the problem represented to be' approach, we posit that MNCH policy discourses contain implicit representations of health equity, which can be further understood by analyzing the governing practices and interventions designed to ameliorate it. Our exploration of its problematization is guided by the following questions: What is the problem of health equity represented to be in MNCH policies? What assumptions underlie this representation of the problem? How has this representation of the problem come about? What effects are produced by this representation of the problem? Where are the silences? How and where have these representations of the problem been reinforced and how have they been challenged?

In our application of the 'what's the problem represented to be' approach, we acknowledge that the discourse and knowledge surrounding governance practices extend beyond a sole focus on official policy documents. In the context of Ethiopia, English-language health policy documents draw heavily upon the texts, terminology, and framing used in publications by organizations external to the country. Thus, health policy problems may also be contextualized through more direct discourses with policy actors. For this reason, we mainly focus on presenting empirical findings from interview data and use document analysis for triangulation purposes.

This study was undertaken as part of a nested case study that explores perceptions and experiences related to health equity among national, subnational and community stakeholders in Ethiopia. (16,17) The nested case study was conducted as an extension of the Safe Motherhood Project, a mixed-methods intervention trial testing the rollout and scale up of interventions to reduce preventable maternal and newborn morbidity and mortality in Jimma Zone, Ethiopia. (18–20)

7.4.2 Data collection

Our analysis draws primarily from KIIs and secondarily from policy documents. KIIs were conducted from November 2017 to January 2018 with individuals in Ethiopia who worked on national MNCH issues in

leadership roles across different types of health sector organizations. Potential participants were identified purposively based on their professional affiliation and their senior position within the organization. They were initially contacted by email with an invitation to participate, and interviews were arranged at a time and place convenient for the participant. To maintain their anonymity and confidentiality, participants are identified only by the type of organization with which they are affiliated, and not by their name, title or organization.

The interviews were semi-structured and covered five domains of questioning: perceptions of relevant social determinants of health[1]; health equity within current scope of work; interface with health equity work at national and/or global levels; interface with health equity work at subnational levels; and collaborations with other sectors or groups[2]. All interviews were conducted in English, and the duration of the interviews spanned from 30 to 75 minutes. At the request of one invited participant, one interview was done with two participants present (a manager, who was the invited participant, and a trainee working with the organization). One interview was conducted over two sessions, as the participant was called away partway through the initial session. Ethical approval for the study was obtained from the University of Ottawa and Jimma University, and all participants provided written informed consent for their participation in the study. One participant did not give consent to be audio recorded, and the researcher took notes during the interview, including jotting down exact quotes. All other participants gave consent for the interview to be audio recorded and transcribed.

Policy documents, including national strategies, plans, and reports, were selected to represent the major priorities and directions for MNCH and the national health sector. The selected documents, identified in consultation with key informants working in MNCH in Ethiopia, were available in English and current at the time of the research (2017-2019).

7.4.3 Data analysis

The findings are derived from a thematic and content analysis of the interview transcripts and policy documents. A comprehensive reading of all transcripts and documents was undertaken to develop an understanding of the discourses and to consider gaps and silences in the texts. Preliminary coding of the interview transcripts identified passages that related to the importance of health equity, and ownership and accountability for health equity (where health equity was considered both broadly and specifically in relation to MNCH topics). Coding summaries of the relevant quotes were produced for each code, and quotes were rearranged into major thematic categories. The content within the thematic categories was then consolidated as descriptive text, further summarized and, where relevant, grouped to correspond to key questions identified in the 'what's the problem represented to be' approach (pertaining to the representation of the problem, the origins of the representation, and the underlying assumptions). To enrich and triangulate these findings, policy documents were analyzed through a similar approach; that is, identifying relevant passages and then thematic ideas related to: descriptions of health equity; stated importance; evaluation or measures of progress; historical context; and ownership and accountability. Atlas.ti (version 7.5.18, ATLAS.ti Scientific Software Development GmbH) was used to organize and manage the coding of all documents and transcripts during the analysis.

7.5 Results

The study includes a total of 23 KII participants and six policy documents (Tables 7 and 8, respectively). Policy documents include the *Growth and transformation plan II*, which serves as the overarching development plan for the country and the basis for the *Health sector transformation plan.* (21) The *Health sector transformation plan* guides all activities in the health sector over the five-year period between 2015-16 and 2019-20, (22) whereas the *National strategy for newborn and child survival* is specific to MNCH activities. (23) The remaining three documents include a national plan of action to address low-performing regional states and zones, (24) the 2017 voluntary national review on the SDGs,

(25) and a national report on the state of equity in MNCH. (26) The findings of the study are presented as responses to the first three questions of the 'what's the problem represented to be' approach; the remaining lines of questioning of this approach are addressed in the discussion section.

Table 7. Characteristics of key informants

Organization type	**Participant job titles**	**Number of participants (males/females)**
Government ministry	Coordinator, Director, Senior Expert	5 (4/1)
Research institute	Director, Lead Researcher	2 (2/0)
Academic institute	Dean, Director, Professor	5 (4/1)
International organizations	Coordinator, Specialist	3 (2/1)
Donor/implementing organization	Coordinator, Director, Health Lead, Manager	6 (4/2)
Civil society organization	Director	2 (2/0)

Table 8. Policy documents

Issuing body	**Name of document**
Federal Democratic Republic of Ethiopia	Growth and transformation plan-II (2015/16-2019/20)
Federal Ministry of Health (FMOH)	Health sector transformation plan 2015/16-2019/20
FMOH	National strategy for newborn and child survival in Ethiopia 2015/16-2019/20
FMOH	Transforming health status and health systems in the developing regional states and selected zones with suboptimal performance: Plan of action, 2016-2020
National Planning Commission	The 2017 voluntary national reviews on SDGs of Ethiopia: Government commitments, national ownership and performance trends

FMOH	State of equity in maternal, child and reproductive health in Ethiopia

7.5.1 What is the problem of health equity represented to be?

7.5.1.1 Normal, inevitable, and actionable

Equity as a national health sector concern is regarded as normalized and inevitable, as actionable but not fully resolvable. The concept of health equity[3] was familiar to all study participants, who readily recognized its prominence in government health plans and strategies. In the *Growth and transformation plan -II*, the strategic direction for the health sector includes the provision of 'equitable, accessible, and quality primary health services.' (21) The *Health sector transformation plan* emphasizes the importance of ensuring 'equal access to essential health services, equal utilization by equal need, and equal quality of care for all,' (22) while the *National strategy for newborn and child survival in Ethiopia* underscores 'addressing inequity in access to and utilization of newborn and child health services strengthening.' (23)

In speaking about the national situations in Ethiopia and abroad, participants expressed health equity as a priority for Ethiopia, but also one that exists for other countries. P1, an academic, elaborates on this idea, acknowledging that the international acceptance of the importance of improving health equity is an impetus to take action:

> In terms of [addressing] inequity, the Nordic countries seem to fare better. But we know this is a challenge everywhere. In terms of equity, people [in Ethiopia] feel the gap growing… in that sense, we need to address it. –P1

In this quote, P1 expresses an idea also echoed by other participants, alluding to an acceptance of the notion that the meanings or expectations surrounding health equity can be adapted based on the country context. Some, including P3 from an academic institute, further assert that even within Ethiopia

the expectations associated with health equity may be different. P3 explains their view about the unrealized potential of the health system to equitably deploy health interventions such as vaccination:

> If you take this [health equity] as the opportunity that everyone has the fair chance to receive [health care], you don't expect a country like Ethiopia to provide hospital bed services to everyone. At least you know the availability of health posts in every village, and the provision of very cost-effective interventions like vaccination for everyone – although we have not used the whole potential [of the health system]. –P3

Acknowledging perceived lower expectations surrounding Ethiopia but also the potential of the health system to do more, P3 raises an inherent tension between the inevitable-yet-actionable nature of equity concerns. Reconciling the prioritization of health equity within Ethiopia – a country with high universal need and widespread poverty – presents as a complexity for some. While several participants made remarks to the effect of Ethiopia 'doing well in sharing poverty,' a few go further by questioning why equity should even be considered a priority in the health sector given the extent of poverty and lack of basic infrastructure such as roads. As P14, who works at a research institute, explains:

> Equity is…a luxury, to be honest with you. [O]ur health facilities are not well equipped, our health personnel are not trained and not well paid. The reality on the ground is very dark […] Without the basics of road infrastructure, without the skilled manpower, talking about equity is a bit far fetched for me. […] if you consider the poverty we are in. –P14

Decoupling equity from the underlying determinants of health and poverty, P14 suggests that a minimum threshold of development is required before health equity can be taken seriously as a policy priority. This reinforces many interviewees' sense of the inevitability of inequity, since addressing it first requires improvements in conditions of widespread poverty.

7.5.1.2 A technocratic matter

Discourses surrounding health equity – both in the KIIs as well as policy documents – largely represented health equity as a technocratic matter operationalized as the distribution of health intervention coverage, primarily, as well as the distribution of morbidity and mortality. The *2017 voluntary national reviews on SDGs of Ethiopia* states that: (25)

> The main objective of the National Health Policy is to create reality where all citizens of the country have easy access to basic health services. (p.26)

Likewise, the major strategy of the *Transforming health status and health systems in the developing regional states and selected zones with suboptimal performance: plan of action* (25) aims to build capacity to enable health service delivery, with a target of these regions 'increasing effective primary care coverage to 100% (reaching the national average by 2020).' (p.29)

In the area of MNCH, the country has implemented a set of high-impact services to address maternal mortality, namely, family planning, skilled birth attendance, antenatal care, and postnatal care. Efforts to monitor and promote equity in MNCH center on these services and the distribution of their geographical coverage. As such, equity represents a problem that can be quantified and pursued strategically. P13, a director at a federal research institute, explains:

> So yeah, in Ethiopia, equity is very very important in terms of geographic equity in health care… I have seen data that shows where these midwives, skilled midwives, are assigned, skilled attendant deliveries have gone up. Also in those zones where they have beefed up immunization programs to address equity, I've seen that immunizations has gone up. –P13

P13 concludes that 'in terms of service uptake and so on we have seen some sort of changes' but also cautions that it is 'really too soon to say whether the health outcomes in those regions is now on par with others.'

When reflecting upon health equity in Ethiopia, participants often cited the Health Extension Program, established in 2003 to expand health service coverage into rural areas of the country. Speaking about plans for the proposed second generation of the Health Extension Program and its implications for equity, P17 from the FMOH outlines how increasing the number of Health Extension Workers (HEWs) (locally-recruited, salaried health workers with basic training) from two to three per health post could help to improve health service coverage:

> We are planning to increase our numbers of Health Extension Workers. Though it's not yet approved – it needs the approval of higher officials and councils – but we have recommended three Health Extension Workers at each health post so that they can cover all the areas. Now it's difficult because we are expanding the services at that level, and it's very difficult to cover everything with just two Health Extension Workers. -P17

Other participants expressed views that the upcoming second generation Health Extension Program should be better adapted to provide services to different types of rural populations, including pastoralist (nomadic) populations.

7.5.2 How has this representation come about?

7.5.2.1 Rise-from-behind during the MDG period

Representations surrounding health equity in Ethiopia are shaped by international discourses about equity, universal health coverage, and development, which trace to the MDG period from 1990 to 2015. During that period, Ethiopia reported national improvements in MNCH indicators, attributed to the expansion of health services in rural areas through the 2003 Health Extension Program – progress which garnered positive attention from the international community. Study participants explain that Ethiopia has been widely celebrated for its performance during the MDGs, such as P14 from a research institute:

> The ultimate culmination of that effort was meeting the MDGs and being lauded as one of the greatest countries in sub-Saharan Africa. Or globally. -P14

This exuberance is abundantly reflected in policy documents. The *Health sector transformation plan* affirms the progress registered in Ethiopia during the MDG period, communicating a rise-from-behind narrative:

> Ethiopia's health indicators have been remarkably improved from one of the worst in Sub-Saharan Africa to amongst the stand out performers in just two decades. The lives of millions of children have been saved, millions of new infections and death from communicable diseases such as HIV, malaria, and tuberculosis have been averted. (22)

Ethiopia's SDG voluntary national review, which positions Ethiopia as an exemplar in global development, notes that the country 'registered remarkable achievements' in the MDGs and 'has made significant contributions by sharing [lessons from the MDG experiences] as inputs to the preparation of the 2030 Global Agenda for Sustainable Development.' (25)

Perhaps reflecting its international recognition and perceived influence in shaping international development agendas, Ethiopia's health policy environment appears to readily accommodate global influences. The large extent to which Ethiopia relies on international health equity discourses is evident in national health sector plans, which import descriptions and call-to-action passages about health equity taken from publications by global organizations. In interviews, when asked about their familiarity with the concept of health equity, many of the participants recited the phrasing used in World Health Organization (WHO) descriptions of health equity.

Ethiopian health policies draw heavily upon international health goals, targets and indicators defined in major international health agendas such as the MDG and SDG Agendas. Participants in the study generally expressed a sense of ownership over and commitment to these metrics, which are in

accordance with the country's agenda of expanding health interventions in rural areas through the Health Extension Program. P19 from a government ministry, explains how the goals and targets of the SDG Agenda reflect Ethiopia's contribution to the consultation processes and Ethiopia's national priorities:

> Some of the SDG goals and targets are in line with our goals and targets because when these SDG goals and targets were set, I remember there was an intense consultation process from developing countries like us. My country was part of the consultative process. So, these targets and goals are perfectly fit to our national goals and targets. -P19

P16, also from a government ministry, acknowledged the reality that government plans must align with the interests of international donors, citing a financial imperative. The participant generally felt positively about this alignment, noting that the use of key performance indicators helped the government to remain accountable and ensure progress in 'emerging' regions, four of its nine states that require special support. (24)

> You can see that it's a huge amount of money that we are given from the developmental partners funding. But, you need to work and align with them…So we are just trying to mix, to make and catch up with the other emerging regions so at the end of the day we'll assess our effort based on the key performance indicators that we put on our monitoring and evaluation framework on the strategic document. -P16

Other participants discussed the limitations of 'chasing targets,' suggesting that an overreliance on achieving targets detracts from broader health system strengthening. Despite some ambivalence towards current approaches, all participants recognized the mainstreamed nature of this global metric-driven development paradigm and the practical necessity of working within it to maintain international recognition and donor support.

