EXAMINING THE MATERNAL MORTALITY PREVENTIVE MEASURES IMPLEMENTED BY HO MUNICIPALITY AND ADAKLU DISTRICT AUTHORITIES

BY

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DECLARATION

I hereby declare that this thesis is my original work, which was conducted under proper supervision. I have acknowledged all references to other people's work used in this thesis, Furthermore, I confirm that this thesis has not been presented for another degree, either partially or completely.

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DEDICATION

Dedicated to the practitioners of population and health Geography of Africa

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ABSTRACT

Maternal mortality is a major concern worldwide. In this study, preventive interventions for maternal mortality were evaluated in four communities in Sofa, Waya, Shia and Nyive. The interventions were carried out by state and non-state institutions. The study used a mixed sampling technique to recruit a sample of 201 respondents, including 15 non-state and state institution leaders, 98 lactating mothers, 48 pregnant women, and 40 traditional birth attendants. Data was collected using questionnaires, interviews, and focus group discussions.

Qualitative data was analyzed using content analysis, comparative analysis, and direct quotations. Statistical analysis tools such as frequencies, percentage distributions, tables, bar graphs, and pie charts were used to present findings. The da ta was examined using the chi-square test of significance. The analysis revealed that state and state institutions implemented various interventions such as fertility behaviour change communications, cultural group counseling, obstetric medical and philanthropic outreach programs to address maternal mortality. The findings show that the outcomes of the interventions were inconsistent patterns of maternal mortality in the communities.

The results of hypothesis tests showed that there was a significant relationship between the utilisation of antenatal services and maternal counseling. However, there were disruptive factors such as people's inability to take maternal mortality prevention education seriously, intolerance to opposing views, disregard for contraception advice and obstetric medical advice, community culture-related issues, rampant disease outbreaks, and a culture of low loan repayment that hindered maternal mortality preventive measures. To successfully combat maternal mortality, state and non-state institutions must adopt a preventive approach that combines behavioral and biological treatments with a structural approach.

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LIST OF ABBREVIATIONS AND ACRONYMS

AF: . ……. Adanu Foundation

AIDS:…….Acquired Immune Deficiency Syndrome

BCC:……..Behaviour Change Communication

CC:…….Christian Council

CDC:……..Centre for Disease Control

CHAG:……...Christian Health Association of Ghana

CHRAJ:……..Commission on Human Rights and Administrative Justice

CSO:……...Civil Society Organizations

CVQM:……..Central Volta Queen Mothers Association

DA:……District Assembly

DANIDA:……..Danish International Development Agency

DHS:……..Directorate of Health Service

ECA:……..Economic Commission for Africa

FAO:……..Food and Agricultural Organizations

FBBA:……...Faith Based Birth Attendants

FBOs:…….Faith Based Organizations

FC:…….Female Circumcision

FGM:…….Female Genital Mutilation

FHI:……...Family Heath International

GDHS:……..Ghana Demographic and Health Survey

GES:……..Ghana Education Service

GHS:…….Ghana Health Service

GLOWA:……..Global Action for Women Empowerment

GoG:…….....Government of Ghana

GOSANET:…… Good Samaritan Network Foundation

GSS:……Ghana Statistical Service

HBM:……Health Believe Model

HC:……Health Centres

IEC:……...Information, Education and Communication

ISD:……...Information Services Department

LAD:…….Love Aid Foundation

LHO:…….Literacy and Health Organisation

MCS:…….Maternal Counselling and Screening

MDG:……Millennium Development Goals

MMDAs:……...Metropolitan, Municipal and District Assemblies

NCCE:……...National Commission on Civic Education

NDPC:……...National Development Planning Commission

NGOs:……...Non-Governmental Organizations

PECs……..Public Education Campaigns

PPAG:……...Plan Parenthood Association of Ghana

PSO……...Public Service Organisations

PVO……..Private Voluntary Organisations

RTIs:…… Reproductive Tract Infections

SDGs:……Sustainable Development Goals

TBAs:……....Traditional Birth Attendants

UN:……....United Nations

UNECA:……United Nations Economic Commission for Africa

UNFPA:……United Nations Fund for Population Activities

UNICEF:……...United Nations International Education Children Fund

USAID:…….United States Agency for International Development

WHO:……World Health Organization

WVG:……World Vision Ghana

CHAPTER ONE

GENERAL INTRODUCTION

1.1 Introduction

Maternal mortality is one of the evergreen health and development challenges around the globe. The term "maternal mortality" describes the deaths of women in their reproductive years over a specific time period, whether they occur during pregnancy, during childbirth, or after childbirth (UNICEF, 1984). Maternal mortality rate reduction was a primary target in the United Nations Millennium Development Goal (MDG) 6, which expired in 2015, and now is a target in the United Nations Sustainable Development Goal 3. This goal aims to reduce maternal mortality to less than 70 maternal deaths per 100,000 live births by 2030. The term 'maternal mortality rate' describes the number of women who pass away during pregnancy and childbirth within a specific time frame (WHO 2001). According to the World Health Organization (WHO), approximately 830 women die every day from pregnancy or childbirth-related factors. The organization further noted that a woman dies of pregnancy-related causes every two minutes around the World (WHO, 2001). Worldwide, over 34 million pregnant women have died as a result of pregnancy and childbirth-related causes, with an estimated 390,000 narrow escapes from maternal death (WHO 2011). More than 25.8 million sub-Saharan African maternity women have died from pregnancy or childbirth-related causes (Rigg, 2018).

According to the WHO (2011), maternal mortality has claimed at least one million maternal lives in Ghana cumulatively since 1986. According to the Ghana Health Service (2011), 225,477 maternal women were pronounced dead in Ghana in 2011 due to pregnancy and childbirth-related causes, with 100,336 over the age of 35 and 125,141 under the age of 35. In Ghana in 2013, there were 15262 yearly maternal deaths and 180,000 semi-orphan children, according to WHO (2015).

In 2010, the incidence rate of maternal death in Ghana ranged from 0.4% in Krachi and Adibo to 7.8% in Sofa (Ghana National Population Council, 2012). In 2011, Adibo had the lowest maternal death incidence rate of zero per cent, and Cape Coast had the highest at 9.6%. The preponderance (85%) of female teacher deaths recorded in Ghana between 2016 and 2018 were due to maternity causes (Katjaavivi and Otaala 2003). In the Volta Region, more teachers died from pregnancy and childbirth-related causes in 2014 than were created by the country's teacher training colleges that same year (Seale, 2020).

According to Piot et al (2001) maternal mortality has far-reaching consequences. It exacerbates and prolongs poverty in all contexts. It has a detrimental impact on the supply of female teachers as well as the ability of semi-orphaned children to continue their education. Studies in sub-Saharan Africa have shown that the direct cost of a maternal funeral can reach one-third of a family's income (Oppong, 2020). Kumar's study on the impacts of maternal death in Tanzania, Ethiopia, Malawi and South Africa showed that the impacts of maternal death can include having to take over the mother's tasks including cooking, cleaning and fetching water (Kumar, 2019). According to Gatrell (2021), Ghanaian households saw a 32% increase in expenditure over the year following a maternal death. The loss of mothers has been linked by Fako 2020 to a 20 per cent decline in basic school attendance in the Volta Region. Maternal death has a stronger impact on available financial resources in already disadvantaged households, limiting access to food and health care for children who have fallen behind (Silverman, 2021).

Maternal mortality prevention according to the WHO (2018) refers to the discontinuation of maternal deaths among the female population of the world. Many governments have intervened to reduce maternal mortality around the world. Among these preventive maternal mortality initiatives is the United States of America's Head of State Emergency Plan for Maternal Mortality Reduction, provision of over $15 billion to a dozen critically affected African

countries over the last five years (U.S. Department of State, 2003). In Sub-Saharan Africa, the Global Fund has offered nutritional therapy to 1.9 million pregnant women (USAID, 2011).

In Ghana, the Rotary Club developed programmes to educate the general public through obstetric medical outreaches and pregnancy schools, emphasizing pregnant women and breastfeeding mothers (World Bank, 2008). All these attempts by authorities are aimed at minimizing maternal mortality incidence. This study examined maternal mortality eradication interventions of state and non-state institutions in Sofa, Waya, Shia and Nyive of Ghana's Volta Region.

1.2 Statement of the Problem

Non-state institutions, such as Non-Governmental Organisations (NGOs), Faith-Based Organisations (FBOs), and Community-Based Organisations (CBOs), are crucial in supplementing government and state initiatives to reduce maternal mortality. Although the state has generally been considered the focal point of this process, other institutions, especially non-state ones, have important role to play, according to Mabogunje (2021). Even though state and non-state institutions have played various roles in preventing maternal mortality, it remains a serious problem in Ghana, specifically in the Sofa, Waya, Shia, and Nyive communities of Ghana's Volta Region, despite the country's declining maternal mortality incidence (WHO, 2020). The Volta Region's Adaklu District's Sofa and Waya settlements had maternal death rates of 5.8% and 8.0% in 2018, respectively, according to the WHO (2020). In 2020, Hohoe reported 3%, Nkwanta reported 3.2%, and Keta reported 4% (WHO, 2020). Nyive and Shia had respective percentages of 2.0% and 1.2%.

WHO's study on women's attitude towards family planning in Adaklu District and Ho Municipality show that aboriginal women's ability in Sofa, Waya, Shia, and Nyive to take contraception and maternal mortality prevention education seriously is very low, which

discourages provision of further educational support to pregnant and lactating mothers to prevent maternal mortality (WHO, 2020). For example, research in Sofa reveals that disrespect for obstetric medical advice is ingrained and programmed in the majority of persons who believe that following obstetric medical advice is detrimental to their future well-being (International Centre for Research on Women, 2021).

A well-organized women's front is an important aspect in obtaining social and financial assistance (WHO, 2021). According to the Ghana Statistical Service (2018), just 32 per cent of women in Volta Region's Adaklu District organised themselves in groups in preparation for interest-free business loans, while 43 per cent of women have no group connections (GDHS, 2018).

According to Odoi-Agyarko (2022), maternal mortality in Ghana appears to be substantially influenced not only by poverty but also by cultural and traditional practices. Dapaah (2022) observed in the Nyive area that pregnant women prefer to deliver their babies at home rather than at health institutions mostly citing cultural reasons. Uterine cleansing, early marriage, and competition for childbirth in polygynous homes, which are widespread in the Ho Municipality, have all been identified as risk factors (Odoi-Agyarko, 2022). WHO (2021) recognised poor nutrition, domiciliary delivery, and non-contraceptive usage as key contributors to maternal death in Sofa. Accordingly, Halperin and Epstein (2021) discovered that high rates of repeated births, combined with lack of financial support and maldistributed institutional obstetric care facilities in space, are the primary causes of maternal mortality.

According to Crepaz et al (2022), while many women of reproductive age eliminate or limit habits that may expose them to maternal mortality, 60 percent of women do not regularly use safer delivery practices, putting themselves at risk of maternal mortality. For instance, about

80 percent of expectant mothers in Ghana's Adaklu District believe they are not at risk of pregnancy related deaths unless evil forces interfere (USAID, 2020).

According to Merson et al. (2020), interventions that aim to alter reproductive behaviour and promote personal income generation are crucial components of any maternal mortality prevention programme. According to Hecht et al. (2019), structural reforms in traditional communities to lessen economic and social powerlessness of women should be the main focus of stakeholders, as maternal death is a long-term problem.

Earlier research studies in the Ho Municipality and Adaklu District have examined the types and variants of preventive measures instituted by state and non-state institutions to reduce maternal mortality prior to the Sustainable Development Goals (SDG) era. Available maternal health literature focused on types of prevention interventions implemented by stakeholders over the years in an attempt to reduce maternal mortality in the Ho and Adaklu Area. Van Zyl (2019), for example, explored maternal health interventions implemented prior to the Millennium Development Goals (MDG) era in Adaklu, whereas Maphoso (2018) examined state interventions implemented to change fertility behaviour among residents of Shia in the MDG era. Agyemang (2019), for instance investigated the intensity of public education on maternal health in Ghana's Ho Municipality between 2012 and 2016.

None of the publications cited so far sought to examine how the various maternal mortality prevention interventions fared in terms of reducing maternal mortality in Sofa, Shia, Nyive, and Waya, from the perspectives of both service providers and beneficiaries. There is therefore limited knowledge on the outcomes and implementation challenges of maternal mortality prevention interventions in Sofa, Waya, Shia and Nyive. Given these gaps revealed in the maternal health intervention knowledge, it is imperative to address these lacunae through field research.

1.3 Research Questions

The following research questions served as a guide for the study:

(a) What is the pattern of maternal mortality in Sofa, Waya, Shia and Nyive between 2016 and 2023?

(b) Which cultural and social environmental factors contribute to maternal mortality in the study locations?

(c) What types of interventions have been put in place by state and non-state institutions to prevent maternal mortality in the study locations?

(d) How have the interventions fared in the study locations in terms of reducing maternal mortality?

(e) How are state and non-state institutions challenged in intervening in maternal mortality in the study locations?

(f) Is there is a direct link between contraceptive device use and contraceptive advice?

(g) Is the use of institutional antenatal care is directly related to maternal counselling exposure by maternal women?

(h) Is the use of a hospital delivery facility is directly related to women's access to a micro-credit fund

1.3.1 Objectives of the Study

The main objective of this study is to examine the success of maternal mortality preventive interventions of state and non-state institutions in terms of reducing maternal mortality in Sofa, Nyive, Waya, and Shia communities in Ghana's Volta Region.

The specific objectives are to:

(a) Explore patterns of maternal mortality and identify the contributory factors.

(b) Analyze maternal mortality preventive interventions provided by state and non-state institutions.

(c) Assess the challenges of state and non-state institutions in delivering maternal mortality preventive interventions.

1.3.2 Research Hypothesis

The following hypothesis are put forward to guide the study:

(a) There is a positive relationship between contraceptive device use and contraceptive advice

(b) Use of institutional antenatal care is positively related to exposure to maternal counselling

(c) Hospital delivery is positively related to access to a micro-credit

Rationale for the study

The rationale for examining maternal mortality preventive measures in Ghana's Volta Region is to provide credible information for stakeholders on whether or not programmes put in place by way of intervention in maternal mortality are on the right track to achieve target 3.1 under the 2030 United Nations' (UN) Sustainable Development Goals (SDGs) which aims at reducing maternal deaths to less than 70 per 100,000 live births.

Data from the research will assist in unearthing good practices, deviations, bottlenecks and gaps in terms of interventions put in place to banish maternal mortality in the Volta Region of Ghana for scale-up and redress respectively to expedite Volta Region's progress under the target 3.1 of the 2030 UN SDGs. The study will also provide credible information for stakeholders on availability of maternal mortality preventive intervention services, constraints for intervention development and implementation, prevalence of maternal mortality promoting *behaviours*, *practices* and *structures* as well as the nature of maternal mortalities in the study communities to guide effective anti-maternal mortality policy development and

implementation. Finally, the findings of the research will serve as a reference point in the pursuit of maternal health knowledge in the Volta Region.

1.4 Organization of the Study

The first chapter serves as an introduction, outlining the problem, objectives, propositions and scope of the study. Chapter two provides a review of pertinent literature that supports the study's framework. In chapter three, the various methods and procedures employed in carrying out the research are discussed, along with some background information on the study areas. Chapters four through six are analytical chapters that examine various aspects of the data collected from the field. Chapter four examines trends and determinants of maternal mortality in the study communities, while chapter five looks at the types and challenges of preventive services being provided by non-state and state institutions to avoid maternal mortality in the study communities. Chapter six compares preventive services being implemented to avoid maternal mortality to the stated challenges of maternity women to evaluate the success of preventive services of state and non-state institutions in eliminating maternal mortality in the study communities. The final chapter, chapter seven, presents a summary of the major findings and conclusions of the study.

CHAPTER TWO

CONCEPTUAL, THEORETICAL AND EMPIRICAL PERSPECTIVES ON MATERNAL MORTALITY PREVENTIVE MEASURES

2.1 Introduction

Numerous studies have been conducted to investigate maternal mortality, including its spatial patterns, trends, contributory factors, consequences, and preventive actions for reduction. The attention was first brought to this issue by Rasenfield Allan and Debora Maine in their ground-breaking article "Maternal mortality, a neglected tragedy: Where is the maternal in maternal and child health (MCH)" in the late 1980s. This chapter aims to provide a comprehensive review of the literature, with a focus on sub-Saharan Africa and Ghana, to place the study in its scholarly perspective. The review examines global trends and patterns, and summarizes research on the main causes, contributory factors, consequences, and preventive actions taken by both state and non-state institutions. Furthermore, the chapter also evaluates the effectiveness of intervention services provided by these institutions. Finally, the theoretical and conceptual underpinnings of the study are discussed towards the end of the chapter.

2.2 Global maternal mortality burden

The tragedy of maternal death continues to be a significant global public health and development concern, according to the Maternal Health Communication Fact Sheet (2020). Thirty-eight years after research brought this issue to light, it is estimated that 30 million women have died worldwide as a result of maternal mortality (Fact Sheet on Maternal Communication, 2020). According to WHO (2022), 3.4 million fewer women died from maternal causes in 2018, leaving an estimated 35.3 million women afflicted globally. While this is happening, there are also 1.6 million fewer women who nearly died through childbirth. About 2.3 million women nearly lost their lives during childbirth in 2012, whereas there were only million in 2019(WHO, 2020). According to WHO (2021), there were 2.0 million women

impacted by maternal mortality worldwide in 2019, with an estimated 36.9 million women losing their lives to the syndrome. Recent research, according to Cuadros and Abu-Raddad (2020), points to a significant drop in the incidence of maternal death in several regions of Africa. WHO (2021) also noted that whereas maternal mortality rates have decreased overall in sub-Saharan Africa by 34 per cent since 2001, they have decreased in the Caribbean by 49 per cent, with the Caribbean experiencing the greatest decrease. In Asia and the Pacific, there were 480,000 occurrences of women nearly losing their lives and about 5.6 million maternal death cases. In addition, between 2010 and 2020, women nearly losing their lives through childbirth decreased by 31 per cent in this region (WHO, 2001).

It is impossible to overstate the negative effects that maternal mortality has on the world. UNDP (2022) noted that the impact of maternal mortality is distinct since it takes the lives of women in their prime, depriving families, communities, and entire countries of their most productive women. According to studies of rural families in Thailand, households impacted by maternal death saw a decline in farm output and income of between 52 per cent and 67 per cent (UNDP, 2022). According to a different study conducted in Zambia, 80 per cent of urban households that lost their primary breadwinner due to maternal death also faced income losses (UNDP, 2022). The same survey discovered that 21 per cent of girls and 17 per cent of boys left school, 39 per cent of these homes lost piped water, and 61 per cent of them moved to cheaper housing (UNDP, 2022). UNDP (2020) claims that in Asia and the Pacific, there were approximately 570 000 maternal deaths in 2022, an 11 per cent rise from 2010 to 2019. In examining maternal mortality's global effects on the female population, WHO (2020) emphasized that the population of females had reduced by more than 34 million women globally, with almost 1.2 million of those deaths occurring in the global south.

Maternal mortality rates have been increasing in several countries, particularly in sub-Saharan Africa. Families affected by maternal mortality spend four times more than families who are

not affected, according to Rodrigo and Rajapakse (2020). A tragic consequence of maternal mortality is the creation of millions of semi-orphans. For example, Mutangadura (2018) found that around 40% of households in Maniland, Zimbabwe, had taken in semi-orphans who had lost their mothers. Rugalema (2018) and Shannon-Stokes (2019) report that maternal mortality in Sub-Saharan Africa drives low-income households into extreme poverty and destitution. This is due to lost farm labour, decreased farm output, reduced farm income, and a decreased ability to buy food, which all contribute to a vicious cycle of poverty, malnutrition, and food deficiency diseases (Rugalema, 2016; Shannon-Stokes, 2019).

2.3 Sub-Saharan Africa's maternal mortality burden

WHO (2020) estimates that 67 per cent of the world's 32.9 million maternal fatalities occurred in Sub-Saharan Africa, highlighting the significant issue posed by the burden of maternal mortality in the region. In addition to an estimated 1.9 million women nearly losing their lives in childbirth in 2017, the region also reported three-quarters of all female deaths were associated with pregnancy and childbirth complications. Therefore, according to WHO (2020), there were around 25 million maternal fatalities recorded in 2018, making up nearly 70 per cent of the total worldwide, with an estimated 1.6 million women nearly losing their lives during childbirth in sub-Saharan Africa at the time. According to Awad and Abu-Raddad (2020), maternal death rates in 20 sub-Saharan African nations appear to have decreased by more than 50 percent between 2011 and 2021.

Gillespie et al (2018) analysis of the maternal tragedy's effects in specific sub-regional countries argues that the incidence of maternal death is not constant throughout the sub-region but rather varies between nations and among various demographic age groups. The most severely affected nations are all in southern Africa, where incidence rates exceed 20 per cent of all live births in Swaziland, Lesotho, Botswana, and Zimbabwe. A 10–20 per cent incidence rate is shared by South Africa, Namibia, Zambia, Mozambique, and Malawi. In sub-Saharan

Africa, maternal mortality was predicted by the WHO to have reached 22 million by the end of 2017. It has been noted that women in this region (15–49 years old) make up the large majority of victims of maternal mortality.

2.3.1 Contributory factors in Sub-Saharan Africa's maternal mortality burden

In some parts of sub-Saharan Africa, maternal death rates are exceptionally high due to patterns of reproductive behaviour in which women have children often and unspacedly and are also highly susceptible to malnutrition (WHO, 2021). Solomon et al. (2021) suggested that income deprivation is a driving force behind many impoverished women turning to musculo-skeletally demanding employment to augment money. For instance, Rivers and Aggleton (2022) discovered that 2/3 of Malawian women surveyed admitted to exchanging physical labour for cash or presents. Gregson et al. (2021) note that due to lack of resources, many young women accept dangerous jobs in exchange for gifts, favors, and money. According to Audet et al. (2020), it has been established that one reason why pregnant and nursing women in sub-Saharan Africa engage in strenuous work is to earn money to buy food. The high rate of maternal death in Africa, according to Park et al. (2020), is linked to home births among Africans, whether they are single or married. If it were not for unassisted home deliveries, Shelton et al. (2022) were rather emphatic in stating that there would not be any regional maternal mortality.

Stoneburner and Low-Beer's (2018) study in Malawi, Zambia, and Kenya has reaffirmed that the decline in home births among women is a significant contributory factor to reducing maternal mortality, rather than contraceptive use. They also linked the success story of Uganda's maternal mortality reduction to the decline in home births. According to Jewkes et al. (2016), those who give birth at home are considered the population most at risk. However, no statistically significant correlation has been found between rates of reported domiciliary

delivery and maternal mortality in any of the at least four ecological studies conducted on the subject, contrary to the claim made by Lurie et al. (2019).

Madise and Hinde (2020), observed that cultural beliefs significantly influence home births in sub-Saharan Africa, in addition to income deprivation. WHO (2020) argued that cultural expectations embolden women to give birth at home without informing their neighbors. This is further exacerbated by the fact that complications of childbirth are often taboo topics in many African nations, depriving young male partners of the knowledge they need to support their female partners and relatives during labor. Mothers also avoid talking about labor-related difficulties to their daughters out of concern that it would happen to them in the future.

Risk factors for maternal death have also been linked to other customs, such as fecundity and purification rites, gender discrimination, maternal dietary restriction, which are pervasive in Ghana's Volta Region (Odoi-Agyarko, 2022). To reduce maternal mortality, the main objectives of maternal mortality preventive actions have been to reduce home births, frequent births, and cultural practices in respect of fecundity and womanhood. More recently, reduction in social and financial deprivation during pregnancy, labor, and puerperium has also been a goal.

However, preventative actions have not given women enough authority, and households still neglect women's reproductive rights, which is a gap that needs to be addressed. Lack of financial resources often discourages women from asserting their rights. Hypertension is identified by the WHO (2021) as the leading direct cause of maternal death (19%); almost a fifth of all deaths are attributable to this condition. The rest of the causes include bleeding (17%), anemia (12%), unsafe abortion (11%), infections (10%), obstructed labor (7%), and other causes (24%). Reduction of multiple pregnancies, unspaced births, domiciliary deliveries,

obstetric medical negligence, gender inequality, malnutrition, and poverty are essential to reducing maternal mortality in Africa, according to sub-Saharan African regional evidence.

2.3.2 International responses to global maternal mortality burden

In their 2018 study, Merson et al. examined global efforts to reduce maternal mortality and found that in the 1980s and 1990s, the focus was mainly on birth spacing and access to maternal health care. However, maternal mortality was later recognized as a development issue and not just a health issue, leading to the inclusion of the Millennium Development Goals (MDGs) in 2000, and the current Sustainable Development Goals (SDGs) in 2015 which aimed to reduce maternal mortality. In 2019, on the International Day for Maternal Health and Rights, the World Health Organization (WHO) and its partners launched the "3 by 5" campaign. This campaign aimed to provide 3 million pregnant women in underdeveloped nations with dietary supplements and access to obstetric care services by the end of 2020. However, this goal was not achieved.

Kim and Ammann (2021) criticized the "3 by 5" plan, calling it a "top-down" and unsustainable approach that relied too much on international aid. They argued that domestic funding was necessary for effective measures to reduce maternal mortality, citing Brazil's success in reducing maternal mortality through its 84% domestic funding of such initiatives compared to South Africa's 0.4%. Low-Beer and Stoneburner (2021) also noted the success of Thailand's reduction in maternal mortality, which was due to reproductive behavior modification, hospital delivery facility utilization, and obstetrically trained medical personnel. They emphasized the importance of providing free contraceptives to rural communities and counseling women to demand contraceptive use from their partners. Brookes (2021) agreed with this statement and added that Brazil's success in reducing maternal mortality was also due to the adoption of

programs to address frequent childbearing. In Vienna, pregnant women are regularly screened for physiological problems and diseases and registered for antenatal care (Brookes, 2021).

According to WHO (2020), UNICEF works closely with the Clinton Foundation in the Asian region to expand access to obstetric medical care in Cambodia, China, and Vietnam. The Clinton Foundation, WHO, and UNICEF have also collaborated to promote comprehensive maternal health services for women in Papua New Guinea (WHO, 2020). However, according to the United Nations (2020), there are already two women waiting for every woman who is given delivery care, indicating that the demand for delivery services is outpacing the availability of obstetric medical treatment.

2.3.3 Regional responses to sub–Saharan Africa's maternal mortality burden

To raise public awareness of maternal mortality, a number of projects have been launched across the continent. The first continental campaign against maternal mortality began in 1998, according to Allen and Heald (2018), and employed radio advertisements, bumper stickers, and T-shirts to spread the word. According to Low-Beer and Stoneburner (2021), there is evidence of a fundamental population-wide reaction that was started at the community level to reduce unplanned pregnancy and risky reproductive health seeking behaviours. The maternal mortality reduction "success story" on the continent can be attributed to commitment and focused care given during pregnancy, labour and puerperium by healthcare workers, facilities, use of hospital delivery facilities as well as awareness-raising about maternal mortality done through community educators. Contrary to this study, Campbell et al. (2017) discovered that most maternal women in Africa often rely solely on informal, home-based pregnancy, labour, and puerperium period care provided by older women living in disadvantaged settings.

Many countries in Africa launched Tetanus Vaccine Access Initiative in 1998 after a pilot feasibility phase, according to WHO (2021). Approximately 103,600 pregnant women received

tetanus vaccines through USAID activities in 2019, which served close to 400,500 people overall (WH0, 2020). In order to reduce the pervasiveness of maternal mortality, FAMME (NGO) launched the "sister-to-sister" project in a number of African countries. This initiative makes use of peer educators selected from women of reproductive age to provide maternal mortality prevention education on radio (FHI, 2020).

A pilot intervention was launched throughout Africa in 1993 and reinforced in 2015 with the goal of lowering maternal mortality through routine obstetric medical examinations and social care for expectant mothers (FHI, 2020). However, the response to maternal mortality in Sub-Saharan Africa has come under fire for being based on health policies from industrialized countries that treat maternal mortality differently from other mortalities (Mohiddin and Johnson, 2021). United Nations (2022) notes, however, that efforts to reduce maternal mortality have a history of ignoring poverty's broader effects. For instance, according to Auerbach (2021), a pilot microfinance project in the United States that involved women in Baltimore investigated the effectiveness of a jewelry-making business mixed with education about maternal mortality prevention. At the conclusion of the pilot initiative, researchers discovered appreciable reduction in the reporting of obtaining food assistance or pleading for money, as well as a drop in unprotected sex and the number of children women were giving birth to (Auerbach, 2021). In order to close this gap by incorporating income deprivation reduction initiatives into state and non-state actors' mainstream activities to prevent maternal mortality in the study communities, more research is needed to examine the poverty reduction aspect.

2.3.4 Challenges of responses to sub-Saharan Africa's maternal mortality burden

Despite regional successes, national and global responses to the tragedy of maternal mortality, according to Sachs (2020), are still insufficient. For instance, in the underdeveloped world and sub-Saharan Africa, respectively, just 8% and 4% of pregnant women who require antibiotics,

vitamins, and antacids are receiving them. Only 8% of pregnant women receive trained obstetric medical care, and most communities lack trustworthy knowledge on how to safeguard their female members from maternal mortality (Auerbach, 2021). In a study conducted in Botswana, Weiser et al. (2021) found that 55% of pregnant women were unable to access hospital delivery care due to financial constraints, while 70% mentioned the cost of antacids, antibiotics, and painkillers as a barrier to seeking obstetric medical care. The problem is that, despite significant financial investment, measures to minimize maternal mortality and to provide pregnant women with antibiotics, immunizations, and vitamin supplements are still insufficient (United Nations, 2020).

More field study is therefore required to close this gap by investigating the availability, affordability, and accessibility of information, dietary supplements, and obstetric medical facilities to pregnant women. The USAID (2021) bemoaned the lack of adequate data on maternal mortality in sub-Saharan Africa as a barrier to lowering incidence rates of maternal mortality. For instance, over 2 million South African women in their reproductive years feel their pregnancy will not grow complex and are not aware they could die during or after childbirth. According to USAID, an assessment of Demographic and Health Surveys (DHS) from West African nations between 2013 and 2018 found that less than 50% of people between the ages of 15 and 49 had access to adequate information on dynamics of maternal death (WHO, 2020).

To close this knowledge gap, it is apparent that more field studies are needed on maternal mortality prevention efforts. Dominguez (2021) emphasized that women in sub-Saharan Africa may struggle to negotiate safe child spacing due to their poor social status. For instance, a study conducted in Nigeria revealed that 35% of women were forced to deal with unforeseen pregnancies and numerous childbirths due to income deprivation and a lack of access to food (Sachs, 2020). Adu-Oppong et al. (2020) discovered that 95% of women reported financial

difficulties as the cause of their involvement in crowded birthing in their research of the factors influencing child spacing in Ghana. Disempowerment and power dynamics, according to Barnett and Whiteside (2022), can also account for the fact that 60–80% of frequent child-bearers in Africa were unable to negotiate protected sex with their partners.

Therefore, more field investigation is required to examine maternal mortality prevention strategies that attempted to incorporate women's empowerment and poverty reduction. USAID (2021) also noted that substantial obstacles to preventing maternal deaths were caused by sub-Saharan African societies' views of women as expendable, gender inequality, and poor women's status. Low women's status frequently resulted in abuses of women's reproductive rights, insufficient focus on women's nutrition and health, and views of pregnancy as a common physiological condition that has an impact on maternal womenfolk's wellbeing. It is uncommon in some societies for people to accept women. Less than one-third of men and women in Zambia, for example, showed acceptance towards pregnant mothers according to the 2017 Demographic and Health Survey (USAID, 2021). According to USAID (2021), less than one-fifth of Ghana's population also showed acceptance of pregnant women. Therefore, a multi-sectoral intervention is required to alter sociocultural and structural practices as well as governments' and communities' policies. These interventions focused on structural change are sadly missing. This study aimed to investigate how state and non-state actors are addressing these issues in Sofa, Shia, Waya, and Nyive in this way.

