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PHD OUTLINE

Maternal Health Outcomes in a Somalia Post-war Context: analyzing trends towards universal health coverage

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ABSTRACT

Somalia has one of the highest maternal mortality ratios in the world and an inequitable distribution of maternal health outcomes and service utilisation. Like other developing countries, Somalia has adopted the global policy goal of attaining universal health coverage of health services and improved health outcomes across all populations. Although United Nations agencies track the progress towards achieving universal health coverage as part of health targets for achieving the Sustainable Development Goals, empirical case studies are rarely documented, especially in developing countries and even more so in post-war contexts such as Somalia. Literature shows the overall progress towards globally agreed-upon targets for maternal health is lagging in war-affected countries, with persistent socioeconomic gradients in health outcomes. However, little is known about the mechanisms through which the social determinants of health impact on the distribution of maternal health outcomes.

The aim of this PhD research is to examine the mechanisms through which social determinants contribute to inequities in maternal health outcomes in Somalia. Specifically, the study will analyse the policy context and progress towards achieving universal health coverage of maternal health services in Somalia; analyse trends in maternal health outcomes and inequities in Somalia; and examine the mechanisms through which social determinants contribute to inequities in maternal health outcomes. A mixed-methods case study design will be adopted, employing both qualitative and quantitative approaches to data collection and analysis.

The findings of this PhD research will contribute to the evidence base on pathways for achieving universal health coverage of maternal health outcomes in post-war countries like Somalia. This will facilitate development of effective health care policies and those addressing the social determinants, which if implemented will improve maternal health outcomes in Somalia and mark progress towards achieving the goal of universal maternal health coverage.

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Background

Maternal health as a global priority

Reducing the burden of maternal mortality is considered a global health priority [1]. Internationally, approximately 295,000 women died in 2017 as a result of complications related to pregnancy and childbirth [2], with 94 percent of the deaths taking place in low- and middle-income countries (LMICs) especially in Sub-Saharan African countries where 66% of all maternal deaths occur [3]. In 2015, the lifetime risk of maternal mortality in Sub-Saharan countries was estimated to be 1 in 36, significantly higher than the global average of 1 in 180 and the risk of 1 in 4,900 in high-income countries (HICs) [4]. This difference in maternal mortality between the HICs and LMICs indicates that most maternal deaths are preventable if women have timely, adequate and quality maternal health care such as skilled birth attendance (SBA) at delivery, antenatal care (ANC) and postnatal care (PNC) [3,5].

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Maternal health policy framework

Somalia has the third highest maternal mortality ratio (MMR) in the world; in 2016 the estimated MMR was 732 maternal deaths per 100,000 live births [6], with a lifetime risk of a woman dying as a result of a maternal health complication of 1 in 16 [5]. Like other developing countries, Somalia has adopted global policy norms for improving maternal health outcomes.

International calls to reduce maternal mortality and maternal health inequities have included the Universal Declaration of Human Rights (1948) [7], the Alma-Ata Declaration for achieving "Health for All" (1978) [8], and the conference on Safe Motherhood convened by the World Bank, the World Health Organization (WHO) and the United Nations Population Fund (UNFPA) (1987) [9]. This conference marked the start of the Safe Motherhood Initiative to reduce maternal mortality by 50% by the year 2000 [9]. Subsequent international and national conferences focusing on maternal health issues have included the Cairo International Conference on Population and Development (1994) [10] and the Fourth Beijing International Conference on Women (1995) [11]. In 2000, the adoption of the United Nations' Millennium Development Goals (MDGs) further reinforced maternal health as a global priority and in 2005 WHO's Commission on Social Determinants of Health was established [12,13]. MDG-5 had a target of reducing the MMR by 75% between 1990 and 2015 and another target of achieving universal access to reproductive health. In 2016, more ambitious Sustainable Development Goals (SDGs) replaced the MDGs. SDG-3, which is to improve the health and wellbeing of the entire population by 2030, has 17 targets of which SDG 3.1 is to reduce the MMR globally to less than 70 maternal deaths per 100,000 live births by 2030 [2].