7.5.2.2 The boon of external financing

The representations of equity as actionable and quantifiable stems from an overarching framing of health as part of a larger economic development strategy. *Growth and transformation plan-II,* which sets the foundation for sectorial plans in Ethiopia, is oriented towards Ethiopia attaining lower middle-income country status by 2025, a common development target in many low-income countries in Africa. (21) Accordingly, the health sector frameworks described in the *Health sector transformation plan* (22) were developed to support this vision, premised on Ethiopia achieving 'the best health outcomes that would be expected of a lower-middle-income country by 2025' and in the longer term, 'at least median health outcomes of an upper-middle-income country by 2035.' (22) Using an analogy of health services as products, P10 from a donor/implementing organization explains how access is a precursor to measuring outcomes, and further highlights the economic trade-offs of investing in subnational regions with variable levels of development:

> You start with access. You get the consumer to the facility, you consume the services and then you measure outcome. If you don't have anyone buying the product, you won't know how successful you are in marketing the product or you know, in gauging your profit… If you do an investment in Oromia and you impact 50 sites, you will get the numbers you need, versus if you combine Gambella, Benishangul and Somali regions, with 20 times the effort, you still won't be able to reach that end. -P10

The argument presented by P10, and also expressed by several others, conveys a circularity of health and development whereby economic productivity is viewed as a determinant of health, and investing in health is viewed instrumentally as a means to improve productivity. P10 emphasizes that putting resources into situations with more complex needs will yield lower returns; thus, addressing health equity requires increased investments in health that are disproportionately higher in 'emerging' regions. This unveils a tension between framing health for its instrumental purpose (which, according to P10's

quote, may exacerbate health inequities) and addressing equity concerns (which may stall development).

The health sector in Ethiopia brings substantial financial capital into the country. Recognized improvements in health service coverage during the MDG period, paired with a 'more work to be done' mentality, helped justify increased financial investments in Ethiopia from international donor organizations in the final years of the MDG era and the transition to the SDGs. The *National strategy for newborn and child survival in Ethiopia* reports that the national health expenditure increased by 138% between 2007/08 and 2010/11, with about half of contributions coming from donors (and about a third from households). (23) In this sense, Ethiopia has attracted external funding based, in part, on its achievements in addressing health equity, and continues to receive financial inputs, concurrently motivating both the normalization and the problematization of health equity in policy spaces.

Receiving external donor funding has influenced the positioning and autonomy of the Federal Ministry of Health (FMOH), both internally within the government as well as among international and non-governmental organizations. P22, from an international organization, has experience working in other countries, and explains how the situation in Ethiopia is unique:

> I think what is interesting in Ethiopia is that the Ministry of Health is one of the most powerful ministries in government, which is different from other places where I've worked... The Ministry of Finance doesn't have the leverage over the Ministry of Health that it might in other countries. The Ministry of Health has resources, they have a growing public budget and a ton of donors and technical assistance. -P22

This participant goes on to explain that the FMOH in Ethiopia has established this high level of autonomy through a strong track record of 'producing results' in line with international donor interests; this participant notes that, from the perspective of external donors, 'for now we are lucky.'

7.5.3 What are the underlying assumptions?

The normative representations of health equity as a national policy problem reflect certain assumptions regarding: responsibilities and roles of stakeholder groups; the connections between health outcomes and economic productivity; and the ability of coverage estimates to reflect reality.

Health equity is assumed to be, ultimately, the responsibility of the government. In describing their respective organizations with regards to promoting health equity, participants oriented their roles in alignment with, or as filling the gaps of, the work of the FMOH (Table 9). Recognition for advancing equity is primarily directed towards the government and, under the purview of the government, health equity has been mainstreamed and legitimized across health sector discourses and planning more broadly. For example, P7, from a civil society organization, describes their role in ensuring that the government follows through on its responsibilities for equity:

> As a civil society organization, we are concerned about equity, but we are not responsible for equity. The government is responsible for equity. But we are responsible to impose the government so that health equity comes. -P7

The FMOH, with positive reinforcement on the international stage for their accomplishments of the past, support from various health sector groups in the country, and a fairly autonomous leadership position within the wider government, is highly incentivized to exert ownership over health equity.

Table 9. Major roles in promoting health equity, self-described by national health sector stakeholders

Stakeholder group	**Major roles in promoting health equity**
Federal Ministry of Health	• technical and advisory role for Regional Health Bureaus • advocacy • leadership and coordination among other stakeholder groups • special support to low-performing areas (e.g. through mentorship initiatives, training, supervisions, funding)

Research institute	• gather evidence to inform decision making by the FMOH • promote knowledge translation and uptake of evidence for decision making
Donor/implementing organization	• work across levels of the health system in a variety of roles including program delivery, system strengthening, advocacy, financing and others • address needs that are unmet by the government health system ('gap filling') • often have expertise about realities at the community level
Civil society organizations	• advocacy and information dissemination, both with the government and their members and networks • fulfill a coordinating role, such as hosting policy dialogues and forums
International organizations	• technical and financial support to the FMOH, including assisting with the preparation of government strategies and implementation of global standards • maintain databases and build capacity in data management • convening role among development and implementing partners
Academic institute	• engage with health equity issues through projects, research and training • facilitate community-based learning experiences for students • participate in government research advisory councils • produce policy briefs, systematic reviews and meta analyses for government policy makers

Embedded in national discourses is an assumption that health equity is considered more actionable (and perhaps even resolvable) at decentralized levels of the health system. An overarching focus on resource efficiency means that decentralized levels of the system are called upon to report improvements in health service use without substantially increasing resource inputs, but rather through innovation and ingenuity. National actors emphasized the importance of community ownership and action over health initiatives, with P18 from the FMOH noting that 'you'd be surprised what the community does in different places.' Participants from the FMOH mentioned several low-resource ways that their organizations encouraged innovation and improvement at decentralized levels of the health system, such as rewarding high-performance, facilitating best-practice sharing, and implementing mentorship

programs. Several participants from donor/implementing organizations also described a reliance on inbuilt community potential, evident through a trend of moving their resources 'out of the community' to instead focus on health system strengthening at the district level and above. P10 explains how their donor/implementation organization is shifting support out of the community:

> Unless you pull up [to support higher levels of the health system] and you start creating capacity to eventually hand over to the true owner of the system, you continuously will be doing the work for them, and not building any capacity and transitioning this work for them. -P10

This 'trickle-down' logic maintains that capacity building at local levels can be motivated from more centralized levels.

The pro-poor and pro-development aims of *Growth and transformation plan-II* are used to justify the prioritization of health equity – more specifically, equitable health service access – in health policies and reports, reiterating the circularity of health and development. This notion reflects an implicit assumption that: (a) the use of health services will (b) improve health outcomes and, (c) in turn facilitate economic development. These links (i.e. that (a) leads to (b) and that (b) leads to (c)) are further associated with the pursuit of health equity through normative statements such as this passage from the *State of equity* report (27):

> Equity in accessing health services and health outcome has been recognized as an important development agenda for Ethiopia as it would be a concern for further development due to a potential widening in economic growth. (p.73)

Participants also reinforce these assumptions, with P22 from an international organization stating that 'we are working on health to fight poverty' and 'of course improving health outcomes leads to greater productivity and economic growth.'

Commonly, the health equity discourses encountered in this research made direct links between health service provision and economic productivity, implying that health service indicators may be a proxy for health status. Accordingly, much emphasis is on rapidly maximizing the coverage and efficiency of health service provision as a means to drive economic development. This calls into question the extent to which the idea of leaving no one behind is attainable: while the government states a position promoting equitable health service access and health outcomes, external financing seeks to optimize economic returns on investments in health. As P18 (from a government ministry) explains, this introduces concerns surrounding quality and sustainability:

> Trying to improve access has been a main focus of the programs and development partners and the government as well. Through that process, I think, quality has been compromised. Mainly because we are trying to meet numbers and ratios of the health care professionals, ratios of the facilities and the like. In the meantime, we have compromised quality for quantity. Quantity and quality should have gone hand in hand, but we are a resource-limited nation and we had to do what we had to do. -P18

P18's resigned acceptance of the perceived compromise between quantity and quality begs greater consideration of the consequences of striving to meet numbers and targets.

The use of metrics to motivate and measure the advancement of equity rests on the assumption that these metrics are – or have the potential to be – an accurate reflection of reality. In Ethiopia, the implications related to the metrics surrounding MNCH service coverage and outcomes are reflected in funding levels and arrangements, national and international positioning of health sector organizations, and recognition and classification. While key informants raised widespread concerns surrounding the integrity of health information systems, also reflected in the findings of other studies, (27) the desire to

improve these systems – for example, by introducing more rigorous auditing procedures or data collection practices – reflects a commitment to a quantitative approach to represent realities.

7.6 Discussion

7.6.1 What effects are produced?

The representation of the 'problem' of health equity in these discourses reinforces a particular depiction of equity, with implications for how solutions to the problem are constructed. Equity as a policy priority is portrayed as normalized and inevitable in the health sector through references to its universal nature and the notion that the expectations surrounding health equity may be adapted to match a given context. In this representation, equity becomes a permanent 'work in progress' where the problem can continually be redefined and thus never truly resolved. Accordingly, Ethiopia is legitimized in keeping equity as part of policy discourses. This representation of health equity alludes to the idea of progressive realization (associated with concepts such as universal health coverage (28) or human rights (29)), whereby countries move at their own pace to progress towards full realization, given the availability of resources – though the question of what end goal Ethiopia is progressing towards with regards to health equity remains unclear without further consideration of the basis on which health equity is considered actionable.

The actionable nature of equity is implicit in its representation as a technocratically-driven practice of expanding health intervention coverage and improving measurable health outcomes. The conflation of health equity and health service equity (which is the basis of much confusion surrounding the meaning of health equity) provides a certain advantage in policy spaces, as addressing inequalities in health services is a concrete policy aim. (30) Defining equity through such metrics provides a clear mechanism within the health sector for the coordination of action by multiple stakeholders. It also serves as a way to maintain administrative oversight and hold stakeholders accountable, reinforcing implicit hierarchical

power relations between funders and funding recipients as well as actors at different levels of the monitoring and evaluation process.

Ethiopia routinely identifies and targets low-performing areas, including regular ranking of performance across districts (31) and a region-to-region mentorship scheme targeting the four 'emerging' regions (with some pairings between regions with extant ethnic tensions). Although extra support is allocated to the 'emerging' regions, such approaches also reinforce geographically defined subordination of these low-performing areas. Fraser (1995, 2000) calls attention to the effects of institutionalizing identities of subordination, and the possible negative implications for social justice and indeed, equity. In Ethiopia, aggregate gains in health can be achieved through improvements in higher-performing regions, even as poorer-performing regions may fall further behind. Punitive or stigmatization tactics have been used to motivate behavioural changes to enhance health metrics, however, the ethics and effectiveness of these practices have been called into question (17,32) and may have negative implications for health equity.

On an international stage, the technocratic operationalization of equity has resulted in enhanced participation of Ethiopia in global health and development discourses, and allowed the country to benefit from external recognition and funding. The basis for much of this international attention, the Health Extension Program, has been highly praised in international media for having 'cracked the problem of rural health' (33) and is reportedly being replicated across other sub-Saharan African countries. (34) The 2003 Health Extension Program was the 'signature initiative' of former Ethiopian Minister of Health Dr Tedros Adhanom Ghebreyesus, who in 2017 was elected as the ninth Director-General of the WHO. (35)

7.6.2 Where are the silences?

In current representations of health equity amongst our interviewees and policy statements, certain aspects have been silenced. Notably, the discourses analysed in this study scantly called attention to the

wider social justice or human rights underpinnings of health equity. Similarly, Storeng and Béhague (36) have reported a so-called narrowing of global maternal health advocacy efforts, which are increasingly shifting towards evidence-based advocacy where quantitative objective evidence trumps appeals on the basis of morality or social justice. The study authors contend that the silencing of morality in maternal health spaces coincided with a desire for economic efficiency and an objective 'trust in numbers,' ideas that also resonate with the findings of our own analysis. A so-called trust in numbers detracts attention from unintended consequences of actions to enhance those numbers. It may also result in cancellation of interventions that are equitable on human rights or ethical bases, solely because they fail to demonstrate an economic growth return.

With an overriding emphasis on economic development, wider civil liberties and political freedoms are deemphasized. Political and social determinants of health are mostly absent from prevailing representations of health equity by the key informants and policy documents analyzed in this study, as are discussions of civil engagement and empowerment. This reflects, in part, the scope of their respective professional mandates. While issues in Ethiopia surrounding interracial violence, forced displacement, human rights abuses, political oppression, and gender-based inequality have been highlighted in international media and reports, (37–40) they remain outside of the bounds of health equity metrics and are infrequently raised in health research. (41) On issues directly related to health, Ethiopia has a history of minimizing or failing to take meaningful action on widespread health crises such as cholera outbreaks (42) and famine. (43,44) Østebø et al. (41) point to a methodological reporting bias in health research in Ethiopia that systematically omits critical discussion of the political context surrounding healthcare (and the Health Extension Program in particular). In research conducted alongside this study, we have identified and developed strategies to minimize instances of social desirability bias, which tends to downplay the existence of problems, challenges, or shortcomings, while overstating the positive impacts of government-led efforts. (45) The reasons for this bias may be

multiple, possibly reflecting both a subordination to perceived government authority (which promulgates the positive impacts) and a fear that criticisms could result in a decline in current efforts (e.g. international assistance), whatever their shortcomings may be.

Finally, the global dimensions of health equity, driven by macro-structural transformations and global policy priorities, are left largely unexplored in policy documents and by key informants. However, deep inequities in the distribution of power and economic arrangements, globally, are of key relevance to understanding health equities in national and local contexts. (46) For example, structural adjustment programs administered by international financial institutions have been found to contribute to growing health and income inequality in African countries, (47,48) while policy reforms driven by the World Bank, especially the privatization of health services through pubic private partnerships, have undermined equitable access to health care provision. (49) Early experimentation with privatization will likely intensify under the current administration which has committed to large scale privatization of key sectors (including aviation, telecommunications, energy, and logistics), following recommendations by the international financial institutions to open up previously protected sectors of Ethiopia's rapidly growing economy. (50) The importance of such (global) policy choices is not reflected in the dominant representations of health equity discourse in Ethiopia, depoliticizing the role of global social relations and their complicity in reproducing an unjust economic order leading to inequitable health outcomes.