2.3.5 Service Delivery Modes for Maternal Mortality Prevention

Depending on the socio-cultural environment and the magnitude of maternal mortalities, different countries require different types and combinations of interventions to deal with maternal mortality (Piot et al 2021). Regular obstetric medical outreach programmes in rural areas and urban areas such as community deworming projects, community vaccination programmes, delivery kit support programmes, philanthropic and humanitarian outreach

services such as community nutrition improvement projects as well as educational outreach services including community empowerment training programmes in agriculture development, viticulture development, contraception use, reproductive rights, gender violence aversion, maternal health care, and environmental sanitation should all be included (USAID 2021). One of the few nations mentioned as a remarkable success story in Africa for preventing maternal mortality is Uganda. Their strategy, known as the "basics of maternal mortality prevention," was widely used in the 1980s and 1990s and is thought to have been a significant factor in the nation's maternal mortality rate dropping from 15% in the early 1990s to 5% by 2018 (AVERT, 2020). First, the programme promoted childbirth and delayed marriage. Second, those who were already giving birth and were unable to stop were urged to space it out. Finally, using hospital delivery facilities was advised for expectant mothers (AVERT, 2020). According to Barnett and Parkhurst (2021), using a hospital delivery facility is the best option, followed by delaying childbearing and child spacing as the last options. In evaluating the importance of child spacing, Lawrence and Scott (2022) noted that encouraging child spacing is crucial for preventing maternal mortality. But the ongoing discussion on the placement and function of child-spacing promotion in campaigns to reduce maternal mortality has produced contradictory results. According to Lawrence and Scott (2021), these have a tendency to limit the consensus over what is effective. The issue, they continued, "illustrates concerns about the interactions between child spacing promotion, on the one hand, and other behaviour change approaches, particularly those aimed at sexual abstinence, on the other." This worry stems from the worry that encouraging child spacing would increase protected sexual activity and tempt people to disregard religious prohibitions against using contraceptives (Lawrence and Scott, 2021). When discussing the effects of maternal health facility use, Ahmed et al. (2022) noted that while women may use these facilities, the impact will be minimal if they do not do so consistently. They added that there is little proof that using maternal health services

occasionally (but not usually) offers any added protection over not using any facilities at all. In fact, a study from Uganda found that women who occasionally used maternal health facilities had a higher risk of morbidity and mortality than women who never did (Ahmed et al., 2022). This may be because these women were less afraid to experiment with other aspects of their fertility behaviour, such as the amount of space between births.

Cohen (2022) provided examples to support the claim that Thailand's efforts to reduce maternal mortality were successful. The success was based on requiring all local communities to regularly use maternal health facilities, providing free contraceptives to women of childbearing age, and enforcing the use of contraceptives by sexually active women to space out pregnancies. Although child spacing is an essential technique to reduce maternal mortality, it does not fully address the issue, according to Human Rights Watch (2020). They warned that opening up access to information about contraceptive devices is scientifically supported to decrease maternal death, and that encouraging childbearing delay-until-above-19 years schemes can be effective. However, they recognized that depriving people of comprehensive information and resources for maternal mortality prevention while promoting these practices at the expense of child spacing is not ideal. Hospital births and antenatal attendance may occasionally be beneficial for some communities.

Smith (2023) criticized this strategy, arguing that campaigns to reduce maternal mortality must go beyond the straightforward advice to use maternal health facilities and address ingrained gender issues of bias and inequality that expose women to risks they cannot control. According to Barnett and Parkhurst (2021), contraceptives have a failure rate of 10-20% in preventing unwanted pregnancy and a 10-13% failure rate in preventing maternal mortality. Although child spacing is extremely beneficial when implemented properly, no nation can claim to have completely prevented and eliminated maternal death through the promotion of child spacing alone (Kolawole, 2020).

USAID (2021) observed in an analysis of strategies to lower the rate of maternal mortality in Africa that the success of clinical trials evaluating the use of dietary supplementation to reduce maternal mortality has prompted many countries to enact projects to scale up and encourage dietary supplementation as a maternal mortality prevention strategy. The dietary supplementation project in Kenya primarily targets people in districts where dietary supplementation is not a customary practice and maternal mortality is a problem. One study (Newman, 2021) showed that the risk of maternal morbidity and mortality was two times higher in undernourished mothers in the United States.

Maternal mortality can be prevented in large part by implementing community education and counselling activities. Community education and counselling involves sensitization and counselling of community members to enable them to choose informed reproductive lifestyles about protecting their health before and during pregnancy, labour, and puerperium, and to take appropriate action during those times (UNFPA, 2020). According to Baiden et al. (2017), community education and counselling programmes are the most well-liked strategy for advancing information about maternal mortality reduction. Community education campaigns are being widely seen as essential to preventing maternal mortality (Gauge and Ali, 2021). Timely obstetric medical treatments and the early identification of warning signals of complications in pregnancy and childbirth have been found to encourage maternal risk reduction, lifestyle changes, and ultimately a decrease in maternal mortality (Fako, 2020). However, WHO (2021) found that awareness of maternal mortality was still insufficient. Additionally, community education and counselling activities are not necessarily customized to local contexts, and significant gaps still exist between therapy and existing community practices related to womanhood, child spacing, and maternal health seeking, as well as issues with money production.

Another strategy for minimizing maternal mortality is malaria prevention. It involves educating expectant mothers about their malaria status so that, should they not have the disease, the appropriate clinical measures can be taken to lessen their chance of contracting it. Malaria has the potential to raise maternal death rates by causing convulsions, according to WHO (2021). The three times this can occur are during pregnancy, at delivery, and during the first few months of puberty (WHO, 2021). This demonstrates the need of family planning, prenatal care, tetanus vaccination, deworming during pregnancy, intermittent preventive therapy, and iron supplements. Antibiotics, antacids, and painkillers are all safe to take throughout pregnancy. Intermittent preventative therapy has reportedly been regarded as a successful method of lowering the probability of becoming a mother, according to AVERT (2020).

2.3.6 Preventive Actions to Reduce Maternal Mortality by State

State institutions' roles have varied in creating success stories for preventing maternal mortality.

Harman (2018) notes that the World Bank-led approach to reducing maternal mortality in sub-Saharan Africa, which has been accepted by the international community and articulated as the global response to maternal mortality, is repositioning heads of state to support public campaigns to raise awareness of risk factors for maternal mortality. Yoweri Museveni's "success story" of maternal mortality reduction has been linked to this trend. De-Waal (2021), notes that the "success story" of Ugandan maternal mortality reduction has been so politically significant for the government and the "international maternal health industry" that it has rarely been given a close examination. According to Parkhurst (2021), the development realities of an African political state that was heavily dependent on donors and NGOs had an impact on Uganda's policy and programming response to reduce maternal mortality. Morgan (2021) aimed to bolster this claim by establishing a connection between will of political office holders and donor-driven incentive. He contends that rather than elucidating the initial catalyst for high

level commitment of political office holders to maternal mortality prevention, the literature focuses mostly on maternal mortality reduction "success stories" that highlight the impact of commitment of political office holders on national programming responses. Former United Nations Secretary-General Kofi Annan is quoted by the UNDP (2021) as saying that strong leadership acumen of political office holders is a key element in the majority of countries where significant progress against maternal mortality is observed. Campbell (2017) argued that nations like Senegal, Uganda, Brazil, and Thailand appear to have more "success stories" to share in terms of maternal mortality prevention. This is in line with the idea that strong and decisive leadership of countries may contribute to the explanation. The capacity of the state, particularly in welfare provision, has been weakened by the IMF with their structural adjustment policies, according to Barnett and Whiteside's (2022) assessment of the state's effectiveness to intervene in risk factors for maternal mortality. It is not without reason that Schoepf (2019), asserted that maternal mortality is influenced by the behaviours and inactions of people and groups that are situated in a variety of historically constructed systems, the social and economic makeup of societies, gender bias, gender inequality, gender violence, denial of women's health and nutrition rights, and income poverty. According to Dominguez (2021), the political and economic effects of maternal mortality are examined with an emphasis on the challenging environment that governments of low- and middle-income countries find themselves in both domestically and globally. Poku (2022) came to the conclusion that many African countries had to reduce their maternal mortality prevention expenditure in order to meet International Monetary Fund conditionalities at a time when up to 70% of women in hospitals were seeking out obstetric medical care service.

Campbell (2017) examined the reasons why maternal mortality prevention efforts in Africa fail and also pointed out that ineffective leadership by governments created the conditions for international development assistance and externally sponsored NGOs. Campbell et al (2017)

added that, regardless of how much these are relevant for local contexts, the discourses of maternal mortality prevention are frequently the discourses of western research and projects. Programmes against maternal mortality drivers are often designed by 'overseas experts' with only minimal and tokenistic consultation of local people, who may have little sense of 'ownership' of project proposals and lack the conceptual understandings, technical skills, or trained staff to implement them properly.

For instance, in South Africa, Campbell et al (2017) attributed the state's failure to prevent maternal mortality to a number of factors, including the lack of a strong national leader, official denial of maternal mortality rumors, the emergence of a series of financial scandals involving government officials, and the inability to procure food supplements, antibiotics, and vaccines for pregnant women. According to scientists, about 75,000 expectant mothers could have been saved from death in South Africa in the year 2017 if these services had been provided. This analysis of the role of state actors in maternal mortality prevention clearly shows the need for research to look at the state's interventions in the risk factors for maternal mortality and the success of those interventions in terms of whether the issues they have targeted for change have changed or remain the same. Despite these, Barnett and Whiteside (2022) observed that the state's leadership in the struggle to curb maternal mortality still stands as the most important factor. But why would state actors get involved in the risk factors for maternal death? Maternal mortality has increased the attrition rate among employees of the civil and local governments in Zambia and Zimbabwe, according to Barnett and Purkhust (2021), who was evaluating the drivers of maternal mortality and the need for state actors to intervene in Africa. The death of female voters has also resulted in a decrease in the size of the electoral constituencies.

According to De Waal (2021), politicians can use maternal mortality's political importance to advance their own political objectives, such as winning over voters. However, Harman (2018) preferred to examine the problem from the perspective of economic gain and maintained that

the most intriguing issue arising from state intervention in the factors that drive maternal mortality is the problem of perceived political and official corruption, even though it is difficult to identify because of the onerous bureaucratic procedures and duplication of duties. For instance, the Global Fund stopped providing financial help to Uganda when Price Water House Coopers, independent auditors, found that monies had been improperly administered (Harman, 2018). Ghana experienced a similar fate when the Global Fund announced that it would no longer be able to support maternal mortality prevention initiatives in the nation after 2018, putting the lives of over 60 000 future expectant mothers in danger due to a lack of funding (WHO, 2020).

2.4 Preventive Actions to Reduce Maternal Mortality by Non-State Institutions

The role of non-state players such as FBOs, NGOs and CBOs in creating solutions for the risk factors for maternal death is extremely important in assisting governments and state actors in maternal mortality-oriented problem intervention. Mabogunje (2021) asserts that although the state has typically been seen as the main focus of this process of generating solutions to the risk factors for maternal mortality, other actors, especially non-state ones, have an essential role to play.

Anyang (2020) contends that it is critical to recognise these additional forces (non-state actors) and the contexts in which their involvement can be more beneficial and manageable. In addition to reiterating the benefits of non-state actors, Swidler (2017) noted that the rise of non-state actors may be advantageous since they might aid the government in averting and containing the tragedy of maternal mortality.

According to de-Waal (2021), non-state actors assist in directing foreign funding for implementing projects to eradicate maternal mortality because national entities are largely unable to conduct maternal welfare services on their own. However, coping with the emergence

of various non-state players can prove challenging for state actors as well. Governments may find it difficult to control and organize these non-state players, and they may feel overshadowed. As a result, governments may find it difficult to acknowledge or support them, according to Poku (2022). Even more plainly, Covell (2020) contends that the tragedy of maternal mortality has sparked a response from non-state actors that can reveal the frailty of some African states and weaken the state's role in caring for its own people. The establishment of the World Bank's Maternal Mortality Reduction Programme Funds, in fact, is where non-state actors first became involved in efforts to prevent maternal death, claims the World Bank in 2018. As a result, funding was made available to states that would agree to the following requirements: the existence of a national strategic plan to combat maternal mortality; the existence of a national coordinating body; the commitment to allocate 40–60% of funds to civil society organisations (CSOs); and the government's acceptance of the use of multiple implementation agencies, particularly national non–governmental organisations (NGOs) and community organisations.

The Ghana Shared Growth and Development Agenda 2018-2020 (GSGDA), which aimed to involve grassroots participation at the regional, district, and community levels to coordinate the country's response to maternal mortality, is in accordance with this requirement of World Bank Multi-Country Maternality Mortality Reduction Programme funds (GSS, 2020).

2.4.1 Joint Preventive Actions to Reduce Maternal Mortality by Non-State and State Institutions in Ghana

Maternal mortality in Ghana was viewed as more of an infrequent tragedy than a problem of development, according to Anarfi and Appiah's observations in 2019. The Ministry of Health has therefore been particularly focused on and in charge of the national response to maternal mortality (WHO 2022). The establishment of a Technical Committee on Maternal Mortality Prevention in 1985 marked the beginning of the Ghanaian government's response to maternal

mortality, according to the Ghana Health Service (2019). In order to address issues pertaining to maternal mortality prevention, this committee established the National Maternal and Child Health and Nutrition Improvement Project (NMCHNP) in 1987 under the Ministry of Health's Diseases Control Unit. This project devised a short-term plan for maternal mortality prevention. When examining the MCHNP's mandate, Dzokoto (2021) found that it was mandated to increase the use of community-based maternal and child health and nutrition services, with a special focus on pregnant women and children under two years of age, to reduce under-feeding, strengthen local health systems, boost local economies, and to lessen the negative effects of maternal mortality on human suffering. Using sentinel surveillance systems to track maternal mortality, the NMCHNP planned, managed, monitored, and evaluated its activities in the nation.

In evaluating the NMCHNP and the Ministry of Health's lack of readiness to handle the challenge posed by maternal mortality, Anarfi and Appiah (2019) argued that it became clear that the complexity of maternal mortality requires a developmental and holistic approach to address the multidimensional nature of maternal mortality risk factors. Another obstacle was the absence of multi-sectoral agreements and the fact that the NMCHNP was unable to meet its goals as a result of the heavy demands placed on the NMCHP programme office.

The lack of a clearly defined budget line by the Ministry of Health to address maternal mortality-oriented issues also created a gap, which eventually led to the sponsorship of maternal mortality prevention programmes in Ghana being primarily provided by bilateral and multilateral sources (Anarfi and Appiah, 2019). This development led to the revitalization of the Ghana Population Council, which began the multi-sectorial initiative. However, according to Dzokoto (2021), the National Strategic Framework 2011–2015 (NSF I), which was created as part of Ghana Growth and Poverty Reduction Strategy I and used to direct the implementation of the national maternal mortality response after a Joint Programme Review

(JPR) of the national maternal mortality response in 2014, placed a strong emphasis on maternal mortality prevention.

The role of the media and the necessity of fostering information sharing, distribution, and documentation were, however, not sufficiently handled in NSF I, according to the Ghana National Population Council's 2015 analysis of the NSF I's shortcomings. Its inadequate coverage of the private health and business sectors, which among other things employed a significant portion of the workforce, paved the way for the introduction of the NSF II (2016-2020), which was created within the framework of the Ghana Growth and Poverty Reduction Strategy 2016-2020 to concentrate on broader areas of maternal mortality driver intervention.

In addition, the Ghanaian government created a medium-term development framework called the Ghana Shared Growth and Development Agenda (GSGDA) for the years 2020 to 2023. The GSGDA served as an inspiration for the creation of the National Maternal Mortality Prevention Strategic Plan for the years 2021 to 2025 as a means of advancing the goals of the national framework (NPC, 2019). By delegating these tasks to the various MMDAs and establishing offices of reproductive focal personnel in each MMDA, the GSGDA aimed to involve the general public in grassroots efforts to prevent maternal mortality. Fobil and Soyiri (2019) predicted power struggles among related organisations in their review of the roles played by state institutions in Ghana due to factors like the roles played by the NMCHNP and NPC being indistinguishable from one another.

According to Fobil and Soyiri (2019), the goals of the NMCHNP were to increase the use of community-based maternal health and nutrition services, improve obstetric medical care delivery, improve maternal mortality prevention programmes, aid in the revitalization of entire communities, strengthen local health systems, and boost economies in order to decrease maternal mortality, improve service delivery, and lower individual and community costs and

create a multidisciplinary institutional framework to coordinate the execution of the project. In a similar vein, the Ghana National Population Council which is in charge of directing and coordinating all initiatives aimed at eradicating maternal mortality in Ghana, is regarded as the top policy-making organisation in that country. It is obvious that when two government entities are required to coordinate the same activity, this will not only lead to implementation conflicts between them on who controls what, but it will also result in the duplication of efforts and the waste of limited resources (Fobil and Soyiri, 2019). The German Technical Cooperation/Regional Maternal Mortality Prevention Programme, the United States Agency for International Development (USAID), the European Union (EU), and the Japanese Fund were among the donors who supported the government of Ghana's efforts to reduce maternal mortality. To bring efforts to prevent maternal mortality closer to the people, a number of NGOs and FBOs have been collaborating with the donors. These included the Evangelical Presbyterian Church, the Salvation Army, and the Catholic Secretariat as part of the Christian Health Association of Ghana (CHAG). The Ghana Health Service (2020) lists additional organisations as the Ghana Red Cross, Save the Mothers' Fund (SMF) UK, Centre for Development of People (CEDEP), CARE International, Action AID, and Stop Maternal Mortality.

The following is an examination of a few of these organizations' initiatives to prevent maternal mortality: To reduce maternal mortality in Ghana, the support care for women scheme was implemented. The National Maternal and Child Health and Nutrition Improvement Programme, Ghana Health Services (GHS), Family Health International (FHI), the District Health Management Team, the District Response Initiative, the National Population Council, DFID, UNICEF, and UNAIDS all worked together on the project. The program's objective was to enhance the quality of life for pregnant women and their families by offering extensive programmes for preventing maternal mortality, maternal care, and obstetric medical treatment

services, such as behavioural change communication, community education and counselling programmes, prevention of maternal malaria, clinical care for the prevention of tetanus, management of pregnancy, and dewormers for pregnant women, expectant mothers in need, home-based care, and pregnant women (FHI, 2020). However, because maternal mortality rates in Ghana continued to rise, this plan was unable to meet its goals.

2.4.2 Maternal Mortality Preventive Action Funding in Ghana

According to UNDP (2021), the maternal mortality prevention budget for 2020 was US$158,764,061. Funds from international organizations-primarily United Nations agencies, the Global Fund, the World Bank, USAID, DANIDA, GIZ, and other international organisations active in maternal mortality prevention programmes in Ghana-made up 77% of the total expenditure on maternal mortality prevention, whereas public funds made up just 13% of the total (NPC/UNDP, 2021). Multilateral funds made up 65% of the total, followed by international foundations and not-for-profit organisations with 19%, and direct bilateral partners with 16%. 88% of Ghana's total multilateral funding came from the Global Fund, which fights diseases like malaria, TB, and maternal mortality (NPC/UNDP, 2021). Only 21% of the total financing provided by international organisations (i.e., $10,263,810) went to the pooled or earmarked fund managed by the NPC; the remaining 79% went straight to the implementing organisations (NPC/UNDP, 2021). According to Table 2.2, which breaks down the 2020 APOW budget by funding source and intervention areas, there was an overall increase in spending (of nearly US$ 13,594,151) from US$54,228,388 in 2019 to $62,147,564 in 2020.

Budget for 2020 for APOWs by funding source and areas of intervention, as shown in the table.

Table 2.1: Budget for 2020 for APOWs

Intervention Areas	Pooled Funding	Earmarked Funding	Direct Funding	Total	Total (%)
Maternal mortality data collection	790,000	355,000	4,424,475	5,569,475	4
Maternal mortality impact mitigation	1,924,000	1,950,000	14,157,000	18,031,000	11
Public education on risky fertility behavior change	1,250,000	60,000	8,723,550	10,033,550	6
Vaccination and maternal death prevention care services support	6,700,500	4,853,153	29,378,184	40,931,837	26
Gender equality Advocacy/gender violence victim support in communities	130,000	1,495,794	73,596,856	75,22,650	47
Female business development	2,098,500	3,418,959	3,006,840	8,524,299	5
Rural/decentralized maternal mortality response coordination	410,000	0	41,250	451,250	0
Total	**12,303,000**	**11,132,906**	**133,328,155**	**158,456,231**	**100**

Source: NPC/UNDP, 2021

The analysis of funding for maternal mortality prevention in Ghana seems to support the earlier claim made in this review by Harman (2018), Barnett and Whiteside (2022) that funding undermines the effectiveness of the state and portrays governments as supporters of donor-led and donor-designed interventions in their respective countries. Public funds, on the other hand, were insignificant (13%), depriving the government of the ability to make wise decisions and

prudent expenditures without being susceptible to any external conditions. This supports Harman's (2018) claim that foreign organisations have been given permission to cross sovereign boundaries and set up offices within states and communities because maternal mortality must be prioritized as a development issue. The analysis also shows that only 53.93% of the 88% of funds from bilateral sources were spent on activities to prevent maternal mortality specifically, to prevent risky fertility and maternal health seeking behaviour, to provide social welfare services, and to provide obstetric medical care, which again raises legitimate concerns about what was actually done with the remaining funds.

2.5 Non-State and State Organizational Challenges of Preventing Maternal Mortality

2.5.1 Human Resource Challenge

According to the Worldpress (2016), one of the main obstacles in reducing maternal mortality rates is the lack of trained professionals in Africa. There are not enough social workers, gender advocates, business development experts, midwives, and other professionals to effectively implement projects to minimize maternal mortality. Furthermore, UNDP's report in 2020 revealed that less than 5% of the world's obstetric medical staff is present in Africa, which faces over 80% of the world's maternal mortality cases, despite having only 10% of the world's population. Due to the overburdened institutions and staff responsible for maternal health, care for expecting mothers and women in labour does not seem to be a priority (UNDP, 2022).

2.5.2 Funding Challenge

Programmes in Africa to minimize maternal mortality could be derailed by inconsistent finance. The maternal mortality strategic plan for Mozambique from 2000 to 2002 was underfunded, and many of the intended preventive initiatives were not really carried out, according to a report by the Economic Commission for Africa (2020). Due to a lack of sufficient financial resources, the Global Fund to combat Maternal Mortality recently decided

to suspend sponsoring maternal mortality prevention activities in Ghana (The Economic Commission for Africa, 2020).

2.5.3 Socio-cultural Practices and beliefs

Bankole et al. (2020) highlight the possibility that socio-cultural beliefs and practices unique to African nations will make it extremely difficult for stakeholders when pursuing maternal mortality prevention on the continent. According to their findings, superstitious obstetric beliefs endemic to Africa are likely to interfere with maternal mortality prevention education. Grey (2021) countered that by holding on to some indigenous beliefs during pregnancy and puerperium, the risk of maternal death may be lowered.

2.5.4 Gender Inequality

According to Lammers et al. (2021), low levels of women's status may prevent women from patronizing community education and other community-based human empowerment projects. This according to them militates against the broad objectives of maternal mortality prevention programmes. According to WHO (2021), women are effectively excluded from their families, communities, and jobs as a result of gender inequity. Research by Hollow (2020) found that over 20% of businesses would be hesitant to employ a woman for hard labor in order to increase her income. Howell (2019), addressing gender inequity, points out that when partners make sexual intentions unreasonably soon after giving birth, women may be discouraged from bringing up their own health concerns

2.6 Theoretical and Conceptual Approaches to Maternal Mortality Preventive Actions

The challenge of maternal mortality is complicated, and several writers have expressed varying views on it. In order to better understand the problem of dying maternally, particularly understand risky fertility and delivery care seeking behaviours, it is crucial to take into account a wide range of explanatory models (Sundong, 2018). According to the Centers for Disease

Control and Prevention (2019), theories can help stakeholders highlight what should be the focus of maternal mortality prevention interventions and what should be of more concern in the evaluation of the success and effectiveness of same. Most maternal mortality prevention interventions, whether expressly expressed or not, are based on theory, according to a UNDP assessment of delivery care seeking and fertility behavioral change. Furthermore, most maternal mortality prevention interventions are predicated on the idea that obtaining accurate knowledge about the factors influencing maternal death and effective prevention actions will change maternal mortality rates (UNDP 2022). Programmes to decrease maternal mortality must be diverse, including different prevention intervention strategies, in order to be particularly effective. There are basically three thoughtful ways to deliver interventions to effectively prevent maternal mortality, according to the WHO (2021).

The first strategy is behavioural change intervention that entails contraceptive advice group, institutional obstetric care counselling, insecticide treated net use training programmes, antenatal care schedule adherence counselling, hospital delivery adherence counselling, delayed childbirth debut education, comprehensive maternity education, education to reduce multiple pregnancies, and education against use of multiple tree-root remedies during pregnancy complications, early marriage, polygamy, female genital mutilation taboo-based food restrictions and other aboriginal rituals open only to females.

The second is biomedical support intervention, which includes help to key populations through blood pressure management and treatment, anemia treatment, stress management, caesarean services, vaginal delivery services, blood transfusion services, antenatal services, postnatal services, family planning information and family planning services.

The third is structural intervention, includes sensitization to gender issues, outmoded cultural practices and beliefs, institution of reforms on traditional land tenure, modern industry skills

training, establishment of female credit schemes, education about social capital and time management. To play host to services to combat maternal mortality, commitment of political office holders in doing so must be demonstrated. This is something that the political authority of society aims to do.

These three main domains all have a theoretical foundation for providing maternal mortality prevention interventions. Most programmes, according to the review of the literature on maternal mortality prevention interventions to date, have sought to implement only behavioral and biomedical types of interventions targeted at reducing maternal mortality.

Structural challenges, including the historical women's financial dependence on men, historical social construction of women's status as low, gender inequality, and ancient social norms have not been taken into consideration when assessing a woman's capacity to enact behavior change. Most theories also made reference to the Health Belief Model, the Stages of Change, and the Theory of Reasoned Action to evaluate lifestyle changes that pertain only to the individual. However, when considering the local context of maternal mortality issues in this study, the primary focus is not on the individual woman but rather on ancient community norms of fertility and delivery. Indeed, Hawe et al. (2019) argued in their paper titled "Theorizing interventions as events in communities" that weak maternal mortality prevention interventions might be an inevitable result of programmes that rely too heavily on individual-level theorizing, in which whole community level change is conceived simply as a matter of "aggregating up." Therefore, due to these theories' individualistic orientation, they are not appropriate in the context of maternal mortality prevention measures in Ghana in this study. This study examined maternal mortality prevention strategies within the Ghanaian environment using structural intervention and theories that recognize traditional practices, social interaction, and wider financial climate in order to fill this gap. The Theory of Gender and Power as well as the Theory of Empowerment Education are some of these theories (UNDP 2022).

2.6.1 Making a Case for Structural Interventions to Support Biomedical and Behavioural Interventions for Maternal Mortality Prevention.

In as much as they ignore the structural (social environment) domain, individualistic (personal) interventions have limitations. It may be possible to investigate maternal mortality interventions without confining it to only individual lifestyle changes by focusing on structural constraints in both a broad and more specific context. According to Piot et al. (2021), specialists in the field of maternal mortality intervention are beginning to come together in recent years around the wide definition of "combined action" which is meant to aid maternal mortality preventive action planners overcome one of the major inhibitions associated with maternal mortality preventive actions. Coates and Caceres (2021) made a case for the structural approach by stating that behavioural change communication strategies, such as those to discourage early marriage, contraceptive resistance, desire for many children, home-delivery, baby sex preference and gender based violence of all forms can be challenging to enforce and should be combined with social support strategies in traditional societies such as gender awareness creation, gender mainstreaming in local development, affirmative actions for women, *HeForShe* campaigns, women's assertiveness training, women's deliberate exposure to the outside world, women's capacity building, provision of skills training to assist individuals pursue economic activities that will earn them regular income, cash transfer to ultra-poor households, credit assistance to enterprises operated by ultra-poor households, mass immunization against diseases of public health interest, vitamin supplement distribution, mass awareness creation about malaria, HIV/AIDS, Fistula in order to churn-out population level changes.

Gupta and Parkhurst (2020) emphasized the structural impediments (gender inequality, low women's status, income poverty, mal-distribution of obstetric medical facilities and equipment, malnutrition, unemployment, corruption, communicable diseases, illiteracy,

ignorance) that can exacerbate the factors influencing maternal mortality in support of the study's claim. For instance, unprotected sex resulting in unwanted pregnancy is associated with historical gender inequality because of masculine physique and male financial dominance, which leads some women to consent to unprotected sex leading to unwanted pregnancy out of fear of physical abuse or forfeiture of financial assistance. This was addressed by Auerbach (2021) by highlighting how micro-lending for women, for example, has evolved as a way to empower women in their relationships and lessen their reliance on males for financial assistance, the author hopes to examine this situation. In fact, according to Auerbach (2021), several studies of discovered that micro-lending interventions targeted at women financial empowerment translated into improved social networks and higher self-esteem, control over household decision-making, bargaining power, and contraceptive use. According to Merson et al. (2021), combination intervention programmes that simultaneously address cultural (*behavioural traits of human societies)*, structural (*the social environment*) and biomedical (*clinical*) issues were the origins of the most effective early maternal mortality prevention intervention efforts, not the public health and medical communities. According to PEPFAR (2021), structural intervention should therefore tackle the major social and economic organizational issues such as gender inequality, income and medical infrastructure poverty that contribute to maternal mortality whiles cultural interventions should deal with major human and social behavioural issues such as genital mutilation in female fertility rites, early marriage, contraceptive resistance, desire for many children, domiciliary delivery, gender based violence of all forms. Many theories have been developed in support of interventional approaches to maternal mortality. The researcher will analyze these theories and demonstrate how they might be applied the current investigation in the section that follow.

2.6.2 Paulo Freire's Education Theory

According to this theory, high rates of adherence to social and medical standards as well as changes in human behaviour occur where targeted persuasion and less formal information dissemination is prevalent (Feiere, 1970). He emphasizes how crucial it is for human persuading workshops and workshops on human empowerment with necessary information to be conducted in contexts, settings, medium of instruction and time-frames most favourable for experts, information disseminators and targeted groups.

In the understanding of Wallerstein (2019), Paulo Frier's theory of education is applied in guiding investigations as to how targeted persuasions and information dissemination within local contexts and mother tongues affect adherence to pre-natal and post-partum standards as well as change in behaviours and practices that contribute to maternal mortality in local communities. The importance of this theory for the study is that, it aids in examining the extent to which persuading workshops and specialized information dissemination is related to compliance with obstetric medical standards and maternal health promoting behaviour in a given geographical area which are all poorly studied.

2.6.3 Gender and Power Theory

According to this theory, the differences between men and women in terms of power create inequality for women and increase their risk and vulnerability to maternal mortality (Wingood and DiClemente, 2021). In contrast to psychosocial theories, which are fundamentally gender-blind, R.W. Connell's Theory of Gender and Power tackles broader social and environmental issues relating to women, such as gender-based power inequalities (King, 2019). The theory is a structural model that tries to explain how women are at danger as a result of various social arrangements in human civilizations. It contends that economic hardships, abusive relationships, and socialization of women to be submissive or ignorant frequently influence

how well-meaning women protect themselves. The theory can aid in directing interventions involving both men and women that take into account the nature of gender relations, societal notions of masculinity and femininity, and economic power (Connell, 2019). Applying the theory, it is presumable that gender-based disparities and differences in cultural and economic standards resulting from the social and economic structure of human societies produce different conditions that increase the risk for unintended pregnancy, frequent childbirth, home births, and the use of herbal concoctions (Brindis et al, 2021) The theory is very helpful for this study since it can clarify field outcomes of gendered interventional programmes involving normal and maternal women. Wingood and DiClemente (2021) assert that women with lower earnings are less likely to use maternal health care facilities and that women who are poor may be unable to procure appropriately nourishing diet, increasing their susceptibility to maternal mortality. Additionally, women who believe that asking a sex partner to use contraceptives during love-making implies that he is loved less are four times more likely to never request the use of contraceptives than women who do not believe that doing so implies a lack of interest and love. Understanding the outcome of women's health interventions can be difficult when using the theory of gender and power. Wingood and DiClemente (2021) emphasized that human social systems are indirect to conceptualize and quite challenging to operationalize, leaving out differences among cultures. In addition, it might be challenging to isolate and measure the impact of a certain social action on women's health when using the theory of gender and power. Additionally, because social interventions are so ingrained in alien culture it is frequently taken for granted, rendering it challenging to empirically evaluate the outcomes this paradigm (Brindis, 2021).

2.6.4 Conceptual Framework for the Study

Examining the outcome of interventionist programmes requires a conceptual framework that is comprehensive, comparative and policy oriented which shows the combination of

interventionist approaches and inter-connections between state and non-state institutions in the provision of maternal mortality interventions. A model shown in Figure 2 was developed in response to the approaches to maternal mortality prevention intervention not present in the maternal mortality prevention literature in order to set an effective linkage among these variables: maternal mortality drivers (*contributory factors*): interventionist approaches, types of interventionist programmes and services provided and possible outcomes of these interventionist programmes and services.