As a consequence of these actions and policy frameworks resulting from a series of global, regional and country-level initiatives with a shared commitment to improving maternal health, maternal mortality has declined significantly.

Although the MDG-5 target to reduce maternal deaths by 75% was not reached by 2015, a 38% reduction was achieved, with the global MMR reducing from 556 maternal deaths per 100,000 live births in 1990 to 130 maternal deaths per 100,000 live births in 2016 [2]. However, the rate of reduction in maternal deaths was slow in many LMICs, and most did not reach the target of MDG-5 by 2015. This was especially the case in Sub-Saharan Africa, where the decline was only 0.1% [14].

Although progress has been made in reducing maternal mortality, inequities remain both between and within countries [2]. Given the social determinants of health, maternal mortality is not only an indicator of health but also inequities in underlying social factors that influence accessibility to affordable health services and health outcomes [15].

Health inequities

Inequities in health are defined as differences in health or access to health services that originate from socio-economic differences that a change of policies, programs or practices can correct [15]. These health inequities, including in maternal health, have become a long-standing policy debate worldwide and a global health priority [12]. In 2008, the WHO Commission on the Social Determinants of Health made people aware that global health challenges are shaped by the conditions in which people are born, grow, live, work, and age [12,16]. Tackling these inequities is a priority of the United Nations Development Programme's (UNDP) 'human development' approach, which seeks to address the broader range of inequities beyond economic inequality including in relation to key issues such as health, education, environmental inequality, respect and dignity for all [17].

Since the 58th World Health Assembly in 2005 and release of the World Health Report 2010, the focus on universal health coverage (UHC) has increased, defined as universal access to quality healthcare services for all people, without enduring financial hardship [18,19]. The fact that UHC is included as one of the SDGs indicates its importance. SDG 3.8 advocates for countries to protect their population from financial risk when utilising health services, while also providing access to quality and affordable healthcare [20]. The progress towards achieving UHC as part of health targets for achieving the SDGs is tracked worldwide by the United Nations (UN) agencies [21]. This tracking shows overall progress towards globally agreed-upon targets for maternal health is lagging in developing countries [22].

Maternal health service accessibility and utilisation

Many studies have been conducted in LMICs exploring maternal health inequities and the social determinants shaping these inequities, including in Ethiopia [23,24]; Mozambique [25]; and Ghana [26]. Findings of these studies have illustrated that structural, socioeconomic, community, family, and individual factors influence the accessibility and utilization of maternal health services [26]. For example, Nyathi et al., (2017) and Medhanyie et al. (2018) showed maternal health literacy to be an important determinant of health as women's awareness of the available services and their benefits are influenced by the level of health literacy the women have [27,28]. Geographical disparities have also been found to result in inequities in maternal health outcomes, with communities living in urban and developed regions utilising more health service than rural residents due to greater access to health facilities [23,29]. Gender autonomy and family support too are factors to have been associated with a woman's utilisation of maternal health care and to impact on maternal health outcomes [15]. Health seeking behaviour of socially disadvantaged women has also been shown to be negatively influenced by out-of-pocket fees for maternal health services and the cost of transport [25,30].

Overview of the situation in Somalia

Somalia has performed poorly in terms of maternal health equity. Less than one-quarter of women access maternal health care services, with a prevalence of antenatal care and skilled birth attendance during the period 2012 and 2015 of 6.3% and 9.4% respectively [31]. In the context of the country's fragile state, a recent UNICEF study reported that Somali women are burdened with increased maternal health risk contributed by social determinants of health including the "geography, clan hierarchy, livelihood vulnerability, internal displacement, gender, exposure to shocks and conflict-related stresses" [31 p2]. Similarly, coverage of health services in Somalia is low, with half of the health facilities lacking basic emergency obstetric care services [32].