7.6.3 How has the representation of health equity been reinforced and challenged?

Within Ethiopia, stakeholders positioned at different levels of the health system hold different perspectives about health equity, as explored in previous studies conducted as part of the Safe Motherhood Project. Among rural community members, equity was associated with group cohesion and inclusion, and communities expressed a strong sense of agency over health and health equity. (16) Community-level health workers more readily acknowledged barriers to health beyond the community, but felt that their ability to influence systemic determinants of health was limited. (19) In accordance

with national mandates, subnational health managers demonstrated a strong commitment to addressing geographical barriers to health service use (to the extent that socio-cultural considerations, such as gender norms or community mobilization, were framed by geographies). In contrast to findings of this study, however, where national discourses presupposed that health equity is more actionable at decentralized levels, the managers themselves describe severe resource constraints that limited their ability to fully address health inequities. (17)

Aspects of the political landscape in Ethiopia variably reinforce and challenge the conditions that perpetuate current representations of health equity. Ethiopia has a poor human rights record that does not reflect the rights and freedoms guaranteed in its constitution or the numerous international human rights agreements to which it is a signatory. (51,52) Despite its ambition to achieve lower middle-income country status by 2025, large segments of the population still lack access to basic infrastructure and social services. The change of government in April 2018 that saw Dr Abiy Ahmed Ali become prime minister, however, has brought renewed optimism for political and economic reforms that, to date, have been met with mixed success (marred by sporadic internet outages, escalating ethnic tensions and ongoing land conflicts, among other issues). Broader civil engagement and expanded democratic spaces may be warranted to generate wider support and ownership over the reforms, and thereby advance development aspirations. (53,54)

7.6.4 Strengths and limitations

Drawing from the 'what's the problem represented to be' approach, this study offered new insights into understanding the problematization of health equity in Ethiopia. This research was strengthened by the inclusion of participants from numerous types of health sector organizations that are prominent in Ethiopia, encompassing both governmental and non-governmental organizations. While all participants were currently working on MNCH issues on a national level, many had career trajectories that had spanned several organization types and positions, both at the national level and, in some cases,

including practitioner positions at lower levels of the health system. This allowed several participants to speak to varying perspectives across organizations. We did not recruit participants from the private sector in this study. The private sector currently occupies only a small role in the health sector, though the prospect of expanding public-private partnerships is of growing interest to the FMOH. (55,56) Thus, the influence of private interests in health equity spaces is an area for future exploration. We note that changing political dynamics in Ethiopia since the time of data collection may have implications for understandings of health equity in the country.

7.7 Conclusion

This article brings together representations of the problem of health equity in MNCH policy in Ethiopia. Our analysis indicates that health equity in this context is characterized as an unresolvable, technocratic problem, primarily operationalized through the continual expansion of health interventions into rural areas. These representations of health equity effectively depoliticize the problem, turning attention towards improvements in quantifiable health measures and data systems, and away from normative aspects of health equity pertaining to ethical principles of fairness and justice. Indeed, in the absence of explicit ethical or moral justifications, discussions of health equity become synonymous with those about health inequalities or disparities (systematic differences in health across population groups) and thus may lack a deeper representation of what are acceptable, or unacceptable, measurable health differences, and under what circumstances. In this sense, the current representations of health equity do little to challenge entrenched power structures, and fall short of addressing more controversial issues such as empowerment, access, participation and rights.

The findings of this study have implications for MNCH policy beyond Ethiopia, as low- and middle-income countries face similar global pressures in terms of maximizing health investments. In particular, the SDG focus on promoting universal health coverage devotes little attention to the social, political and economic determinants of health that date back to the notions of health equity in primary health care

(PHC) described in the Alma Ata Declaration. Building on the findings of this study, further research is warranted to delve into the silences inherent in the current representation of health equity, including studying the processes and conditions of how these silences may be brought into health equity policies. In contrast to Ethiopia and many low- and middle-income African countries, the Pan American Health Organization of the WHO goes much further in premising health equity on issues of fairness, morality, and justice – reflective of a long-standing engagement with social theory, political theory and human rights. The 2018 final report of the Commission of the Pan American Health Organization on Equity and Health Inequalities in the Americas, for instance, emphasizes climate change, environmental threats, colonialism, racism and the history of slavery, human dignity, human rights and other issues (57) – thereby orienting discussions of health equity away from technical problem spaces and towards broader political and social determinants of health.

7.8 End materials

7.8.1 Declaration of interest

The authors report no conflicts of interest.

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7.8.4 Endnotes

[1] Understandings of social determinants of health – the factors that shape the conditions in which people grow, live, work, and age – help to clarify contextual representations of health equity, as actions on the social determinants of health are recommended to tackle situations of health inequity (46).

[2] Intersectoral collaborations between actors in health and non-health sectors contribute to the improvement of health equity, (46) and questioning about these collaborations revealed how health equity was represented in these interactions.

[3] Participants tended to speak about the concept of health equity holistically, without specifying between equity in health services versus equity in health outcomes, though cases where this distinction was made are indicated.

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7.10 Bridge

Chapter 7 (Article 4) addressed the question of how health equity is understood as a policy problem in Ethiopia, characterizing how it is represented as a policy issue, how this representation came about, and the assumptions that underlie the representation. The portrayal of health inequity in national health policy discourses reinforced an inevitable-yet-actionable depiction of the problem, whereby technical approaches to the problem prevailed (namely, the expansion of key health interventions in under-performing jurisdictions to meet service coverage targets). This representation of health equity is evident in the professional mandates of subnational health managers (explored in Chapter 6) and Health Extension Workers (HEWs, explored in Chapter 5), who tended to rely on personal ingenuity to adapt the pursuit of national policy objectives to their local contexts.

"Difference is not a curse when we listen to each other, and when we agree based on principle, it brings blessings." –Abiy Ahmed Ali

Chapter 8. Conclusions

In this dissertation, I have discussed issues surrounding health equity in maternal, newborn and child health (MNCH) in Ethiopia, exploring how it is understood and pursued by stakeholders at different levels of the Ethiopia health sector. At the most local kebele level, perceptions of community members and health workers were examined to assess how they guide and are affected by the promotion of MNCH (Articles 1 and 2). Then, looking at subnational and national levels in Articles 3 and 4, further examination of the conceptualization and operationalization of health equity provided insight into implications for its advancement within the health sector in Ethiopia. The four articles were researched and prepared in the order that they appear in the dissertation (from the community to the national level), and thereby build upon one another such that the interpretation and conclusions presented in Article 4 represent a cumulative understanding of the findings across the study. Other analyses undertaken alongside my thesis work (for example, the publications featured in Appendix 6) illuminated related aspects of the study context and enhanced my interpretation of the findings.

In this concluding chapter, I present the major findings and their implications in more depth. First, looking at each of the articles in turn, I summarize their salient conclusions. I then explore how the three theoretical constructs of health equity introduced in Chapter 2 (meaning of health, distribution of health, and ethics of health distribution) are reflected in the research, highlighting two overarching findings: the largely unexplored role of subnational stakeholders in merging nationally-determined health equity policies with local contextual considerations; and the lack of social justice underpinnings for health equity at centralized levels of the health sector. After considering the influence of

contemporary political, economic, and other pertinent contextual realities in Ethiopia, I address the implications of the research findings on the advancement of equity in MNCH in Ethiopia, as well as the promotion of health equity on a global scale. Finally, returning to aspects of the study design and methodology, I consider the methodological contributions of my dissertation, and reflect on the broader contributions to the field of population health.

8.1 Summary of major findings

The first article provides a sense of how the phenomenon of health equity is understood by participants in rural communities of Jimma Zone. While participants highlighted diverse aspects of health and health equity that were relevant to their lives and the overall well-being of the community, the most pertinent finding from this article points to a strong perceived sense of community agency and responsibility for health. Accordingly, individuals who did not 'belong' to the surrounding community – that is, those who did not fit in or who were considered outsiders – were at risk of poorer health, underscoring the collectivist nature of the underlying culture.

The second article explored the experiences of Health Extension Workers (HEWs) in their efforts to promote maternity waiting areas (MWAs), an equity-oriented health service. Building on the findings from Article 1, this article conveys that the uptake of equity-oriented programs requires broad engagement and acceptance at a community level, including a shift in attitudes and practices. Importantly, the HEW participants acknowledged the existence of several barriers to health services use beyond the community level, but felt that their ability to influence these factors was limited. While some HEWs made inroads in their communities through their engagement with male partners and kebele councils, they generally lacked opportunities for meaningful interaction with higher levels of the government or the health system.

In the third article, subnational health managers were interviewed about their understandings of health equity issues and their roles in addressing these issues. Participants were familiar with national health sector messaging surrounding health equity, though their understanding of how to apply these messages were varied. A main finding of this article suggests that the strategies by subnational health managers to address health inequities are primarily undertaken to circumvent resource constraints, and tend to be solutions that are discretionary, one-off, and short-term. The article calls into question the extent to which health inequities are avoidable, given subnational health managers' lack of resources and agency to address them.

The fourth article looks at how health equity is characterized as a problem within national health policy discourses in Ethiopia (i.e. policy documents and interviews with policy actors). The portrayal of health inequity as a problem that is normalized and actionable (especially at decentralized levels) but not fully resolvable maintains a space where incremental improvements are sufficient to justify and sustain external recognition and funding. Health equity was operationally treated as a technocratic matter premised on the distribution of health services, pursued through the expansion of key interventions into rural areas in particular. Promoting health equity on the national stage was linked to economic development, with less emphasis on issues such as empowerment, access, participation, and rights.

8.2 Revisiting the three constructs of health equity

Chapter 2 outlined the three constructs of health equity: health, distribution of health and characterization of the distribution of health. Across the four groups of participants, perceptions of these constructs varied.

8.2.1 Health

Community-level participants tended to ascribe to an understanding of health that equates and values the benefits derived from health with the notion of health itself, emphasizing functions related to daily

activities of life and participation in community activities. This understanding echoes Sen's (1,2) notion that health, as a prerequisite to functioning, has intrinsic value in addition to its instrumental value (e.g. enabling income generation). Subnational and national participants, on the other hand, more often described health in terms of health service provision and use, reflective of their professional mandate. Participants working at the national level underscored the instrumental value of health: that better health at the population level, achieved through the increased use of health services, was a necessary precursor for economic development. While intrinsic and instrumental perspectives on health are not necessarily in conflict – indeed, satisfying health for the sake of its intrinsic value would not detract from its instrumental value – their compatibility in this context rests on the assumption that health service use will enable people to achieve better health and thereby improved functioning. This assumption is inherent in the design of the Safe Motherhood Project information, education and communication (IEC) intervention, (3–5) the delivery of health promotion activities in Ethiopia, (6) and the overarching problematization of health equity as a health sector priority, (7) although the extent to which this holds true in MNCH in Ethiopia is unclear, especially given concerns about service quality and continuity.

8.2.2 Distribution of health

The second construct calls into question the basis of how social groupings are constructed to make determinations surrounding the distribution of health. Whereas social capital (expressed as a sense of belonging or inclusion in the community) was a prominent distinction for community members, participants working in the health sector focused more on the geographical distribution of health, with the HEW and subnational health managers often raising the intersection of geography with other factors (including poverty, remoteness, gender and education). Unsurprisingly, the geographical granularity with which the participant groups spoke about the distribution of health tended to correspond to their scope of work and professional mandates. In Article 4, for example, our analysis of interviews with participants working at the national level and national policy documents notes distinctions between

'emerging' regions and other regions, with some discussion of high- and low-performing zones. (7) Among all participants there was a notable absence of discussion surrounding ethnicity or migrant status as prominent social groupings, despite these being of longstanding concern in the country. (8) Similarly, differences between religious groups were not mentioned prominently in the study context, through religion is a commonly cited universal dimension of health inequality (9) that has been correlated with maternal health seeking behaviour in Ethiopia (with Muslim women less likely to seek care, according to one study (10)). In recent years, a series of attacks on churches and Mosques in the country have been a manifestation of a developing Christian-Muslim divide. (11,12)

Considering the themes that emerged across the four articles, one overarching finding related to the distribution of health pertains to the challenges facing subnational health managers and HEWs in merging higher-level directives with local contextual factors. Working at the middle level of a hierarchical organization structure, subnational health managers are mandated by centralized levels to address under-performing regions or zones, while also having to navigate contextual factors that contribute to inequities, such as remote or nomadic populations and resource scarcity. This competing set of perceived responsibilities was also assumed, to a lesser extent, by the HEWs, who faced analogous pressures from their supervisors at subnational levels of the health system amidst high expectations for acceptable service provision from local communities. Both subnational health managers and HEWs reported relying on personal initiative and ingenuity to address the high demands of their roles. While a growing body of literature has explored the demands of HEWs, (13,14) to date the role of subnational health managers in mediating action to address health equity is largely understudied. (15)

8.2.3 Normative judgements about the distribution of health

The third construct of health equity addresses normative judgements about the distribution of health. The findings of this study shed light on how different participant groups imply responsibility for health and its distribution, acknowledging that different and even competing norms may be invoked.

Community members in Article 1 expressed the notion that the community at large, to the extent possible given the resources available to them, is responsible for ensuring the health of its constituents. Redistribution appears to be motivated by compassion, caring and charity, according to the norms established by the community, as per the 'distribution according to entitlement' conceptualization of health equity. (16) For example, community norms guide the conditions for the informal mechanisms of pooling resources and disbursing them: health is an asset to be enjoyed by all in the community, with the possible exclusion of individuals in ill health due to the 'will of God' or those who have not participated in established community networks. Through these norms, the community members collectively convey judgements about who is rightly entitled to receive resources, when, and for what reason, positioning community members as having a high degree of agency. Factors outside the community that affect available health resources were mentioned less frequently by community participants, who were more likely to defer this consideration to HEWs or higher levels of the health sector. Discussions surrounding the importance of citizen participation and access were primarily oriented inwardly (i.e. within the local community) rather than towards broader levels of society.

In Articles 2 and 3, by contrast, the HEWs and subnational health managers tended to give greater emphasis to factors outside their jurisdiction that affected resource availability, pointing out the aspects of scarcity that contributed to situations of health inequity. Whereas the community participants in Article 1 had informal norms and precedents surrounding the redistribution of resources, HEWs and subnational managers were guided by certain professional obligations, such as increasing the rates of

facility-based births. With regards to health, these actors expressed concerned with providing the 'decent minimum' standard of health care for all. (16) Given the scarcity of resources in many of the study settings coupled with the pressure to demonstrate constant improvements in health service use, these efforts tended to be focused on utilitarian gains in the populations that they served. HEW and subnational health manager participants also made frequent reference to wider determinants of health such as gender relations, infrastructure, and resource allocation, thereby linking health equity with broader societal issues. (17)

Normative judgements about health equity on the national scale are discussed in some depth in Article 4. Briefly, the notions of health inequality and health inequity are often conflated, as national stakeholders and policy documents regard both as technocratic matters with little reference to, or justification on the basis of, ethical principles of fairness and justice. In some respects, consideration of ethical principles of health equity appears to have been overshadowed by the country's economic development agenda and desire to meet health service coverage targets specified in health policies, implying an instrumental utilitarianism.