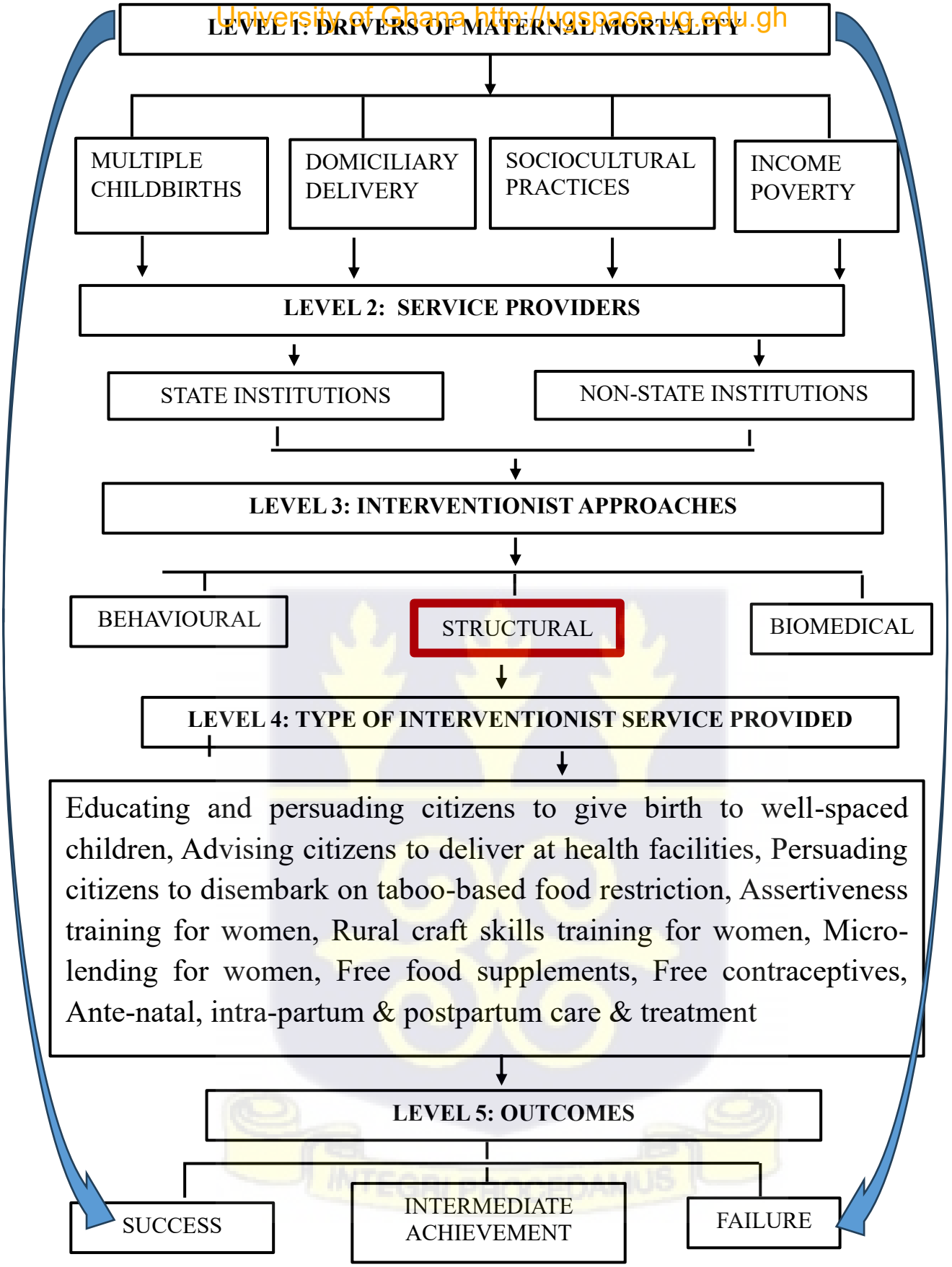

Figure 2.1: Conceptual Framework Showing the Linkage between Maternal Mortality Drivers, Interventionist Programmes Mounted and Outcomes.

The Framework is divided into five levels

Level 1 is representing the maternal mortality drivers, which are *contributory factors* to maternal mortality which have been accounted for in the scientific literature on maternal health. The review has brought attention to the risk expectant women run when they choose unskilled domiciliary delivery. Income deprivation and social inequality might also force particular women to take unbalanced diets and accept hazardous jobs in order to meet their own demands. In a similar vein, the study of the literature on evaluations undertaken on maternal mortality prevention has highlighted specific aboriginal practices such as early marriage, forced marriage, female genital mutilation, polygamous cultures, taboo-based food restrictions, conferment of powers on men to abuse women, inability of women to negotiate contraceptive use, inability of women to question their husbands over impatience with childbirth and womb purification rites as contributing to maternal mortality. Some African cultures encourage women to start having children early in their life, have multiple children in their life, have their clitoris removed at puberty, deliver their babies at home in secret, use herbal concoctions while pregnant, and undergo a number of rituals to purify their wombs, all of which are life-threatening.

Level two is made up of institutions identified as interventionists in maternal mortality. In fact, central and municipal governments have a crucial role in health promotion in their respective countries as recorded in the maternal health literature. The government has mandate from the population they are leading to champion causes that could ameliorate plights facing their respective citizens. The devastating impact of maternal mortality make it inevitable for central and municipal governments to intervene and address the issue of maternal mortality. Relevant institutions of government were district assemblies and central government agencies including the National Commission on Civic Education (NCCE), Commission on Human Rights and

Administrative Justice (CHRAJ), National Population Council (NPC) National Health Service etc.

In order to exploit every available means to tackle maternal mortality, the central and municipal governments require the assistance of their development partners, donor agencies, bilateral organisations, multilateral organisations, Non-Governmental Organisations (NGOs) and Faith Based Organisation (FBOs). These could result in the embracement of documented interventionist approaches to curb maternal mortality.

Level three therefore represents the main interventionist approaches available for adoption to effectively curb maternal mortality which include behavioural, structural, and biomedical interventionist approaches. While a combination of these interventionist approaches is necessary for effective and successful prevention of maternal mortality, stakeholders have primarily focused on behavioural and biomedical interventionist approaches, neglecting the structural interventionist approach to maternal mortality prevention. The lack of attention towards structural aspects of society and the economy are evident in the scientific literature on maternal mortality prevention. If one area of maternal mortality intervention is neglected, the others will likely suffer as well. For instance, social inequality can make pregnant women reluctant to seek out-patient treatment or not seek out-patience treatment at all, leading to a higher risk of maternal death. Income poverty can force women to give birth at home alone, putting them at risk for maternal mortality. Additionally, lack of social support may prevent women from seeking maternity hospital delivery or procuring contraceptives, leading to unprotected sex, unwanted pregnancy and unspaced births, which may put them at risk of maternal mortality. Furthermore, if women lack funds to attend antenatal check-ups, seek opportunistic infection treatment, or procure food supplements, their health and nutritional status may deteriorate, and they run the risk of dying during pregnancy and childbirth.

Therefore, the study advocates for the structural interventionist approach in combination with behavioural and biomedical interventionist approaches in order to achieve effective and successful intervention against maternal mortality.

Level 4 represents the types of maternal mortality interventionist roles played towards curbing maternal as recorded in the maternal mortality prevention literature. These include behavioural change interventions like educating and persuading citizens to give birth to well-spaced children, advising citizens to deliver at health facilities, persuading citizens to embark on antenatal and postnatal clinic attendance, persuading citizens to disembark on taboo-based food restriction, fertility rites, early marriage, gender-based violence, female genital mutilation: biomedical interventions entailing the provision of a wide range of schedulable services including family planning, antenatal care, tetanus immunization, deworming in pregnancy, iron supplementation, intermittent preventative treatment, anti-retroviral therapy(ART) for pregnant women with AIDS, insecticide treated nets (ITNs) for pregnant women, pre-eclampsia management, skilled delivery care and postpartum services and structural interventions such as micro-lending for women and young girls, free food supplement distribution for women, free contraceptive distribution for women, assertiveness training for women and young girls, alternative livelihood skills training for women and young girls to grant them freedom and protection from spousal abuse and male dominion which the research found as a lacuna and thus calling for its presence in the interventionist outreaches of state and non-state institutions in the study communities

Level 5 indicates possible outcomes of these interventionist services and programmes provided by state and non-state institutions as recorded in the maternal mortality prevention literature. Interventionist programmes might lead to success, partial failure or total failure in maternal mortality eradication depending on how well state and non-state organisations combine interventionist approaches

For instance, South Africa was identified as one of the clear failures in maternal mortality eradication due to the lack of committed national leadership, official denials of maternal mortality rumors, and failure to provide obstetric medications and delivery commodities that resulted in over 7000 women dying during childbirth, whiles countries like Uganda, Brazil, and Thailand have been praised for being successful in maternal mortality eradication worldwide (WHO 2021).Although the maternal mortality rate is still declining in Ghana, the country has not yet been hailed as a clear success in the eradication of maternal mortality.

Thus, the conceptual framework suggested in Figure 2.1 aided in illuminating the various linkages among the framework's variables towards a successful and sustainable eradication of maternal mortality. However, the relationship between the different levels of the framework is not uni-directional. Depending on the outcome of each interventionist programme, a cyclical reaction whereby the entire process could be repeated, re-starting from the drivers could be triggered. For example, if the outcome is a failure in eradicating maternal mortality, it might require re-examining the drivers, the kind of interventionist programmes mounted and its outcome

2.8 Summary of Chapter

Maternal mortality rates were examined internationally, in Africa and in Ghana. The review revealed that more than 22 million women have died from obstetric causes, 40 million people are still living with disabilities related to childbirth, and 3 million women worldwide have come dangerously close to dying from maternal mortality. Insights gleaned from the survey of the maternal mortality prevention literature showed that a great number of community-based council of elders and chiefs, community based faith based organizations, community based churches, and community based non-governmental organizations worldwide have been working to provide interventions for maternal mortality prevention such as community education about birth control methods, public promotion of safer delivery services, public

sensitization to cultural practices that go against women, financial and social support services such as actions towards gender inequality elimination, unemployment elimination, hunger relief, poverty relief, free contraceptives, blood transfusion for pregnant women, pre-eclampsia diagnosis and treatment for pregnant women, antiretroviral therapy for pregnant women with HIV, antibiotic therapy for pregnant women with sepsis.

Based on the analysis of literature related to maternal mortality prevention, it has been found that maternal mortality rates in Ghana and Africa are impacted by aboriginal practices, income inequality and deprivation. The research further highlights that income deprivation, domiciliary deliveries, and socio-cultural rituals can also contribute to maternal death. Additionally, the disproportionately young population of Ghana can also cause high rates of maternal mortality as young women may die due to reproductive health issues. The review also highlights that international organizations like the World Bank and the IMF provide most of the financial resources for maternal mortality prevention programs. However, the conditions put forth by such organizations may affect Ghana's ability to offer effective programs for maternal mortality prevention.

The research shows that maternal mortality impacts core voters, constituency officials, and members of the national labor force in South Africa. Government intervention in maternal mortality prevention is attributed to political and official corruption gains at times. Therefore, strong and devoted political leaders' willingness to intervene is vital for maternal mortality measures to succeed. However, due to a lack of strong national leadership, financial scandals involving government and corporate executives, and official denial of maternal mortality allegations, many maternal mortality prevention efforts in Africa have failed.

The review concludes that maternal mortality prevention projects must address the causes of maternal mortality from various angles and service delivery modes, including behavioral,

biomedical, structural, and political commitment. The study highlights several community-related and behavioral issues related to maternal mortality, such as a lack of awareness of maternal mortality in the sub-region, unemployment, and social inequality. Despite several initiatives to raise public awareness of maternal mortality, attitudes towards women are still not accepting. The review also highlights the importance of encouraging hospital births, as nations that encourage hospital birth tend to have lower maternal death rates. The study's conceptual framework was created to address the gaps found in the literature review, such as non-encouragement of hospital births, intervention in detrimental aboriginal practices, social inequality, low women's status, and poverty. The review also highlights that there is a need for additional research to examine the outcomes of interventionist programmes to eradicate maternal mortality in Ghana. Finally, the review concludes that combinations of interventionist approaches are the most effective methods for eradicating maternal mortality

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The previous chapter reviewed related literature on (maternal) mortality and the role of state and non-state institutions in its prevention. This chapter describes the context of the study areas: the Adaklu District and the Ho Municipality. The variables analyzed included: location, demographic and household characteristics, health care services and economic activities. The chapter also focuses on the research design and the methods and procedures used to collect data. It discusses the theoretical and practical underpinnings of the research design, data sources, data type, method of data collection, units of data analysis, sampling techniques, data analysis and presentation.

3.2 Profile of the Study Areas

Two study areas were chosen for the study: *Sofa* and *Waya* in the *Adaklu* District and as well as *Shia* and *Nyive* in the *Ho* Municipality. Sofa and Waya were specifically selected based on the fact that, at 8.0% and 5.8%, respectively, these communities in the Adaklu District of the Volta Region had the highest incidence rates of maternal deaths. Additionally, Nyive and Shia were chosen because of their low rates of maternal mortality—2.0% and 1.2%, respectively—in the Ho Municipality of the Volta Region. Within the Volta Region, Hohoe observed a maternal mortality rate of 3%, Nkwanta 3.2%, and Keta 4% (WHO, 2019).

Figure 3.1 Shows the study areas in the national context.

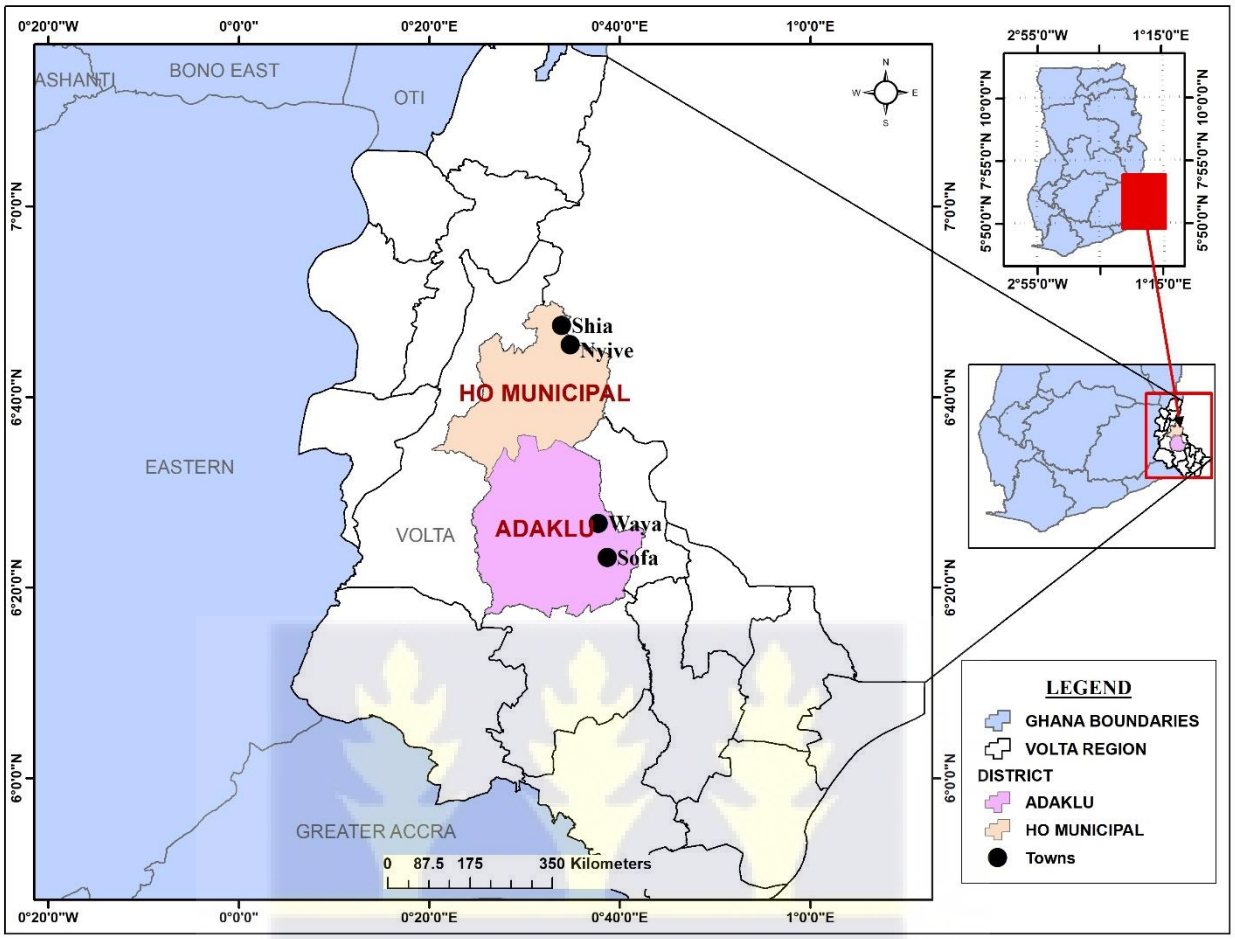

Figure 3.1: Map of Volta Region showing Study Areas

Source: Geographic Information System and Cartography Department. Department of Geography and Resource Development, University of Ghana, 2023

The communities of Sofa and Waya were carefully chosen for a study based on their high rates of maternal mortality - 8.0% and 5.8% respectively - in the Adaklu District (WHO, 2019). These communities were also selected because the MOTHER CARE programme, a joint initiative by the Government of Ghana and Family Health International, was first introduced in the Salvation Army Health Centre in Sofa. This programme provides comprehensive maternal mortality prevention-oriented care to clients throughout pregnancy, labour, and puerperium in the Adaklu District of the Volta Region of Ghana, including physiotherapy care.

Purposive sampling was also used to select Nyive and Shia because they had low maternal mortality rates of 2.0% and 1.2% in the Ho Municipality. In addition, the Ho Municipal Health Directorate was one of the first to start maternal mortality prevention programmes on tetanus vaccination and deworming services in the southern part of Ghana. The opt-in-method was first introduced in Nyive Health Centre to make sure that all pregnant women attending antenatal care (ANC) were routinely offered malaria prevention services. These four study communities were also chosen in order to compare and analyze the spatial differences in maternal mortality prevention interventions of state and non-state actors.

3.2.1 The Geography of Ho Municipality

The Ho Municipal, one of the 5 Municipalities in the Volta Region, was established by a Legislative Instrument (L.I) 2074 of 2012. Originally, Agotime – Ziope and Ho West were all part of the then Ho District until 2012 when these Districts were carved from it (GSS 2020a). The Municipality has Ho as its capital which also serves as the capital and economic hub of the Volta Region. The Municipality was the home of missionaries who founded the Evangelical Presbyterian (E.P) Church in the then Gold Coast.

The Municipality is located between latitudes 60 20”N and 60 55”N and longitudes 0º 12’E and 0º 53’E. The Municipality shares boundaries with Adaklu and Agotime-Ziope Districts to the South, Ho West District to the North and West and the Republic of Togo to the East. Its total land area is 2,361 square kilometers thus representing 11.5 percent of the region’s total land area (Dickson and Benneh, 1988).

The general relief of the Municipality is made up of both mountainous and lowland areas. The mountainous areas are mostly to the north and northeast which are part of the Akuapim - Togo Range and have heights between 183–853 meters tall. The notable areas are Awudome stretch in the southwest and Matse and Klefe in the northeast. The lowland areas are to the South of

the Municipality and are between 60 – 152 meters in height. The general drainage pattern is southwards and dominated by rivers like Tsawe (Alabo) and Kalapa, which flow into the lower Volta or Avu Lagoon. These rivers are seasonal and therefore do not provide all year round dependable source of water supply to the communities for home use and irrigation for farming. (Dickson and Benneh, 1988).

Generally, the mean monthly temperature in the Municipality ranges between 220 C and 320 C while annual mean temperature ranges from 16.50 C 37.8 C. In effect, temperatures are generally high throughout the year which is good for crop farming. The rainfall pattern is characterized by two rainy seasons referred to as the major and the minor seasons. The major season begins from March to June while the minor season is from July to November. Mean annual rainfall figures are between 20.1mm and 192mm. The highest rainfall occurs in June and has mean value of 192mm while the lowest rainfall is in November averaging about 20.1mm (Dickson and Benneh, 1988).

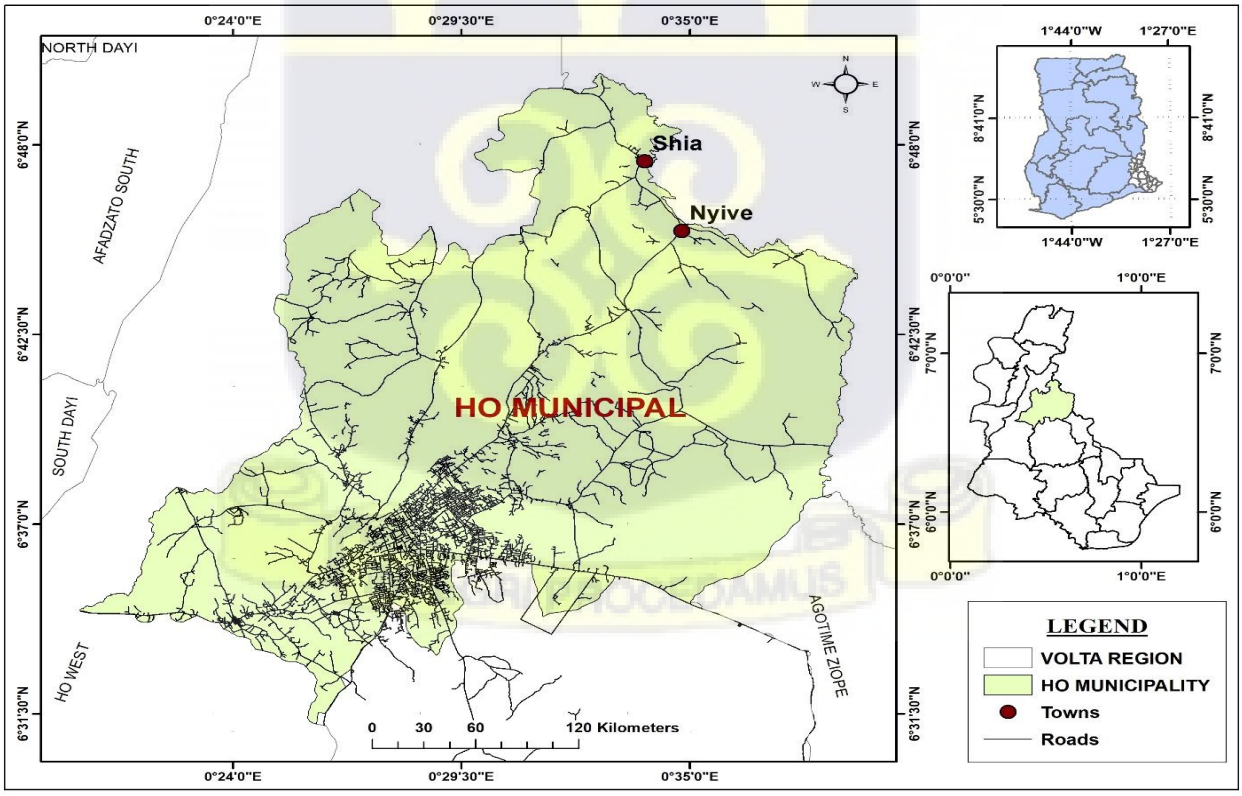

Figure 2.2: Map of Ho Municipal showing Study Areas

Ho Municipality has two main types of vegetation zones. The moist semi-deciduous forest covers mostly the hills in the Municipality whiles the savannah woodland covers the rest of the Municipality. The Municipality has 33.83 square kilometers of forest reserve at two main locations namely, Ho Hills and Kabakaba Hills. There are several soil groups in the Ho Municipality. These could be put into two major groups: these are forest soils and savanna soil. Examples of forest soil are forest ochrosols, lethosols and intergrades found in the mountainous and wetter northern areas of the Municipality. The savanna soil type which is sandy is found in Sokode and part of Ho Township (GSS 2020b).

The governance structure of the Municipality is made up of 43 Assembly Members. These include 29 elected members and 14 government appointees. There is also a Member of Parliament and the Municipal Chief Executive. The Municipality is headed by the Municipal Chief Executive who is the highest political authority. The General Assembly which is the deliberative organ of the Assembly is chaired by a Presiding Member. Administratively, the Municipality has five Zonal Councils which operate below the Assembly structure. These are Ho Zonal Council – Ho; Sokode Zonal Council – Sokode; Dutasor Zonal Council –Matse; Hokpeta Zonal Council – Kpenoe and; Norvisi Zonal Council – Nyive 1.4 Social and Cultural Structure (GSS 2020)

Traditionally, chiefs are the main custodians of stool lands, beliefs and customs in the Municipality. They are also the symbol of authority in the Municipality. The Municipality is made up of two major traditional councils. These are the Asogli Traditional Council and Hokpeta Traditional Council. Both are headed by paramount chiefs, and they supported by divisional and sub chiefs who play various roles in the traditional society (GSS 2020).

According to the 2010 Population and Housing Census, the most predominant religion in the Municipality is Christianity which constitutes 91.9 percent of the population followed by Islam

(3.2%). Traditional religion forms 2.2 per cent, and other religions constitute less than one per cent of the population. 1.4.3 Festivals Like many of the districts in the region, the Municipality celebrates a variety of festivals. Prominent among them is the Asogli Yam Festival (Ete Za), which is celebrated annually by the people of Asogli State to thank the Almighty God and the gods for a bumper harvest of yam. The Sasa festival is a celebration that is observed by the Chiefs and people of Akrofu. It commemorates their migration from Notsie, which is a town located in Togo, to their current settlement. Additionally, the people of Klefe and four other related communities (Klikor, Kpeve, Tsorxor, and Tsibu) celebrate the Zendo Glimetsoza festival annually (Ho Municipal Assembly, 2021).

Although an urban area, agriculture is the mainstay of the Ho Municipality's economy. It employs about 70 percent of the economically active labour force. Nearly every household in the Municipality is engaged in farming or an agricultural related activity. Farming in the Municipality is largely carried out on small-scale or subsistence basis. The average acreage cultivated ranges between 4-6 acres for all crops. Despite its importance in the Municipality's economy, much of the agricultural potentials in the Municipality remain unutilized. For instance, out of a total of 62,261 hectares of arable land, only 23,167.6 hectares are currently being utilized. The Municipality's irrigation potential also remains untouched. The Municipality's economy is also characterized by large number of small-scale commercial and industrial activities. These small-scale enterprises and industrial concerns are concentrated in the city center, making it the business hub of the Municipality. People are in various forms of employment both in the public and private sectors. The public service employs 9 percent of the workforce while the private sector (dominated by the informal sector) employs the remaining 91 percent (Dickson and Benneh, 1988).

The industrial sector in the Municipality is less developed. There are currently no large industrial holdings in the Municipality. The commercial sector is dominated by retail activities.

There are limited wholesale activities in agricultural and industry. On the other hand, the service sector is dominated by small-scale operators in activities such as telecommunication services, hair dressing and barbering, electronic repairs, vehicle repairs and footwear repairs (Ho Municipal Assembly, 2023). The Municipality has a number of small-scale industries. These include cassava flour processing, mushroom growing, bee keeping, gari production, soap making, batik tie and dye making, carpentry and metal work. A few tourist sites are located in the Municipality. These tourist attractions include the Ancient German Cemetery, Ancient European Church Bell and Old German Buildings all located at Ho Kpodzi. The Municipality also has a number of guest houses and hotels to host tourists and visitors to the Municipality (Ho Municipal Assembly, 2021).

3.2.2 Profile of the Study Communities

3.2.2.1 Shia

Shia is located in the western section of the district where a combination of rugged and gentle relief constitutes the landscape. Stony and rocky surfaces of hillocks intertwine with the sandy and clayey soil of the valleys (Cassillo, 2021). The main settlements are found on gentle–rolling relief with comparatively good soils while bush farms are located between hillocks or in the southern plains. Shia is 825 feet above sea level, while the hills to the north are as high as 1207 feet on the Togo- Atakora range (Dickson and Benneh, 1988). The relief falls as you move southwards towards the town of Deme and eastwards towards Ho to lows of 450 feet. Howell (2019) narrates the story of Shia as having been founded by the migration of a chief's son from Notsie (Togo) who failed in his contest to become chief and feared for his life. He wandered into a blacksmith's (Nosi) home at a place called Sia. While Nosi's sons were hammering iron, and as the stranger could not respond to them in their language, he imitated the sound of the metal: "Shia, Shia, Shia" to illustrate what attracted him to the place (Howell

2019). So they began calling him Shia while a series of relationship developed between the migrants and the original dweller.

Agriculturally, Shia is known for its extensive cultivation of maize. The biotire gneiss upon which the soils are developed, are relatively fertile for short durations of cultivation. In recent years cassava features high as the most preferred crop on both intensive compound farm cultivation and extensive bush farm cultivation (Environmental Protection Agency, 2018). Extensification has been the norm in Shia because of its low population density. Shia Township has a population of 2,890 inhabitants (GSS 2020a) and an estimated population of 20,000 (Cassiman 2022) including the surrounding villages that have virtually merged with it to form sections of the community. The settlement pattern is more or less linear, aligned along the Nyive–Kpedze road. Shia has an unusual characteristic of being described both as a town and a village. This confusion is as a result of official definitions of the Ghanaian state, which recognizes settlements above 5000 inhabitants as towns, and also its growing formal sector with increasing numbers of government and church institutions, in addition to physical infrastructure unknown in Ghanaian rural areas.

Its village characteristics stem from the fact that its economy is predominantly agricultural. The cultural setting is indigenously typical of central *Ewedome* type, and has a low percentage of people in the formal sector who in any case still cling to traditional values and way of life. Weather vagaries and soil impoverishment constitute the main problems of crop cultivation thereby necessitating shifting emphasis to non–farm activities most of which still depend on nature for raw materials. Extensification of agriculture further into the bushes involving maize and cassava cultivation and livestock (goat) rearing constitute the foundation of life and a reaction to the macro–economic situation of Ghana. Inability to meet the high cost of intensification and extensification in terms of labour and financial obligations, in addition to low employment avenues in the non–farm sector is leading to higher out–migration rates.

Generally, poverty is widespread amidst plenty of land for crop cultivation and animal husbandry leading early onset of childbirth in the community; Shia has a second grade motorable road that guarantees easy developed network of footpaths caters for the needs of the inhabitants either on foot or on bicycles. A clinic offers first aid, antenatal, delivery and postnatal care while major cases are referred to Ho municipal and Teaching hospitals. Other facilities available include the town hall, chief's courtyard, post office and community administrative center, which is not in use because the state has not appointed personnel. The first school opened in Shia in July 1940 with 40 children using free labour by the colonial administration (Howell 2019). Currently, the Shia circuit has 3 pre–school institutions, 10 primary schools, 4 junior secondary schools and 1 senior secondary school, totaling 18 educational institutions (Ho Municipal District Assembly 2021).

The Shia circuit is defined by the district administration as encompassing other settlements along the Nyive–Kpedze road, such as Hoe and Klave, and that explains the high number of educational institutions.

Institutions and organizations of significance in shaping social, reproductive and economic life in Shia include, the chieftaincy and the councils of elders, landowners, the churches, the state and Non–Governmental Organisations (NGOs), the extended family and the household. Shia has one of the powerful chiefs in the district, whose role in governing, arbitration, and administration is uncontested. The chief retains his traditional rights in addition to assuming the role of the state by working with the district administration, the health service, the police service, government ministries and NGOs. This has been necessitated by the absence of state administrative structures and the fact that the chief is one of the educated men in the district who has played crucial roles at the national level (Cassillo, 2021).

3.2.2.2 Nyive

Nyive is located in the north–central part of the Ho municipality. It is about 4 kilometers from the municipal capital, Ho. It is a small village with an estimated population of between 1000 and 2000 inhabitants, divided into sections that extend in three directions, one towards Shia, the second towards *Tokokoe* and the third towards the republic of Togo (Howell, 2019). Each extension has a mix of relationships with the adjoining village or town. Its political orientation is more towards *Tokokoe* where the chief has paramountcy over the surrounding villages. A Chief or *Dufia* aided by a council of elders govern Nyive. The Chief in consultation with the elders settle disputes, arrange sacrifices, oversee activities of development organisations and are the first consultants in the village. Natural capital, such as land and trees is controlled by the land chief or '***Anyigbator'*** who has all the powers in distributing land, leasing land and regulating the use of forest and water resources (Howell, 2019). The land chief is a powerful force in Nyive as land hunger is a glaring problem in this densely populated area. An assemblyman represents Nyive in the district administration where decisions and lobbying for facilities in the villages are negotiated at Ho.

The soils are among the best in the district. They are generally loamy soils with good water retention capacities. However, decreasing organic manure usage and increasing anthropogenic stress combine to impoverish the soils (Ann, 2019). The good conditions of crops on compound farms is a manifestation of the good original properties of the biophysical condition of soils which when aided by organic manure in the form of cow dung and other household refuse, assures high crop outputs. Nyive is one of the villages affected by or that benefited from the 1970s Integrated Rural Development schemes (Ho Municipal Assembly, 2019). The *Yevutoe* irrigation dam consumed part of the village's cultivable land. Hypothetically the dam should have modernized crop cultivation by ensuring all year round cultivation, introducing new crops such as onion and Asian long grain rice, generating employment for laborers or what is called

'by–day workers', and improving infrastructure such as roads. Practically, few people in Nyive cultivate irrigable lands in the *Yevutoe* project. Economic liberalization has eliminated subsidies on use of chemical fertilizers and other inputs and imposed other forms of hardship on farmers that reduce their ability to cultivate these irrigable lands. Secondly, the project is supposed to generate profit rather than support difficult–to–convince villagers. Thirdly, the educated and the influential based in Ho have hijacked best lands in the project since they have the business knowledge to ensure profits without cost being incurred by the state. Benefiting from the project by villages has revolved around a range of illegal channels one of which is erecting dry season gardens on the receding floodplains of the Yevutoe Dam and River, with devastating consequences in the form of siltation of the dam (Environmental Protection Agency, 2018).