Despite the challenges faced by Somalia after a prolonged civil war and the post-war political context, the country has made progress in improving maternal health outcomes. As a result of investment made in training and supporting health care workers by the federal government in collaboration with UN agencies, the number of deliveries by skilled birth attendants increased to an estimated 29% in 2017 [33]. Furthermore, the Somali Health and Demographic Survey 2020 illustrated that maternal mortality ratio was reduced from 732 to 692 deaths per 100,000 live births. The country is also making strides towards ensuring no woman dies due to pregnancy, labour and delivery. The Somali Government, in collaboration with UN agencies and health partners, have started to implement the UHC policy. A roadmap was developed to increase universal health coverage, to manage health services for emergencies, and to promote health and wellbeing of the populations. Moreover, the Somali Government, with help from the United Nations Children's Fund (UNICEF), the UNFPA, the WHO and partners, not only is committed to accelerate efforts to provide universal health coverage for all its population but also is revising an essential package of health services aimed to cover priority health needs and eventually reach all Somalis [34].

Despite efforts to advance UHC, progress to improve maternal health outcomes has been slow, with inequities remaining in access to and utilization of essential maternal health services. The recent Somali Health and Demographic Survey showed a low coverage of maternal health services including antenatal care and institutional delivery [35]. Twenty-four percent of women made antenatal care visits of four or more to a health facility while the percentage of pregnant women delivering at a health facility was 21%. Yet, these two intervention are important for improving maternal health outcomes and increasing universal health coverage [36]. In addition, many disadvantaged Somali women continue to die from maternal health-related preventable causes. The majority of these deaths are avoidable if vulnerable communities were provided with equitable access to basic health services [29]. While there is a lack of information on inequities in maternal health outcomes for Somalia, socio-economic inequities are plainly evident with poverty ranging from 26% in the North East to 61% in the North West [37].

Our previous exploratory study conducted in Bosaso district, Somalia in 2016 used an adapted verbal autopsy tool to investigate the causes and contributing factors to cases of maternal deaths occurring at health facilities and in the community [38]. Its findings illustrated that many of the barriers to adequate access and use of maternal health care services were connected to a variety of factors such as poverty, gender issues and health system factors. A UNDP report on gender inequality ranks Somalia at the fourth-highest position globally, with a Gender Inequality Index of 0.776 (with a maximum of 1 denoting complete inequality) [39].

Aim

The studies in this PhD thesis will examine trends and inequities in maternal health outcomes in Somalia.

Specific objectives are to:

1. Analyse the policy context and progress towards achieving universal health coverage for maternal health services in Somalia.
2. Assess trends in maternal health outcomes and evidence on social determinants influencing maternal health.
3. Examine the mechanism through which social determinants shape inequities in maternal health outcomes in Somalia.

Methods

Research design

The study will adopt a mixed-methods case study design which allows for an in-depth analysis of a complex phenomenon within a 'bounded system' using both qualitative and quantitative research methods [40]. Mixed-methods combines qualitative and quantitative approaches in order to obtain in-depth insight to answer research question. The phenomenon to be studied is 'social determinants of maternal health inequities' and the 'bounded system' or case study site is Somalia. Qualitative data will be collected from a scoping review of the literature (an assessment of available literature to identify the nature and scope of evidence related to the research question), document analysis, key informant interviews, and focus group discussions. Quantitative data will be extracted from official data sources for Somalia. Findings from the qualitative and quantitative data analysis will be triangulated to address the research objectives. Data triangulation involves combining and interpreting together findings from various studies to improve the confirmability of the research findings.

Setting

Somalia is a low-income country located in the Horn of Africa, with an estimated population of 14 million inhabitants [41]. It is one of the poorest countries in the

world, is heavily indebted, and was ranked 2nd out of 178 countries on the Fragile States Index in 2020 [42]. The Somali health system is rebuilding from the damage caused by the prolonged civil war, which started in 1991 and ended with the establishment of a new Federal government in 2012. However, civil unrest continues in parts of the country. The Federal Ministry of Health is responsible for regulating health services, and multiple actors including the state governments, the private sector and international non-government organisations work together to provide a modest level of access to basic health care. Health indicators are among the lowest in the world: life expectancy at birth is 55.7 years compared with an average of 63 years across all low-income countries, infant mortality is high at 89 deaths per 1000 live births compared with an equivalent rate of 45 for low-income countries, and infectious diseases dominate partly due to a lack of access to basic sanitation and hygiene services [35].