Across the four articles, a second overarching finding points to the apparent lack of invocation of social justice underpinnings of health equity across the study settings but especially at subnational and national levels. This technocratic orientation is, in part, a reflection of where the actors' professional mandates and abilities to act lie. Social justice issues (e.g. pertaining to empowerment, access, participation and rights) appeared to be more apparent as a justification for action on health inequity at the community and subnational levels than at the national level, where the inevitability of health inequities was normalized. At more decentralized levels, there are some indications that there may be discontent around social justice issues. For example: subnational health managers reported an ongoing lack of resources to adequately fulfill their roles; and HEWs had few opportunities to participate in higher-level decision making.

8.3 Political, economic and other contextual influences

The research period (2015-2019) was a time of uncertainty and instability in Ethiopia. A federal election in 2015 had the ruling party, the Ethiopian People's Revolutionary Democratic Front, claiming every seat in parliament, which solidified an authoritarian rule (coined the '100% election'). (16) Amid mounting protests in Amhara and Oromia regions calling for free and fair elections, broadening of the political space, greater freedom and democratic reform, the government – beholden to the influence of the minority Tigrayan ethnic elite – responded with a 10-month state of emergency and increased restrictions on communication, access to information, and travel throughout the country. (17) This included bans on all protests without government permission, blocked access to the internet (or certain websites and social media platforms), and media censorship. (18) A subsequent rise in regional tensions led to the fall of the political regime in 2018. Then Prime Minister Hailemariam Desalegn resigned in February and was replaced by current Prime Minister Dr Abiy Ahmed Ali, who reversed many of the previous regime's practices.

Despite the deteriorating political environment, the economic situation in Ethiopia was marked by growth in the years preceding and during the study, with growth rates averaging nearly 10% per year from 2007/08 to 2017/18, and reductions in poverty in rural and urban areas (the share of the population living below the poverty line declined from 30% in 2011 to 24% in 2016). (18) Most of the growth occurred in industry (namely construction) and service sectors, with declining contributions from agriculture and manufacturing. Indeed, Ethiopia's positive economic performance and deepening trade ties with China may have served to prolong the survival of the former political regime until 2018, (19) as the threat of political upheaval brought concerned speculation about a potential economic slowdown. (20) As discussed in more depth in Article 4, Ethiopia's heavy dependence on external health sector funding, harmonized planning/reporting/budgeting processes, and aim to achieve lower middle-income country status are forces that have stabilized the health sector.

Natural disasters, land conflicts, major development projects, and international appointments are among the many occurrences that have affected the Ethiopian context in recent years. While some of these influences have placed strain on the country and its governing bodies, others have brought attention and recognition to Ethiopia, shaping aspects of the social fabric and identity. For example:

- In 2015-2016, Ethiopia experienced its most devastating drought in decades (affecting the lives and livelihoods of over 10 million people), as well as widespread flooding (displacing hundreds of thousands of people from their homes). (21,22) The slow response to these natural disasters by the Ethiopian government garnered criticism from the international media. (23)
- The proposed reallocation of farmland from Oromia region to Addis Ababa in 2015 motivated large-scale protests throughout the country, and violent clashes over regional boundaries between Oromia and Somali regions have persisted since 2016. As of April 2018, more than a million people have been internally displaced. (24) Such conflicts have demanded the attention of high-level government officials, detracting from their capacity to engage with health programs (as recorded in research field notes, detailing informal conversations with interview participants and key informants).
- The Grand Ethiopian Renaissance Dam, initiated in 2001 and at 60% capacity in December 2018, prompted intense diplomatic negotiations with Sudan and Egypt. (25,26) The project represents an opportunity for Ethiopia to lead the way in promoting 'hydrosolidarity' in the region or, conversely, to defend Ethiopian nationalism in a manner that may erode international relationships. (27)
- In May 2017, Tedros Adhanom, former Ethiopian Ministry of Health, was elected as Director General of the World Health Organization (WHO), bringing international attention to health reforms in Ethiopia. (28)

The 2015-2018 period of growing uncertainty coincided with the data collection activities of this study (Figure 8) and may have influenced the opinions and perspectives held and expressed by the participants in interviews and focus group discussions (FGDs), many of whom worked closely alongside or as part of government structures. In early stages of the research we documented a social desirability bias tendency in some of the community-level participant responses, whereby information and opinions were provided that aligned with what was perceived to be socially acceptable. (29) The techniques developed to detect and minimize these tendencies were applied during subsequent data collection activities. In a few cases, the responses of participants at subnational and national levels appeared to be either overly guarded (that is, hesitant to offer opinions, especially of a critical nature) or hypercritical (for example, of the government or Ethiopian cultural values). It is plausible that the restrictive environment in the country may have impacted the selection of individuals who agreed to participate in the study. For instance, despite repeated attempts, the number of participants from civil society groups was below the number planned in the sampling frame (Appendix 3.3).

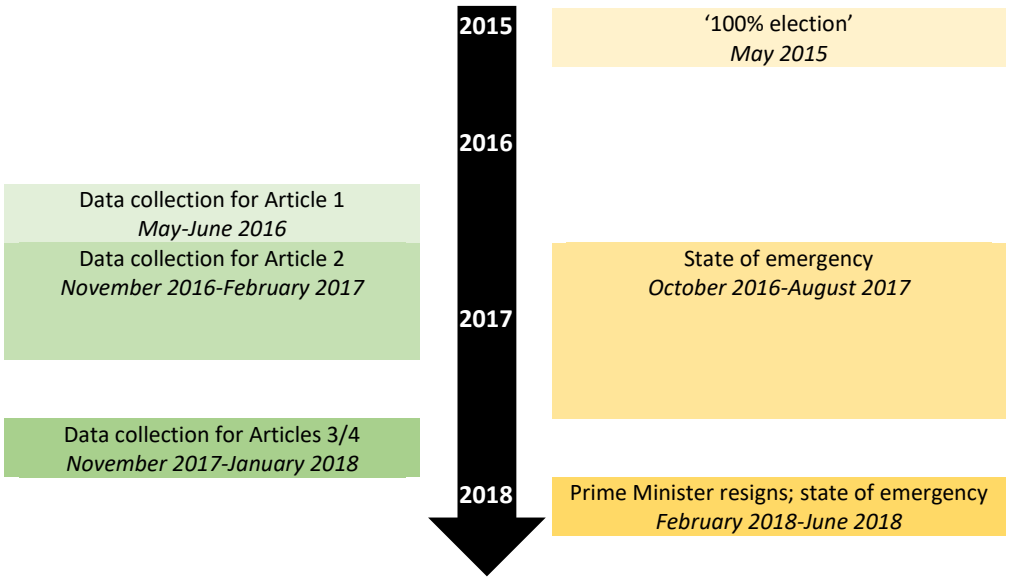

Figure 8. Timeline of data collection activities and political events in Ethiopia

The period immediately following data collection, when much of the data analysis and interpretation took place, was characterized by a general sense of optimism amid ongoing political, security, and social concerns. Dr Abiy Ahmed Ali became Prime Minister in February 2018, promising ambitious reforms such as: liberalizing the economy; brokering peace with Eritrea; ensuring gender parity among the cabinet posts; loosening restrictions on the media; and releasing political prisoners. (30,31) While the realization of these reforms has proven successful in some respects – in 2019, Dr Abiy was awarded the Nobel Prize for the peace agreement with Eritrea – in other ways, these reforms have spurred further instability within the country. For example, inter-ethnic tensions have resurfaced (especially between Oromo and Amhara peoples), several claims on statehood have been put forward, (32) and there have been violent displays of discontent with the government, such as the 2019 murders of the army chief of staff and a regional governor as part of an alleged coup attempt. (30) The security situation in Jimma Zone has been uncertain, especially for those who are not ethnically Oromo, due to the resurgence of the Oromo Liberation Front (see Chapter 3) and ethnic- or religious-motivated violence. (11) This emergent context is reflected in the following section, which considers the implications of the findings for the advancement of MNCH in Ethiopia.

8.4 Implications for the advancement of equity in MNCH in Ethiopia

The findings of this research uphold, to some degree, Ethiopia's MNCH success story, as the country has made marked improvements in MNCH outcomes and service coverage (especially in rural areas) since the start of the Millennium Development Goal (MDG) period. (33) Over the past decades, MNCH has benefited from stability and continuity in the health sector (coinciding with relative political stability for most of this period), and increased coordination among health sector development partners and funders. (7) MNCH remains a longstanding priority of the Federal Ministry of Health (FMOH) and development partners, and also appears to be a growing priority at more local levels as well, especially as greater attention to issues of gender equality reinforces the importance of a women's reproductive

health agenda. (34) The findings of this research also suggest an increased awareness and openness surrounding pregnancy and childbirth issues in rural areas as MNCH services have become more accessible to populations in these settings. This signifies greater potential for meaningful engagement with wider audiences including men, who traditionally were less likely to engage with MNCH topics.

Yet, anchored in a heavily-promoted set of health interventions, the advancement of MNCH in Ethiopia is largely pursued without extensive consideration of the diverse needs and preferences of community stakeholders, and in many cases, without consultation with those responsible for the day-to-day delivery of healthcare, such as HEWs and subnational health managers. The notion of health equity has effectively been depoliticized (7) and, as Kitaw (35) warns with regards to the implementation of primary health care (PHC) in Ethiopia, could have the potential to be 'unduly used to control the lives of citizens' (p.2). This is somewhat evident, for example, in the campaign to increase the rates of facility-based births, where punitive or coercive measures have been reported in some instances, with empowerment-based approaches adopted in other instances. (7,15) This dissertation research has also drawn attention to issues of health financing in the country, including the low level of domestic health financing (which, at 5.98%, falls below the Abuja target of 15% (36)), and the lack of advancement in use of progressive taxation to finance health and social protection programs. (15)

There are, however, limits as to what can be achieved through increased MNCH service use alone, especially when there is discordance about the underlying notion of health. Are community members expected to use health services if they are not perceived to be aligned with the intrinsic value of health? Or if health service use precludes participation in important cultural practices? The findings of this research that describe community perceptions of the meaning of health and health equity provide a basis for how demand-creation initiatives of the health sector may be better aligned to community interests and values, and better positioned to draw from and augment established community assets through a greater emphasis on participatory approaches. While many HEWs and subnational actors

make efforts to contextualize their professional responsibilities within the realities in the areas that they served, such efforts were not recognized or supported by higher levels of the health system to the extent that they could be. Our explorations of health equity conceptualizations at the national level suggest that the influence of external financing of health as a development strategy may detract from the ethical underpinnings of fairness and justice.

While geographical inequalities in MNCH were found to be a common way to conceptualize inequities in MNCH, especially for the HEW, subnational health manager and national health sector participants in the study, other forms of disadvantage that cut across geographies also warrant attention. For example, communities in Jimma Zone identified social capital as an important dimension of inequity, (5) and HEWs and subnational health managers pointed to factors that intersected with geographical areas. (15,37) While HEWs and subnational health managers relied on their familiarity with the areas that they served and personal ingenuity to develop tailored approaches to issues affecting underserved populations, these actions could be strengthened by receiving support and recognition from higher levels of the system. Greater and more meaningful inclusion of community members, HEWs and subnational health managers in higher-level policy-making and decision-making processes may help to ensure that MNCH programs and policies reflect the realities in which they are to be implemented. It would also facilitate a process of embedding traditional practices and values within national institutions.

As Ethiopia enters a time of political transition and democratic reform, it seems an opportune time for the re-emergence of civil society, akin to the mid-1990s when the transition to democratic politics opened up spaces for expanded civil society activism (38). Next to examples of civil engagement in response to political matters, statehood claims, land reforms, and information access, citizen advocacy may increasingly take hold within the health sector. An interesting case, explored in analyses conducted alongside this research (34,39) and by others (40) is the Women's Development Army (WDA), whose effective role, in some areas, amounted to surveilling the community and reporting back to government

officials about non-compliance with MNCH service use recommendations. This group, however, is aptly positioned at a decentralized level to evolve into their officially stated, more advocacy-based role: to promote and protect access to MNCH services among vulnerable populations. Recent government reimagining of the WDA initiative, including investments in formal training opportunities and certifications, may facilitate changes in their role. This would require government willingness to invest in a program that facilitates citizen complaints against the government – a longstanding conundrum in community empowerment initiatives. (41) Additionally, the opening of communication and information channels providing exposure outside of the community may prompt grassroots demands for equitable improvements and accountability. Overall, the equitable advancement of MNCH in Ethiopia is contingent on sustainable improvements in programs and services that are accessible, culturally appropriate, and of high quality, and which emphasize participation and empowerment approaches within the health sector and at the community level described earlier in Chapter 2.

8.5 Considerations for promoting health equity on a global scale

Although this research was done as a case study in Ethiopia, the findings prompt consideration for the wider advancement of health equity in other low- and middle-income countries and on a global stage. Importantly, the tendency at the national level to conflate the notions of health inequality and health inequity call into question the orientation of global health equity agendas, which appear to be framed as technocratic in nature, and quantitatively driven. The construct that differentiates health equity from health equality – normative judgements about the distribution of health – is seldomly operationalized or invoked as a justification for action. (42) Instead, numerical targets and monitoring protocols are adopted as the principal means to assess health equity globally, and rarely account for the underlying process and context through which quantitative changes may have occurred (though this is an area of increasing attention). (43,44)

While the achievement of such metrics are often intended to motivate and promote accountability and transparency, numerous examples point to how the pursuit of improved metrics lead to harmful, undesired consequences. (45) Through my research in Ethiopia, I have raised questions about the consequences of the negative social stigma that results from punitive measures to promote service use, (7,15) and the oversimplification of gender equality issues that results from 'box checking' approaches to gender mainstreaming. (34) As Storeng and others have argued, technocratic approaches to improving health narrow the space for advocacy efforts and appeals on the basis of morality, instead upholding neoliberal ideology and an erosion of trust in public institutions. (46)

The meaningful integration of health equity (beyond measuring the distribution of health) into national health and development agendas, however, is not straightforward (see Chapter 2). Three governance challenges highlighted by Bowen et al. (47) – fostering collective action through inclusive decision-making spaces that promote engagement across diverse stakeholders; prioritizing equity, justice and fairness, especially when faced with difficult trade-offs; and creating accountability mechanisms for societal actors regarding decision-making, investments, action and outcomes – are indeed pertinent in Ethiopia and elsewhere. In my research, I have highlighted examples of how actors at decentralized levels of the health system, namely HEWs and subnational health managers, have proven instrumental in adapting national policy and program aims within local contexts. (15,37) This research also suggests that these actors may be an underutilized resource in furthering approaches to advance health equity.