Modern facilities in Nyive include a health center with a maternity unit, motorable grade–three road constructed by a World Bank Food For Work Project, a primary school and a Junior High School established by the Catholic Church, and a few boreholes constructed by NGOs. The nearest senior secondary school is Tanyigbe Senior High School, located 2 kilometers towards Ho. Its poor performance in the West African Senior Secondary School Examinations has made many enlightened parents prefer to send their children to far off schools while the poor are assured their female children will come back home after three years to give birth or in most instances will be embarrassed to do so and hence migrate to larger cities (Ho Municipal Assembly, 2019).

3.2.3 Geography of Adaklu District

Adaklu District is one of the 46 newly created Districts in Ghana in 2012 and one of the Seven (7) newly created Districts in the Volta Region. It was carved out of the former Adaklu-Anyigbe District now Agotime-Ziope District and was established by Legislative Instrument (LI 2085)

of 2012. Its administrative capital is at Adaklu-Waya which is geographically positioned in the center of the district. It was inaugurated on 28th June, 2012 as part of efforts to deepen the decentralization process and to bring development to the doorstep of the people of Adaklu and its environs (Adaklu District Assembly, 2018). The district is located on Longitudes 06°41′1″N and 6.68361°N and Latitudes 00°20′1″E and 0.33361°E. It shares boundaries to the east with Ho-West, North-Tongu District to the south, Agotime-Ziope District to the north and to the east with Akatsi-North District. The District covers a total land area of 800.8sqkm (Adaklu District Assembly, 2018).

The District is characterized by hills, mountains, lowland and generally rather undulating landscape. The very high areas are around the Adaklu scarp which rises to heights of 305 metres above sea level. A prominent feature in the District is the Adaklu Mountain located between Adaklu-Aboadi, Adaklu-Helekpe and Adaklu-Tsrefe. Rivers like Awator, Tordze, Todzoto, Dawa, Kalakpa and other streamlets like Kpoduekpodue, and Anfoe dominate the general drainage system of the District. Other rivers include Kplikpa, Fortsihlui. The rivers do not provide all year-round water supply to the communities they serve even though they present potential sources of surface water which can be treated and distributed for household consumption and other uses (Dickson and Benneh, 1988). During the dry season, the water levels reduce and some dry up completely.

Adaklu District is underlain with two major geological formations namely the forest soil (forest ochrosols, lethosols and intergrades found in the Adaklu Mountains area), savannah soil (heavy clay soil). The savannah soils are suitable for the cultivation of crops like maize, yam, cassava, groundnuts, cowpea, sorghum and a variety of vegetables. Some areas are also good for oil palm cultivation (Howel, 2019).

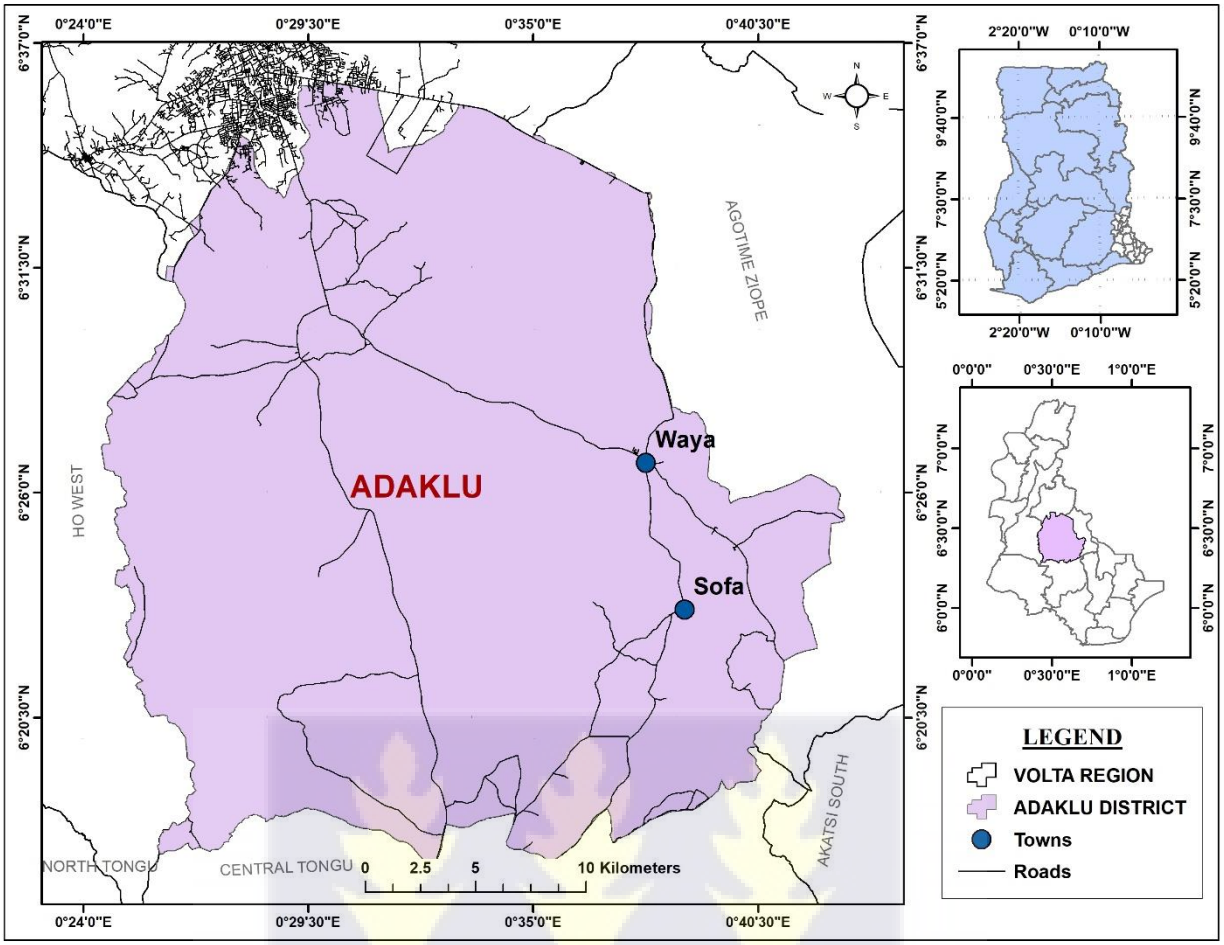

Figure 3.3: Map of Adaklu District

Source: Geographic Information System and Cartography Department. Department of Geography and Resource Development, University of Ghana, 2019

The District has a very good temperature that supports plant growth. Food crops such as maize, sweet potato, tomatoes, yam, cassava and groundnut do well under this climatic condition. Generally the mean monthly temperature ranges between 22°C and 32°C. However, average temperature during the dry season rises so high that except for irrigation in river valleys, food crop cultivation is hampered (Dickson and Benneh, 2018). The rainfall pattern in the District is characterized by two rainy seasons commonly referred to as the major and minor seasons. The major season starts from mid-March to July while the minor from August to November. The dry season is characterized by the dry north-east trade winds, extends from December to

February in the District. This period is dominated by rampant bushfires posing threat to both life and property. The mean annual rainfall of the District ranges between 20.1mm and 192mm. The highest rainfall occurs in June and has mean value of 192mm while the lowest rainfall is in December recording 20.1mm. The major vegetation cover in the District is savannah woodland. However, few areas, mostly Adaklu-Aboadi and the river banks of Kalakpa and Awator have semi-deciduous forest. There are also strands of borassius species (Agorti) used for construction works. The borassius palm serves as economic tree for most people (Adaklu District Assembly, 2018).

The political head of the District Assembly is the District Chief Executive. The District Coordinating Director is the Head of the District Administration. The General Assembly consists of Nineteen (19) Assembly members made up of Thirteen (13) elected members and Five (5) Government appointees and One Member of Parliament representing the Adaklu Constituency. The District has One (1) Sub-district structure located at Adaklu-Tsrefe.

Adaklu has three traditional divisions namely Aboadi, Goefe and Helekpe. The Aboadi division is the paramountcy which serves as the traditional head and Goefe is the division where the linguist for the paramountcy is selected while Helekpe division serves as the warlord or in modern terms the Military / Security division of the Paramountcy. The District has one Paramount Chief currently at Abuadi and other sub-chiefs who assist in the promotion of peace and stability in the District. The people of Adaklu celebrate the Glidzi festival every January to remember the death of their ancestors during their escape from Nortsie, their ancestral home (Adaklu District Assembly, 2018).

The most dominant economic activity in the District is agriculture which employs about 78 percent of the labour force. The District is well known in the Region for the production of cereals and legumes such as maize, cowpea, groundnut, rice and tubers including cassava,

sweet potatoes and vegetables (i.e. tomatoes, garden eggs, pepper, okro, etc). Livestock rearing plays an important role in the lives of the people as the District is endowed with large livestock populations of cattle, sheep, goats, poultry and others. There exists abundant land for large scale crop farming and livestock rearing. About 30 percent of agricultural land available in the District is used by livestock farmers as pasture for animals. If properly harnessed and developed, job opportunities would be created for the youth in the district.

This sector is least developed and characterized by petty trading mostly of household consumables. Items traded include foodstuffs, clothing, charcoal and fuel wood. All other items need to be imported but the poor nature of the roads makes this quite difficult (Adaklu District Assembly, 2018).

This sector has the potential to contribute to the development of the District. Some of the popular tourist attractions in this area include the Adaklu Mountain, which offers breathtaking scenery and caves that are home to various species of tropical animals such as bats, different types of monkeys, and more. There have been feasibility studies conducted with the aim of developing the mountain for paragliding, which could make the District a major tourism destination in the Region. Additionally, the Kalakpa Forest, which the District has a share in, is a well-known game reserve that could significantly improve the fortunes of the District if it is well-developed. There is also a Cemetery for German Allied Missionaries located at Adaklu-Waya difficult (Adaklu District Assembly, 2018).

.Education is one of the most important sectors of the District. The District has both public and private educational institutions. Though the District cannot boast of any tertiary institutions, its strategic location has provided the proximity to such facilities located at Ho, Amedzofe and Akatsi. The sector is divided into five circuits namely: Ablonu, Abuadi, Ahunda, Kalakpa and Waya circuits. Inadequate teaching staff is an issue of concern in the District. With the

increasing enrolment due to the School Feeding Programme, Distribution of Free Exercise and Textbooks as well as Free School Uniforms at the basic level, the number of teachers particularly the trained must be motivated to stay in the District. There is the need for the District Assembly to ameliorate the situation by attracting trained teachers into the District to enhance quality education.

Health is one of the major sectors of the District economy. Health service provision is mainly by the Government through Ghana Health Service and supported by the Christian Health Association of Ghana. The District lacks a Hospital as such health services are delivered at facilities located at Adaklu-Helekpe H/C, Adaklu-Waya H/C, Sofa Clinic (CHAG), Ahunda H/C, Torda CHPS zone, Ahunda CHPS zone and Kordiabe CHPS zone. There are also uncompleted CHPS compounds at Kpeleho and Kordiabe. The District epidemiological profile shows a concurrent significant prevalence of diseases including Malaria, Upper Respiratory Tract Infections, Intestinal Worms, Diarrhea and Rheumatism/Joint Pains difficult (Adaklu District Assembly, 2018).

Transportation the Transport sector in the District is poorly developed. The common means of transport in the district is using motor cycles. Although the communities within the District are well linked and connected with feeder roads most of these roads are un-engineered. The total road network in the District is about 123.1km. This is categorized into Highways, consisting of the Ho-Adidome Highway, and Feeder Roads including engineered, partially engineered and un-engineered roads. Vehicular movement within the District is largely witnessed during market days of key communities such as Adaklu-Waya. However, communities along the Ho-Adidome Highway do receive the services of commercial vehicles that ply the road on their way to major towns along the highway. The District capital lacks access to potable water delivery. Potable water coverage in the District is very low. Adaklu-Anfoe and Ahunda are the only communities with mechanized water systems which are even inadequate to meet the

current population demand. There are also few communities with boreholes. Sanitation coverage in the district is also low. This situation is likely to be improved following acquisition of sanitation equipment by the Assembly. The district through collaboration with landlords in the district has acquired a final Disposal site for waste management in the district difficult (Adaklu District Assembly, 2018).

.Even though one can access a number of mobile telecommunication networks namely Vodafone, MTN. TigoAirtel, the quality of these network services are poor due partly from interference by Togo cell (from the neighboring Country-Republic of Togo) and weak signals from the available networks. This situation needs to be corrected by the various network operators as they attempt to improve the quality of their services nationwide (GSS 2020).

3.2.4 Profile of Study Communities

3.2.4.1 Waya

Waya is located almost in the middle of the Adaklu district. It is about 20 kilometers from the Volta Regional Capital. Waya is located on the floodplains of the Tordze River where the land is relatively flat, loamy and clayey in most places. It is a semi–resettled village as about 31 compounds were physically moved from the floodplains to the mid–uplands. This was to enable the construction of the network of irrigation canals deemed necessary for the off–take of the Adaklu green revolution. The production of grain, especially maize featured high on the minds of politicians, in order to meet urban food needs. Waya can be seen as the capital of the green revolution in the Adaklu district as over 50% of its lands are cultivable all year round using modern irrigation flood farming techniques difficult (Adaklu District Assembly, 2018).

However, the blessing of being the capital of the green revolution has not come without its negative fall–outs. In the first place, the resettlement process was cruel as senior army officers from the Adaklu district who saw the demands of villagers as constraining to their bid to

construct as hard–won massive project, used force and threats to move people from floodplains without adequate or no compensation. *'The project is to benefit you, so why should we pay you to construct cheap mud houses. Also, there is abundant land towards Trefe, so there should be no questions of land availability for resettlement. Many places in Ghana have contested for such a project but never got any, so we should be happy it is taking place here'* (an old man outlining reasons given by a senior military officer to quell their demands).

Agricultural intensification was thought to reduce the land hunger, introduce new crops and increase crop output. But this never materialized as many of the farmers dropped out and stopped cultivating irrigation lands for lack of inputs and labour to undertake the demanding task of the green revolution. Secondly livestock farming has not gone through modernization, thereby leading to an acute shortage of grazing land. Livestock numbers have also dwindled in most households because farmers kill livestock that intrude into their fields. Only households with many grown children capable of shepherding large heads outside village lands are still in the livestock sub–livelihood system (GSS 2020).

Crop cultivation is the most important component of the farm livelihood system in Waya. Rice farming on irrigated land, vegetable cultivation on irrigated gardens and compound and bush fallow systems, constitute the farming systems in the village. For many, household gardens constitute major sources of income as tomato and chilies have become important commercial crops in Ghana. Other income activities carried out by the villagers include trading, fishing and formal employment difficult (Adaklu District Assembly, 2018).

Waya has a clinic with a maternity unit, grade three motorable feeder road that runs parallel to the major canal off the Ho–Torda major road. This enables the carting of agricultural produce from the farms and gardens to the market centers in the urban areas. It has a Primary and a Junior High School that enrolls a huge number of students. The primary school in Waya has

the largest number of teachers in the Adaklu District, a neighboring village called *Gbagbadeve* and *Kogafe* have merged with it. A second reason for the large number of students in the primary school is the fact that, it is a school feeding center, which attracts children from impoverished households. Waya has a higher advantage over the rest of the communities in the District in terms of *land* capital for accumulating further wealth. But the limitation of credit, official malpractices and malfunctioning markets continue to swell the numbers of the poor in this community resulting in early sexual relationships and childbirth by female dwellers difficult (Adaklu District Assembly, 2018).

3.2.4.2 Sofa

Sofa is located in the south eastern part of the Adaklu District. It is about 8 kilometers from the Waya. It is a community with an estimated population of between 1500 and 2500 inhabitants. A Chief *aided* by a council of elders govern Sofa. The Chief in consultation with the elders settle disputes, arrange sacrifices, oversee activities of development organisations and are the first consultants in the community. Natural capital, such as land and trees are controlled by the land chief *who* has all the powers in distributing land, leasing land and regulating the use of forest and water resources. The land chief is a powerful force in Sofa as land hunger is a glaring problem in Sofa. An assemblyman represents Sofa in the district administration where decisions and lobbying for facilities in the villages are negotiated (Adaklu District Assembly, 2018).

The soils are among the best in the district. They are generally loamy soils with good water retention capacities. However, decreasing organic manure usage and increasing anthropogenic stress combine to impoverish the soils. The good conditions of crops on compound farms is a manifestation of the good original properties of the biophysical condition of soils which when aided by organic manure in the form of cow dung and other household refuse, assures high

crop outputs. Sofa is one of the villages affected by or that benefited from the baby boom of the 1970s

Modern facilities in Sofa include a clinic with a maternity unit, motorable grade–two road constructed by a World Bank Food For Work Project, a primary school and a Junior High School established by the Salvation Army Church, and a few boreholes constructed by NGOs. The nearest senior secondary school is Adaklu Senior High School, located 7 kilometers towards Ho. Its poor performance in the West African Senior Secondary School Examinations has made many enlightened parents prefer to send their children to far off schools while the poor are assured their female children will come back home after three years to give birth and in most instances will be embarrassed to do so and hence migrate to larger cities (Adaklu District Assembly, 2018).

3.3 The Study Design

Interventionist programme outcome examination in local communities is complex and nuanced in nature. Different data types from state and non-state institutions engaged in maternal mortality eradication in the study communities is required. This presented a challenge of identifying a single research approach that can address the complex issues entailed in interventionist programme analysis in the study communities. It became necessary to use the sequential explanatory mixed methods of data collection (i. e. qualitative and quantitative) in this regard, since in the understanding of Patton (2020) both are recognized and valued as legitimate for interventionist programme examination to meet the diverse needs of such examinations

Pope and Mays (2019) noted that researchers agree on the complexities around poverty reduction programmes, women's empowerment programmes, public education about antenatal clinic, birth spacing, hospital delivery, postnatal clinic and tetanus immunization, public

education on harmful socio-cultural practices, food item distribution, malaria education and healthcare services and the need for a wide range of methods to understand and examine these complexities. This has attracted cross boundary interest as to how to address these complexities

(Pope and May 2020). In a like manner, some scholars have contended that the complexities of most public health problems including maternal mortality on one hand and socio-demographic interventions such as maternal health education, malaria education, public sensitization to harmful socio-cultural practices, poverty reduction programmes, women's empowerment programmes and maternal health care services require a broad spectrum of quantitative and qualitative methods (Sale et al., 2021). A single study, in which the researcher gathers and analyses data, integrates the findings, and draws inferences using both quantitative and qualitative approaches is a sequential explanatory mixed method study (Tashakkori and Cresswell, 2017).

Mixed research methods (sequential explanatory variant) should involve a combination of qualitative and quantitative methods, approaches and concepts that have complementary strengths and non-over-lapping weaknesses (Johnson Onwuegbuzie 2016). Whereas qualitative researchers use phenomenological procedures and their views of reality is to discover meaning, quantitative researchers utilize statistical techniques and subjective inferences to make decisions about what their data mean in the context of an a priori conceptual frame (Dzurec and Abraham, 2023).

In the social sciences at large, mixed methods has become increasingly popular and may be considered a legitimate stand-alone research design (Cresswell, 2023)

Quantitative data can assist the qualitative component by identifying representative sample members. Conversely, qualitative data can assist the quantitative component of a study by helping with conceptual and instrumental development at the design stage (Johnson et al 2017)

There are disagreements over the application of both qualitative and quantitative approaches among researchers with some arguing that it is preferable to begin with qualitative methods in order to inform the quantitative methods.

Brookes (2017) explained that qualitative and quantitative methods address different sorts of research questions, gather different types of data and produce different answers. Therefore, instead of spending too much time debating the merits of applying both qualitative and quantitative methods in a single or multiphase study using a mixed method approach, regardless of the order, researchers should recognize the benefits of doing so to take advantage of each method's advantages and balance out its disadvantages. Finally, the study design, which is essentially a mixed approach that combines qualitative and quantitative methods, is shown in Figure 3.4

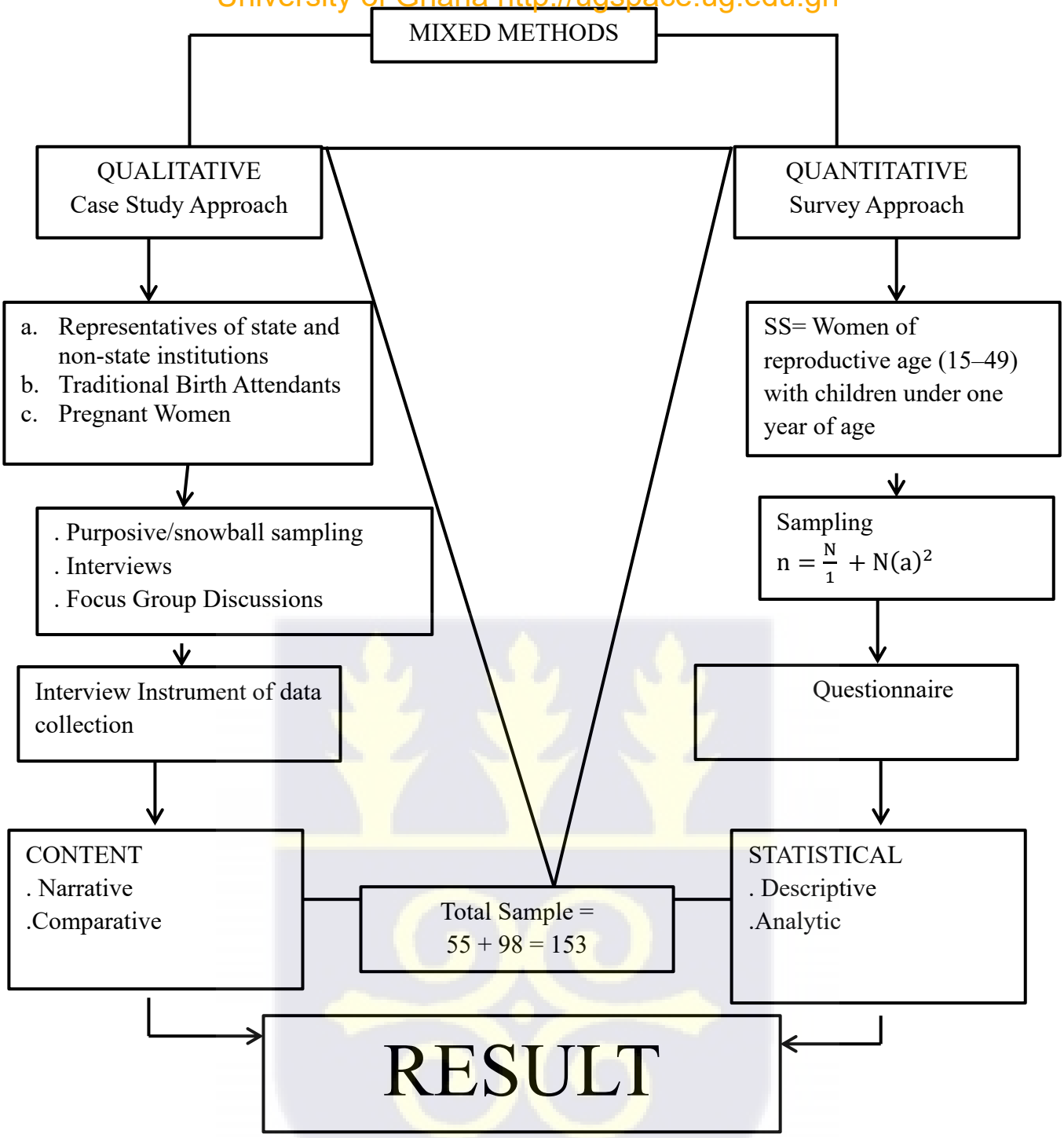

Figure 3.4: Research Design

Source: Author's Construct, 2022

The qualitative method was preferred because it ensured the researcher's direct involvement in data collecting and allowed for direct contact with respondents, whereas the quantitative method offered the counts while adding value to them through explanation. According to Krueger (2019), who was cited by Sundong (2018), the quantitative approach is a potent

research instrument, but it also demands that you place the greatest amount of faith possible in the total counts that represent a characteristic. They both convey the overall impression of a situation. When looking for statistical responses to well-crafted questions on subjects that are not completely understood, the quantitative method works best. They are effective instruments for gathering a variety of common information to a sizable population (Onwuegbuzie and Leech, 2019). According to Sale (2021), the use of a quantitative approach permits an investigator to analyze a phenomenon without having any influence over it. The same author maintains that the objective of the quantitative approach is to quantify and examine the causal links between variables within a value-free framework. Quantitative research according to Golafshani (2018), enables the researcher to become familiar with the issue under study and maybe develop testable hypotheses or prepositions. Gatrell (2021) argued, however that a quantitative approach that almost solely focuses on the spatial distribution of maternal mortality incidence through mapping neglects to pay attention to what the points on the map actually reflect.

The qualitative method describes how people behave in typical or unusual situations and how people think about things in typical or unusual settings (Sundong, 2020). It is useful for developing ideas or conceptual frameworks and polishing and sharpening theories through early measurement. However, the interviewer serves as the research instrument in qualitative methods, which presents a hurdle. The depth of the researcher's experience, knowledge, and abilities dramatically influences the quality of the research and the work that follows (Sofaer 2019).

After evaluating the advantages and disadvantages of qualitative and quantitative approaches, the researcher concluded that combining the two methodologist approaches is essential for unearthing the complexity of the relationship between interventions from state and non-state institutions and maternal mortality outcomes. Nonetheless, Johnson and Onwuegbuzie (2020)

argued that issues with representation, integration and legitimization beset and afflict mixed research. In line with this conclusion, Sale et al (2022) asserted that a new generation of researchers is adopting mixed-methods research blindly, neglecting the underlying assumptions driving the qualitative-quantitative dispute. In spite of these arguments, Hanson et al (2015) continued to support the use of mixed methods, arguing that the inclusion of both quantitative and qualitative data in a study allows researchers to enhance their findings in ways that are not possible with only one type of data. Additionally, it enables researchers to test theoretical models and make adjustments in response to research participant comments and remarks. The type of facts and information requested from research respondents is one the reasons that this study used the two approaches. The researcher was able to find out respondents' opinions about the causes and outcome of interventions to eradicate maternal mortality by using the qualitative approach. Additionally, the qualitative method helped the researcher gather comprehensive data regarding maternal mortality, its contributory factors, outcomes of its eradication interventions because an open-ended format allowed to freely express themselves in response to the questions posed. The qualitative approach also improved the researcher's understanding of interventions aimed at eradicating maternal mortality and outcomes of maternal mortality interventions by analyzing the testimonies, comments and views of formal institutions in the provision of anti-maternal mortality programmes and services, pregnant women, postpartum women, traditional delivery attendants and obstetric nursing officers.

The researcher's ability to clearly explain the relationship between social interventions like women's training in assertiveness and alternative crafts, microlending- and maternal health status- like low maternal mortality -was made possible by the quantitative approach, which supported the inclusion of a structural interventionist approach to maternal mortality eradication.

Comparably, Onwuengbuzie and Leech (2019) pointed out that integrating qualitative and quantitative research aids in the creation of a conceptual framework that can be used to analyze quantitative and qualitative data and validate quantitative findings by referencing data taken from the qualitative portion of the study. In this sense, the researcher was able to create a conceptual framework using the qualitative technique, given information gaps regarding maternal health and the different interventionist approaches to eradicating maternal mortality.

The fact that the interviewer served as the instrument for the qualitative research was one of the study's drawbacks with the qualitative method. Accordingly, the researcher's extensive expertise and abilities were crucial to the study and its final product. In doing so, the researcher exposed the respondents to a laborious and potentially hurtful exercise, particularly when it came to a delicate subject like maternal death. This could result in bias, which would impair the study's quality and findings. It is significant to note that the researcher was able to accomplish the study's main goal of analyzing anti-maternal mortality interventions from state and non-state institutions in the study communities and the ensuing outcomes, thanks in large part to the combination of these two methods.

However, a drawback of this approach was that the interviewer was the instrument used in the qualitative research. The researcher's extensive experience, knowledge, and abilities played a significant role in determining the quality of the research and the work resulting from it. It is important to note that using a qualitative methodology can be a tiresome exercise for respondents, especially when addressing delicate subjects like maternal mortality. The quality and outcome of the study could be impacted by this circumstance, which could result in bias.

The research's methodology is guided by pragmatism, or choosing the best strategies and techniques to help the researcher achieve the study's goals. Utilizing the method that seems to be most appropriate for the research problem is part of the pragmatic approach, which avoids

getting bogged down in philosophical discussions about the best approach. Therefore, pragmatic researchers give themselves permission to employ any of the techniques, methods, and procedures typically used in either quantitative or qualitative research. The pragmatic method mainly utilizes inductive and deductive reasoning. This is due to the fact that inductive analysis must be supported by deductive reasoning in order to adequately address a phenomenon, as is the case with this research (Saunders et al., 2019).

3.4 Sources of Data

For the study, primary and secondary data were gathered. The primary data gathered were about the kinds of maternal mortality interventionist services received from state and non-state institutions, number of births within a 36-month period, usage of hospital delivery facilities, number of rival marriages, uterine cleansing, fertility rites, child marriages, taboo-based food restrictions during pregnancy, income level, Types of interventions provided in communities against maternal mortality, perceptions of programme success in terms of desired results and associated constraints.

Publications and records of the following organisations provided the needed secondary information on efforts to eradicate maternal mortality and the prevalence of maternal: relevant district assemblies, central government institutions, non-governmental, civil society and faith-based organisations in the selected communities. Working papers, books and maternal health journals were also reviewed.

3.5 Study Population

All governmental, non-governmental, civil society, and faith-based institutions in the study communities as well as the district assemblies in charge of those communities were the target population. Women who were pregnant, nursing and attending deliveries in the childbirth continuum were also singled out. Specifically, the institutions include the Adaklu District

Assembly, the Ho Municipal Assembly, the Ho Municipal Directorate of National Commission on Civic Education, the Adaklu District Directorate of Health, the Health Centers in the study communities, the programmes coordinators of Society for Women and Maternal Mortality Prevention in Africa (SWAA), the Christian Council, Youth Alive, Kekeli Foundation, 4H-Ghana, Volta Region Queen Mothers Association and Youth and Women Empowerment (YOWE) (all community-based CSOs/FBOs/NGOs in the study communities) (See Table 3.1)

Table 3.1: Respondents and Type of Data collected

Category of Respondents	Type of Data
State and State Institutions	Information about interventionist programmes and services provided against maternal mortality, perceptions of ensuing outcomes and challenges in communities
Lactating Women	Information about interventions received from state and non-state institutions to prevent maternal death, childbirths in the last 36 months, usage of hospital delivery facilities co-wives, physical abuse, food denial, ritual bath experience and monthly earnings
Pregnant women	Access to antenatal and postnatal counseling and care, tetanus immunization, insecticide treated net, dewormers, iron supplementations, intermittent preventative treatment, anti-retro-viral therapy, loans ,assertiveness and skills training
Traditional Birth Attendants	Obstetric knowledge, access to modern delivery equipment

3.5.1 Number of registered lactating women in the study communities

The actual number of puerperal lactating women in the study communities was not properly and accurately recorded, and in some cases, there was no recent data or no data at all kept for

lactating women for some of the years. Figure 3.5 shows the number of registered lactating women in the study communities.

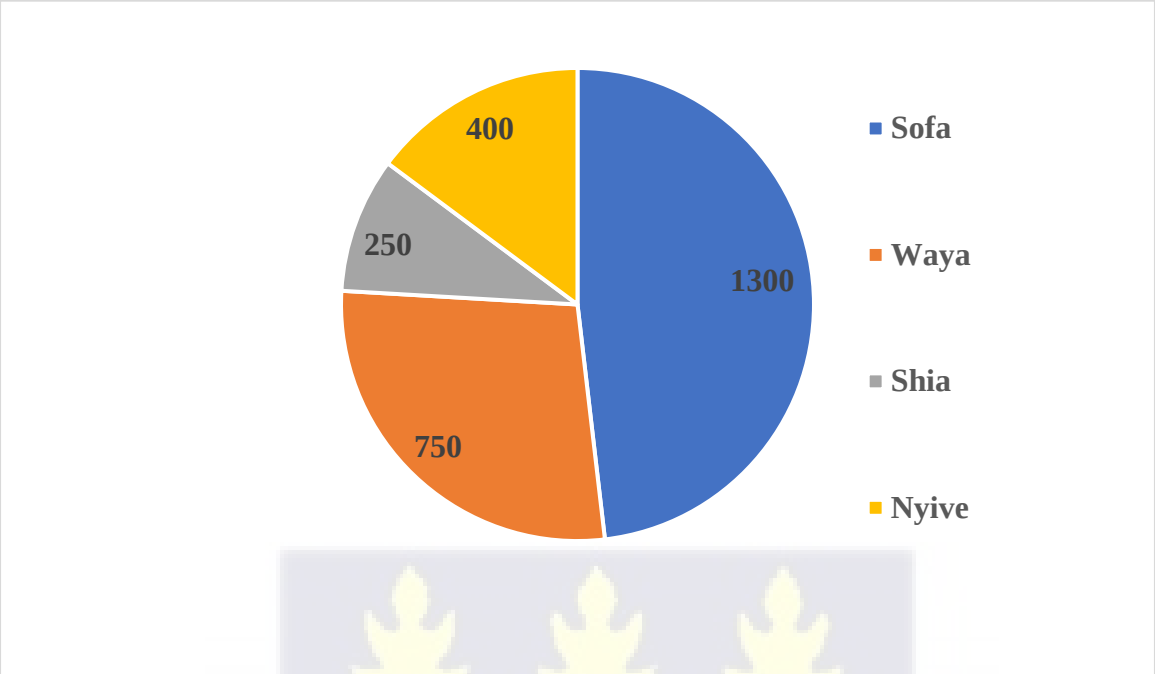

Figure 3.5: Number of Registered puerperal women/lactating mothers in the study communities

Source: **YOWE (2023)** and Ho Municipal Assembly, 2023.