Data collection methods

Scoping review of the literature: The purpose of conducting a scoping review is threefold. Firstly, to explore the overall context, policies, and programs for achieving UHC of maternal health services at the global level. Secondly, to examine the progress towards achieving UHC of maternal health services in LMICs and finally, to map methodological approaches and indicators used for evaluating the progress towards achieving UHC of maternal health services in LMICs. The scoping review will follow the guidelines as outlined in the Joanna Briggs Institute (JBI) Manual for Evidence Synthesis 2020 to select relevant literature [43].

Document analysis: Document analysis will follow a systematic procedure based on the READ approach to review policy documents related to UHC and maternal health in Somalia [44–46]. The purpose of conducting the document analysis is to establish the initial theory of change of UHC for maternal health in Somalia as a basis for evaluating the progress in improving maternal health outcomes. Relevant country-specific documents will be retrieved from government websites in Somalia and those for international organizations, for the latter including ReliefWeb, United Nations (UN) and World Bank. Documents for Somalia will include national and state strategic plans, annual plans, monitoring reports, state budget reports, legal framework documents under the regional/local health care system and any other relevant published and unpublished material.

Quantitative data: Quantitative data will be obtained from secondary data sources (surveys and statistical reports) to enable patterns and trends in maternal health outcomes in Somalia to be analysed. Data will be retrieved from 1990 (post-conflict period) onwards. Examples of data sources in the public domain at the national and the regional level include 2018-2019, Somali Health and Demographic Survey [2020]: Reports findings from more than 15,000 households across the country conducted in collaboration with the UNFPA and with the support of five European governments (UK, Sweden, Finland, Italy and Switzerland) [35].

Key Informant interviews: Key Informant interviews will aim to understand the formulation and implementation processes for policies related to the universal health coverage of maternal health care in Somalia. Twenty-five participants will be selected using purposive sampling from the national, zonal and regional levels of the health system in Somalia to obtain a cross-section of policymakers and health services managers with roles and responsibilities related to maternal health and UHC.

Focus group discussions: The aim of the focus group discussions is to gain insight from participants about their experiences and perceptions of specific maternal health policy processes and outcomes. Participants for the FGDs will be purposively selected from district hospitals and health facilities conveniently selected from the three regions in the Northeast Zone. Twenty-one focus group discussions will be conducted, using a questionnaire. Each focus group will comprise six to eight members who will be representative of health workers, community representatives and women of childbearing age.

Data analysis

Data extracted from the selected articles of scoping review will be analysed using both descriptive and numerical summaries and qualitative thematic analysis. Reporting will be compliant with the PRISMA Extension for Scoping Review Checklist [47]. Document analysis will involve an iterative process combining content, thematic and interpretive analysis to generate key themes [48]. NVIVO software will be used to extract and code relevant content from the selected documents. Quantitative data analysis will include tabulating descriptive statistics and preparing time sequential plots of maternal health indicators including those used globally such as mothers who had at least four antenatal care visits, births attended by skilled health personnel and deliveries at health care facilities. Dates at which interventions likely to have impacted maternal health outcomes will be identified and included with other explanatory variables in regression analysis. Methods of regression analysis will be determined by the nature of the data and time-series patterns with segmented linear regression a possible approach. Data will be analysed using IBM SPSS Statistical Software. The recorded interviews from key informant and focus group discussion will be transcribed and analysed thematically [49] using NVIVO software. Both deductive and inductive analytical approaches to the thematic analysis of interview narratives will be used to generate themes for discussion [49].