As the world approaches the mid-way point of the United Nations (UN) 2030 Agenda for Sustainable Development, the findings of this study prompt consideration of whether (and how) the normative aspects of health equity need to be further integrated into national plans and strategies. By design, the principles of the 2030 Agenda are meant be adapted by countries to reflect their national situations and priorities, however, as of yet, there is little evidence to suggest how and whether this has been pursued. The findings of this dissertation illustrate how, in the case of Ethiopia, many of the actions to improve

health have been motivated by narrowly defined indicators and targets established at the global level. Indeed, the use of health metrics has become a dominant paradigm globally. (48) While this technocratic focus has ushered in significant health gains (and arguably, a sense of accountability and transparency), its dominance overshadows other forms of knowledge and may risk overlooking more deeply rooted social issues and injustices that affect health in a given context. Moving forward, the broadening of national health sector development approaches – and the types of evidence that inform and monitor progress – may be expected to help ensure that progress is sustainable over time, inclusive of marginalized groups, and mutually reinforced across sectors. Building on the findings of this dissertation, further research into these issues is warranted.

8.6 Methodological contributions

To date, this dissertation is the first detailed case study of health equity perceptions across multiple levels of a national health sector. Indeed, studies about perceptions of health equity – aiming to elucidate how information about the concept is acquired, how it is understood and how it is applied to interact with the surrounding environment – are rare, especially in low-income country contexts. Such studies (as presented in this dissertation), however, can form an important empirical basis for identifying obstacles to improved health at the population level and developing relevant strategies and approaches to overcome them.

My dissertation research allows for a broad consideration of health equity in MNCH that accounts for perspectives and experiences of different stakeholder groups across multiple levels of the health sector. The use of qualitative methods to conduct an initial rapid assessment of the local context (Article 1) was particularly novel, as previous investigations have tended to rely more heavily on quantitative-based surveys for such purposes. The findings of this assessment provided valuable insights and background information prior to conducting the subsequent research interviews. Following the publication of this

article, other Ethiopian researchers have expressed interest in applying similar methods for research in other parts of the country, including an ongoing study of perceptions and practices of mothers on equity in MNCH services utilization in Tigray. [Personal communication with A. Desta (PhD Candidate at Mekelle University, Ethiopia) on 22 Dec 2018]

During this initial round of data collection for the Safe Motherhood Research Project in May-June 2016, I identified two emergent methodological issues: approaches to working with interpreters and social desirability bias. Drawing upon my field notes and observations, I reflected on these issues in two subsequent publications (Appendix 6.1 and 6.2). (29,49) While these issues are certainly not unique to this research, they have not been widely acknowledged and discussed in the academic literature. Thus, these publications add to a small body of literature that contemplates qualitative research methodological issues in Ethiopia, though the experiences and insights conveyed in these articles are of general interest for researchers working across diverse settings. (For instance, my article about working with interpreters was downloaded nearly 1800 times in the year following its publication.)

8.7 Reflections on population health

Throughout the duration of my time in the Population Health PhD Program, my appreciation of interdisciplinarity as a foundation for population health has deepened. As part of the Safe Motherhood Research Project team, I worked closely alongside researchers and experts from diverse backgrounds (such as anthropology, epidemiology, behavioural sciences and visual communications) to gather and synthesize evidence using qualitative and quantitative methods. This type of team-based collaboration constitutes one form of interdisciplinary research that is valuable for merging multiple approaches and perspectives to arrive at a deeper understanding of a common problem. (50)

An alternate interpretation of interdisciplinarity, stemming from the humanities, focuses on individual intellectual processes that synthesize concepts from multiple disciplines. (50) For me, developing my

capacities with regards to this second interpretation – through my experiences collecting primary data and preparing my dissertation – has been instrumental to my development as a population health researcher. In addition, my involvements within the Population Health PhD Program (namely, establishing the Population Health Writing Group and co-facilitating the weekly meetings (51)) have generated other insights into how doctoral programs can promote and support interdisciplinary learning (Appendix 6.3).

8.8 Overall conclusion

Through this dissertation research I have explored the conceptualization of health equity in MNCH across community, health worker, subnational and national contexts, interrogating the impact of these conceptualizations on the advancement of MNCH policies, programs and practices. My analysis of the data collected for this research has shown that the conceptualization of health equity differs across levels of influence in the health system, though actions to address health inequities are to a large extent driven by higher-level technocratic interpretations of the concept. The framing of health equity in the Ethiopian health sector thereby tends to concentrate on the delivery of a selected suite of health services to under-served geographical areas.

This research has provided insight into the link between the conceptualization of health equity and its operationalization in the area of MNCH, including identifying opportunities to strengthen the role of subnational health actors and questioning the social justice underpinnings of health equity in the implementation of national policies. My dissertation is limited in that it has only captured the experience of one country, at one point in time, focusing on a single health topic (MNCH). A wider consideration of the research questions across other contexts could help to further elucidate how health equity agendas are enacted, and to yield more generalizable findings for the development and advancement of global and national health agendas to reduce health inequities. Qualitative research is

critical to that end as a means to better understand and account for the perceptions and experiences of stakeholders.

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Glossary of terms

Birr: A birr is the unit of currency in Ethiopia. In 2019, 1 Canadian dollar can be exchanged for about 23 Ethiopian birr.

Garee: A garee is a community consisting of about 25 households.

Health Extension Worker: Health Extension Workers are locally-recruited, female community health workers that are paid to deliver disease prevention and health promotion activities at the kebele level, predominantly through community mobilization and health education. Based at health posts, Health Extension Workers are the most local level of the formal health workforce in Ethiopia.

Health post: A health post is the most decentralized level of health facility, located in kebeles. Health posts are staffed by two Health Extension Workers.

Iddir: An iddir is an informal, community-level arrangement for pooling and redistributing resources.

Kebele: A kebele is a community of about 5000 people, governed by a local kebele council. Each kebele is served by a health post.

Male Development Army: The Male Development Army is a voluntary community workforce with a focus on aspects of community development related to physical infrastructure or agriculture.

Maternity waiting area: A maternity waiting area (also called maternity waiting home) is a residential structure built near a health facility where women can stay during the final weeks of pregnancy, giving them access to maternity care, and allowing them easy access to the facility when labour begins.

One birr for one mother campaign: This campaign encourages households to contribute one birr (or more) per woman of reproductive age to fund community-level health initiatives, such as ambulances or maternity waiting areas.

Region: In Ethiopia, regions are the first-level subnational administrative divisions. There are nine regions in Ethiopia, as well as two chartered cities.

Tokoshane (one to five network): A tokoshane is a model of social organization whereby five households support one another. Each tokoshane has designated WDA and MDA members to support health and development initiatives.

Women's Development Army: The Women's Development Army (previously called the Female Development Army or the Health Development Army) is a voluntary community health workforce that supports the work of Health Extension Workers. One woman out of every five households is a Women's Development Army member, responsible for promoting health among the five households under the supervision of Health Extension Workers.

Woreda (district): In Ethiopia, a woreda is a subnational administrative division smaller than a zone. Woredas are comprised of kebeles.

Zone: In Ethiopia, a zone is a second-level subnational administrative division smaller than a region, comprised of woredas.

Appendices

Appendix 1. Letters of ethical permissions and approvals

A1.1 Letter of permission for use of secondary data

28 March 2017

Office of Research Ethics and Integrity

University of Ottawa

550 Cumberland (Pavillon Tabaret Hall), Room 156

Ottawa, ON K1N 6N5

Canada

RE: Permission for use of data

Dear University of Ottawa Research Ethics Board,

With this letter, I grant permission for Nicole Bergen, PhD Candidate in the Population Health Program in the Faculty of Health Sciences at the University of Ottawa, to use secondary data in the form of qualitative interview transcripts from the research project *An Implementation Study of Interventions to Promote Safe Motherhood in Jimma Zone, Ethiopia* (H 10-15-25B). Nicole Bergen will be given access to the transcripts, and may do reanalysis of the qualitative data for her doctoral research.

Sincerely,

Dr. Manisha Kulkarni
Co-Principal Investigator of *An Implementation Study of Interventions to Promote Safe Motherhood in Jimma Zone, Ethiopia*
Assistant Professor
School of Epidemiology, Public Health and Preventive Medicine
Faculty of Medicine
University of Ottawa
Phone: 1-613-562-5800, ext. 8713
E-mail: manisha.kulkarni@uottawa.ca

A1.2 Ethical approval from Ethics Review Board, University of Ottawa

File Number: H04-17-10 **Date (mm/dd/yyyy):** 08/16/2017

Université d'Ottawa University of Ottawa
Bureau d'éthique et d'intégrité de la recherche Office of Research Ethics and Integrity

Certificate of Ethics Approval

Health Sciences and Science REB

Principal Investigator / Supervisor / Co-investigator(s) / Student(s)

First Name	Last Name	Affiliation	Role
Ronald	Labonté	Medicine / Medicine	Supervisor
Manisha	Kulkarni	Medicine / Medicine	Co-Supervisor
Nicole	Bergen	Health Sciences / Interdisciplinary School of	Student Researcher

File Number: H04-17-10

Type of Project: PhD Thesis

Title: Health equity as a priority in the 2030 Agenda for Sustainable Development: a nested qualitative case study of maternal, newborn and child health in Ethiopia

Approval Date (mm/dd/yyyy)	Expiry Date (mm/dd/yyyy)
08/16/2017	08/15/2018

Special Conditions / Comments:
N/A

550, rue Cumberland 550 Cumberland Street
Ottawa (Ontario) K1N 6N5 Canada Ottawa, Ontario K1N 6N5 Canada
(613) 562-5387 • Téléc./Fax (613) 562-5338
http://www.recherche.uottawa.ca/deontologie/ http://www.research.uottawa.ca/ethics/index.html

File Number: H04-17-10 **Date (mm/dd/yyyy):** 08/16/2017

Université d'Ottawa University of Ottawa
Bureau d'éthique et d'intégrité de la recherche Office of Research Ethics and Integrity

This is to confirm that the University of Ottawa Research Ethics Board identified above, which operates in accordance with the Tri-Council Policy Statement and other applicable laws and regulations in Ontario, has examined and approved the application for ethical approval for the above named research project as of the Ethics Approval Date indicated for the period above and subject to the conditions listed the section above entitled "Special Conditions / Comments".

During the course of the study the protocol may not be modified without prior written approval from the REB except when necessary to remove participants from immediate endangerment or when the modification(s) pertain to only administrative or logistical components of the study (e.g. change of telephone number). Investigators must also promptly alert the REB of any changes which increase the risk to participant(s), any changes which considerably affect the conduct of the project, all unanticipated and harmful events that occur, and new information that may negatively affect the conduct of the project and safety of the participant(s). Modifications to the project, information/consent documentation, and/or recruitment documentation, should be submitted to this office for approval using the "Modification to research project" form available at: http://research.uottawa.ca/ethics/submissions-and-reviews.

Please submit an annual status report to the Protocol Officer 4 weeks before the above-referenced expiry date to either close the file or request a renewal of ethics approval. This document can be found at: http://research.uottawa.ca/ethics/submissions-and-reviews.

If you have any questions, please do not hesitate to contact the Ethics Office at extension 5387 or by e-mail at: ethics@uOttawa.ca.

Germain Zongo
Protocol Officer for Ethics in Research
For Daniel Lagarec, Chair of the Sciences and Health Sciences REB

550, rue Cumberland 550 Cumberland Street
Ottawa (Ontario) K1N 6N5 Canada Ottawa, Ontario K1N 6N5 Canada
(613) 562-5387 • Téléc./Fax (613) 562-5338
http://www.recherche.uottawa.ca/deontologie/ http://www.research.uottawa.ca/ethics/index.html

A1.3 Ethics approval from Institutional Review Board, Jimma University

JIMMA UNIVERSITY
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ቁጥር Ref.No. IHRPGD/777/2017
ቀን Date 10/08/2017

Institutional Review Board (IRB)
Institute of Health
Jimma University
Tel: +251471120945
E-mail: zeleke.mekonnen@ju.edu.et

To: Mr. Lakew Abebe

Subject: Ethical review status of your research protocol

The IRB of Institute of Health has reviewed your research project entitled: **Health equity as a priority in the 2030 agenda for sustainable development- a nested qualitative case study of maternal, newborn and child health in Ethiopia' "** which is requested as an amendment and part of your previous project **entitled "An implementation study of intervention to promote safe Motherhood in Jimma Zone, Ethiopia'** for which you were granted ethical cleanse with ref no: RPGE/449/2016.

This is to notify that this research protocol as presented to the IRB requesting for amendment meets the ethical and scientific standards outlined in national and international guidelines. Hence, we are pleased to inform you that your protocol is ethically cleared.

We strongly recommended that any significant deviation from the methodological details indicated in the approved protocol must be communicated to the IRB before they are implemented and submit the annual report to our office.

With regards!

[redacted]

Zeleke Mekonnen (PhD)
Associate Preofessor Health
Research and Postgraduate
Director

Institute of Health
Jimma University

CC
To: Nocle Bergen. University of Ottawa
canada

Tel. +251-47 11 114 57
PBX: +251471111458-60
Fax: +2514711114 50
+251471112040
P.O.Box. 378
JIMMA, ETHIOPIA
e_mail: ero@ju.edu.et
website: http://www.ju.edu.et

Appendix 2. Recruitment script and consent forms

A2.1 Recruitment script for interview participants

Jimma University and the University of Ottawa

Title of study: Health equity as a priority in the 2030 Agenda for Sustainable Development: a nested qualitative case study of maternal, newborn and child health in Ethiopia

Name of researcher:

Ms Nicole Bergen
Ph.D. Student
Interdisciplinary School of Health Sciences, Faculty of Health Sciences
University of Ottawa
Phone: [*will provide local phone number in Ethiopia, when available]*
E-mail:

Invitation to participate

Good [*morning/afternoon/evening*]. My name is Nicole Bergen. I am a PhD student at the University of Ottawa in Canada and a researcher at Jimma University. For my thesis, I am conducting research to learn more about issues surrounding health equity, particularly in relation to policies and programs that address maternal, newborn and child health in Ethiopia.