In addition, a few lactating women in the study communities had not even enrolled with any mother organisations. Since there were so few registered lactating women in the study communities, it was quite challenging to find out their actual number.

3.5.2 Sampling size estimation

According to Kumar (2019), a sample is a subset of the population that serves as an accurate portrayal of the full population. A population is the full set of pertinent units that a researcher is interested in generalizing. According to Frankfort and Nachmias (2020), a sample frame is a list of all the sample units in the population. Saunders et al. (2019) were used to estimate the sampling frame and sampling size for puerperal women/lactating mothers, with a margin of

error of 8%. The following mathematical formula was used to determine the sample size: 76 n = N 1+N (α) where n is the sample size. Sample population: N = 8% is the estimated margin of error. Shia researchers determined the sample size (n) for 250 lactating women in Shia as follows: n = 250 1+ 2700 (0.01) n = 9.3 n = 9. The same formula was used to determine the sample size for lactating women in Sofa, Waya, and Nyive. Tables 3.2 and 3.3 contain information about the number of lactating women and all of the organizational focal persons who will be interviewed for this study.

Table 3.2: Sampling Frame and Sample size Determination for Lactating Women

Community	Number of lactating women	Calculation	(%)	Size
Shia	250	250/1+2700 (0.01)	9.3	9
Nyive	400	400/1+2700 (0.01)	14.8	14
Sofa	1300	1300/1+2700 (0.01)	48.1	48
Waya	750	750/1+2700 (0.01)	27.8	27
Total	**2700**		**100**	**98**

Table 3.3: Category of Respondents and Criteria for Selection

Category of Respondent	Sample Size	Sampling Technique	Criteria for Selection
Institutional leaders of Non-State and State Organizations	15	Purposive Sampling	Main maternal mortality prevention intervention service providers
Lactating women	98	Snow balling	Main maternal mortality prevention intervention service beneficiaries/recipients
Pregnant women	48	Accidental sampling	Main maternal mortality prevention intervention service beneficiaries/ recipients
Traditional Birth Attendants	40	Snow balling	Main maternal mortality prevention intervention service beneficiaries/ recipients
Total	**201**		

3.5.3 Sampling Technique

The researcher was introduced to the district chairperson of the association of lactating women in Sofa, Shia, Waya, and Nyive by the Focal Persons of the *Ho* and *Adaklu* district assemblies, and then the ninety-eight (98) respondents from lactating women were chosen from the Sofa, Waya, Shia and Nyive communities using the snowballing technique. According to Wahyuni (2020), the practice of acquiring subjects for study through a recommendation system is referred to as the snowball or networking approach. The reason lactating women were chosen for survey in the examination of maternal mortality prevention intervention of non-state and state institutions was that they were a major beneficiary group of these interventions by stakeholders in the study communities. As a result, they are better able to share valuable facts and profound perspectives on maternal mortality prevention interventions with the researcher for a more objective and balanced appraisal of their worth. When identifying and interviewing lactating

women, ethical considerations were observed and treated seriously. Shia lactating women were first contacted by sending an introduction letter to the Ho Municipal Health Authorities and the Traditional Authority in Shia. An introduction of the research and researcher was made to the Ho Municipal Assembly's focal person for reproductive health and she drove the researcher to the home of the association of lactating women's president in Shia. The researcher first discussed the study's goals and purpose with the president. The researcher was then introduced to the secretary, and after meeting each individual lactating mother one by one, the researchers conducted all of their discussions on Shia Primary School compound. The researcher's initial contact with the various presidents of the various Associations of lactating mothers in the study communities was aided by the reproductive health focal persons for the other study areas. One (1) respondent was purposefully chosen from the Ho Municipal Directorate of Health, the Ho Municipal Directorate of Information Services Department, the Ho Municipal Directorate of National Commission on Civic Education, the Ho Municipal Assembly, the Shia Health Center, the Nyive Health Center, the Adaklu District Directorate of Health, the Adaklu District Directorate of Information Services Department, the Adaklu District Directorate of National Commission on Civic Education, the Adaklu District Assembly, the Society for Women and Maternal Mortality Prevention in Africa at Nyive, the Christian Council at Shia, Youth Alive at Nyive, Kekeli Foundation at Nyive, 4H-Ghana at Waya, Sofa Queen Mothers Association and Youth and Women Empowerment at Sofa. 19 respondents in all were chosen from this group. In this regard, Tansey (2018) elaborates that purposive sampling is a selection approach where the study's objectives and the researcher's familiarity with the population most suitable to providing valuable facts and profound perspectives on maternal mortality prevention interventions. The researcher may be able to identify the specific respondents of interest and sample those judged most relevant for the research goals if the investigation involves interviewing a visible group of actors. The fundamental premise of purposive sampling is that,

with sound judgment and the right approach, researchers may choose the cases to be included and, as a result, create samples that are acceptable for the study's goals (Sale 2021). These respondents were chosen as the most helpful for the study because they are the main service providers in maternal mortality prevention in the study communities. As a result, 201 respondents from Sofa, Shia, Nyive and Waya communities made up the total number of people from the three groups who had to be interviewed.

3.5.4 Methods of Data Collection

3.5.4.1 Quantitative Data Collection Method

3.5.4.1.1 The Questionnaire Method

A survey approach was used for the quantitative study in accordance with the study's design. In order to get a general idea of women's actions, condition and situation, Babbie (2019) justified the survey strategy by pointing out that survey research is probably the method available to the social researcher who is interested in gathering original data from a defined individual or group of individuals in order to obtain a total count of characteristics in order to generalize about a population. Additionally, surveys are a great way to gauge the attitudes, preferences, and opinions of a sizable community (lactating community). 98 lactating women were given a standardized questionnaire to complete. This was done to gather information on the number of children bored, between-pregnancy intervals, type of maternity health services used, type of 'rituals' undergone, social problems faced in society, economic problems faced in society, access to interest-free business loan fund, access to food commodities, access to food supplements, types of stress-related medical problems experienced, location of obstetric medical facilities relative to places of abode, type of maternal mortality prevention-oriented support services received, impact experienced, problems faced by service volunteers and prevention strategies in the study areas. In survey research, tables and questionnaires are a common tool and are made up of a sequence of questions on a subject about which the

respondent's response is sought to generate a 'story' (Sommer 2019). The questionnaire was meticulously planned and created in accordance with the goals of the study (*worth of maternal mortality prevention interventions in study communities*) and had both closed-ended and open-ended questions. In order to gather sufficient and pertinent information, respondents were contacted door to door in the research neighborhoods. Each time, respondents were given structured questions to answer. To guarantee that the data gathering process was participatory and that respondents understood the questions posed to them, this was important. This was done since the target group consisted of semi-literate individuals, making data gathering more effective and trustworthy when done directly and face-to-face. The survey, which was included as an appendix, consisted of closed- and open-ended questions divided into sections, each of which addressed a different topic.

The questionnaire for puerperium women in Appendix A is broken down into sections A through E. Background characteristics were covered in Section A; behaviours related to fertility and maternity health seeking were covered in Section B; 'rituals' associated with women in the study communities were covered in Section C; social problems faced by women in the study communities were covered in Section D; economic problems faced by women in the study communities were covered in Section E ; Stress-related medical problems faced by women in the study communities were covered in section F; distribution of obstetric medical facilities in the study districts were covered in section G: Interventions aimed at preventing maternal mortality in the study communities were covered in section H: Achievements of interventions to reduce maternal mortality in the study communities were covered in section I; Challenges faced by intervention service providers in the study communities and strategies to overcome the problems faced were covered in Section J.

3.5.4.2 Qualitative Data Collection Method

3.5.4.2.1 The In-Depth Interviewing (IDI) technique

The qualitative data was gathered using a case study approach. A case study, according to Yin (2021), is a type of research approach that enables a thorough examination of a real-world event in its original setting. Thus, case study research focuses on the in-depth analysis and observation of instances of a phenomenon in its actual setting from the viewpoint of the informants involved (Sale, 2021**).** A detailed interview guide, which is included in the appendices, was the instrument used to collect the data during the in-depth interviews. By questioning the respondents further based on their responses, the in-depth interview method was intended to elicit detailed information (*facts*) and perceptions about the research topic (the worth and effects of public health interventions as well as social interventions by stakeholders on frequent childbirth, herbal concoction-use during pregnancy, domiciliary delivery, early marriage, polygamy, taboo-based food restrictions, womb purification, female genital mutilation, social deprivation, violence against women, gender inequality, females' economic dependence on males, income deprivation, stress-related medical conditions and maternity health staff shortage). 'Responsive interviewing' is the term Rubin (2019) use to describe in-depth qualitative interviewing. A deep comprehension of the subject under investigation (*effectiveness of maternal mortality prevention interventions*) is the main goal of responsive interviewing, not a broad one (Sale, 2021). In-depth interviews with key informants (*maternal mortality prevention intervention service providers and service beneficiaries*), according to Kvale (2018), are intended to obtain a vivid picture of the participant's perspective on the research topic (*worth and effect of development interventions*). As a result, a detailed interview schedule was created to cover subjects such as factors of maternal mortality, type of intervention services being provided, location of intervention services, number of intervention service staff/volunteers, source of funding, intervention service impact on factors of maternal

mortality and key populations, problems facing intervention service staff /volunteers in the course of intervention work, problem overcoming strategies. Focal persons from the non-state and state institutions participated in the exploration of the extent to which maternal mortality prevention intervention projects and services in the study communities address the many attitudinal, behavioral, social, economic, medical, human resource challenges prevailing in maternal mortality endemic settlements of the study areas. Because non-state and state institutions were known to for their social support, public educational, humanitarian and philanthropic activities in the study communities, interviews with them were undertaken. Actually, they were promoting the use of maternal health facilities by community members, raising awareness of the need to reduce fertility, and instructing people on the importance of eating a balanced diet in order to prevent maternal death, among other things. The study communities' health centers, for instance, handled all matters relating to intermittent preventative treatment of malaria, antenatal deworming, and nutrition assistance for pregnant and puerperal women. To supplement the information from the structured questionnaire, this strategy offered critical qualitative data.

All of the in-depth interviews took place in English and lasted as long as it took to answer every question. In order to collect information from puerperium women/lactating mothers, key informant interviews and qualitative semi-structured interviews were also used. Additionally, information on number of children bored, intervals given between pregnancies, type of maternity health services used, number of antenatal visits undertaken before the last delivery , types of ‘rituals’ undergone before, during and after pregnancy, type of gender violence experienced , status accorded in society, times of heavy financial dependence on male partner, times of less heavy financial dependence on male partner, types of stress-related medical conditions during pregnancy and access to trained obstetric medical specialists were collected. An in-depth interview guide for health institutions is included in Appendix B. It asks questions

about health institution name, establishment year, scope of activities, number of key personnel, number of supporting staff, factors making women more susceptible to maternal mortality, type of group counselling provided, types of medical screening undertaken and charge, types of maternity health services provided and charge, type of malaria services provided and charge, type of community wellness work undertaken, nature of impact on key populations, nature of impact on factors making women more vulnerable to maternal mortality, sources of funding, challenges in care service provision for key populations, challenges in maternal mortality risk factor eradication intervention and outwitting strategies.

An extensive interviewing guide is also included in Appendix C for the various development institutions such as community-based Faith-Based Organizations, community-based Chieftaincy Institutions, community based Non-Governmental Organizations and District Assemblies in the study areas. It discussed organization name, registration year, geographic scope, factors making women more susceptible to maternal mortality, type of public education work undertaken in local communities (if any) type of public sensitization work undertaken in communities (if any), type of support given to key populations (if any), types of social welfare work undertaken in communities (if any), type of philanthropic work undertaken in the communities (if any) nature of impact on key populations (if any), nature of impact on factors making women more susceptible to maternal mortality (if any), sources of funding, main challenges in implementation of maternal mortality prevention programmes (if any) and outwitting strategies (if any) An in-depth/key informant interview and FGD topic guide for lactating women and traditional birth attendants can be found in Appendix D. But according to Saunders et al. (2019), no research technique is inherently better or worse than any other. As a result, what matters most is not the name given to a certain approach but rather whether it will help you reach your goals and provide an answer to your specific research question(s). Last but not least, keep in mind that these strategies should not be viewed as being mutually

incompatible. For instance, it is very feasible to include the survey approach into a case study (Rubin, 2019)

3.5.4.2.2 The Focus Group Discussion (FGD) Method

A focus group is a gathering of a small group, usually between four and twelve people, who convene to discuss their opinions and experiences regarding a particular topic of shared interest, with the help of a facilitator (Gatrell, 2021). Focus groups and other scientific methods like surveys are frequently used in tandem. Before a group discussion, quick surveys are frequently given out (Sofaer, 2020). In order to enhance the quantitative data, focus groups with obstetric medical professionals, traditional birth attendants, and puerperal women or lactating mothers were held. Focus group discussions have the benefit of allowing participants to talk about and investigate problems among themselves as well as to share their experiences and viewpoints. As a result, the method offers more clarity in a shorter amount of time and allows the chance to uncover and analyze beliefs, attitudes, and behaviour (World Health Organisation, 2020). Four focus groups each at Sofa, Waya, Shia, and Nyive brought the total to sixteen. When conducting the focus group conversations, the researcher's biggest issue was figuring out how to divide up the various age groups given their diverse economic and social backgrounds. Focus group talks work best when the participants are comparable, according to Krueger (2019), who was mentioned by Sundong (2018).

The discussions were held at various times and in different ways for the various responders, with at least 10 females in each group. At the location where they often hold their support group meetings in the various study villages, the discussions for puerperal women/lactating mothers and traditional birth attendants were held separately on select specific days. A topic guide that may be found in the appendices served as the data gathering tool. A FGD topic guide for obstetric medical professionals, puerperal women/lactating mothers, and traditional birth attendants is included in Appendix E. Examining the coverage areas and nature of effects of

maternal mortality prevention intervention programmes on key populations and factors making women more vulnerable to maternal mortality were among the objectives.

The researcher moderated the meetings, which were held in both English and Ewe. Each session lasted until all the questions had been addressed. Research assistants assisted with the translation for those who were unable to speak Ewe and English. The researcher relied on some of the more literate respondents because he was unable to find any study assistants outside of the targeted community due to the sensitive nature of the conversations. All of the volunteers were given refreshments by the researcher, as well as presents of sachet rice, sugar, egg cartons, soaps, and bus tickets. After the exercise, some of them received allowances to work as research assistants.

3.6 Methods of data analysis

3.6.1 Main variables of the study

In the context of this study, "state actors" refers to governmental organisations like district directorates of health, information, gender, social welfare and assemblies that act as public sector maternal mortality prevention intervention service providers while "non-state actors" refers to community based FBOs, NGOs and chieftaincy institutions that act as private sector maternal mortality prevention intervention service providers in the study communities. The other concepts and ideas explored in the study communities include multiple pregnancies, home birth, early marriage, polygamy, genital mutilation, womb purification, food restriction, physical abuse, gender-sexist bias, financial dependency, stress-related medical problems, nutrition-related medical problems, contraceptive use, modern maternity health service use, knowledge of cultural practices that go against women, access to obstetric medical facilities, access to interest-free business credit, access to food commodities and supplements.

3.6.2 Quantitative Method of Data Analysis

The quantitative data collected from pregnant women and lactating mothers were summarized and presented in tables, frequencies, percentage distribution, charts, graphs for analysis and interpretation. Before travelling into the field, a coding method was used and created to make data gathering easier. Following the completion of data collection from the women, open-ended questions were edited and coded as part of data processing. All replies that were coded and categorized according to factors making women more vulnerable to maternal mortality and their resolution there-on. Data was entered into Excel for Windows (version 7.1; Microsoft Corp. Redmond, WA) and the Statistical Package for Social Sciences (SPSS) for Windows (version 16.0; spss Inc. Chicago) programmes after coding, and any discrepancies discovered by the software were cleaned up and fixed. This technique was used to track the frequency of specific responses or the number of times a particular response occurs for each of the variables.

3.6.3 Unit of Analysis and Data Processing

Sometimes, the unit of analysis is referred to as the unit of observation. Babbie (2019) asserts that the "what" or "whom" being investigated serves as the study's unit of analysis. The Sofa health center, the Shia, Nyive, and Waya health center, the Adaklu District Health Directorate, the Ho Municipal Health Directorate, the Adaklu District Assembly, the Ho Municipal Assembly, the Society for Women and Maternal Mortality Prevention in Africa, the Kekeli Foundation, 4-H Ghana, Youth and Women Empowerment (YOWE), Youth Alive, the Christian Council, and the Sofa Queen Mothers Association were all included in the study's unit of observation. The maternal mortality prevention intervention data, which served as the unit of analysis for the observational data, were examined using responses from four types of organizational respondents. Puerperal women/lactating mother, pregnant women served as the study's survey subjects.

3.6.4 Qualitative Method of Data Analysis

In order to produce meaningful findings and make sound conclusions about maternal mortality prevention intervention operations, data analysis on qualitative data essentially entails breaking down, segmenting, and reassembling data (Boeije 2021). Thus, in order to analyze the qualitative data collected from non-state and state institutions on maternal mortality prevention services, direct quotes and photographs from respondents were used. According to Sarantakos (2018), content analysis is a popular method for deciphering meanings from textual data. Researchers in the social sciences, both quantitative and qualitative, have reportedly employed this technique, according to Silverman (2021). By deriving meanings from the textual information, the qualitative contents analysis focuses on presenting reality. Additionally, comparative analysis was utilized to analyze the qualitative data in order to spot emerging trends that would make it simple to compare problems in Sofa and Waya in the Adaklu District with Shia and Nyive in the Ho Municipality. Boeije (2021) noted that the constant comparative technique emphasizes more on describing variance in many social phenomenon's settings, which is consistent with this method. It offers a more methodical approach to identifying any difference that appears in empirical data, according to Wahyuni (2020).

Following the conclusion of data collecting, numerous steps were taken to analyze the qualitative data. To make sure that the topics included in the study were properly understood, the initial phase required transcriptions, reading of transcripts, and field notes. The responses to all tape-recorded in-depth interviews were typed, read, and reread numerous times in order to uncover common patterns and distinctions occurring both during and after the qualitative data collection. A separate summary of each transcript that outlines the main points was then prepared after ongoing data correction and improvement. Without losing the linkages between concepts and their environment, the study was able to uncover developing patterns in the initial step of data review without coding. The application of the coding approach to the analysis of

the qualitative data was the second phase. In reality, Wahyuni (2020) said, coding is used in qualitative content analysis. Labelling is the same as coding. It refers to the process of giving each category of data a code that represents its primary subject. According to Seale and Kelly (2020), a researcher must first create a set of codes that reflect the initial goals of the research project and take into account any unexpected problems that may have arisen during data collection when they are presented with an interview transcript, descriptions of observations, or other qualitative material. This was discussed by Du Plessis (2018). He highlighted that researchers must arrange and filter their data in accordance with their goals and the subjects they are studying. At this point, coding gave the study a formal system to organize the data, revealing and documenting further connections inside and between concepts and experiences in the data. The coding procedure included creating a code structure, perfecting it, and using it to create themes for analysis. Up until theoretical saturation was attained, the codes and their structure were still being developed. After several iterations of evaluating and coding data, no novel concepts were discovered at this time (Bradley et al., 2021). The coding structure was judged finished at this point, and themes were created. The term "themes" simply refers to the ability to identify a key aspect of the data relevant to the research topic and to display some degree of patterned themes as responses or meanings within the data set (Boyatzis, 2021). The summary of each transcript was carefully examined in the final step, and it was then presented in words and, when appropriate, with images to provide a visual representation of the scene being described. The in-depth interview transcripts also contained direct quotes from respondents on pertinent topics. The effectiveness of maternal mortality prevention measures was evaluated, primarily with a view to finding areas of concentration and neglect as well as parallels and variations between state and non-state actors' prevention interventions. Maternal death rates in the study communities served as comparison points for lifestyle interventions for evaluating the efficacy of state and non-state actor actions to prevent maternal mortality.

Women's participation in keep-fit programmes, participation in environmental sanitation initiatives, acceptance of antenatal purification rituals, attendance at antenatal clinics, commitment to child spacing, dedication to birth reduction, commitment to birth control, commitment to environmental sanitation initiatives, and employment status were the factors examined. A lifestyle intervention should ideally result in changes in fertility behaviour, such as child spacing, birth reduction, adoption of keep-fit activities, regular attendance at antenatal clinic, abstinence from antenatal purification rituals, and abstinence from at-home delivery, as well as a decrease in maternal mortality rates in the study communities.

3.7 Ethical considerations

It is recognized that efforts to minimize maternal mortality are delicate subjects, and that respondents' privacy is crucial. As a result, the Department of Geography and Resources of the University of Ghana provided written consent for the study, which was duly acknowledged by the department head and obtained in line with the protocols stipulated for the study. Copies of this were also provided to all of the Health Directorates in the study communities after being submitted to the Ethical Review Board of the School of Medical Sciences, UG for ethical clearance. The several Health Directors in the study communities were scheduled for a meeting. Following the health Directors' approval, additional permission to consult with both state-run organisations and non-state actors in the study communities was requested from the personnel officers of the various MMDAs in the study communities in order to make the necessary arrangements and discussions for the research to be conducted. Before beginning the interview, each participant gave their approval, and participation continued only on a purely voluntary basis after that. According to Wahyuni (2020), the researcher should emphasize the study's voluntary nature and secrecy at the beginning of the interview while also briefly describing its purpose. A consent document is then handed to the interviewee, who must sign it along with the researcher. Each interview must have participant consent in order to be recorded. As a

result, the study made sure that the participants' identities and the data they supplied were kept a secret and never shared with anyone. Participants' names were not written on the materials; instead, labels that could be read by the researcher were utilized to pinpoint any specific respondent. The respondents were given the assurance that the researcher would keep their findings confidential by not sharing them with other participants or community members. Data collection began once all of these processes and procedures had been completed.

3.8 Limitations of the Study

The sensitive nature of the study was the greatest barrier to this investigation. Even when ethical permission was gained in the study areas, particularly Sofa and, maternal mortality statistics remained very difficult to get. For instance, the offices of the West African Programme to Combat Maternal Mortality in Waya and Nyive declined to provide information on their operations. As a result, a wealth of secondary data on interventions for maternal mortality was gathered in Sofa and Waya.

On a fundamental level, too, figures like maternal mortality incidence are still debatable and unstable, forcing researchers to rely on the best information they can find due to the absence of thorough and current data on maternal mortality.

It was also exceedingly challenging to locate older and younger nursing mothers and convince expectant women and traditional birth attendants to talk with them about problems. This therefore prevented the selection of pregnant women, breastfeeding mothers, and traditional birth attendants using probability sampling techniques like the lottery approach of simple random and the table of random numbers. This presented a significant methodological challenge to the study, forcing the researcher to adopt the best approach at hand, the non-probability sampling technique (snowballing). After the respondents were identified, several of the authorities who helped in that process wanted financial reward. They also made the same

demand following focus group sessions. Due to this circumstance, gathering data was a very time-consuming and expensive operation.

The data collection was not entirely hampered by these difficulties, though. To choose endemic areas and ensure that the research's findings were properly representative of all the communities in the study areas, the researcher relied on District profiling. The researcher was able to engage pregnant women, breastfeeding mothers, and traditional birth attendants utilizing the snowballing strategy with the help of assembly members from several communities and officials at the health centers in the study areas. After each meeting, the researcher was required to provide them with some goods, like eggs, sacks of rice, and soap, as well as money for transportation to their destinations.

3.9 Summary of the Chapter

This study's research design, which included qualitative and quantitative methods, was known as mixed methods. This methodology was used because it enabled the researcher to better understand the many sides to balanced examination of programmes aimed at reducing maternal mortality in local communities. The research design also addresses the methodological shortcomings found in this study, making the study's findings relevant to the methodological literature as well as the socio-economic development of the study communities and Ghana as a whole.

CHAPTER FOUR

TRENDS AND FACTORS DRIVING MATERNAL MORTALITY INCIDENCE IN STUDY COMMUNITIES

4.1 Introduction

This chapter provides secondary information on Shia, Sofa, Waya, and Nyive maternal mortality incidence trends and patterns. The chapter also examines field research information on factors in Sofa, Waya, Shia, and Nyive that increase women's vulnerability to maternal death. Other factors considered in the analysis included the respondents' personal characteristics such as their age, educational attainment, occupational status, and religious affiliation. These socio-demographic dimensions of especially of women of reproductive age were analyzed because they could independently affect their susceptibility to maternal mortality.

4.2 Respondents' Socio-Demographic Characteristics

4.2.1 Personal Characteristics of State and Non-State Institution Respondents

Respondents from both state and non- state institutions averaged more than 50 years of age and more than 15 years of institutional leadership offering maternal mortality prevention programmes. They have favored and directed maternal mortality prevention interventions in the study communities including *reproductive* and *fertility* behavioural change communication, *religious* and *traditional* cultural group counselling, food package dispensing, food supplement dispensing, health care product dispensing, personal hygiene care commodity distribution, malaria prevention, psychosocial stress prevention and sexually transmitted disease prevention. Postgraduate qualifications were possessed by a higher number of institutional respondents (80%) across all study communities.

4.3 Personal Characteristics of Survey Respondents

4.3.1: Age distribution of lactating women

Table 4.3.1: Age distribution of lactating women

Community	Above 35 yrs		Below 35 yrs		Total	
	No.	(%)	No.	(%)	No	(%)
Sofa	14	29.2	34	70.8	48	100
Waya	9	33.3	18	66.7	9	100
Shia	4	44.4	5	55.6	27	100
Nyive	5	35.7	9	64.3	14	100
Total	**32**	**32.7**	**66**	**67.3**	**98**	**100**

Source: Fieldwork, 2023

Maternal mortality discriminates and hence a respecter of age but women above 35 are more at risk because of the flexibility of their pelvis and birth canal structure at various ages (Sundong, 2018). In all of the study communities, the proportion of lactating women above the age of 35 (67.3%) is larger than the number of lactating women under the age of 35 (32.7%). From Table… it was clear that there were also greater proportions of lactating women under 35 years old in Sofa (70.8%) and Waya (66.7%) than in Shia (55.6%) and Nyive (64.3%). However, the proportion of nursing mothers over the age of 35 in Shia (44.4%) and Nyive (35.7%) appears to be larger than in Sofa (29.2%) and Waya (33.3%).

4.3.2: Age distribution of pregnant women

Table 4.3.2: Age distribution of pregnant women

Community	Below 35 yrs		Above 35 yrs		Total	
	No.	(%)	No.	(%)	No	(%)
Sofa	29	60.4	19	39.6	48	100
Waya	15	55.6	12	44.4	9	100
Shia	6	66.7	3	33.3	27	100
Nyive	11	78.6	3	21.4	14	100
Total	61	62.2	37	37.8	98	100

Source: Fieldwork, 2023

In general, the proportion of pregnant women before the age of 35 (62.2%) appears to be larger than that of pregnant women after the age of 35 (37.8%) throughout all study communities, most likely due to the higher number of women in romantic relationships before the age of 35. However, in *Shia* (66.7%) and *Nyive* (78.6%), pregnant women under the age of 35 were proportionally greater than pregnant women over the age of 35 in *Sofa* (60.4%) and *Waya* (55.6%). However, there were more pregnant women under the age of 35 in *Sofa* (39.6%) and *Waya* (44.4%) than in *Shia* (33.3%) and *Nyive* (21.4%).

4.3.3 Educational level of respondents

Table 4.3.3: Educational level of respondents in the study communities

C'ty	Lactating Women									
	Sofa		Waya		Shia		Nyive		Total	
	Num	(%)	Num	(%)	Num	(%)	Num	(%)	Num	(%)
No formal education	19	39.6	14	51.9	3	33.3	4	28.6	40	40.8
Basic level	16	33.3	8	29.6	4	44.4	7	50	35	35.7
Secondary	13	27.1	5	18.5	2	22.2	3	21.4	23	23.5
Tertiary	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	**48**	**100**	**27**	**100**	**9**	**100**	**14**	**100**	**98**	**100**
C'ty	Pregnant Women									
	Sofa		Waya		Shia		Nyive		Total	
	Num	(%)	Num	(%)	Num	(%)	Num	(%)	Num	(%)
No formal education	12	25	13	48.1	4	44.4	6	42.9	35	35.7
Basic level	21	43.8	8	29.6	2	22.2	4	28.6	35	35.7
Secondary	15	31.3	6	22.2	2	22.2	3	21.4	26	26.5
Tertiary	0	0.0	0	0.0	1	11.1	1	7.1	2	2.0
Total	48	100	27	100	9	100	14	100	98	100

Source: Fieldwork, 2023

Educational attainment is critical since it may influence maternal mortality vulnerability. In all study communities, 40.8% of lactating women had no formal education, but only 35.7% and 23.5% of lactating women have basic and secondary education, respectively. It is seen in Table 4.3.3 that, Lactating mothers in Shia (44.4%) and Nyive (50.0%) appear to be less educated

than those in Sofa and Waya. Sofa (43.8%) and Waya (29.6%) pregnant women had greater levels of education than Shia (22.2%) and Nyive (28.6%).

Furthermore, the findings show that traditional birth attendants in *Sofa* and *Waya* had formal education than those in *Shia* and *Nyive.*

4.3.4 Religion of Respondents

Religious affiliation is important because it can influence maternal mortality vulnerability by enlisting in medically harmful spiritual practices. In all survey areas, 50.8% of nursing women were Christian, whereas only 25.7% and 23.5% of lactating mothers were Muslim and traditional, respectively. Shia (41.4%) and Nyive (49.0%) lactating mothers appear to be more religious than those in Sofa and Waya. Pregnant women from Sofa (33.8%) and Waya (30.6%) exhibited lower levels of religious commitment than Shia (26.2%) and Nyive (30.6%). Furthermore, traditional birth attendants in Sofa and Waya were found to be more religious than those in Shia and Nyive.

4.3.5 Respondents' Occupation

Occupational affiliation is important because it may increase maternal mortality vulnerability by denying access to contraception, obstetric care facilities, more nutritious food, and other fundamental maternal life demands. In all study communities, 60.8% of nursing women were not occupationally related. Only 15.7% of breastfeeding mothers were traders, while 20.5% were civil servants. Lactating mothers in Shia (30.4%) and Nyive (40.0%) seem to be more occupationally affiliated than those in Sofa and Waya. Pregnant women from Sofa (47.8%) and Waya (32.6%) had higher levels of agricultural occupation affiliation than Shia (30.2%) and Nyive (40.6%). Furthermore, traditional birth attendants in Sofa and Waya were less likely to be unemployed than those in Shia and Nyive.

4.3.6 Housing Situation of Respondents

The style of housing women live in is important because it may increase maternal mortality vulnerability due to a lack of proper sanitation and hygiene. In all, 54.8% of nursing women lived in compound houses across all study communities. Only 56.7% of lactating women lived in separate residences, whereas 30.5% lived in semi-detached households. Lactating women appear to reside in huts more frequently in Shia (52.4%) and Nyive (43.0%) than in Sofa and Waya. Pregnant women in Sofa (40.8%) and Waya (50.6%) had higher rates of tenancy than Shia (30.2%) and Nyive (30.6%). Furthermore, traditional birth attendants in Sofa and Waya lived in huts rather than Shia and Nyive.

4.4 Maternal Mortality Trends in *Ho* Municipality and *Adaklu* District

In 2018, the *Ho* municipal area had the lowest maternal mortality incidence of 1.1% in the *Volt*a region, while the *Adaklu* district had the highest rate of 4.2%, with *Sofa* having the highest rate of 8.0% in the region. According to NDPC/GoG/UNDP (2020), *Sofa* had the highest incidence rate of maternal mortality at 8.0%, while *Shia* had the lowest incidence rate of maternal mortality at 1.2%. Maternal mortality among pregnant women and breastfeeding mothers is utilized as a proxy indicator for individual women and districts' socioeconomic progress. According to the *Volta* Region maternal mortality surveillance, *Sofa* and Waya have the highest site incidence rates of 8.0% and 5.8%, respectively, while *Nyive* has a rate of 2.0% and *Shia* has a rate of 1.2%. The Volta Region's *Adaklu* territory is known for its high maternal mortality rates. According to Ghana Health Service (2020), the national incidence rate fell from 2.7% to 1.9% in 2019, whereas the rate in the *Adaklu* District climbed from 8.4% to 8.9% using *Waya* Health Centre as a central location. However, the prevalence of *Sofa* has decreased from 10.1% to 3.6% in 2022 compared to the national prevalence rate of 2.1% (WHO 2022).