Data integration phase

Given the mixed-methods design, qualitative and quantitative data from all sources will be integrated through a process of triangulation to address the aim and objectives of the study [50]. Data will be collected and analysed sequentially in the following order: the scoping

review; the document analysis; quantitative analysis; and the qualitative analysis including the key informant interviews and focus group discussions. This sequence allows for the scoping review to provide an international context to examine trends and inequities in maternal health outcomes, the document review to inform on the policy context and progress towards achieving UHC for maternal health services in Somalia, the quantitative analyses to examine trends in maternal health outcomes and evidence on the social determinants influencing maternal health, and the qualitative research to examine mechanisms through which social determinants shape inequities in maternal health outcomes in Somalia. Evidence gathered from each sequential stage will guide data collection, analysis and interpretation in later stages, thus enabling development of a cumulative evidence base to support future planning and policy development.

Ethics considerations

Respondents approached for participation in the study will be fully informed about the purpose of the study, their rights to withdraw from the study without penalty and the protection of privacy and confidentiality. An information sheet will be given and will be explained in the Somali language to all participants. The participants will then sign a consent form in writing with their name or using thumbprint. The research data from this study will be kept on the candidate's laptop and will be password-protected to ensure security. The research data will also be saved on Curtin University's R-drive for backup. Ethical clearance will be obtained from East Africa University Review Board and the Human Research Ethics Committee of Curtin University before conducting data collection. Similarly, permission will be obtained from the appropriate health authorities such as the Puntland Ministry of Health. Local administrative authorities and health personnel will also be briefed about the study`s objectives and permission obtained to conduct the study.

A thesis will be prepared and its findings will be shared in appropriate formats with key stakeholders of Somali health system including the Federal and States Ministries of Health. In addition, the results will be disseminated through publications in peer-reviewed journals available in open access format. Relevant conferences and workshops will be conducted involving participants, policy makers and community members to discuss the findings and their implication for public health policies and programs.

Expected impact

Adopting UHC in Somalia is a significant policy shift in line with global policies to address inequities in health outcomes, access and utilisation of health services. Studies in other LMICs show how health inequities are caused by a range of social determinants, which is also likely to be the case in Somalia. However, country-specific differences and the post-war context of Somalia imply findings from elsewhere are not necessarily transferable. In order to determine appropriate responses, the policy context of achieving UHC for maternal health in Somalia needs to be understood. Moreover, there is a paucity of research exploring how maternal health outcomes are tracking and the mechanisms by which social determinants shape inequities in maternal health in Somalia.

Generating such local evidence will be useful for developing context-specific pathways (policy design or theory of change that includes policy instruments) for achieving UHC of maternal health outcomes in post-war countries like Somalia. Hence, this study will provide an evidence base for both health care policies and policies addressing the social determinants of health to be developed, and interventions implemented to improve maternal health outcomes in Somalia and to attain progress towards achieving the goal of universal health care. Findings from this study will potentially be transferable to other fragile states, given common challenges faced in terms of inequities in maternal health coverage and outcomes.

The rationale for selecting this topic included the candidate's experience in global inequities in accessing maternal healthcare services, specifically in comparing the situation in a HIC like Australia to a LIC such as Somalia. Stark differences in universal health coverage and maternal health outcomes between the two countries raised an initial research interest in the impact of social determinants of health on the high maternal mortality in Somalia. This led to an exploratory study conducted in Bosaso, Somalia about factors contributing to maternal mortality. The majority of maternal deaths were found to be preventable if women had quality, adequate and timely maternal healthcare. Pursuing doctoral research on this topic provides the opportunity to explore in more depth the overall context, reforms and outcomes of maternal health care in Somalia and contribute to building an evidence base that can be used in policy development to save the lives of Somali mothers.

Paper Context

Somalia has an inequitable distribution of maternal health outcomes. Literature shows the overall progress towards globally agreed-upon targets for maternal health is lagging in war affected countries. However, little is known about the mechanisms through which the social determinants of health impact on the distribution of maternal health outcomes. The findings of this PhD research will contribute to the evidence base on pathways for achieving universal health coverage of maternal health outcomes in Somalia.