[*Name of participant's organization*] does important work in this area. Given your knowledge and expertise, I invite you to participate in an interview for this research. Participation is entirely voluntary, and will consist of an interview of about 45-60 minutes.

Purpose of the study

The purpose of this study is to explore how health equity, a concept promoted in the United Nations Sustainable Development Goals, is understood and pursued in Ethiopia. Specifically, my research will look at policies, programs and practices related to maternal, newborn and child health. Through interviews with key stakeholders, I hope to become familiar with your work surrounding maternal, newborn and child health, and the successes, challenges, opportunities and setbacks that you encounter. I am also interested to learn more about how efforts align with the work being done at other levels of governance and in different sectors. This research will help to identify ways that Ethiopia can move forward in improving maternal, newborn and child health, and achieving the Sustainable Development Goals.

A2.2 Consent form for interview participants

Jimma University and the University of Ottawa

Participant Informed Consent Form

Title of study: Health equity as a priority in the 2030 Agenda for Sustainable Development: a nested qualitative case study of maternal, newborn and child health in Ethiopia

Lead institution: University of Ottawa, Canada

Name of researcher:

Ms Nicole Bergen, Ph.D. Candidate
Interdisciplinary School of Health Sciences
Faculty of Health Sciences
University of Ottawa
Phone:
Local phone in Ethiopia: [*number to be added when available]*
E-mail:

Thesis supervisors:

Dr. Manisha Kulkarni, Assistant Professor
School of Epidemiology, Public Health and Preventive Medicine
Faculty of Medicine
University of Ottawa
600 Peter Morand, Room 301E
Ottawa, ON, Canada K1G 3Z7
Phone: 1-613-562-5800, ext. 8713
Fax: 1-613-562-5944
E-mail: manisha.kulkarni@uottawa.ca

Dr. Ronald Labonté, Professor
School of Epidemiology, Public Health and Preventive Medicine
Faculty of Medicine
University of Ottawa
850 Peter Morand, Room 116
Ottawa, ON, Canada K1G 3Z7
Phone: 1-613-562-5800, ext. 2288
Fax: 1-613-562-5659
E-mail: rlabonte@uottawa.ca

Invitation to participate: You have been invited to participate in the abovementioned study, which will contribute to the doctoral research of Ms. Nicole Bergen (PhD Candidate), with supervisors Dr. Manisha Kulkarni and Dr. Ronald Labonté.

Purpose of the study: The purpose of this study is to explore how health equity, a concept promoted in the United Nations Sustainable Development Goals, is understood and pursued in Ethiopia, in the area of maternal, newborn and child health.

Participation: Your participation will consist of participating in an interview that will last for approximately 45-60 minutes. The researcher will ask you some questions, and may also ask some questions to help explain or clarify or ask you for more detail about your answers. The researcher may take notes while you are giving your answer, and with your consent, the interview will be digitally recorded. Should you wish to review the typed transcript of the recording, you may contact the interviewer or anyone listed on this consent form. The transcript will be sent to you by email in a password-protected document. Instructions about how to open the document will be sent in a separate email. If you wish, you may modify your transcript to a reasonable extent to further clarify your responses.

Risks: Your participation in this study will mean that you will be giving information about your experience, knowledge and expertise in the area of maternal, newborn and child health. No risks are anticipated for your participation. You may feel tired or inconvenienced in the short term as a result of participating in the interview. The researcher will make every effort to minimize these risks, including respecting the length of time of the interview. You will not be asked about sensitive or personal issues. You do not have to answer any questions that you do not want to and you may end the interview at any time. If you personally choose to disclose your participation to people others than those in the research team, understand that you risk revealing your identity. Revealing your part in the study may (or may not) have consequences for you, such as feeling judged by others for your opinions surrounding equity and fairness.

Benefits: Your participation in this study might benefit you personally by giving you the opportunity to reflect on health equity, and your work related to maternal, newborn and child health. Any knowledge generated through this research will be added to existing knowledge about maternal, newborn and child health in Ethiopia, and may advance new thinking. Any advancements or improvements to health policies and programs as a result of the knowledge generated in this research can be understood as beneficial to society.

Confidentiality and anonymity: Your participation in this study is strictly confidential. Only members of the research team will have access to the materials related to this study. All documents and files, including the audio recording files, transcripts, interview notes, and consent forms, will be stored in locked filing cabinets and/or on password protected computers at the University of Ottawa. Electronic files will be password protected. We will not use your name or any other personally identifiable information in any presentations or publications that result from this study. We will also not use the name of any other people you identify or the name of any institution with which you are affiliated. All quotations or excerpts from the interview used in presentations or publications will be masked and/or any identifying information will be removed. You may request and/or send information to the researchers by email (for example comments or requests for your interview transcripts). In order to minimize the risk of security breaches and to help ensure your confidentiality we recommend that you use standard safety measures such as signing out of your account, closing your browser and locking your screen or device when you are no longer using them.

Anonymity will be protected in the following ways: any characteristics or words that have potential to identify you will be removed from the text when the researchers report or write about the study. Any quotations used in written work will be anonymously reported. If you personally

choose to disclose your participation to people others than those in the research team, understand that you risk revealing your identity, and there may be a breach in anonymity and confidentiality. Revealing your part in the study may (or may not) have consequences for you. The identity of participants in any publications will be through the use of generic terms describing occupational standing e.g. individual working at a health organization, university professor, health officer, etc.

Conservation of data: The digital data collected through interviews will be transcribed and stored as digital (electronic) files. Once transferred to electronic files, data will be removed from recording devices. Electronic data will be secured as password-protect files on computers that have password protection. Any hard (written hand notes or typed) copies of discussions will be anonymized before printing to prevent other non-researchers from accessing identity of the participants. Only the researchers will have access to the data. All researcher-collected data will be transferred to the University of Ottawa and stored on limited-access, password-protected drives and servers. Data will continue to be kept in a secure manner for a period of five years after the research has been published. After this period, data will be deleted in a secured manner.

Voluntary Participation: You are under no obligation to participate and if you choose to participate, you can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequences. If you choose to withdraw, you may decide whether the data gathered until the time of withdrawal will be deleted or be used for the study.

Acceptance: I, _____ *(Your Name),* agree to participate in the above research study conducted by Nicole Bergen of the Interdisciplinary School of Health Sciences, Faculty of Health Sciences at the University of Ottawa*, and under the supervision of Dr. Manisha Kulkarni and Dr. Ronald Labonté.*

☐ I agree to have my interview audio recorded.

☐ I do not agree to have my interview audio recorded.

If you have any questions about the study, you may contact the researchers directly. If you have any questions regarding the ethical conduct of this study, you may contact:

Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, Ontario, Canada K1N 6N5, tel. no.: +1-613-562-5387, e-mail: ethics@uottawa.ca.

Note: There are two copies of the consent form, one of which is yours to keep.

Participant's signature: Date:

Researcher's signature: Date:

Appendix 3. Sampling frames and participant demographic information

A3.1 Pre-IEC interviews and focus group discussions

*A3.1.1 Participant sampling frame: number of key information interviews and focus group discussions planned and conducted**

District	Kebele	Participant type: method of data collection					
		HEW: KII	RL: KII	WDA: KII	MDA: KII	Males: FGD (no. participants)	Females: FGD (no. participants)
Kersa	Baallto	1	1	1	1	1 (n=12)	1 (n=11)
Kersa	Kitimble	1	1	1	1	1 (n=9)	1 (n=9)
Gomma	Keso Hito	1	1	1	1	1 (n=7)	1 (n=11)
Gomma	Kilole	1	1	1	1	1 (n=9)	1 (n=11)
Seka Chekoresa	Buyo Kechema	1	1	1	1	1 (n=6)	1 (n=12)
Seka Chekoresa	Hula Huke	1	1	1	1	1 (n=7)	1 (n=11)
Total		**6**	**6**	**6**	**6**	**6 (n=50)**	**6 (n=65)**

FGD: focus group discussion; HEW: Health Extension Worker; KII: key informant interview; MDA: Male Development Army; RL: religious leader; WDA: Women's Development Army

*Note: All KIIs and FGDs were conducted as per the sampling frame.

A3.1.2 Demographic information, by participant type

Participant type	Age range in years (median)	Sex	Range of years in role
HEW	23-30 (25)	Female	4-10*
RL	36-70 (52)*	Male	18-45*
WDA	28-53 (38)	Female	2-10*
MDA	35-55 (47)	Male	8-30*

HEW: Health Extension Worker; MDA: Male Development Army; RL: religious leader; WDA: Women's Development Army

*Note: One or more values are missing (not collected, erroneous or provided as an estimate)

A3.2 Baseline interviews

A3.2.1Participant sampling frame and demographics for Health Extension Workers

District	Study site	Sampling frame: no. interviews planned	No. transcripts included in analysis*	Age range in years (median)	Range of years in role
Gomma	Limu Shayi	1	1		
	Beshasha	1	1		
	Gembe	2	2		
	Choche	2	0		
	Yachi	2	2		
	Kedemasa	1	1		
	Chami Chago	1	1		
	Omo Beko	2	1		
	Dhayi Kechene	2	1		
	Total	**14**	**10**	**22-30 (27)****	**1-10****
Kersa	Serbo HC	1	0		
	A/Dika HC	2	2		
	Kellacha HC	1	1		
	Bulbul HC	2	2		
	K/Beru H/C	1	1		
	B/Wajo H/C	2	2		
	K/Gora HC	2	2		
	Total	**11**	**10**	**20-29 (23)****	**1-10****
Seka Chekoresa	Seka	1	1		
	Wokito	2	2		
	Buyo Kechema	2	2		
	Bake Gudo	1	1		

	Detu Kersu	1	1		
	Lilu Omoti	1	1		
	Geta Bake	1	1		
	Setemma	2	2		
	Total	**11**	**11**	**20-32 (25)****	**1-10****
Total		**36**	**31**	**20-32 (24)****	**1-10****

*Note: Transcripts were missing because the interview was not conducted due to logistical limitations or the data collector did not submit the transcript to the research team

*Note: One or more values are missing (not collected, erroneous or provided as an estimate)

A3.3 Subnational and national interviews

A3.3.1 Sampling frame and organization descriptions

Participant type	**Sampling frame: no. interviews planned**	**No. interviews conducted**
Federal government officials	2-4 with participants from the Ministry of Health	5
	1-3 with participants from other ministries	1
Sub-national government health officers	1-2 with participants from Oromia Regional Health Office	2
	1-2 with participants from Jimma Zonal Health Office	2
	3-6 with participants from District Health Offices in Jimma Zone	5
	3-6 with participants from PHCUs in Jimma Zone	3
Federal research institute	not specified	2
Ethiopia-based United Nations agencies	4-8	3
Civil society organizations	4-5	2
Ethiopian academia	3-5	5
Donor or implementing organizations	4-5	5
Total	**26-46**	**35**

Appendix 4. Data collection tools, summarized

A4.1 Pre-IEC focus group and interview guides

A4.1.1 Focus group discussion guide

Separate focus group discussions were held with groups of male and female gender participants. The below guideline summarizes the general types of questions posed; however, modifications were made based on the gender of the participants.

Guiding question	Probes
1. What does it mean to be healthy?	1.1 to you, personally? 1.2 to others? 1.3 to your community?
2. What might explain why some people are healthy and others are not?	2.1 Factors in your community? 2.2 Individual characteristics? 2.3 Factors beyond your control?
3. How do you feel about the reality that there are differences in health between people?	3.1 Are these differences natural, or could this be improved? 3.2 How important is it that something be done to improve the health of people that are unhealthy? What might this be?
4. What is it like to be healthy during pregnancy, childbirth and the newborn period?	4.1 What do you do to support women during this time? 4.2 What advice do you give?
5. Some women have healthier pregnancy experiences than other women…	5.1 Why do you think this is? 5.2 What are some of the common problems encountered in your community? 5.3 What are the causes of some of the common problems encountered? 5.4 Where do women go when they have problems during pregnancy? Child birth? Newborn period? 5.5 Please describe the sequence of how women typically seek help for their problems. That is, who do they consult first? What are their preferences? How might they be referred to other types of services or health facilities?
6. Who has a role in promoting the health of pregnant women and newborns?	6.1 First, what is the role of the husband? 6.2 Other family members? 6.3 Religious leaders? 6.4 Community leaders, like the WHDA and the MDA? 6.5 People who are part of the health system? 6.6 Traditional birth attendants? 6.7 The community at large? 6.8 Does anyone else come to mind as helping to address problems during pregnancy?

7. What type of information and education about safe motherhood have you encountered in your community?	7.1 What are the existing sources of mother and child health information or education targeted to women? (Probe: health personnel, media, community meeting, radio, TV, articles, community dialogue, etc) 7.2 Are those types of sources conducive to them and why? Why not? 7.3 What are the preferred methods of communicating information about mother and child health? (Probe: radio, TV, leaflets, folk songs, folk drama, one-to-one conversation, community conversation, etc) Which are successful and why?

A4.1.2 Key information interview guide

The below questions are a generic overview of the guidelines for key information interviews, which were tailored for each of the four participant groups: Health Extension Workers, religious leaders, leaders of the Male Development Army and leaders of the Women Development Army.

Guiding question	Probes
1. What does it mean for your community to be healthy?	1.1 To you, personally? 1.2 To others? 1.3 To your community?
2. What might explain why some people are healthy and others are not?	2.1 What are factors in your community, individual characteristics, factors beyond your control? 2.2 How important is it that something is done about this? a. What? How? And by whom?
3. In your community, what types of beliefs surrounding health do you encounter?	3.1 What do people believe makes them healthy or sick? 3.2 How do people act on these beliefs? 3.3 How do you address these beliefs in your role as a [HEW, religious leader, or MDA/WDA leader]?
4. What is the role of [group] in promoting health?	4.1 What barriers do you face? 4.2 What type of support, materials or information would you need to better promote health? 4.3 What more could be done to promote health in your community?
5. What is the role of the [group] in supporting the health of pregnant women and their newborn babies?	5.1 What actions do you do? 5.2 What advice do you give? 5.3 What barriers do you face? 5.4 How important is this part of your work? 5.5 What type of approach do you prefer when providing information or education to women and their families?
6. How important is it that the [group] participate in efforts to promote healthy pregnancies, childbirth and babies in your community?	6.1 Do you think more should be done? Why or why not? 6.2 What might this look like? 6.3 What would you need to expand your work?
7. What types of beliefs do people in your community hold about	7.1 What do people believe to be the cause of mother or infant death and other health problems that women and babies sometimes encounter? 7.2 How do people feel about the use of health services?

pregnancy, childbirth and the newborn period?	7.3 How do people feel about the advice that you give? 7.4 Do you ever encounter beliefs that you disagree with? How would you approach this situation?
8. How you do engage with other groups in learning / teaching about maternal and newborn health?	8.1 What has worked well? 8.2 In what ways might these activities be improved?