Figure 4.1 depicts the local maternal mortality pattern in the *Adaklu* District

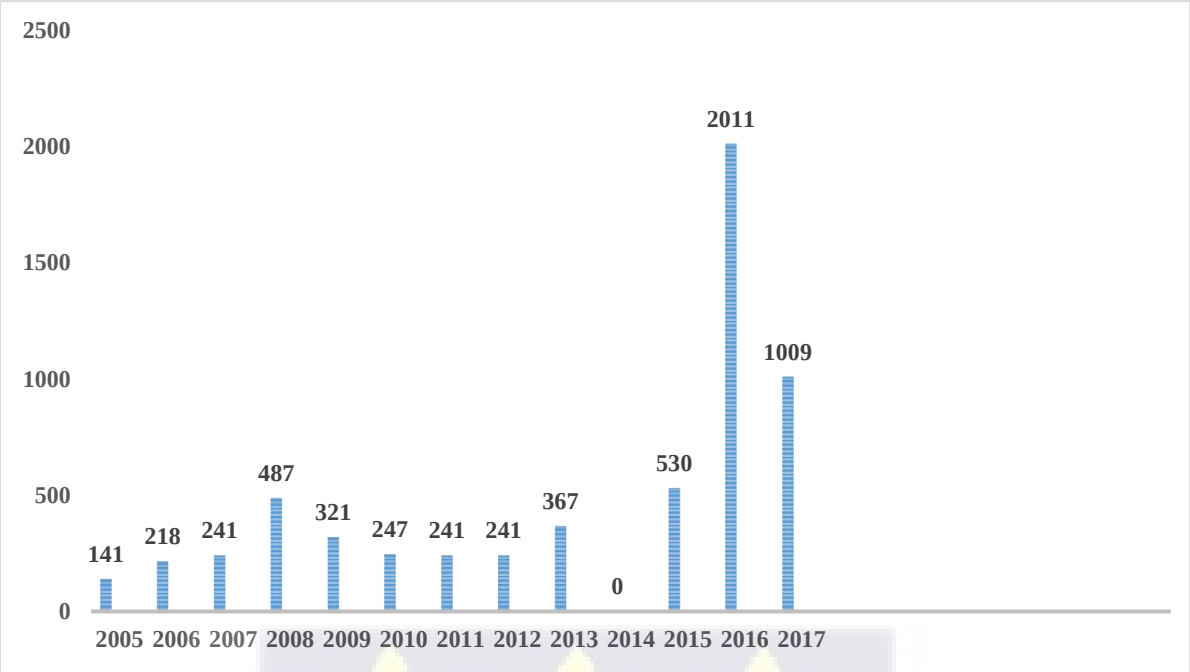

Figure 4.1: Local Maternal Mortality cases reported in Adaklu District from 2005 to 2017

Source: *Adaklu* District Health Directorate, 2023

The situation that can be seen from Figure 4.1 is that the number of reported instances of local maternal mortality increased from 2005 to 2008, when incidence began to decline from 2009 to 2014, when there were no recorded cases and only a year later a large number was reported again. The implication of this data is that *Sofa* saw a decrease in maternal mortality within the stated period, and that maternal mortality preventive measures were most likely producing results.

According to the WHO (2022), while the incidence rates of maternal mortality in *Sofa* and *Waya* increased from 2016 to 2023, they decreased in *Shia* and *Nyive*. In *Nyive*, for example, the maternal death rate was 3.2% in 2016, 3.2% in 2017, 5.8% in 2018, 2.0% in 2019, 2.0% in 2020, and 0.8% in 2023

(See Figure 4.2).

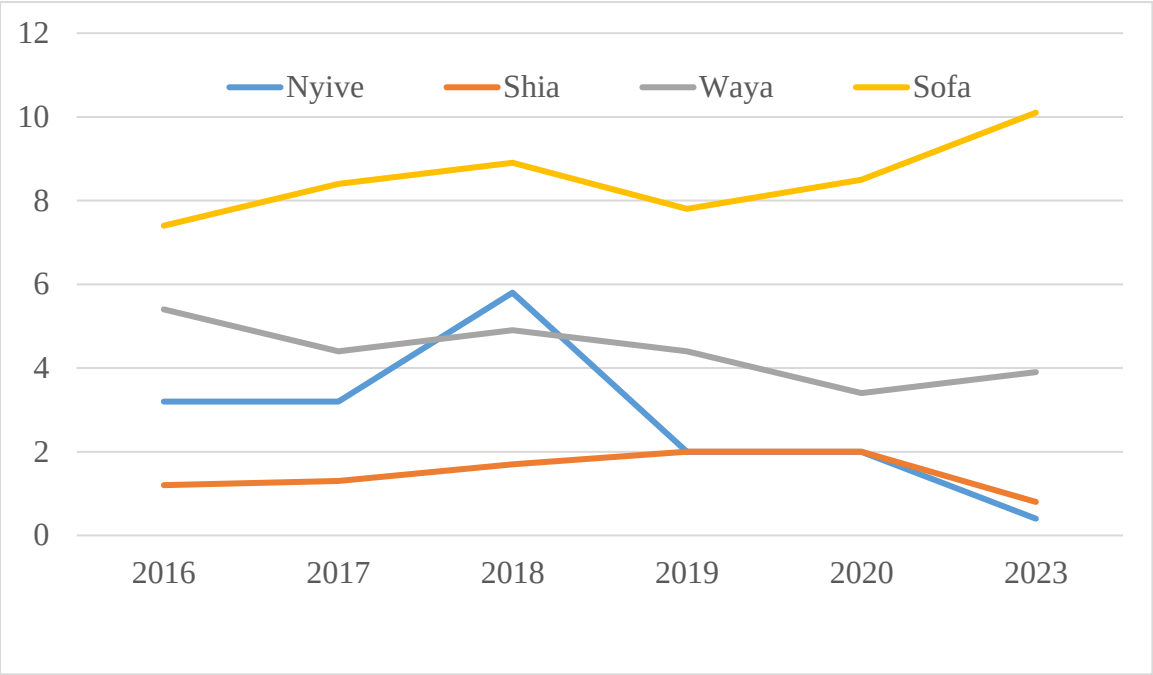

Figure 4.2: Maternal Mortality Rates in the Study Communities from 2016 to 2023.

Generally, maternal mortality was declining in urban Ho municipality compared to the rural Adaklu district. Compared to *Sofa* and *Waya*, the results in Figure 4.2 show that maternal mortality incidence is decreasing in both *Nyive* and Shia, particularly from 2016 to 2023. The result is that stakeholders delivering maternal mortality prevention initiatives in these locations are on the right road, albeit there is still space for improvement. The study found that maternal mortality incidence in *Sofa*, *Shia*, *Waya*, and *Nyive* was not consistent, but rather rose and fell among the female population. For example, the *Nyive* research revealed a growth between 2016 and 2018, followed by a dip in 2019 and 2020, which was dramatically reduced in 2023.

This analysis has implications for the activities of governmental and non-state institutions in *Sofa* and *Waya* to reduce maternal mortality, and the researcher will return to this topic in following parts. The findings also revealed that while the incidence of maternal mortality may be lower at times, the number of reported instances is extremely high. According to the findings, there were around 1,300, 750, 400, and 250 registered lactating mothers in *Sofa*, *Waya*, *Shia*, and *Nyive*, respectively. Furthermore, the study found that these data did not

accurately reflect the number of reported maternal mortality cases since many maternal deaths in the study communities were not reported to the District Directorate of Health. According to the *Adaklu* District Assembly's Coordinating Director, who was interviewed in *Waya*:

The high level of social discrimination against women and contempt for women's reproductive rights, as well as a society unsure whether women's lives are worth saving, are to blame for the high number of deaths. Obstetric medical practitioners, who are intended to instill trust in health-care institutions so that pregnant women and breastfeeding mothers feel safe going to get their obstetric medical problems treated, are unfriendly. Pregnant and breastfeeding women therefore fear that obstetric medical practitioners will violate their dignity and self-worth.

As a result, pregnant women and breastfeeding mothers may not seek obstetric medical intervention throughout pregnancy, childbirth, or after childbirth, or may not visit obstetric medical facilities at all for prenatal, delivery, or postnatal care. This circumstance has the potential to exacerbate maternal mortality in the study communities. According to the findings in this study, Shia and Nyive also had reduced maternal death rates throughout time while Sofa and Waya continually had higher rates. These findings are not entirely novel, as comparable patterns of maternal mortality incidence have been seen in earlier research and surveys in Kpetoe and Wumenu areas of the Akatsi North and Agotime-Ziope areas of the Volta.

4.5 Factors Driving Maternal Mortality Incidence

4.5.1 Repeated and Multiple Pregnancies and births

Sale (2021) notes that repeat childbirth has a high correlation with uterine rupture among childbearing women and the incidence of maternal mortality among the population of women of reproductive age. The purpose of the survey was to count the number of pregnancies among nursing mothers in the previous 48 months because more than two births in 48 months may be

harmful to mothers' health. According to Table 5.1's empirical evidence, older lactating women who were married had a higher multiparity rate than younger lactating mothers, with 69.2% of older lactating women reporting that they had multiple pregnancies within the previous 48 months compared to only 13.6% of younger lactating mothers due contraceptive opposition for funny reasons.

Table 4.1: Proportion of nursing mothers having multiple pregnancies in the last 48 months

Did you have more than one pregnancy in the last 48 months?	**Lactating women above 35**			**Lactating women below 35**		
	Yes	No	**Total**	Yes	No	**Total**
Frequency	18	8	26	3	19	22
Percentage (%)	69.2	30.8	100	13.6	86.4	100

Source: Field Survey, 2023

Reports from key informant interviews that showed older breastfeeding mothers [*lactating mothers above 35 years*] often had more pregnancies than younger breastfeeding mothers [*lactating mothers below 35 years*] supported this finding. Key informant interviews with older nursing mothers revealed several arguments for their many pregnancies.

We become pregnant frequently in order to experience childbirth, and it is also customary for women to become pregnant again and eventually have children. This is due to the fact that some of our husbands are petty about having fewer kids and enjoy nagging us frequently. Young ladies today are more sexually active and skilled in bed than we are, who always wear conventional clothing and don't dress nicely. The main way for us women to keep our husbands is through several pregnancies since these young girls are more stylish and know how to dress (37-year-old nursing mother, Sofa).

On the other hand, younger lactating mothers also provided reasons, including: lack of money to cover personal needs if partner is sexually starved; wives treated like they were purchased

from the market by husbands if unable to have children after five years of marriage; some husbands are not sexually active; lack of entertainment options to supplement sex; husbands not traveling for long in search of better pastures; and some husbands are abusive toward childless wives. The study's findings also revealed that older puerperial women were more multiparous than younger puerperial women. A poor use of maternal health facilities was also noted by older pregnant women who had more than one child over their childbearing years. Regarding the reported number of pregnancies in the previous 36 months, there were also notable community differences across the several study groups. For instance, Sofa and Waya (i.e., districts with a high incidence of maternal mortality) reported more of repeated pregnancies than Nyive and Shia (i.e., areas with a low incidence of maternal mortality). Policymakers should be concerned because this may be one of the elements contributing to the high rate of maternal death in Sofa and Waya. Therefore, when developing their interventions for preventing maternal mortality in these places, stakeholders must take into account pregnancy reduction programmes for the women who live there. Furthermore, by choosing not to utilize birth control during sexual activity, puerperal women cause additional injury to themselves. This is due to the possibility that their uterus would grow weaker.

4.5.2 Domiciliary Delivery facility use

The prevalence of maternal mortality in the childbearing population and the frequency of postpartum infections among childbearing women may both depend on how frequently pregnant women employ untrained domiciliary delivery services. In all the study areas, older nursing mothers (78.4%) used home birth facilities more frequently than younger lactating mothers (39.3%), according to the results shown in Tables 5.2. Additionally, the findings indicate that younger nursing mothers in Shia (10%) and Nyive (15%) reported using home birth facilities with traditional delivery attendants in the previous year, compared to younger lactating mothers in Sofa (80.7%) and Waya (60.7%). Additionally, home birth facilities were

utilized by older lactating mothers in Nyive (12%) more than they were by younger lactating mothers in Sofa (84.2%)

Table 4.2 Percentage of lactating women having domiciliary delivery at latest birth

Community	**Lactating women above 35**		**Lactating women below 35**	
	Num (N)	Percentage (%)	Num (N)	Percentage (%)
Sofa	22 (29)	75.9	6 (19)	31.6
Shia	2 (6)	33.3	1 (3)	33.3
Waya	15 (15)	86.3	3 (12)	25.0
Nyive	3 (11)	27.3	2 (3)	66.7
Total	**40 (61)**	**65.6**	**12 37**	**32.4**

Source: Field Survey, 2023 *N (Total Sample)

Given that the frequency of unassisted deliveries and the number of pregnancies determine to a large extent a woman's vulnerability to maternal death, the issue of multiple pregnancies with low maternal health facility use may have some implications for maternal mortality in the communities. The uterus may weaken as a result of those pregnancies, which has a significant impact on women's safety. This result is consistent with WHO (2019) studies that suggested that safe maternal health seeking or fertility behaviour practices may not always be predicted by high maternal mortality prevention knowledge levels. The fact that puerperal women who reported having numerous pregnancies within the previous 36 months also reported using maternal health facilities is extremely encouraging. This finding refutes the claim made by Crepaz et al. (2018) that a sizeable portion of puerperal women (10–60%) do not regularly adopt death-prevention techniques throughout labour and delivery. It was also evident that some populations, including the Nyive and Shia, resisted the use of and promotion of maternal health facilities in the West, likely due to their religious inclinations. The struggle against

maternal mortality in these communities will be greatly hampered by this circumstance. Additionally, the findings suggested that few puerperal women visited maternal health facilities. In theory, puerperal women who did not use maternal health facilities obviously put themselves in grave danger because there are no support services available. Due to endemic female poverty, sociocultural practices in Shia and Nyive, fertility, and maternal health seeking activities of women of childbearing age in Sofa and Waya, both scenarios have been related to structural dependence of women on males financially in African civilizations. According to the study's findings and the literature assessment, these factors contribute to higher rates of maternal mortality in these regions. Due to the structural makeup of the countries under study, most women, especially those who were childbearing age, were economically dependent on men. Given that women rarely have any say in health care decisions, this condition might have an impact on when pregnant women in the study locations seek maternal health services, endangering their lives.

4.5.3 Use of Herbal Concoctions

The survey sought to determine the use of concoctions among childbearing women, as these practices may increase blood pressure, and increase heart rate.

The study discovered that many breastfeeding mothers in the study communities used herbal mixtures for reasons that were not clearly medical, as shown in Table 5.4. As can be seen from the findings, Shia (90.0%) and Nyive (100.0%) had larger proportions of lactating mothers than Sofa and Waya did.

Table 4.3: Proportion of nursing mothers using herbal concoctions

Community	Lactating Mothers Above 35		Lactating Mothers Below 35	
	Num (N)	Percentage (%)	Num (N)	Percentage (%)
Sofa	6 (29)	20.7	16 (19)	84.2
Shia	6 (6)	100	2 (3)	66.7
Waya	1 (15)	6.7	8 (12)	66.7
Nyive	11 (11)	100	3 (3)	100
Total	24 (61)	39.3	29 37	78.4

Source: Field Survey, 2023 *N (Total Sample)

4.5.4 Polygamy

According to the findings, older nursing mothers in Shia and Nyive had at least one co-wife to compete with during childbirth in a polygamous home, compared to older lactating mothers in Sofa (10.3%) and Waya (20.0%) (See Table 5.8)

Table 4.4: proportion of older lactating women having a co-wife

Community	Number	Percentage
Sofa	3	10.3
Shia	4	66.7
Waya	3	20.0
Nyive	5	45.5
Total	**15**	**24.6**

Source: Field Survey, 2023

Cultural traditions have an impact on the Shia and Nyive people, according to focus group discussions and key informant interviews with senior lactating mothers. The traditional religion does permit enjoying a marriage with up to four other co-wives and promotes child birth competitions as a defensive mechanism and method of securing an inheritance. Because of this,

several participants reportedly made no effort to avoid the delivery competition with their co-wives. The conversations also revealed that some ethnic groups, like the *Ando* in *Shia*, tolerated and legitimately practiced the culture of competing with other co-wives in childbirth.

The finding suggest that polygynous marriages were widespread among Nyive and Shia residents. This result is consistent with research by UNFPA (2020), which indicates that societal pressures may lead women to accept shared husband arrangements with other women while they are also expected to give in to expectations that they will outperform rivals in such polygynous families. Contrarily, Oppong (2018), Tastemain and Cole (2021) used the incidence of maternal mortality in communities where polygamy predominated to draw the conclusion that if polygamy were in fact a powerful means of facilitating maternal deaths and the pressure it would put on women to outperform rivals in childbirth in polygynous homes, such traditional societies should have recorded a higher case of maternal mortalities since polygamy is predominant. Ghana Health Service (2019) noted that the data at hand do not indicate a direct correlation between polygyny and maternal mortality in Ghana, which is in line with this point of view. This is because the Eastern Region, which has the lowest levels of polygyny, has the country's worst maternal death rates, compared to the Northern Region, which has the greatest levels of polygyny. The best conclusion that can be drawn is that they are fertility-promoting habits that may put the women at risk for maternal death. The finding suggested that polygynous marriages were widespread among Nyive and Shia residents.

4.5. Contraceptive resistance and socio-economic dependency of women on men

The outcome of the conversations showed that the Catholic Church, which has a sizable following in Nyive, does not support the use of condoms as a method of contraception. Women reported being unable to reject their husbands' advances in a sexual way, unable to converse with men present, and unable to even consider taking birth control during sex. According to older lactating mothers who participated in focus groups and key informant interviews,

women's life in Shia and Nyive were structurally dependent on men in all areas, including finance and oversight. In a focus group discussion at Zongo, a Nyive suburb, a woman bemoaned:

'*My spouse drinks akpeteshie (a locally produced gin) all the time, which results in him using up the family's revenue on alcohol. We are unable to pay the tuition for my children and those of my co-wives, therefore they are not in school. We turn to traditional medicine to treat ourselves since we cannot even afford to pay for medical care since I am barred from working independently'* (29-year-old nursing mother, Nyive).

However, women in Sofa and Waya claimed to have received respectful treatment during focus group discussions and key informant interviews. According to breastfeeding mothers who lived in Sofa and Waya, polygamous marriages were structured around conversations and exchanges between partners and their families. However, respondents indicated that their husbands do occasionally exert some sort of control over them during the focus group discussions.

Due to the structural makeup of the countries under study, most women, especially those who were childbearing age, were economically dependent on men. Given that women rarely have any say in health care decisions, this condition might have an impact on when pregnant women in the study locations seek maternal health services, endangering their lives.

According to the study's results, males still talked to women about reproductive matters in the study communities, which led to the traditional belief that women were interested in power rivalry with men. But regardless of whether males talk about reproductive concerns with them or not, they will continue to be the ones who suffer the most. This finding supports Wodi's (2021) claim that some men would avoid discussing child-spacing concerns with their spouses out of concern that doing so would give them more authority. Additionally, Buor (2020b) emphasized that it's frowned upon in many African nations to discuss how many children one

should have with anyone. This phrase implies that for the sake of culture and custom, the female partners are deprived of a lot of reproductive knowledge. It must be emphasized, nevertheless, that technology and civilization have altered the society structure, making it difficult, if not impossible, to keep childbirth aspirations a secret from female spouses in the current world. These findings support the contention made in the theory of gender and power as well as the theoretical underpinnings of this study, which suggested that low income, gender inequality, and sociocultural practices that aimed to give men power over women may put women at risk for maternal mortality. This shows that in order to combat maternal mortality, a structural approach which is the main claim and subject of this study must be used in conjunction with other preventative measures.

4.5.5 Female Genital Mutilation and Womb Purification Rites

According to empirical data from the study, more than half of the clans in Nyive had a customary tolerance for the practice of female genital mutilation and purifying a pregnant women's womb. Customary tolerance for womb purification, female genital mutilation and early marriage were said to enhance womanhood in the focus group discussion and key informant interviews. This procedure promotes gender inequality by focusing on only the female gender and puts the expectant mother at risk for psychosocial stress-related health issues, such as high blood pressure, should the man who is cleansing her womb or cutting her clitoris insist on administering a hot ritual bath. In an interview at Nyive, a senior lactating mother described her experience:

When I became pregnant about ten years ago, I had womb cleansing. I can assure you that this ritual of so-called purging is cruel and degrading. It involved administering a hot ritual bath as well as certain unfounded concoctions. It feels cruel to womanhood, but I have no power to change it since, in our culture, it is taboo for women to defy convention, especially when it comes to concerns of reproductive safety. I hope that this custom will one day be abandoned

so that all women can live in freedom. This is more than self-imprisonment. (35-year-old lactating mother, Nyive)

A key informant from the Society for Women and Maternal Mortality Prevention in Africa (a community-based non-governmental organization) in Nyive expressed her regret that these cultural practices, particularly female genital mutilation womb purification, are common and practiced among the clan groups in Nyive during an in-depth interview. When questioned what could be done to stop or end these behaviors, he replied:

Only God has the power to change the issue since altering our culture would be exceedingly tough. Speaking out against womb cleansing is akin to giving yourself the death penalty. (45-year-old Society for Women and Maternal Mortality Prevention in Africa respondent)

4.5.6 Early Marriage

The findings showed that marriage was a rite of passage into maturity that was typically carried out for women prior to parenting. Any lady who was discovered to have been pregnant prior to the marriage ceremony was punished together with her parents. They might be exiled from the community for a while. To avoid being embarrassed by their daughters, parents, particularly mothers, took a deep interest in this marriage ceremony. Therefore, they would go over and beyond to make sure their daughters would complete the marriage ceremony. Girls as young as one (1) year were betrothed and as young as Thirteen (13) years old were married as a result of this development, showing that they were prepared for pregnancy and childbirth activities. This promotes gender inequality and puts young married women at risk of frequent childbirth and complications of pregnancy as well as childbirth. Due to their early exposure to the danger of pregnancy, early marriage is expected to have negative physical effects on adolescent females, according to the World Bank (2021). According to the paper, obstructed labor is one of the leading causes of maternal death in teenage females with poor nutritional status who

become pregnant before reaching full height and before their pelvises have fully matured. Harris (2020) also pointed out that adolescent brides who are malnourished have developing pelvises, which increases the likelihood of surgical delivery, labor obstruction, and obstetric fistula.

A key informant from Youth and Women Empowerment (a community-based Non-governmental Organization) in Sofa noted:

The marriage rite demonstrates the woman's readiness for birthing procedures. Parents go to great lengths to make sure that their daughters undergo the marriage ceremonies, and girls as young as 13 years are even married. Any woman who does not perform the marriage ceremony before pregnancy will be expelled from the community (46 years YOWE respondent, Sofa).

The study's findings also showed that pregnancy complications were so despised in Nyive and Shia that it was even difficult or impossible to talk about them in public; however, this was not the case in Sofa and Waya, according to younger and older lactating mothers. During a focus group in Waya, a woman noted:

'Prior to experiencing a difficulty during childbirth, it was difficult for young people in our era to understand what they were like. A young person is dignified when they are able to avoid culturally taboo subjects. Fortunately, or sadly, traditional ideals of fear for the afraid have been undermined by western civilizations to which our culture is exposed. Youth nowadays are having frank conversations about taboo subjects, while society stands by helplessly. May God save us' (34-year breastfeeding mother, Waya)

All these socio-cultural practices together present a situation where women in their childbearing years could ultimately be exposed to birth complications and eventually maternal death.

4.5.7 Structural Poverty

According to lactating mothers, low income and financial dependence on men limits access to food commodities, medications and hygiene care products in the study areas. According to the findings, the majority of nursing mothers (70.4%), who are primarily farmers and part-time traders, earn less than GH¢100.00 per month contrasted with their partners who earn above GH¢120.00 per month. The findings also showed that in all of the research communities, 22.4% of lactating mothers earned between GH¢100.00 and GH¢200.00 contrasted with their partners who made between GH¢150.00 and GH¢300.00. Similar to this, 7.1% of lactating mothers in each research community make GHS 300 or more a year compared with their partners who earned GH¢500.00 and above a year. Most breastfeeding women in all of the study communities earn between GH¢50.00 and GH¢100.00 per month contrasted with their partners who earned between GH¢150.00 and GH¢300.00, according to the results (See Table 4.5).

Table 4.5: Shows the study communities' breastfeeding mothers' income levels in comparison to that of their spouses.

	GH¢50.00–100.00		GH¢100.00–200.00		GH¢300+		Total	
	Num	(%)	Num	(%)	Num	(%)	Num	(%)
Sofa	34	70.8	12	25.0	2	4.2	48	100
Shia	6	66.7	2	22.2	1	11.1	9	100
Waya	19	70.4	5	18.5	3	11.1	27	100
Nyive	10	71.4	3	21.4	1	7.4	14	100
Total	**69**	**70.4**	**22**	**22.4**	**7**	**7.1**	**98**	**100**

Source: Field Survey, 2023

Focus group discussions and key informant interviews revealed that the study communities' median income levels were extremely low and unequal for men and women, leaving women particularly vulnerable and compelled to take on even physically taxing jobs to supplement their income. The conversations also made clear that working hard to make ends meet was

subjecting women to a variety of health issues. Household heads frequently cited stone-cracking for cash and hawking as ways that women were exposed to musculoskeletal conditions. Female participants in the conversations said that because of money, financially disadvantaged women were even moving from house to house washing clothes for affluent households and spraying weedicides, insecticides and pesticides for them unprotected. A nursing mother noted in sofa:

'Every time we provide these services in the community, we are terrified. Children from wealthy families in the neighborhood called us "wo va do looooo," which is code for "they have come ooo; to clean our house" (25-year-old nursing mother, sofa).

Low income has the effect of forcing these women to accept jobs that they otherwise would not have accepted, placing them at risk for health issues and making them more prone to maternal mortality. This outcome is in line with what Solomon et al. (2021), Aggleton (2022), Gregson et al. (2021), and Audet et al. (2020) observed. These studies collectively suggested that poor nutrition may have its roots in poverty. This conclusion has significant policy implications since it calls for measures that not only reduce poverty but also empower women by providing them with sources of income. In general, unemployment will put people in financial difficulty, especially women. According to a review of the research, American women who participate in microfinance programmes as a mitigation strategy for pregnancy reported fewer pregnancies. This implies that providing women with livelihoods and income-generating opportunities may encourage them to make far more educated decisions about having children, potentially lowering their vulnerability to maternal mortality. Additionally, the findings showed that older puerperal women had a widespread general impression that women live in indecent housing because they lack the funds to pay their rent. The findings also showed that some young puerperal women chose to deliver their babies at home, attributing this to financial

concerns. Maternal mortality has generally been linked to low socioeconomic level among women (Gregson et al., 2021; Audet et al., 2020), both in the study communities and elsewhere.

4.6 Discussion

The results presented in this chapter indicated that Sofa and Waya recorded high incidents of maternal death consistently over the years with Shia and Nyive also recording lower cases. These results are indeed not new as previous studies have revealed similar patterns of maternal death incidence. Both situations have been linked to the recourse of the women to having children very quickly one after the other, socio-cultural practices in Shia and Nyive and activities of quack delivery attendants and abortionists in Sofa and Waya. The findings of the study and the review of literature identified these factors as facilitating maternal death in these areas. These areas are all rural in nature and the possibilities of people resorting to multiple births in quick succession to entrench their blood line is very high. This situation could have implications for maternal health in the study areas as women who have children very quickly one after the other without enough uterus rest are vulnerable to uterus rupture and could jeopardize their life in the study communities. The results indicated that polygamous unions were quite common in Nyive and Shia. This result is similar to findings by UNAIDS/UNFPA/UNIFEM (2022) which suggest that cultural inclination may push women to readily accept multiple co-wives while at the same time expected or compelled to participate in childbirth contests. However, in contrast, Oppong (2021) using the incidence of maternal mortality in areas and communities dominated by polygamy concluded that if indeed, polygamy were a potent means of entrenching maternal mortality, such traditional societies should have exhibited a higher incidence of maternal death since polygamy is the normative form of marriage in these societies. Ghana Health Service (2023) in supporting this view observed that available data do not support a direct link between polygamy and maternal health in Ghana. This is because the Nyive and Shia communities which has the highest polygamy

levels also has the lowest maternal mortality rates while the Waya and Sofa communities which have the lowest polygamy levels, exhibits the highest maternal mortality rates in the Volta Region. The best conclusion which can be arrived at is that, these are traditional marriage practices that could expose the women to a lot of maternal health issues including death.

It also came to light from the results of the study that older women of childbearing age (above 35 years) were more inclined to having multiple childbirths than younger women of childbearing age (below 35 years). Older women of childbearing age with more than one child also reported low hospital delivery facility use. There were also some local variations among the study communities in terms of reported number of children in the last thirty-six months. For instance, Sofa and Waya (i.e. high maternal mortality incidence areas) reported high number of childbirths than Nyive and Shia (i.e. low maternal mortality incidence areas). This could probably be one of the factors accounting for the high maternal mortality incidence in Sofa and Waya and must be of concern to policy makers. Stakeholders engaged in maternal health activities in these areas must therefore consider programmes on childbirth spacing and reduction for the people in these communities in their maternal mortality interventions. Cultural practices that view the man as superior and bestow certain powers on him including the right to domestic violence against women and inability of women to assertive, refuse sex and negotiate contraceptive use are major avenues in exposing women to maternal death. This issue of domestic physical abuses and low contraceptive use could have certain implications for maternal mortality in the communities because the number of times a woman is physically abused, engages in unprotected sexual intercourse and the number of childbirths, determine to a large extent the vulnerability of such a woman.

This result is in tandem with WHO (2020) findings which suggested that, high knowledge level of maternal health may not necessarily be a predictor of safe reproductive behaviour practices. However, it is so refreshing to note that lactating women who reported multiple childbirths in the last thirty-six months also reported hospital delivery facility use. This result goes contrary to Crepaz et al (2021) assertion that, a considerable number of lactating women (i.e. 10-60%) do not consistently use hospital facilities during delivery.

It also emerged from the results that there was a wide general perception among young women of reproductive age that pregnant women do not indulge in hospital delivery, diet in a balanced manner and accept dangerous work citing financial difficulties and lack of employment as the cause. Generally, low-income status among women has been identified as one of the factors driving maternal mortality in the study communities and elsewhere (Gregson et al., 2002; Audet et al., 2010). The implication of low income is the fact that it makes these women rather adopt delivery behaviours and dietary habits which ordinarily would not have been adopted, that could ultimately render them vulnerable and susceptible to maternal death. This situation, if not properly checked could lead to further unprecedented maternal death. Indeed, this result is similar to observation by Solomon et al (2020), Aggleton (2019), Gregson et al (2022), and Audet et al (2020). All these studies indicated that poverty may be a driving force for women to either engage in home delivery or have multiple children.

This finding has a lot of policy implication as it calls for assertiveness and livelihood skills training for them. Generally, lack of employment will lead to financial difficulties for the women. Indeed the findings of the study indicated that young women of reproductive age who engaged in home delivery in the last birth, cited lack of funds as one of their reasons. So for pregnant women who are in financial difficulties, what is important to them immediately is the money to solve whatever problems they might be encountering. The WHO (2020) suggested that women who are involved in a micro-lending scheme as a mitigation measure in the Haiti,

reported birth reduction after two years. This suggests that, creating livelihoods and income generating avenues for women could encourage them to take much more informed reproductive decisions that could reduce their vulnerability to maternal death.

It was also clear that certain communities such as Nyive and Shia opposed hospital delivery facility use and its promotion probably because of their religious inclination. This situation presents a major challenge to the fight against maternal mortality in these communities. The results also pointed to low hospital delivery facility use. Ideally, pregnant women who were not using hospital delivery facilities clearly subject themselves to great danger due to the fact that they can hardly manage a complication should any emerge in the course of delivery. In addition, women also do more harm to themselves by refusing to use hospital delivery facilities.

This result is consistent with the findings by Ahmed et al (2021) which emphasized that hospital delivery facilities could only be effective when used consistently. The evidence from the study suggested that the traditional notion of children becoming inconsiderate and callous when delivered at the hospital still persisted in the study communities. But the fact still remains that whether children are home-delivered or not, will not deter them from being heartless or otherwise. This result is similar to the contention by Wodi (2021) that certain clans would not encourage hospital delivery with the fear that it would in-humanize their blood. WHO (2021) also emphasized that hospital birthing is a taboo in many African clans. The implication of this statement is that the women are denied hospital delivery care for the sake of culture and tradition. However, it must be emphasized that modernity and civilization have changed the societal setup and it is difficult, if not impossible to prevent pregnant women of today from delivering at the hospital if they so wish. In this case, this study argues that whether clan heads enforce traditions on hospital birth or not, pregnant women of today will engage in it if they so wish. It is therefore better to discuss hospital delivery advantages with the traditional authorities to fine-tune the custom. These results validate the argument advanced in Paulo

Freire Education theory, the theory of gender and power and the conceptual framework of this study which indicated that community outreach activities that sought to give behaviour-change enlightenment to targeted sections of the general populations in local conditions yields may desired results which in the context of this study a reduction in the incidence of maternal mortality. This suggests the need for structuralist approach to maternal mortality eradication which is the central argument and focus of this study in addition to other eradication strategies to fight maternal mortality.