Summary in Somali

CINWAAN

Natiijooyinka Caafimaadka Hooyada ee Soomaaliya xaaladda Dagaalka Kaddib: Falanqeynta Isbeddelada ku Wajahan ku-Daboolida Caalamiga ah ee Caafimaadka

Jamila Aden

DULMAR KOOBAN

Soomaaliya waxay leedahay mid ka mid ah saamiyaga ugu sareeya ee dhimashada hooyada uurka leh adduunka, iyo u-sinnaan la'aan qaybinta natiijooyinka caafimaadka hooyada iyo adeegsiga daryeelka caafimaad. Sida dalalka kale ee soo koraya, Soomaaliya waxay qaadatay hadafka siyaasadda caafimaad ee ku wajahan "Ku-Daboolida Caalamiga ah ee Caafimaadka (KDCC)"-Universal Health Coverage-UHC, iyo horumarinta natiijooyinka caafimaad ee dhammaan dadka. Inkastoo hay'adaha Qaramada Midoobay ay isha ku hayaan horumarka laga gaarayo sidii loo hanan lahaa KDCC/UHC oo qayb ka ah bartilmaameedyada caafimaadka ee lagu gaarayo Himilooyinka Horumarineed ee Joogtada ah "Sustainable Development Goals-SDGs", haddana daraasado la taaban karo ayaa dhif ah in la diiwaan geliyo, gaar ahaan dalalka soo koraya iyo kuwa dagaallada kasoo kabanaya sida Soomaaliya. Suugaantu waxay tusinaysaa horumarka guud ee ku wajahan yoolalka caalamiga ah ee lagu heshiiyey ee loogu talagalay ka soo kabashada dib u dhaca caafimaadka hooyada ee dalalka ay saameeyeen dagaalladu, oo leh heerar dhaqan-dhaqaale kala duwan oo natiijooyinkooda caafimaad aaney sinnayn. Si kastaba ha ahaatee, wax yar ayaa laga ogyahay hababka ay u saameeyaan xaaladaha dhaqan-bulsho qaybinta natiijooyinka caafimaadka hooyada.

Ujeeddada cilmi-baaristan PhD-da ayaa ah in la baaro hababka ay xaaladaha dhaqan-bulsho uga qayb qaataan sinnaan-la'aanta natiijooyinka caafimaadka hooyada ee Soomaaliya. Gaar ahaan, daraasaddu waxay lafaguri doontaa xaaladda siyaasadda iyo horumarka lagu gaarayo hanashada KDCC/UHC ee adeegyada caafimaadka hooyada Soomaaliyeed; Falanqaynta isbeddellada natiijooyinka caafimaadka hooyada iyo sinnaan la'aanta Soomaaliya iyo in la baaro hababka arrimaha dhaqan-bulsho uga qayb qaataan natiijooyinka sinnaan la'aanta caafimaadka hooyada. Hababka isku dhafan ee daraasadda ayaa la qaadan doonaa, iyada oo la adeegsanayo habab tayo iyo tiro xagga ururinta iyo falanqaynta xogta.

Natiijooyinka cilmi-baarista PhD-da waxay gacan ka geysan-doonaan caddaynta saldhigga u ah waddooyinka lagu gaaro KDCC/UHC, ee xagga natiijooyinka caafimaadka hooyada ee dalalka ka soo kabanaya dagaallada sida Soomaaliya. Tani waxay fududeyn-doontaa horumarinta siyaasadaha daryeelka caafimaadka ee waxtarka leh iyo kuwa wax ka qabta arrimaha dhaqan-bulsho, kuwaas oo haddii la hirgeliyo hagaajin-doona natiijooyinka caafimaadka hooyada Soomaaliyeed, isla markaana noqonaya calaamad horumar, oo lagu gaarayo yoolka la doonayo in lagu guuleysto ee KDCC hooyada.

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