A4.2 Baseline Health Extension Worker interview guides

Semi-structured, in-depth interview guide for Health Extension Workers

Question set	Questions
Question set 1. Maternal and child health services	1.4 What is your role in managing and/or delivering maternal and child health services? 1.5 Given the maternal and child health services and activities that you perform, where do you feel you are doing well? Where do you feel you could improve? 1.6 How do you break down your time for maternal and child health services and other health extension program activities? How much of your work week is for maternal and child health programs? 1.7 What types of resources do you receive to provide these services? 1.8 Are there any families for whom these services are especially important? Please explain. 1.9 When do you refer pregnant women to upper levels of the health system for health care visits, delivery services and post-delivery care? Please explain how this process happens, and where they go.
Question set 2. Community participation in maternal and child health activities and services	2.1 How do community members become aware of maternal and child health services? 2.2 Are community members encouraged to participate in activities related maternal and child health services, in ways like planning, promoting, financing or providing feedback? If so, please explain how this occurs. 2.3 What do you think motivates the women in this health district to participate in MCH activities or services? 2.4 Why do you think might women decide to not participate? Do you address these factors? If so, how? 2.5 Do you encourage participation in any way? If so, how? 2.6 How important is it that they participate? How do you think this participation affects maternal and child health outcomes? What examples of this participation have you experienced?
Question set 3. Maternal and child health services across different stages of childbearing	3.1 Antenatal care (ANC) a. What types of ANC services do you currently provide as a HEW? b. What challenges do you face in providing these services? c. We know that some women attend ANC visits, while others do not. Some may drop out and not complete the four recommended visits. What do you think are the reasons why women may not attend ANC visits? d. What do you do to encourage attendance and minimize drop outs? e. How have you worked together to provide ANC to women? f. Have there been any challenges in working with the PHCU? 3.2 Childbirth

	a. How do women prepare for birth? b. What are the factors for a woman to give birth at a health facility? c. What are factors why a woman may not give birth at a health facility? d. What do you do to encourage women to give birth at a health facility? e. Are there financial barriers to women giving birth at a facility? What are these? What are the ways to overcome these barriers, if any? f. Have you been involved with helping women give birth? If so, could you tell me about this experience? 3.3 Postnatal care (PNC) a. What types of PNC services do you currently provide as a HEW? b. What challenges do you face in providing these services? c. What do you think are the reasons why mothers and babies may not use PNC? d. What are reasons why mothers and babies may use PNC? e. What do you do to encourage mothers and babies to make PNC visits?
Question set 4. Health problems	4.1 What types of serious health problems do you encounter during pregnancy? 4.2 What types of serious health problems do you encounter during childbirth? 4.3 What types of serious health problems do you encounter during the two days following childbirth? 4.4 What types of serious health problems do you see during the month after a woman gives birth?
Question set 5. Maternal waiting areas	5.1 What do you see as reasons for women to use MWAs? 5.2 What are the reasons for women to not use MWAs? 5.3 What do you do to encourage more women to use MWAs? 5.4 What qualities of MWAs do you think are the most important in encouraging women to use them? 5.5 How can qualities of MWAs be sustained or improved?
Question set 6. Working with other groups	6.1 How do you involve men during household visits or health education activities? 6.2 How do you work together with health development army, opinion leaders and model households? 6.3 How often do health center officers or district health officers visit your community pertaining to maternal and child health services? How do you work together?
Question set 7. HEWs in the community	2 As a HEW, which family members do you try to involve in education activities around maternal and child health? How do you go about doing this? 3 In what ways has your transition to being a trained HEW affected your status in the community?

	4	What challenges, if any, have you encountered as a woman doing paid work in the community? What benefits, if any, have you realized?

A4.3 Subnational and national interview guides

Domain	Questions
Introduction	Please tell me about yourself and your role.
Domain 1. Perceptions of relevant social determinants of health	*Use of photo card prompt* 1.1 Could you please describe what you see in the photo? 1.2 What underlying factors might have contributed to what you see in this photo? 1.3 Thinking about your work, do you directly or indirectly have an impact on scenes like the one in the photo? If so, how?
Domain 2. Health equity within current scope of work	2.1 What does the concept of health equity mean to you? *Use of card displaying health equity definition* 2.2 This card shows one definition of health equity that has been proposed. What is your impression of this definition? 2.3 In what ways, if any, is health equity is taken into account within your work in the area of maternal, newborn and child health? (If not, why not?) 2.4 What kinds of evidence or knowledge do you draw from to guide this work? 2.5 What do you hope to accomplish, in terms of reducing health inequity in maternal, newborn and child health? 2.6 How do you know if this work is having the intended impact? 2.7 What more, if anything, could be done to promote health equity through your scope of work?
Domain 3. Interface with health equity work at national and/or global levels	3.1 Can you please tell me about the work that you are aware of at the global level in the area of maternal, newborn and child health, and the reduction of health inequity? 3.2 Can you please tell me about the work that you are aware of at the national level in Ethiopia in the area of maternal, newborn and child health, and the reduction of health inequity? 3.3 How do policies or programs at the global and national levels affect your work in Ethiopia? 3.4 What involvement had you have working with others at the global and national level? a. What were the positive aspects of these experiences? b. What were the negative aspects of these experiences? 3.5 Are there ways that your work around the reduction of health inequity in maternal, newborn and child health could benefit from greater collaboration with actors at the global and national level? If so, how?
Domain 4. Interface with health equity work at subnational levels	4.1 Can you please tell me about the work that you are aware of at the regional level in the area of maternal, newborn and child health, and the reduction of health inequity? 4.2 What work are you aware of at other subnational levels? 4.3 What involvement had you have working with others at subnational levels? a. What were the positive aspects of these experiences? b. What were the negative aspects of these experiences? 4.4 In what ways, if any, does the work being done at these levels affect your work? 4.5 In what ways, if any, does your work affect theirs?

	4.6 Are there ways that your work around the reduction of health inequity in maternal, newborn and child health could benefit from greater collaboration with actors at subnational levels? If so, how?
Domain 5. Collaborations with other sectors or groups	5.1 Who else do you see as playing a role in reducing health inequity in maternal, newborn and child health? 5.2 What work are you aware of that is currently being done by these groups that contributes to reducing health inequity in MNCH? a. In what ways has this work been successful? b. In what ways has this work not succeeded? c. How could this work be more successful? 5.3 Do any of these groups have bearing on your scope of work? If so, what does this look like? 5.4 Would you work benefit from greater collaboration with any of these groups? a. If so, which groups? What capacity? b. What would be needed for this to happen?

Photocard prompt (for domain 1)

Health equity definition (for domain 2)

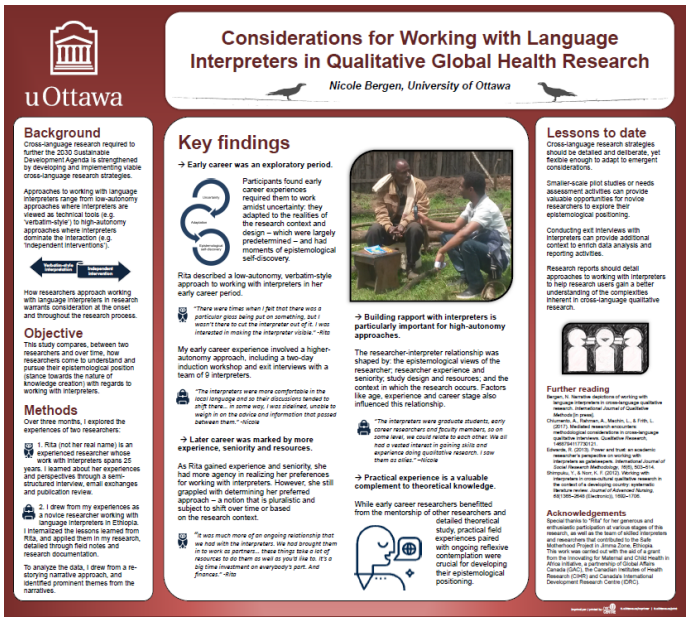
"Health equity exists when everyone has a fair chance to achieve their full health potential. The opportunity to be healthy is available to everyone, regardless of their social, economic, demographic or geographic characteristics."

Appendix 5. Knowledge dissemination activities

A5.1 Poster presentations

Bergen N, Labonté R, Asfaw S, Mamo M, Kiros G, Morankar S. (2019). Social desirability bias in qualitative research – what is it and what can researchers do about it? Poster presentation (in absentia) at the Qualitative Evidence for the Sustainable Development Goals Symposium, Brasilia, Brazil

Bergen N. (2018). Considerations for working with language interpreters in qualitative global health research. Poster presentation at the Canadian Conference on Global Health, Toronto



Bergen N, Mamo A, Asfaw S, Kiros G, Abebe L, Kurji J, Labonté R, Kulkarni MA, Abera M, Bulcha G, Morankar S. (2017). Community perceptions of safe motherhood in Ethiopia: a qualitative needs assessment activity informing the educational component of an intervention study. Poster presentation (in absentia) at the Cochrane Collaboration Global Evidence Summit, Cape Town, South Africa

A5.2 Oral presentations

Bergen N. (2020). Researching safe motherhood initiatives in Jimma Zone, Ethiopia: a video documentary. Invited speaker for the Global Health Network Seminar Series, Ottawa.

Bergen N. (2019). Keynote speaker at Sister to Sister: Kehit Lehit Women's Empowerment Brunch hosted by Ethiopiaid Canada, Ottawa

Bergen N, Slawecki E, Naffa S. (2019). Intersectoral interactions for the SDGs: are you game? Workshop facilitation at the Canadian Conference on Global Health, Ottawa

Bergen N, Labonté R, Kulkarni MA. (2019). IMCHA Safe Motherhood Project. Invited oral presentation at the International Development Research Centre, Ottawa

Bergen N. (2018). Methodological approaches for working with language interpreters in qualitative global health research: reconciling epistemological positioning with practical realities. Oral presentation at the International Institute for Qualitative Methods Qualitative Health Research Conference, Halifax

Asfaw S, **Bergen N.** (2018). Application of a qualitative rapid assessment approach to inform community-responsive information, education and communication activities. Oral presentation (in absentia) at the 29th Annual Conference: Ethiopian Public Health Association, Addis Ababa, Ethiopia

Bergen N, Mamo A, Asfaw S, Kiros G, Abebe L, Kurji J, Labonté R, Kulkarni MA, Abera M, Bulcha G, Morankar S. (2017). Generating evidence to inform research interventions: a preliminary assessment of perceptions of health and disadvantage in Jimma Zone, Ethiopia. Oral presentation at the Canadian Conference on Global Health, Ottawa

Morankar S, **Bergen N,** Mamo A, Asfaw S, Kiros G, Asefa Y, Abebe L, Abera M, Bedru K, Bulcha G, Kurji J, Kulkarni MA, Labonté R. (2017). Community defined roles for maternal and child health communication: Using community based social, cultural, religious, and administrative structures in rural Ethiopia. Oral presentation (in absentia) at the 67th Annual Conference of the International Communication Association, San Diego, USA

Bergen N, Abebe L. (2017). An implementation study of interventions to promote safe motherhood in Jimma Zone, Ethiopia. Oral presentation at the International Development Research Centre Innovating for Maternal and Child Health in Africa (IMCHA) Midterm Workshop, Dakar, Senegal

Bergen N. (2017). Health equity in the SDGs: a nested case study of maternal, newborn and child health in Ethiopia. Oral presentation at the Dalhousie University 15th Annual Crossroads Interdisciplinary Health Research Conference & Affiliate Conferences, Halifax

A5.3 Videography

A5.3.1 Videography workshop

Bergen N, Castel N. (2019). Introduction to videography workshop. Workshop facilitation February 25-26 at Jimma University, Ethiopia

Note: The workshop objectives were for the participants to:

- Identify opportunities to use videography in academic settings
- Understand considerations for planning and executing videography projects
- Gain experience using the videography equipment available at Jimma University
- Be prepared for advanced training on videography techniques

The workshop was attended by over 40 students, staff and faculty members.

A5.3.2 Videography outputs

Bergen N, Castel N. (2019). The Safe Motherhood Project video documentary teaser. Premiered June 5 at the Women Deliver Conference, Vancouver

Note: The two-minute teaser is available from: https://vimeo.com/339593490/5c699caadc

Bergen N, Castel N. (2019). Journeys in motherhood: the Safe Motherhood Project documentary. Public screening event (including panel discussion with the researchers and filmmakers) October 15 at the University of Ottawa, Ottawa

Note: To date, documentary screenings include

- July 10, 2019: Universidad Santo Tomas, Bogota, Colombia
- August 21, 2019: unveiling, the Safe Motherhood Research team, Ottawa
- October 15, 2019: Canada premiere, University of Ottawa, Ottawa
- October 17, 2019: video session, Canadian Conference on Global Health, Ottawa
- November 7, 2019: D'Afrique Ethiopian Restaurant, Ottawa
- November 23, 2019: Sister to sister: Kehit Lehit Women's Empowerment Brunch, Ottawa
- January 29, 2020: Global Health Network Seminar Series, Ottawa

Appendix 6. Abstracts of select other academic works prepared during thesis period

A6.1 Working with language interpreters

Citation

Bergen N. Narrative depictions of working with language interpreters in cross-language qualitative research. International Journal of Qualitative Methods. 2018 Nov 15;17(1):1609406918812301.

Abstract

The role of the interpreter in cross-language qualitative research warrants methodological consideration at the onset and throughout the research. This study used a narrative approach to portray how two researchers' epistemological positionings about the interpreter role were negotiated within the practical realities of conducting research. Data were obtained from a semi-structured interview with an experienced cross-language researcher and field notes of my subsequent experiences working with interpreters. Findings suggest that the researcher–interpreter relationship is shaped by the epistemological views of the researcher, researcher experience and seniority, study design and resources, and the context in which the research occurs. Understanding how researchers' views and approaches to working with interpreters evolve across different career stages and adapt to different circumstances can provide new insights to prepare researchers for cross-language research and to promote rigorous qualitative research.