CHAPTER FIVE

MATERNAL MORTALITY PREVENTIVE SERVICES AND CHALLENGES OF STATE AND NON-STATE INSTITUTIONS

5.1 Introduction

The primary goal of this study was to analyze the success of maternal mortality prevention programmes and services instituted and being implemented by state and non-state entities in Sofa, Waya, Shia, and Nyive. This chapter offers primary and secondary data from the field on the types of interventions used to prevent maternal mortality by state and non-state institutions in Sofa, Shia, Waya, and Nyive. The chapter also examines primary data on the challenges faced by state and non-state actors in their efforts to provide maternal mortality prevention measures in Sofa, Waya, Shia, and Nyive.

5.2 State Institutional Interventions for Maternal Mortality Prevention

This section present findings on state institutions engaged in maternal health interventions in Sofa, Waya, Shia and Nyive and record of their interventional activities. The Ho Municipal Directorate of the National Commission on Civic Education, the Adaklu District Directorate of the Information Services Department, the Adaklu District Assembly, the Ho Municipal Assembly, the Adaklu District Directorates of Health, the Ho Municipal Directorates of Health, the Waya Health Directorate, and the Waya Health Directorate were found to be active in this regard. The state agencies reported themselves as engaged in public education, targeted community education, targeted group counselling on assorted subjects, free obstetric health commodities, economic stimulus packages and humanitarian relief

5.2.1 Ho Municipal Assembly Interventions for Maternal Mortality Prevention

The study's findings revealed that the Ho Municipal Assembly engaged community educators to educate people about maternal mortality and other issues of concern utilizing social groups.

The presentation also included information about the benefits of knowing one's blood pressure level during pregnancy. Lactating mothers reported in key informant interviews at Shia that it was beneficial for pregnant women to check and know their blood pressure status because it would enable pregnant women and lactating mothers be cautious and manage it in case it has been found towards a complication-free delivery. However, other women complained about being unable to obtain contraception and being unwilling to undergo high blood pressure screenings for fear of testing positive for it. Another measure initiated by the Ho Municipal Assembly was the distribution of contraception devices (condoms) to around 137 Shia community members. During the second quarter of 2021, certain contraceptives were also supplied to various groups of artisans. The number of condoms supplied to Shia groups is seen in Table 5.1.

Table 5.1: Number of condoms supplied to Shia Groups

Group	**Number of condoms distributed**
Hair Dressers	200 pieces of female condoms
Market Women	1000 pieces of female condoms
Female Sprayers	65 pieces of female condoms
Dress-Makers	90 pieces of female condoms
Female Farmers	600 pieces of female condoms

Source: Ho Municipal Assembly, 2023

Through focus group discussions with lactating moms, it was discovered that while these distributions were made, they were insufficient to cover the bulk of the community members. An in-depth interview with the Ho Municipal Assembly's coordinating director showed that contraception devices were promoted in order to reduce unwanted pregnancies in Shia.

However, he observed that because of the character of the society, which was dominated by traditionalists, dealing with the subject of contraceptive device use was always difficult. He stated that community members considered that advocating contraceptive device use was equivalent to promoting promiscuity in society, and hence they sometimes dissuade their members from using contraception devices. Additionally, In the Ho Municipality, the Ho Municipal Assembly launched a few development interventions targeted at pregnant women and breastfeeding mothers by showering them with affection. An in-depth interview with the coordinating director at the Ho Municipal Assembly revealed that they provided development assistance in the form of distributing commodities such as sugar, rice, soaps, and food supplements, and that when funding from the District Assembly's Common Fund was available, sponsorship for pre-eclampsia drugs was also undertaken to support pregnant women in the Ho Municipal Areas. The investigation discovered four (4) Shia pregnant women's support groups with at least 50 members each: Dela Associations, Edem Associations, Aseye Associations, and Bubune Associations. However, in a focus group discussion with nine (9) members of Shia pregnant women's support groups, they discovered that the type of love and care provided to them was insufficient. Though pregnant and lactating women were interested in the occasional commodities supplied to them, they want more income-generating activities so that they could at least be self-sufficient financially. However, this was absent since the Assembly said that funding for maternal mortality prevention activities from the District Assembly's common fund was insufficient, and so they could not provide any funds for pregnant women and breastfeeding mothers to start any company on their own.

Despite the significance of these research findings, lactating mothers in these study communities feared going through maternal counseling and screening for existing disease because they thought it might lead to an early grave in the event of a positive result rather than the health facility getting rid of it to guarantee safe delivery. To some lactating mothers, HIV

and Syphilis do not actually kill people, knowledge of bodily invasion by these infections does, not the actual diseases themselves (Key Informant Interview, 2021). According to the study's overall findings, respondents were reluctant to undergo maternal counseling and screening. This was a result of anxiety rather than cost.

This finding is in line with those made by WHO (2022), which asserted that women who are expecting do not undergo maternal counseling and general screening because they are afraid of testing positive for syphilis, hypertension, or HIV. Therefore, this circumstance creates a potential pathway for infections to fester if some are already present in the body of the pregnant woman, which may compromise the safety of the birth and hinder expectant mothers' ability to take preventative measures and lead healthy lifestyles. Pregnant women who choose not to receive counseling or routine universal screening who turn out to be positive for some conditions and diseases may be creating a situation where diseases and conditions progresses unnoticed. The nature of these illnesses makes it difficult for expecting mothers to adhere to treatment regimens, even when they are aware of their syphilis, hypertension, or HIV status. Additionally, it should be mentioned that socioeconomic inequality and unemployment may be obstacles because they may restrict pregnant women's access to medical care, which may have an impact on a healthy birth. This implies that even though the study's findings showed that district assemblies, district population councils, community health centers, community-based non-governmental organizations, and community-based faith-based organizations were putting forth great effort to prevent maternal mortality in accordance with the SDG 3 target, their efforts are insufficient if expectant mothers are still frightened and unable to seek out maternal counseling. So, there is still a lot of work for these communities' stakeholders to accomplish.

5.2.2 Adaklu District Assembly Interventions for Maternal Mortality Prevention

Field investigations found that the Adaklu District Assembly has made monitoring visits to two pregnant women support groups during their monthly meetings in order to assist them navigate the district's maternity system. Furthermore, the Adaklu District Assembly sent representatives to annual review workshops to assess progress of Community Based Primary Health Care Projects by Government and her Partners aimed at enhancing community engagement, improving maternity health services, and strengthening the health environment in all communities throughout the district. Last but not least, three (3) maternity counseling centers were placed under supervision through monitoring visits by the Adaklu District Assembly, among others (See Table 5.2).

Table 5.2: Maternal Mortality Prevention Activities by the Adaklu District Assembly

Intervention Area	Activity
Decentralized response coordination and management in the district	Coordination of all maternal mortality prevention activities
	Progress review meetings with stakeholders of maternal mortality prevention projects
	Monitoring visit to pregnant women support groups

Source: Adaklu District Assembly, 2023

All municipal assemblies had maternal counseling centers, where counseling for pregnant women was conducted, according to the study's findings. Maternal counseling is seen as an effective strategy towards behavior change and provides the women with the chance to protect themselves by engaging in healthy behaviors.

5.2.3 Interventions for Maternal Mortality Prevention by the Adaklu District Directorate of Information Services Department

The survey also indicated that the Adaklu District Directorate of the Information Services Department is implementing aggressive programmes in the Municipality in collaboration with the Waya Health Centre and the Health Center at Sofa. An in-depth interview with the District's Information Officer revealed that about nine (9) maternal mortality prevention implementing partners in the district were involved, along with approximately six (6) organizations, to deliver maternal mortality sensitization for District people. They were sensitized to potential obstetric medical problems that may develop, healthier living habits mainly through behaviour change communications, Furthermore, 138,003 contraceptive devices were supplied in some of the district's underserved communities. In addition, love and support were extended to 382 pregnant women and lactating mothers who received counseling, health education, food supplements, and treatment for opportunistic infections, and 54 community maternal mortality prevention educators were trained and equipped with the capacity to conduct community outreach programmes.

According to the study's findings, the Ho Municipal Directorate of Health has provided nutritional support for pregnant women through various food programmes, maternal counselling, pre-eclampsia prevention for pregnant women, HIV screening for pregnant women, and health promotion in the Municipality since 2003, with funding from the Ghana National Population Council and overseas development assistance, in an effort to reduce maternal mortality in the Ho Municipality. The survey also discovered that the Nyive Health Center and the Ho Municipal Directorate of Health have informed community members about maternity health services and educated them on maternal mortality and other important topics. Furthermore, the two facilities provided free HIV screening and counseling to pregnant women and breastfeeding mothers. Finally, the groups took on pre-eclampsia and STI management.

They occasionally promoted and distributed contraceptive devices. The study discovered that one of the ways the health centers in the study communities sensitized people about maternal mortality and other issues of concern was by using their notice boards and front desk at the maternity department and other facilities to educate people on safe delivery requirements. The reception area is the initial point of contact at any maternity department.

Plate 1 depicts how the Nyive health center's maternity unit reception desk is used to educate clients and visitors about maternal mortality prevention.

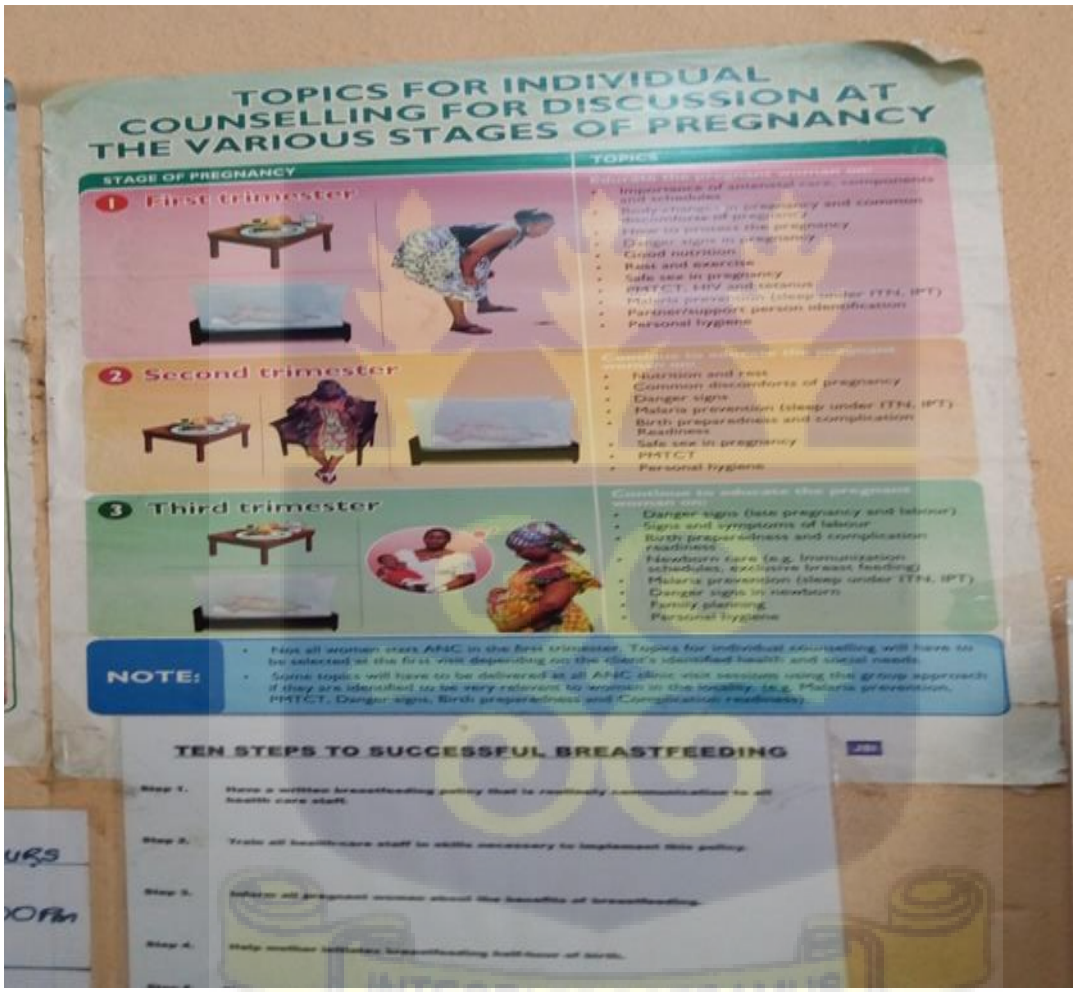

Plate 1: Posters in the Nyive Health Center's welcome area educate about antenatal care routines.

Source: Field Survey, 2023

The nature of these illnesses makes it difficult for expecting mothers to adhere to treatment regimens, even when they are aware of their syphilis, hypertension, or HIV status. Additionally, it should be mentioned that socioeconomic inequality and unemployment may be obstacles because they may restrict pregnant women's access to medical care, which may have an impact on a healthy birth. This implies that even though the study's findings showed that district assemblies, district population councils, community health centers, community-based non-governmental organizations, and community-based faith-based organizations were putting forth great effort to prevent maternal mortality in accordance with the SDG 3 target, their efforts are insufficient if expectant mothers are still frightened and unable to seek out maternal counseling. So, there is still a lot of work for these communities' stakeholders to accomplish. Another strategy for lowering maternal mortality was identified as the screening and management of pre-eclampsia. According to the study's findings, all pregnant women receiving antenatal care at clinics had access to counseling and screening for stress-related medical conditions like high blood pressure, and those who tested positive were being treated for their condition with either a long or short course of medication. Pre-eclampsia screening and care have been highlighted as an important medical intervention area in several African nations, including Botswana, Kenya, Namibia, Ethiopia, Ghana, and the United States, according to numerous research papers that have emphasized its significance and influence.

For instance, the arguments for the necessity of pre-eclampsia management have been made by Kanabus (2021), United Nations (2022), and USAID (2021). In this study, it was discovered that all hospitals and health directorates serving the Sofa, Waya, Shia, and Nyive populations provided pre-eclampsia care services and had areas for mother counseling. However, the problem of coercion related to pre-eclampsia counseling and management for pregnant women during antenatal care presents a challenge and may have some policy implications for human rights.

When weighing the effects of requiring pre-eclampsia screening and management for pregnant women on preventing maternal mortality and violating human rights, one is likely to accept and realize that prevention is undoubtedly preferable to cure, particularly when it comes to the issue of children who may be made to suffer the consequences of their mother's death unjustly

In conclusion, the study found that state institutions in the study areas mostly offered behaviour change communications, education about healthier living habits, cultural counselling, education about obstetric medical problems, obstetric medical care, contraceptive devices, obstetric medicines and occasionally food commodities to pregnant women and breastfeeding mothers. In-depth interviews found that there were no explicit programmes targeting pregnant women and nursing mothers to financially support them. Furthermore, the study discovered that pregnant women and breastfeeding mothers were not included in any maternal mortality prevention interventional programmes.

5.3 Non-State Institutional Interventions for Maternal Mortality Prevention

The Society for Women and Maternal Mortality Prevention in Africa in Nyive, the Christian Council in Shia, Youth Alive in Nyive, Kekeli Foundation in Nyive, 4H-Ghana Foundation in Waya, and Youth and Women Empowerment (YOWE) and the Queen Mothers Association in Sofa were among the non-state institutions identified in the study communities to be providing maternal mortality prevention services.

5.3.1 Youth and Women Empowerment (YOWE) Activities to Reduce Maternal Mortality

The study's findings revealed that Youth and Women Empowerment (an NGO) conducted numerous programmes to raise maternal mortality awareness among community members, particularly female youth in Sofa and the surrounding villages. The goal of conducting these programmes was to raise community members' awareness of maternal mortality and to assist

them in making informed decisions and changing their fertility habits. Table 5.3 depicts YOWE's maternal mortality prevention actions in Sofa.

Table 5.3: Youth and Women Empowerment (YOWE) activities to raise maternal mortality awareness in Sofa

Intervention Area	Activities
Community Education (*Behavioral Change Communication and cultural group counselling*)	1. Contraceptive Use Workshop for the Youth
	2. Child, Early, Forced Marriage (CEFM) Sensitization for community leaders
	3. Family Planning Workshop
	4. Healthier Eating Habits Workshop for the Youth
	5. Psychosocial stress prevention workshop for Market Women
	6. Malaria Prevention Workshop for Artisans

Source: Fieldwork, 2023

YOWE conducted workshops for hairdressers, seamstresses, fitters, auto electricians, welders, tailors, barbers, and washers. According to the YOWE program manager, the goal was to assist community people in changing their fertility habits.

Plate 2: depicts a cross-section of workshop attendees.

Plate 2: Workshop with female Artisans in Sofa and Surrounding Communities

Source: YOWE, 2023

In an interview in Sofa, a younger breastfeeding mother stated:

*"The high maternal mortality cases here are due to poverty; we, the lactating mothers, cannot meet our needs." Our husbands are dropping upkeep for us. The only labor available here is farming and little trade, which does not provide us with enough money to support ourselves. We pushed our husbands, but it was in vain. Oh, we're in pain. They verbally attack us at times, and men openly refuse to look after us' (*28-year-old younger lactating mother, Sofa*).*

The survey also discovered that six (6) community educators were chosen by YOWE and educated by theater Network (a theater training organization) to conduct community education on maternal mortality prevention in Sofa. An Adolescent and maternal Corner was also established at the Sofa Health Center to ease the implementation of youth and maternal counseling.

Plate 3 depicts some of the youth utilizing theatre to raise community awareness about maternal mortality.

Plate 3: Using Drama Groups to Sensitize the Community in Sofa

Source: YOWE, 2023

In-depth interviews with eight (8) young breast-feeding mothers in Sofa revealed that these maternal mortality prevention activities of YOWE were extremely effective in raising public awareness of maternal mortality and educating people on how to adopt healthy reproductive behaviors and take safeguards when necessary.

According to the study's findings, YOWE has been offering financial assistance to pregnant women and breastfeeding mothers in the form of a small fund or credit plan to assist them in raising start-up capital in Sofa. According to the report, the Population Council provides around 15% of YOWE's funding. YOWE set aside a portion of this cash each year to serve as a revolving fund from which loans were made to pregnant women and breastfeeding mothers who wanted to start their own businesses. In an in-depth interview with the YOWE programme manager in Sofa, she discovered that the plan began with roughly 30 women from two pregnant women support groups at a 5% interest rate. He argued that the rise in maternal death cases was due to insufficient financial aid, and that initiatives for maternal mortality prevention must include a poverty reduction component.

Table 5.4: Shows a list of some of the scheme's recipients

Beneficiary	Location	Amount Given (GH₵)	Period of Repayment	Year
Beneficiary 1	Sofa	190.00	17 months	2018
Beneficiary 2	Sofa	140.00	11 months	2017
Beneficiary 3	Sofa	240.00	19 months	2016
Beneficiary 4	Sofa	190.00	17 months	2018
Beneficiary 5	Sofa	140.00	11 months	2018
Beneficiary 6	Sofa	140.00	11 months	2017
Beneficiary 7	Sofa	140.00	11 moths	2017
TOTAL		**1,180.00**		

Source; Fieldwork, 2023

In a focus group discussion with lactating women in Sofa, they discovered that the scheme was still in operation and that it had helped them engage in various income-generating activities. Some people used the space to launch modest companies, such as selling sachet water. Others were involved in vegetable gardening as well as cassava and maize production. The scheme's issue was that the quantity of money supplied to them was very tiny, and the repayment time was quite short. However, an in-depth interview with a respondent from YOWE in Sofa revealed that the plan was encountering serious issues because recipients were unable to repay their loans in time for others to access the facility:

'Because of the culture of low loan re-payment, the loan collection rate was very low, threatening the scheme's sustainability' (42-year-old lactating mother, Sofa).

The economic atmosphere in African settings makes debt-servicing quite cumbersome.

5.3.2 Sofa Queen Mothers Association Activities to Reduce Maternal Mortality

The survey also discovered that the Queen Mothers Association is one of the community-based non-governmental organizations in Sofa that provides services for maternal mortality prevention. An in-depth interview with the Queen Mothers Association's programmes manager in Sofa revealed that the Association was involved in educating women about obstetric death prevention at community durbars, promoting contraception in communities, building capacity on pre-eclampsia on radio for pregnant women, facilitating obstetric medical outreach services, and providing social support to pregnant women and lactating mothers. Furthermore, the survey indicated that the Association has created a strategy for reaching out to people by visiting them in their homes for face-to-face meetings. This allows the organization to educate them on the need of avoiding unsafe fertility practices that could endanger their lives, as well as sensitize them to seek maternal counselling and obstetric medical screening. The sociocultural environment of the African setting expects women to outperform rivals in childbirth in polygamous homes without regard to their safety while recognizing the right of men to gather more women in polygamous relationships for the childbirth contest, unaware of the right of women to have safe childbirth by asking their husband to use contraceptives. As a result, this environment undermines equality between men and women though the queens are making serious inputs.

5.3.3 4-H Ghana Activities to Reduce Maternal Mortality

The investigation discovered that 4-H Ghana (a community-based non-governmental organization) that provided maternal mortality prevention services in Waya was also offering some maternal mortality prevention services in Waya. The four letters 4-H stand for heart, hand, head, and health. According to the study, they provided social assistance to pregnant and nursing mothers, sexually transmitted infection information to the general public through community educators, and mobile network short code texting service. In an in-depth discussion

with the non-governmental organization's programs manager in Waya, he underlined that they were doing something distinct from the other organizations using the mobile network messaging service.

According to him, they discovered that pregnant women and breastfeeding mothers have a tough time accessing treatment services at obstetric medical facilities. They thus collaborated with pregnant women's and lactating mothers' support groups where special mobile short codes were given and those who needed some obstetric medical services, contraception, and other social help and assistance at any time could either text their messages using their short codes or just give a flash on the organization's number and they will immediately provide you with the needed service.

However, they confirmed that the program began some time ago but could not be sustained in a separate focus group discussion with nursing moms and key informant interviews with lactating mothers in Waya. In Waya, a lactating mother said:

"Don't mind them; they were just using us to get money from some organizations outside Ghana." Apart from contraceptive devices, they have never provided us anything else. We no longer go to programmes when they call us. It is preferable to make time for a quick job that will pay than to attend their pointless programmes and return empty-handed. (28-year-old lactating mother, Waya)

5.3.4 Interventions by Society for Women and Maternal Mortality Prevention in Africa

On Mother's Day 2021, the Society for Women and Maternal Mortality Prevention in Africa conducted Love and Trust activities to reach out to community members with maternal mortality prevention messages and inform them about maternal mortality trends in Nyive. Plate 4 depicts some of the participants who attended the program.

Plate 4: Nyive Youth listen to a Counsellor during the Mother's Day Celebration.

Source: SWAMMP, 2023

An in-depth interview with the programmes manager of the Society for Women and Maternal Mortality Prevention in Africa (a community-based non-governmental organization) in Nyive indicated that uterine purification and its accompanying rites were popular in Nyive. The conversation also came to light the fact that polygamous marriage and its accompanying childbearing competition among rivals were highly widespread due to the character of the society, which is largely a traditional group. He also emphasized that the practice of women engaging in dangerous employment for extra revenue was widespread in the community, despite the fact that there was nothing they could do about it other than the regular teaching and counselling already in place.

5.3.5 Youth Alive Activities to Reduce Maternal Mortality

Youth Alive (a community-based Non-Governmental Organization) also worked with the youth in Nyive to distribute contraceptive devices to the surrounding communities and to encourage community members to space their childbirths under the supervision of the Society of Women and Maternal Mortality Prevention in Africa. According to an in-depth discussion with the Youth Alive program manager, around 1,000 condoms were delivered to

approximately 250 women and men in the community. Plates 5 and 6 show some young people demonstrating how to use condoms.

Plate 5: A young woman illustrates how to properly apply a female condom.

Source: SWAMMP, 2023

Plate 6: A nurse demonstrates how to properly attach a male condom.

Source: SWAMMP, 2023

During a focus group session, an older nursing mother asked, "Why should you cover your sex organ with a rubber and yet enjoy sex in the name of rejecting God's consequence of sex?" How do I wrap Akple in paper and consume it? (34-year-old lactating mother, Nyive). However, four (4) younger breastfeeding mothers interviewed at Nyive had no understanding about female condoms for contraception and how they are used, but they wanted to see one while being aware of the male condom. The women remarked that moving to the shop to purchase condoms was difficult given their socio-cultural setting, which considers those who use condoms as promiscuous. This result is in line with research by Lawrence and Scott (2022), Merson et al (2021), Barnett and Whiteside (2022), and UNAIDS (2021), which suggested that promotion of family planning is a crucial component of intervention services for the reduction of maternal mortality. The findings also showed that stakeholders focused solely on pushing contraception while ignoring other tactics like advocating for physical readiness and celibacy. It is critical to recognize that the use of contraceptives and their efficiency in reducing maternal mortality have been challenged and discussed. According to some reports, contraceptives do not completely prevent unintended pregnancies. Barnett and Parkhurst (2021) advocated for this school of thought.

The effectiveness of contraceptives in avoiding maternal mortality has also been hotly debated, perhaps as a result of improper use on the part of individuals who use them, as noted by Ahmed et al. (2022). Those with fervent religious beliefs and sentiments also assert that the promotion of contraception breeds promiscuity and exposes young people to undesirable sexual lifestyles and behaviors such having numerous partners at once. The need to address the aboriginal socio-cultural limitations that women face, as mentioned by Smith (2023), must be emphasized together with the fact that the topic of maternal mortality prevention must go beyond the promotion of contraception.

5.3.6 Maternal Mortality Prevention Activities by Kekeli Foundation

The study's findings indicated that one method of sensitizing and educating the community about multiple pregnancy and social discrimination reduction was to use radio (FM stations) as a medium. According to an interview with the Kekeli Foundation's programme manager, an advocacy exercise on multiple pregnancy, social prejudice reduction, and gender-based violence was performed using Radio Kekeli (one of the community's radio stations) in Nyive as an outlet.

Plate 7 depicts Kekeli Foundation personnel in the studio of Radio Kekeli

Plate 7: Radio Programme on Multiple Pregnancy Prevention in the Nyive Community

Source: Kekeli Foundation, 2023

In an in-depth interview with the Kekeli Foundation's programmes manager, she lamented that the programme could not buy additional airtime due to financing constraints, but she underlined that it was the greatest way to reach out to the bigger community members.

5. 4 Partnerships of State and Non-State Institutions

5.4.1 The Christian Council and the Ho Municipal Assembly

According to the findings of the study, the Ho Municipal Assembly, in partnership with the Christian Council (a faith-based community group), has implemented community education programmes to extinguish the flame of maternal mortality in Shia (See Table 5. 5 below).

Table 5.5: Maternal Mortality Prevention Programmes Implemented by the Ho Municipal Assembly and the Christian Council (2015-2019)

Intervention Area	Activities
Education (*Behavioral Change Communication and cultural group counselling*)	1. Maternal counselling outreach
	2. One-on-one family planning discussion with the Youth
	3. Individual and/or small group menu discussions with adults
	4. Sensitization on culture related harmful practices

Source: Ho Municipal Assembly, 2023

Table 5.5.1: Maternal Mortality Prevention Programmes Implemented by the Ho Municipal Assembly and the Christian Council (2015-2019)

Intervention Area	Activities
Poverty and Humanitarian Relief	1. Contraceptive device distribution
	2. Food supplement distribution
	3. Insecticide treated net distribution

Source: Ho Municipal Assembly, 2023

An in-depth interview with the Christian Council in Shia's programming manager revealed that the council itself could not reconcile its position on condom use to prevent unplanned pregnancy since it would promote promiscuity. He said that they were hesitant to distribute contraceptive devices because of this development, but as he puts it:

'When you're torn between the devil and the deep sea, you must make a decision. In this instance, a condom use against unplanned pregnancy is an option, but it is not a license to promiscuity or sexual freedom. People should remember that pre-marital sex is a sin, and the more you commit to it, the more you will eventually dig your own grave' (37 years old older lactating mother Shia)

5.4.2 The Ho Municipal Assembly and the Society for Women and Maternal Mortality Prevention in Africa

According to the study's findings, the Ho Municipal Assembly has implemented maternal mortality awareness programmes in partnership with the Society for Women and Maternal Mortality Prevention in Africa (a community-based non-governmental organization that provides maternal mortality prevention services in Nyive. They trained community educators at Nyive.

Plate 8 depicts a cross-section of the participants in these activities.

Plate 8: At a training with community educators in Nyive, SWAMMP Regional Coordinator gives a lecture on maternal mortality prevention.

Source: SWAMMP, 2023

Participants were also educated through the process of community mobilization for pregnant women seeking antenatal care and childbirth at health facilities, maternal counselling, pre-eclampsia prevention, and demonstrations on the correct usage of both male and female contraceptive devices.

Plate 9 depicts a cross-section of the programme's attendees.

Plate 9: A Facilitator giving a presentation during the Training

Source SWAMMP, 2023

5.5 State Institutional Challenges

5.5.1 Funding

Funding is a critical issue for state institutions involved in maternal mortality prevention in the study communities. Donor organization financing for maternal mortality prevention programmes were insufficient and untimely for effective programmes. This was attributed to internal and external factors, some of which were caused by the Ghana National Population Council's multiple bureaucratic layers through the Government of Ghana and international donor agencies such as the Global Fund in releasing funds for maternal mortality prevention activities.

In an in-depth interview in Ho, the coordinating director of the Ho Municipal Assembly stated that, despite the Assembly's mandate to use 0.05% of its quarterly allocation of District Assembly Common Fund (DACF) on pregnant women and other vulnerable residents, it has only been paid once in the past. He also mentioned that the Ghana National Population Council does not communicate with the Assembly before picking NGOs for reproductive health financing. As a result, the NGOs were accountable to Accra and only copied the Assembly on reports they sent to Accra. He stressed that, unlike in the past, the Ghana National Population Council does not assist the Shia pregnant women's support group. Finally, he stated that the Ho Municipal Assembly was intended to provide love and support to expectant and lactating mothers in the form of food commodities and pre-eclampsia medications, but they were unable to do so due to a lack of funding. This rendered the Ho Municipal Assembly useless in terms of maternal mortality prevention initiatives.

When asked about the next steps, he said:

'*Efforts to prevent maternal mortality will be fruitless and in vain until the Ghana National Population Council revises its mode of funding to various interest groups in the Municipal area and allows the Municipal Assembly to play a leading role and be a major player in activities for maternal mortality prevention in addition to sufficient logistical support from central government of Ghana. May God save us' (42-year-old Ho Municipal Assembly coordinating director*)

According to Harman (2018), the World Bank and the IMF, as well as other international institutions primarily affiliated with the UN, have used funds for maternal mortality prevention and conditions attached to it to advance their own agendas in Ghana and other nations.

To enable the prompt distribution of funds for maternal mortality reduction initiatives, the processes for obtaining funding by community-based non-governmental organizations and

community-based faith-based organizations from the Population Council must be made flexible.

5.4….Culture of silence on contraception

Another issue that was raised in the study communities was the drudgery in encouraging contraception use to prevent unwanted pregnancy. Worse, there is a cultural assumption that contraception advertising fosters promiscuity in society, so many avoid purchasing and using it. The district directorate of health and community health institutions faced a dilemma when some breastfeeding mothers did not utilize contraception to prevent undesired pregnancy. During an interview, the midwife in charge of the Nyive health center's maternity unit stressed: *The more unwanted pregnancies and children you have, the more likely you are to die during childbirth or suffer uterine weakness (35-year-old midwife in charge of the Nyive health center's maternity unit)*

The promotion of contraception, persuading expectant mothers to participate in maternal counseling and general screening, aboriginal practices, poverty, social inequality, lack of time and prejudice against women were among the other difficulties. The findings of Bankole (2020) and de Waal (2021), which suggested that cultures such as female genital mutilation, infant betrothal, taboo-based food restriction, polygamy, fertility, and purification rites are obstacles to effective maternal mortality prevention, are also consistent with these results. It is clear that stakeholders need to step up their efforts to inform and educate people about the importance of including traditional birth attendants and women in programs to minimize maternal mortality. Additionally, behavior change programs must be zealously pursued and increased in local communities, particularly to alter the fertility habits of couples and to inspire them to get counselled and screened during pregnancy, avoid multiple pregnancies, and follow a healthy diet.