A6.2 Social desirability bias

Citation

Bergen N, Labonté R. "Everything is perfect, and we have no problems": detecting and limiting social desirability bias in qualitative research. Qualitative Health Research. 2019 Dec:1049732319889354.

Abstract

Many qualitative research studies acknowledge the possibility of social desirability bias (a tendency to present reality to align with what is perceived to be socially acceptable) as a limitation that creates complexities in interpreting findings. Drawing on experiences conducting interviews and focus groups in rural Ethiopia, this article provides an empirical account of how one research team developed and employed strategies to detect and limit social desirability bias. Data collectors identified common cues for social desirability tendencies, relating to the nature of the responses given and word choice patterns. Strategies to avoid or limit bias included techniques for introducing the study, establishing rapport and asking questions. Pre-field work training with data collectors, regular debriefing sessions and research team meetings provided opportunities to discuss social desirability tendencies and refine approaches to account for them throughout the research. While social desirability bias in qualitative research may be intractable, it can be minimized.

A6.3 Writing groups and interdisciplinary doctoral programs

Citation

Bergen N, Hudani A, Khan S, Montgovery NM, O'Sullivan T. Practical considerations for establishing writing groups in interdisciplinary programs. Palgrave Communications. 2020 Jan 31; 6:19.

Abstract

Academic writing capabilities are a cornerstone of success in doctoral programs, yet prove to be a point of anxiety and apprehension for many students. Providing support for academic writing within interdisciplinary programs poses special considerations, as students in these programs are called upon to transcend single disciplinary perspectives to address a central area of research, and to integrate multiple different disciplinary perspectives that may be conflicting or overlapping. When treated as a social practice, writing can serve as a common interest that draws doctoral students to convene and develop in their learning. This article describes the development of a student writing group in an interdisciplinary doctoral program, considering how the characteristics and activities of the group create an environment that enables and encourages enhanced interdisciplinary learning. The article argues that, when delivered successfully, student writing groups have the potential to strengthen student writing skills and outputs, as well as deepen interdisciplinary learning. Drawing from Lattuca's four aspects of interdisciplinary learning (relational, mediated, transformative and situated), the article illustrates ways that the writing group helped to promote each aspect of learning and benefit the overall student experience in the program. Reflecting on these experiences, the authors propose six practical considerations for establishing writing groups in interdisciplinary programs: vision and purpose; dedicated time and space; institutional support; readings or educational material; socialization opportunities; and shared responsibility. Administrators, students, faculty members and support staff involved in the delivery of interdisciplinary doctoral programs are called upon to consider the introduction and/or strengthening of writing groups for the purpose of enhanced interdisciplinary learning.

A6.4 Delivering health messages to rural mothers

Citation

Asfaw S, Morankar S, Abera M, Mamo A, Abebe L, **Bergen N**, Kulkarni MA, Labonté R. Talking health: trusted health messengers and effective ways of delivering health messages for rural mothers in Southwest Ethiopia. Archives of Public Health. 2019 Dec;77(1):8.

Abstract

Background: Access to trusted health information has contribution to improve maternal and child health outcomes. However, limited research to date has explored the perceptions of communities regarding credible messenger and messaging in rural Ethiopia. Therefore, this study aimed to explore sources of trusted maternal health information and preferences for the mode of delivery of health information in Jimma Zone, Ethiopia; to inform safe motherhood implementation research project interventions.
Method: An exploratory qualitative study was conducted in three districts of Jimma Zone, southwest of Ethiopia, in 2016. Twelve focus group discussions (FGDs) and twenty-four in-depth interviews (IDIs) were conducted among purposively selected study participants. FGDs and IDIs were conducted in the local language, and digital voice recordings were transcribed into English. All transcripts were read comprehensively, and a code book was developed to guide thematic analysis. Data were analyzed using Atlas.7.0.71 software.
Result: Study Participants identified as Health Extension Workers (HEWs) and Health Development Army (HDA) as trusted health messengers. Regarding communication channels, participants primarily favored face-to-face/ interpersonal communication channels, followed by mass media and traditional approaches like community conversation, traditional songs and role play. In particular, the HEW home-to-home outreach program for health communication helped them to build trusting relationships with

community members; However, HEWs felt the program was not adequately supported by the government.
Conclusion: Health knowledge transfer success depends on trusted messengers and adaptable modes. The findings of this study suggest that HEWs are a credible messenger for health messaging in rural Ethiopia, especially when using an interpersonal message delivery approach. Therefore, government initiatives should strengthen the existing health extension packages by providing in-service and refresher training to Health Extension Workers.

A6.5 Gender equality and health equity in Ethiopia

Citation

Bergen N, Zhu G, Asfaw S, Mamo A, Abebe L, Morankar S, Labonté R. Promoting equity in maternal, newborn and child health – how does gender factor in? Perceptions of public servants in the Ethiopian health sector. Global Health Action. 2020 Jan; 13(1):1704530.

Abstract

Background: Advancing gender equality and health equity are concurrent priorities of the Ethiopian health sector. While gender is regarded as an important determinant of health, there is a paucity of literature that considers the interface between how these two priorities are pursued.
Objective: This article explores how government stakeholders understand gender issues (gender barriers and roles) in the promotion of maternal, newborn and child health equity in Ethiopia.
Methods: Adopting an exploratory qualitative case study design, we conducted semi-structured interviews with 17 purposively-selected stakeholders working in leadership positions with the Federal Ministry of Health and Federal Ministry of Women and Children Affairs as part of a larger study regarding the promotion of health equity in maternal, newborn and child health. A post hoc content and thematic sub-analysis was done to explore how participants raised gender issues in conversations about health equity.
Results: Efforts to address gender inequalities were synonymous with the promotion of a women's health agenda, which was largely oriented towards promoting health service use. Men were predominant decision makers with regards to women's health and health care seeking in both public and private spheres. Participants reported persisting gender-related barriers to health stemming from traditional gender roles, and noted the increased inclusion of women in the health workforce since the introduction of the Health Extension Program.
Conclusions: The framing of gender as a women's health issue, advanced through patriarchal structures, does little to elevate the status of women, or promote power differentials that contribute to health inequity. Encouraging leadership roles for women as health decision makers and redressing certain gender-based norms, attitudes, practices and discrimination are possible ways forward in re-orienting gender equality efforts to align with the promotion of health equity.

A6.6 Midwife and Health Extension Worker engagement for antenatal care provision

Citation

Bergen N, Hudani A, Asfaw S, Mamo A, Kiros G, Kurji J, Morankar S, Abebe L, Kulkarni M, Labonté R. Promoting and delivering antenatal care in rural Jimma Zone, Ethiopia: a qualitative analysis of midwives' perceptions. BMC Health Services Research. 2019 Oct;19:719.

Abstract

Background: Despite improvements in recent years, Ethiopia faces a high burden of maternal morbidity and mortality. Antenatal care (ANC) may reduce maternal morbidity and mortality through the detection of pregnancy-related complications, and increased health facility-based deliveries. Midwives and community-based Health Extension Workers (HEWs) collaborate to promote and deliver ANC to women in these communities, but little research has been conducted to characterize these relations. The strength and quality of professional interaction between these two key actors is instrumental in improving healthcare performance, and thereby community health outcomes.
Methods: We conducted eleven in-depth interviews with midwives from three rural districts within Jimma Zone, Ethiopia (Gomma, Kersa, and Seka Chekorsa) as a part of the larger Safe Motherhood Project. Interviews explored midwives' perceptions of strengths and weaknesses in ANC provision, with a focus as well on their engagement with HEWs. Thematic content analysis using Atlas.ti software was used to analyse the data using an inductive approach.
Results: Midwives interacted with HEWs throughout three key aspects of ANC promotion and delivery: health promotion, community outreach, and provision of ANC services to women at the health centre and health posts. While HEWs had a larger role in promoting ANC services in the community, midwives functioned in a supervisory capacity and provided more clinical aspects of care. Midwives' ability to work with HEWs was hindered by shortages in human, material and financial resources, as well as infrastructure and training deficits. Nevertheless, midwives felt that closer collaboration with HEWs was worthwhile to enhance service provision. Improved communication channels, more professional training opportunities and better-defined roles and responsibilities were identified as ways to strengthen midwives' working relationships with HEWs.
Conclusion: Enhancing the collaborative interactions between midwives and HEWs is important to increase the reach and impact of ANC services and improve maternal, newborn and child health outcomes more broadly. Steps to recognize and support this working relationship require multipronged approaches to address imminent training, resource and infrastructure deficits, as well as broader health system strengthening.

A6.7 Equity in maternal, newborn and child health

Citation

Bergen N, Labonté R, Asfaw S, Mamo A. Equity in maternal, newborn and child health: expanding health services onto rural Ethiopia. In Cochrane, L. (Ed) *Ethiopia: social and political issues.* Hauppauge: Nova Publishers; 2019: 91-124.

Abstract

Over the past two decades, Ethiopia has increased the availability of maternal, newborn and child health (MNCH) services in rural areas and witnessed accelerated progress in areas related to Millennium Development Goals 4 and 5 (to reduce child mortality and improve maternal health, respectively). These achievements have been largely attributed to transformative health policies and the expansion of health facilities and community health workers (Health Extension Workers) in rural areas. Despite improvements in MNCH nationally, however, the country faces considerable geographical inequities in MNCH services and outcomes. According to data from the 2016 Ethiopia Demographic and Health Surveys: urban areas reported more than 30 percentage points higher coverage of women who received

antenatal care from a skilled provider than rural areas (90% vs. 58%); and nearly all women in Addis Ababa (97%) gave birth at a health facility, whereas in Affar, Somali and Oromiya Regions, this figure was less than one in five women (15%, 18% and 19%, respectively). The promotion of equity – defined as the absence of avoidable or remediable differences among social, economic, demographic or geographic subgroups – is an implicit part of Ethiopia's commitment to broader initiatives such as the United Nations 2030 Agenda for Sustainable Development, and the African Union Agenda 2063. Equity is also a strategic objective in the country's Health Sector Transformation Plan and resonates throughout MNCH policies and programs, including the Health Extension Program and the National Strategy for Newborn and Child Survival. This chapter explores how health equity (pertaining to its geographical dimension) has emerged as a priority for MNCH initiatives in Ethiopia and discusses how the country is moving forward to reduce geographical inequities in MNCH.

A6.8 Roles and contributions of community actors in promoting maternal and child health

Citation

Mamo A, Morankar S, Asfaw S, **Bergen N,** Kulkarni MA, Abebe L, Labonté R, Birhanu Z, Abera M. How do community health actors explain their roles? Exploring the roles of community health actors in promoting maternal health services in rural Ethiopia. BMC Health Services Research. 2019 Oct;19:724.

Abstract

Background: Maternal and child morbidity and mortality remains one of the most important public health challenges in developing countries. In rural settings, the promotion of household and community health practices through Health Extension Workers in collaboration with other community members is among the key strategies to improve maternal and child health. Little has been studied on the actual roles and contributions of various individuals and groups to date, especially in the rural areas of Ethiopia. In this study, we explored the role played by different actors in promoting antenatal care (ANC), childbirth and early postnatal care (PNC) services, and mainly designed to inform a community based information, education and communication (IEC) intervention in rural Ethiopia.
Methods: An exploratory qualitative study was conducted on 24 in-depth interviews with Health Extension Workers, religious leaders, women developmental army leaders, and selected community members; and 12 focus group discussions, six with female and six with male community members. Data were captured using voice recorders and field notes and transcribed verbatim in English, and analyzed using Atlas.ti software. Ethical approval for the fieldwork was obtained from Jimma University and the University of Ottawa.
Results: Participants described different roles and responsibilities that individuals and groups have in promoting maternal/child health, as well as the perceived roles of family members/husband. Commonly identified roles included promotion of health care services; provision of continuous support during pregnancy, labour and postnatal care; and serving as a link between the community and the health system. Participants also felt unable to fully engage in their identified roles, describing several challenges existing within both the health system and the community.
Conclusions: Involvement of different actors based on their areas of focus could contribute to community members receiving health information from people they trust more, which in turn is likely to increase use of services. Therefore, if our IEC interventions focus on overcoming challenges that limit actors' abilities to engage effectively in promoting use of maternal and child health services, it will be

feasible and effective in rural settings, and these actors can become an epicenter in providing community-based intervention in using ANC, childbirth and early PNC services.

A6.9 Factors associated with maternity waiting home use

Citation

Kurji J, Gebretsadik LA, Wordofa MA, Sudhakar M, Asefa Y, Kiros G, Mamo A, **Bergen N**, Asfaw S, Bedru KH, Bulcha G, Labonte R, Talijaard M, Kulkarni M. Factors associated with maternity waiting home use among women in Jimma Zone, Ethiopia: a multilevel cross-sectional analysis. BMJ Open. 2019 Aug 1;9(8):e028210.

Abstract

Objective: To identify individual-, household- and community-level factors associated with maternity waiting home (MWH) use in Ethiopia.
Design: Cross-sectional analysis of baseline household survey data from an ongoing cluster-randomised controlled trial using multilevel analyses.
Setting: Twenty-four rural primary care facility catchment areas in Jimma Zone, Ethiopia.
Participants: 3784 women who had a pregnancy outcome (live birth, stillbirth, spontaneous/induced abortion) 12 months prior to September 2016.
Outcome measure: The primary outcome was self-reported MWH use for any pregnancy; hypothesised factors associated with MWH use included woman's education, woman's occupation, household wealth, involvement in health-related decision-making, companion support, travel time to health facility and community-levels of institutional births.
Results: Overall, 7% of women reported past MWH use. Housewives (OR: 1.74, 95% CI 1.20 to 2.52), women with companions for facility visits (OR: 2.15, 95% CI 1.44 to 3.23), wealthier households (fourth vs first quintile OR: 3.20, 95% CI 1.93 to 5.33) and those with no health facility nearby or living >30 min from a health facility (OR: 2.37, 95% CI 1.80 to 3.13) had significantly higher odds of MWH use. Education, decision-making autonomy and community-level institutional births were not significantly associated with MWH use.
Conclusions: Utilisation inequities exist; women with less wealth and companion support experienced more difficulties in accessing MWHs. Short duration of stay and failure to consider MWH as part of birth preparedness planning suggests local referral and promotion practices need investigation to ensure that women who would benefit the most are linked to MWH services.