5.5.2 Attitude towards medical intervention during pregnancy, delivery, and puerperium

The study also identified a lack of commitment on the part of pregnant women in the study communities to undergo maternal counselling and screening for high blood pressure, syphilis, and HIV due to fear of testing positive and having their status disclosed to others as a major challenge confronting primarily district health directorates and community health centers. The midwife in charge of the maternity unit at Waya health facility outlined some of the obstacles they faced in preventing maternal death as follows:

We face numerous challenges, including pregnant women's reluctance to come for maternal counselling and obstetric medical screening, non-disclosure of physical abuse in the name of culture, culture of home birth, use of contraception to prevent unwanted pregnancies, and use of herbal concoctions, the problem of high blood pressure medication, social discrimination against women, non-enforcement of environmental laws, antenatal patronage, disease outbreaks, outmoded customs, pregnancy beliefs, unsafe illegal abortion, funding, logistics, midwifery resources, delivery equipment, delivery technology, terrain, transportation, Maternity infrastructure, service conditions, overdependence on government for health infrastructure, coverage of national health insurance program, pastors who promise to save pregnant women from complications, and transporting women in labor to prayer camps (33 year old midwife *in charge of the maternity unit at Waya health center)*

Additionally, education should focus more on promoting contraception, especially in cultures where polygamy is prevalent. The problem of indigenous and aboriginal practices can only be resolved by diplomacy, educated education, and a methodical approach.

This argument is unmistakably consistent with the need for a structural approach to maternal mortality prevention put forth in this study, which supports the need to develop empowerment programmes for women so they can bargain with their husbands about using contraception and become financially independent of them. The conceptual framework of the study, which

recognizes social inequality as a barrier to women being financially independent from their spouses, is also helpful for this outcome.

The framework also suggests that actions to reduce maternal mortality should include measures to combat social inequality, unemployment, and poverty. This will help women find work and generate income.

5.5.3 Outmoded customs and socio-cultural beliefs

The findings also revealed that the most significant barrier to maternal mortality prevention initiatives faced by district assemblies, district information services department, district health directorates and community health centers in the study communities was ancient social discrimination against women. Social discrimination was viewed as a barrier not just to maternal mortality prevention intervention implementers, but also to breastfeeding mothers and pregnant women in the study communities. Because of the nature of social discrimination associated with being a woman in the study communities, pregnant women were afraid to attend group counseling and public education sessions for fear of being treated with contempt.

Behavior change programs must be zealously pursued and increased in local communities, particularly to alter the fertility habits of couples and to inspire them to get counselled and screened during pregnancy, avoid multiple pregnancies, and follow a healthy diet.

5.6 Challenges of Non-State Actors

5.6.1. Contraceptive opposition

The study found that non-state institutions in the studied towns were confronting numerous obstacles. In an interview with the programmes manager of Society for Women and Maternal Mortality Prevention (*a community-based Non-Governmental Organization in Nyive*), he emphasized that, while chiefs, opinion leaders, and unit committee members in the various communities were involved in their maternal mortality prevention activities, the challenges

emanating from the communities were enormous, particularly with contraceptive adoption and promotion. He did emphasize, however, that one must walk carefully and be careful and tactical in dealing with this problem because it was a delicate one due to the fact that the community was dominated by traditionalists and Catholics accounted for a significant number in Nyive. These organizations are typically opposed to the use and promotion of contraceptive devices. These religious gropings have the majority of followers in Nyive, with certain followers adhering to their leaders' messages.

5.6.2 Socio Cultural Practices

According to the Society for Women and Maternal Mortality Prevention (SWAMMP) programmes manager, the issue of socio-cultural practices, particularly uterine purification and food taboos, was an impediment to combating maternal mortality in Nyive. Uterine purification has been identified as a traditional practice in Ghana that raises blood pressure during pregnancy (interview with SWAMMP's programme manager, 2022). This could have a significant impact on safe delivery. In an in-depth discussion with the municipal coordinating director of the Ho Municipal Assembly, he stated that dealing with Ghanaian tradition and culture was extremely tough.

Their culture and traditions were more important to them than everything else, including their religion. He emphasized that, despite the fact that certain socio-cultural and traditional practices such as female genital mutilation, early marriage, polygamy, and uterine purification, among others, have been identified as contributing to maternal mortality, nothing appears to be done about it due to the people's fear of persecution. He stated that certain traditions, like as female genital mutilation, were once common among ethnic groups in the Municipal districts, but that through education and community awareness, most of these practices had been eliminated. However, there were still a few rural villages where these techniques were

prevalent, and it was hoped that the same might be done with uterine cleaning, but it is a slow process.

5.7. Discussion

The objective of this chapter was to examine maternal mortality interventions of state and non-state institutions in the study communities. The empirical results pointed to the fact that state and non-state institutions were distributing contraceptives to prevent people from getting unwanted pregnancies with its accompanying complications. This result is consistent with findings by Lawrence and Scott (2021), Merson et al (2020), Barnett and Whiteside (2022) which suggested that contraceptive promotion is significantly, a vital aspect of maternal mortality prevention programmes. However, the results also indicated that stakeholders concentrated on only contraceptive promotion and neglected other strategies such as and hospital delivery and postpartum care. It is imperative to understand that the issue of contraceptive use and its effectiveness in preventing maternal mortality has been controversially contested and debated upon. It has been suggested that contraceptives do not offer 100% protection against unwanted pregnancy. This school of thought was espoused by Barnett and Parkhurst (2021). In addition, the efficacy of a contraceptive in preventing unwanted pregnancy has also been seriously contested probably because of the fact that those who use it do not use it well as observed by Ahmed et al (2021). Those with strong religious convictions and sentiments also contend that contraceptive promotion breed promiscuity and exposes the youth to unhealthy sexual lifestyle and behaviours such as having multiple and concurrent partners. Others also contend that a contraceptive does not offer an absolute protection and solution to the challenge posed by the issue of unwanted pregnancy. In spite of this, the only available antidote to unwanted pregnancy is through the use of contraceptives. This was advanced by the Human Right Watch (2023) which contends that discouraging

contraceptive promotion is rather restricting public access to information about maternal health and contraceptive use.

However, emphasis must also be placed on the fact that the issue about maternal mortality eradication must rather go beyond contraceptive promotion and address the socio-cultural constraints confronting women as noted by Smith (2022). The socio-cultural environment of the African setting recognized the right of men to engage in polygamous relationships while women are expected to obediently accept co-wives and be willing participants in ensuing childbirth contests, unconscious of the right of women to accept to stay in co-wife relations. This creates an environment where assertiveness of women and equality between men and women is undermined.

Pre-natal and post-partum care has also been identified as one important tool which could play a significant role in reducing the incidence of maternal mortality in Africa. The findings of the study indicated that all the health institutions in the study communities have ante-natal and postnatal divisions where ante-natal and post-partum check-ups were undertaken. Ante-natal and post-partum check-ups offers pregnant and postpartum women the opportunity to protect their health. Studies such as Gage and Ali (2023), Peltzer et al (2020), Fako, (2021) and UNFPA, (2023) have established the need for ante-natal and postpartum check-up in some cases shared some of the success stories in several countries including Thailand. Despite the importance of these research findings, respondents in these study communities feared to avail themselves for antenatal and postnatal clinic due to the fact that they rather saw it as facilitating early death of the women in case of detection of any disease. For some people, antenatal clinical tests are a license to death because in the particular case of HIV/AIDS detection, the disease does not kill but the thought of having the disease is what kills (Key Informant Interview, 2023). Generally, the findings of this study showed that respondents were unwilling to go for antenatal clinical test. This was not because of affordability of the test but for fear of revealing their

disease status. This finding is consistent with findings by WHO (2022) and Lammers et al (2021) which argued that people do not go for ante-natal clinical testing because of the fear of testing positive for a disease. This situation therefore presents a potential avenue for the progression of a disease because testing may assist pregnant women to take precautionary measures and adopt healthy lifestyle. Where women do not go for ante-natal clinic testing for diseases and may perhaps be positive for a disease, it may provide an avenue for infecting fetuses unknowingly.

This suggests that even though the findings of the study indicated that state and non-state institutions were working assiduously in maternal mortality eradication, their effort is not good enough if pregnant women are still unwilling to patronize ante-natal and post-natal clinics as well as skilled delivery care. A lot of work therefore still needs to be done by stakeholders in these communities.

Intermittent preventive treatment of malaria was identified as another tool in reducing maternal mortality. The findings of the study indicated that all pregnant women attending antenatal clinics had access to malaria tests and those who were found to be positive were undergoing malaria treatment. Various research studies have underscored the importance and impact of intermittent preventative treatment of malaria and have identified it to be one key intervention in several African countries including Botswana, Kenya, Namibia, Ethiopia, Ghana, and in the United States. For instance, Kanabus (2018) and United Nations (2022) have all argued for the need for Intermittent preventative treatment of malaria. In this study, it was revealed that all the Hospitals and Health Directorates in the four study communities offered intermittent preventative treatment for malaria and had antenatal and postnatal care sections where referrals for pregnancy and postpartum care were undertaken. However, the challenge with care of pregnant women during antenatal care is the issue of compulsion attached to it which have implication for human rights. Weighing the implications of mandatory disease testing for

pregnant women on disease progression and human right abuse, one is likely to come to terms and understand that prevention is certainly better than cure especially if it has to do with the issue of women who are attempting to give birth to life. The study also revealed that challenges encountered by state and non-state institutions were attributed to internal and external factors some of which were due to the bureaucratic nature of the Government of Ghana and international donor agencies in releasing funds for maternal health activities. Harman (2018) indicated that the international organizations mainly UN agencies spearheaded by the World Bank and the IMF had sought to promote their own agenda in various countries and in Ghana using maternal health funding and placing conditions on it. They also have their own agencies on the ground and at the community levels. These organizations used presidents as their tool to promote their interest with offices of maternal health institutions located in the office of the presidents. This situation gives opportunity for governments and their officials to engage in corruption and embezzlement of public funds through the creation of bureaucratic procedures which will ensure that their activities are not unraveled. This is exactly, what these state institutions were confronted with in the study communities. This result is consistent with findings by Harman (2018), Barnett and Whiteside (2022), de Waal (2023) and Tumushabe (2020). All these studies asserted that the situation where the World Bank and the IMF through the UN agencies such as the Global Fund, provide funding for maternal health activities and placed some conditionalities on it, only go a long way to provide a breeding ground for corruption and render the state and its stakeholders ineffective, inefficient and incapacitated in fighting maternal mortality in Ghana and by extension the entire globe. Other challenges included how to promote contraceptive use, antenatal testing for medical conditions as well as the issue of socio-cultural practices against women. These results are also consistent with findings by Bankole (2023) and de Waal (2020) which suggested that socio-cultural practices such as polygamy and fertility rites are barriers to successful maternal mortality eradication.

There is obviously the need for stakeholders to intensify their campaign on educating and providing information on the need to avoid abusing women physically, denying women balanced diets in pregnancy, forcing women to participate in childbirth contest in polygamous homes and discriminating against women and probably integrate them in maternal health programmes. Procedures for accessing funding by local NGOs and CSOs from the central government agencies and district assemblies of Ghana must be made flexible to allow for timely release of funds for maternal mortality eradication activities.

Behavioural change interventions must also be vigorously pursued and intensified in the local communities especially targeted education in local areas to change the reproductive behaviour of women of reproductive age, to encourage them to obtain ante natal & post-natal clinical support *in* and *after* pregnancy, to avoid multiple childbirths and adopt healthy dietary habits. Education should also be intensified in the area of contraceptive promotion especially in societies with high polygamous culture. The issue of socio-cultural practices can only be addressed through diplomacy and well-informed education and in a gradual manner. This argument is clearly in line with the need for a structuralist approach to maternal mortality eradication as advanced in this study which advocates the need to design assertiveness training programmes for women to be able to negotiate contraceptive use with their partners and to be financially independent from their partners. The conceptual framework of the study explains this result because it identifies poverty as an obstacle for women to be financially independent from their partners. The framework also advocates that maternal mortality eradication interventions should integrate poverty reduction component to assist women to engage in income generating activities.

CHAPTER SIX

PERCEIVED SUCCESFULNESS OF MATERNAL MORTALITY PREVENTIVE SERVICES

6.1 Introduction

The last chapter gave a glimpse into the different ways that state and non-state actors in *Sofa*, *Waya*, *Shia*, and *Nyive* have attempted to reduce maternal mortality.

This chapter examine the success or lack thereof of these services in terms of whether or not they were on track to reducing maternal deaths to less than 70 per 100,000 live births by 2030 as set out in the global sustainable development plan from the viewpoints of service providers and beneficiaries (lactating mothers). It has the goal of identifying areas of interest and strength as well as areas of challenges and weaknesses. This would make it possible for the thesis to offer pertinent recommendation for improvement in overall performance towards achievement of sustainable development goal 3 by 2030 in the study communities.

6.2 General impression of maternal mortality preventive services by state and non-state institutions

The successfulness or otherwise of different preventive measures against maternal mortality implemented by state and non-state institutions was determined by examining how well the recipients of public education, community sensitization, group counseling on assorted subjects, free obstetric commodities, economic stimulus packages, and humanitarian relief responded to them using indicators such as knowledge of maternal health, contraceptive use, age at childbirth debut, obstetric medical facility use, personal hygiene practices, obstetric beliefs, food taboos, gender biases, community sanitation, land tenure type, pregnant woman- medical institution relationship type number of antenatal clinic attendances before delivery and maternal mortality rate. Areas of clear forte and weaknesses (gaps) and challenges were

identified with a view of suggesting appropriate support actions towards more effective maternal mortality reduction by stakeholders in the study communities.

A multi-modal preventative action model must be used, according to the review of literature on maternal mortality preventive actions, in order for interventions to be particularly effective. According to the literature, there are mainly three ways to administer actions for preventing maternal death. The first approach to maternal mortality preventive service delivery is reproductive behavior change communication, which includes public education on contraception, eating right during pregnancy, and the utilization of institutional care facilities. It also includes community education to decrease repeated pregnancies and births and avoidance of unspaced births. Contraceptive advise and maternal health endangerment counselling is also part of these community-based communications. Behavior modification interventions are used to influence people's behavior. The second approach to maternal mortality preventive service delivery is bio-medical intervention during pregnancy and childbirth, which includes, among other things, hospital birth promotion, institutional antenatal care promotion, free obstetric and hygiene commodity distribution, pre-delivery medical screening, pre-delivery vitamin supplementation, antiretroviral therapy for pregnant women with HIV, blood transfusion for needy pregnant women, and post-delivery vitamin therapy.

Structural intervention in communities is the third approach to maternal mortality preventive service delivery. The sociocultural aspect deals with public education programmes to get rid of child marriage, polygamy, womb purification ceremonies, gender biases and food taboos, while the socioeconomic aspect deals with skills re-training programmes and economic stimulus package distribution to get rid of chronic structural poverty and eradicate financial dependence of women. The political component focuses on initiatives to promote midwife-pregnant woman co-operation, incentivize antenatal clinic attendance and hospital delivery and equip obstetric medical institutions. However, it is noted that the structural type of interventions for maternal

mortality prevention are either tackled lethargically or left out totally by stakeholders when ascertaining the success of initiatives for maternal mortality prevention by state and non- state institutions in the study communities. The case for combining behavioral, structural and biomedical service delivery methods for preventing maternal mortality was advanced by this study. The structural approach to interventions for maternal mortality prevention fills the gap in service delivery approaches for maternal mortality prevention indicated by state and non-state actors in this study.

6.2.1 Effectiveness of Interventions for Maternal Mortality Prevention by State and Non-state Actors

Field research and records from various government and non-governmental agencies in the study communities were used to gather information on programs for maternal mortality prevention in Sofa, Waya, Shia, and Nyive. Women and Maternal Mortality Prevention in Africa, Kekeli Foundation and Youth Alive (all in Nyive), Youth and Women Empowerment (YOWE) in Sofa, 4H-Ghana in Waya, the Christian Council in Shia, and the various District Assemblies in the study communities indicated that they were carrying out interventions for the prevention of maternal mortality such as awareness raising, community sensitization to multiple pregnancy reduction, and campaigns on "know your menstrual cycle."

Distribution and promotion of contraceptives, blood transfusions for pregnant women who are anemic, a maternal counseling program, information and education about maternal mortality and related topics, including birth control options, non-medical care for expectant and nursing mothers, and business credit and technical support for pregnant and nursing women are just a few of the services that are provided. Additionally, the Assemblies offered coordination, oversight, and evaluation of programmes to minimize maternal mortality in their particular communities. Additionally, the health institutions provided pregnant women and nursing

mothers with some dietary necessities, including food commodities, and helped HIV-positive pregnant women obtain antiretroviral drugs on a social and financial level.

On the other hand, state actors largely focused on obstetric medical care and management of pregnant women, oblivious to other equally pressing thematic areas. This was revealed by analysis of the nature of state and non-state actors' interventions from field data. Following, based on responses from respondents, the effects of these interventions on multiple pregnancies, home delivery, uterus cleansing, food taboos, infant betrothal, female genital mutilation, gender biases, chronic income poverty, uptake of contraceptives, attendance at antenatal clinic, skilled delivery care, postnatal care, and immunization are examined. In the study communities, areas of weakness in the prevention of maternal death are also identified.

6.4…Feedback on interventions for maternal mortality prevention.

The empirical results indicated that behavior change interventions were implemented across the board in the research communities. These interventions took the form of community-based sensitization programs to raise awareness of maternal mortality, reduce multiple pregnancies, encourage community expectant mothers to get prenatal care and blood pressure checks, educate people on the use of contraceptives, provide a wealth of information on maternal mortality and related issues, and occasionally use drama groups and community educators to prevent malnutrition and anemia. In every instance, these programs were created for people living in the research areas' local communities.

6.2.2 Knowledge of maternal mortality and related issues

Empirical data from the study showed that respondents had a fair understanding of the relationship between repeated births without adequate spacing and maternal mortality, as 46.9% and 39.8%, respectively, of lactating and pregnant women in all the study communities named rapid repeat birth as a major cause of maternal death. According to 54.1% of nursing

mothers and 38.8% of pregnant women across all study communities, hospital delivery is a primary way to reduce maternal death, therefore respondents also have a fair understanding of the utilization of hospital delivery facilities as a method of maternal mortality prevention.

In contrast, relatively little was known regarding additional causes of maternal death in the various study communities. The study communities also showed evidence of misinformation, beliefs, myths and misconceptions regarding the causes of maternal death and their prevention. The findings showed that in all the research locations, a sizable portion of nursing mothers (6.1%) and pregnant women (2.0%) continue to have false beliefs about the causes of maternal death. This clearly demonstrates that there is still room for state and non-state actors to improve their prevention techniques, strategize, and be more innovative, even though they were working very hard in the study communities and their interventions were producing the desired results of reducing the incidence of maternal death. This situation has ramifications for both intervention programmes for preventing maternal mortality and the dynamics of maternal mortality in the study communities since no amount of effort can be made to reduce maternal mortality before people are aware of how bad it is. Therefore, stakeholders in the study communities' efforts to minimize maternal death should actively pursue increased education about maternal mortality and related issues through community education and radio sensitization.

6.2.3 Multiple Pregnancies and Hospital Delivery Facility Use

Changes in fertility patterns, including postponed childbirth debuts, high hospital institutional delivery facility use, and decreases in rapid repeat pregnancies and births, are key contributors to a considerable drop in the maternal mortality rate. According to the study's data, a greater percentage of older nursing mothers and expectant women reported having multiple pregnancies, however relatively few older lactating mothers reported using hospital delivery

services during their most recent childbirth. Table 5.2, for example, demonstrates that 65.6% of older nursing mothers in all of the study communities had more than one pregnancy over the previous 48 months, while Table 5.3 reveals that only 39.3% of older lactating mothers reported using hospital delivery services.

Additionally, the findings indicate that multiparity is also present among younger lactating mothers in Shia (33.3%) and Nyive (66.7%) as well as older lactating mothers (74.9%) in Sofa and Waya (86.7%). The study found that in all of the study areas, more older nursing mothers (68.8%) and younger lactating mothers (71.2%) reported having more than one pregnancy in the previous 48 months. The study found that a significant proportion of younger lactating mothers used hospital delivery facilities in the study towns, although 71.9% of older lactating mothers across all study communities did not use such facilities.

6.2.4 Discrimination on the Grounds of Gender

According to actual data, some breastfeeding mothers have experienced clitoris loss due to genital cutting, while others have married before their eighteenth birthday without a corresponding treatment for their male counterparts. Because of the apparent inequality between men and women, women have even been barred from attending so public programmes in the study towns. The findings also showed that none of the parties concerned in preventing maternal mortality had ever included mother support groups in any of their efforts. Since the issue was so bad, some breastfeeding mothers chose not to attend significant non-religious events in the study community. It was also discovered that some volunteers and employees of the intervention program also displayed unfavorable behaviors toward expectant mothers, to the point where expectant mothers believed that these individuals had broken social norms by openly discriminating against them and not crediting them with any dignity. Radio programmes, community education, and sensitization were used by stakeholders to lessen

socioeconomic disparity at the community levels, according to a critical examination of interventions for maternal mortality reduction by state and non-state actors in the research areas. For individuals who indicated they would like to participate in community-level maternal mortality education during key informant interviews, it would have been ideal to involve women. Even though some were willing to participate, the fact that women were largely excluded from state and non-state actors' efforts to reduce maternal mortality in the study areas constituted sufficient evidence of institutionalized discrimination and inequality. This has implications for maternal mortality preventive programmes as well as the dynamics of maternal mortality in the study communities. According to the literature, societal inequality and discrimination may make it difficult for women to get maternity care and reduce maternal death (Kyakuwaa and Hardon, 2022). The fact that some lactating mothers chose not to attend non-religious gatherings and others were unwilling to do so confirms the widespread concern that the problem of non-attendance at non-religious conferences is a significant obstacle to the fight against maternal mortality because it feeds a lack of awareness about the condition, which results in high incidences being recorded. Once more, these findings only serve to support the idea that state and non-state actors have not been able to reduce maternal death with sufficiently effective interventions.

6.2.5 Accessibility to obstetric Medicare and commodities

The findings suggested that care for pregnant women involved monitoring pregnant women's clinical visits and providing medications, which is known to increase the safe delivery rate and ensure the survival of pregnant women (Sachs, 2020). The findings indicated that care interventions were in the form of medical support for pregnant women and lactating mothers and were primarily provided by the health institutions and the health directorates in the study communities. It is, in fact, a pregnant woman's only chance of life, and how much access she has to it determines how likely it is that both she and her unborn child will survive. The study's

findings indicated that the majority of pregnant women had access to obstetric drugs. What was concerning was that costly obstetric drugs are not covered by the existing National Health Insurance Scheme. According to field data, the government of Ghana subsidizes the cost of obstetric medication, but pregnant women who need to take medications for high blood pressure must pay GH¢5.00, and some of them may not even be able to afford the medications because of their low income. Even though the study's results indicated that some health organizations, particularly the health center in Sofa and Youth and Women Empowerment (a community based non-governmental organization) in Sofa, helped some pregnant women access high blood pressure medications. The current situation still has many negative health effects for expectant mothers, particularly their inability to pay for condition management services in the study communities.

To sum up, the study's findings showed that the health facilities in the study communities focused solely on the medical care portion of treating pregnant women while ignoring the financial assistance element. This serves as another evidence that, despite state and nonstate actors' best attempts to care for expectant mothers, those efforts fall short given the significant obstacles to care that these women must overcome.

6.2.6 Trend and pattern of maternal mortality

The efficacy of behavior modification programs should, ideally, be reflected in the maternal mortality rate because, if people alter their reproductive patterns and increase their safety by giving birth in hospitals, the incidence of maternal mortality will decrease. Results from a trend analysis of the study communities' rates of maternal death showed that Shia incidence rates ranged from 1.2% in 2005 to 1.3% in 2006 to 1.7% in 2007, 1.1% in 2008 to 2.0% in 2009, and 0.4% in 2012. Compared to other diseases, the Nyive had a prevalence rate of 3.2% in 2005, 3.2% in 2006, 5.8% in 2007, 2.0% in 2008, 2.0% in 2009, and 0.8% in 2012. A detailed

examination of these figures reveals that, despite the general drop-in maternal incidence rates across the board, the incidence rate is not constant and instead peaks and falls. If these incidence rates are any indication, then state and non-state actors' actions for the prevention of maternal mortality in Nyive and Shia have had some beneficial effects and led to a marginal drop in the incidence rate of maternal mortality, at least within the specified period. Although recent statistics indicate a drop in maternal mortality incidence rates nationally, the results also showed that maternal incidence rates in Sofa and Waya during the period 2005–2012 were growing. Shia incidence actually decreased from 10.1% in 2011 to 3.6%, compared to the 2.1% national percentage. In comparison to the national average of 4.2% in 2009, the Nyive's maternal mortality rate fell from 4.4% to 3.4%. This shows that behavioral change programs in Sofa, Waya, and nearby areas are progressively moving forward. However, more is definitely expected from state and non-state actors in Sofa and Waya given the amount of money that has gone into such efforts, per the Ghana National Population Council (2015) document. This raises some concerns about the efficacy of state and non-state actors' actions in Sofa and Waya to reduce maternal mortality. It also raises the possibility that consistency and increased intensity in the delivery of behavior modification interventions by state and non-state actors will eventually produce the desired outcomes. The usage of hospital delivery services and multiple pregnancies are two examples of fertility behaviors that still need to be changed, and this means that much effort remains in this area.

6. 3 Test of hypothesis

The field research data was further examined by the use of chi-square test of significance in an attempt to establish the significance of association between the use of maternal mortality preventive services on one hand and public educational exposure of respondents on the other hand.

The first null hypothesis in this regard is that there is no significant relationship between the use of a postnatal service and maternal counseling exposure.

Table 6.1: Expected Frequency of Use Antenatal Services and Maternal Counselling

	Exposed to Maternal Counselling	Unexposed to Maternal Counselling	Total
Use Antenatal Services (Yes)	33.11 (60.20%)	21.89 (39.80%)	55 (100%)
Use Antenatal Services (No)	25.89 (60.21%)	17.11 (39.79%)	43 (100%)
Total	59 (60.20%)	39 (39.80%)	98 (100%)
Pearson Chi-Square	5.0205		
Df	1		
P-value	0.02505		

Source: Fieldwork, 2023

Hypothesis: The use of institutional antenatal care is directly related to the exposure of mothers to counseling. According to Table 6.1, among those subjected to maternal counseling, 60.20% expected to use antenatal services, while 39.80% planned not to use antenatal services. In addition, among those who were not exposed to maternal counseling, 60.21% of those expecting used antenatal care, while 39.79% did not. Based on the chi-square test results and (p value = 0.02505 less than 0.05), there is less argument against the hypothesis that "the use of antenatal services is directly related to one's exposure to maternal counseling," so the hypothesis is accepted and a conclusion is that there is a significant association between the use of antenatal services and exposure to maternal counseling.

The second null hypothesis is that there is no significant relationship between the use of a contraceptive device and contraceptive advice

Table 6.2: Expected Frequency of use of a contraceptive device and receiving contraceptive advice

	Exposed to contraceptive advice	Unexposed to Contraceptive Advice	Total
Use Contraceptive Device (Yes)	34.23 (62.24%)	20.77 (37.76)	55(100%)
Use Contraceptive Device (No)	26.77 (62.26%)	16.23 (37.74%)	43(100%)
Total	61 (62.24%)	37 (37.76%)	98(100%)
Pearson Chi-Square	4.8884		
Df	1		
P-value	0.02704		

Source: Fieldwork, 2023

Hypothesis: There is a direct link between contraceptive device use and contraceptive advice.

Table 6.2 indicates the estimated frequency of contraceptive device use and contraceptive counsel receipt. The findings found that among those exposed to contraceptive counsel, 62.24% of those expected use a contraceptive device, while 37.76% do not use a contraceptive device. Furthermore, among those who have not received contraceptive counseling, 62.26% use a contraceptive device, compared to 37.74% who do not use a contraceptive device. We have insufficient evidence to reject the hypothesis "there is a direct relationship between use of contraceptive device and contraceptive advice" with a p-value of 0.02704, which is less than the significance level of 0.05. As a result, it appears that there is a strong relationship between using a contraceptive device and obtaining contraceptive counseling. This suggests that these two variables are not mutually exclusive.

The third null hypothesis is that there is no significant relationship between the use of a hospital delivery facility and access to microcredit fund assistance

Table 6.3: Expected Frequency of hospital delivery facility and micro-credit fund

Use Hospital Delivery Facility	Microcredit Funded	Non -Microcredit Funded	Total
Use Hospital Delivery Facility (Yes)	35.36 (64.29%)	19.64 (35.71%)	55(100%)
Use Hospital Delivery Facility (No)	27.64 (64.28%)	15.36 (35.72%)	43(100%)
Total	63(64.29%)	35 (35.71%)	98(100%)
Pearson Chi-Square	4.7736		
Df	1		
P-value	0.0289		

Source: Fieldwork, 2023

Hypothesis: The use of a hospital delivery facility is directly related to one's access to a micro-credit fund.

According to Table 6.3, 64.29% of those with access to microcredit loan funds were expected to use a hospital delivery facility, while 39.80% of those predicted did not. Clearly, even though people do not have access to microcredit funds, 64.28% use hospital delivery services as expected, while 35.72% do not. Based on the chi-square test results and (p value = 0.0289 less than = 0.05), we can conclude that there is less evidence against the hypothesis that "utilization of hospital delivery facility varies directly with one's access to a micro-credit fund," so we cannot reject it.

6.4 Similarities and disparities between the interventions of state and non-state actors

The study's findings indicated that there were overlaps in roles and activities between state and non-state actors' actions to avoid maternal mortality in all of the study communities. In all of the research communities, there were actually not many spatial disparities in the state- and non-state actors' initiatives to avoid maternal death. Contrary to what the study's conceptual

framework predicted. The two District Assemblies in the study communities were also engaged in free contraceptive distribution, community sensitization using community educators, and maternal mortality prevention, according to the study's findings, which showed that all health institutions in the study communities were essentially providing the same pregnant woman management services in terms of vitamin therapy, maternal counseling, prevention and management of pre-eclampsia, STIs, and delivery services. As a matter of fact, the study found no distinction between state and non-state organizations' interventions for the study communities' prevention of maternal death. It is understandable that both state and non-state entities in the studied communities were repeating the same actions without any innovation. According to Fobil (2019), this essentially amounts to resource and function duplication. The mobile short-code services offered by 4-H Ghana in Waya for expectant mothers and nursing moms are the sole notable distinction between interventions for maternal mortality prevention by state and non-state entities. Shortcomings of Interventions for maternal mortality prevention. It is to identify areas of weakness and strengths, that results of interventions for maternal mortality prevention by state and non-state entities were assessed. This part focuses on the shortcomings of governmental and non-state institutions' interventions in the study communities to avoid maternal death.

6.5 Capacity Building Workshops for Traditional Birth Attendants

The analysis of interventions for preventing maternal mortality by state and non-state institutions in the study communities suggested that there were few interventions intended for traditional birth attendants, particularly from 4-H Ghana (a community-based non-governmental organization in Waya), even though some of the non-state and state institutions claimed that traditional birth attendants were unable to participate. In fact, the study's results showed that traditional birth attendant practices, such applying fundal pressure during labor, could contribute to maternal mortality across the board and have an impact on efforts to reduce

it. The Brazilian government was successful in preventing maternal mortality because it authorized and controlled traditional birth attendance work, according to an assessment of the literature. For instance, TBA work is permitted in Brazil, where the government has also included TBAs into the creation and application of its own policies. Additionally, comprehensive TBA education is given more priority in Brazil. Indeed, according to certain research, the frequency of maternal death was significantly lower in nations where TBA was authorized than it was in those that did not (Brookes, 2021). It is unclear if TBA employment is lawful under current Ghanaian law, but it is apparent that certain behaviors relating to home birth are illegal and may result in arrests. The fact that TBA work is widely practiced in Ghana and that the likelihood of a pregnant woman dying in childbirth is greatly influenced by untrained assistance with TBAs at the time of birth has significant implications for Ghana's efforts to reduce maternal mortality. Legislating TBA work in Ghana is widely believed to be a step in the right direction toward finding a solution to the nation's high rate of maternal death. Structural interventions to promote gender equality through the prevention of child, early and forced marriage and other harmful practices women in communities. The literature review made clear that, in order for interventions to reduce maternal mortality to be successful, non-state and state institutions must take steps to prevent child marriage, early marriage, forced marriage, and other harmful practices against women in order to address gender inequality, unemployment, and poverty among women. The question of the effectiveness and readiness of state and non-state institutions to effectively tackle maternal mortality in the study communities is raised because this must be incorporated into mainstream intervention programmes for the eradication of maternal mortality and political office holders' commitment and willingness to do it. However, this was seen to be lacking. Although some lactating mothers were given some interest-free business loans by YOWE (a community-based non-governmental organization) as start-up capital, according to the study's findings in Sofa, this was insufficient because the

amount given to them was small and the period of re-payment was very brief. Again, the entire population in the study towns was not taken into account; this was only done for expectant mothers and nursing women. In this study's data, for instance, it was shown that the majority of lactating moms (70.4%) have a monthly income of less than GH¢100.00.

The study's findings also showed that, across all study communities, only 40.0% of older lactating mothers had social and financial access to high blood pressure medications. Once more, it was noted in research by Auerbach (2021) that microfinance projects, for example, have developed as a way of empowering women in their relationships and lowering their economic dependence on males. In several studies of microcredit initiatives aimed at women, it was discovered that economic empowerment led to stronger social networks, more self-esteem, more control over household decisions, more negotiating power, and increased usage of contraceptives (Auerbach, 2021). According to the literature analysis, several sociocultural practices as well as poverty are driving higher maternal mortality in Ghana, particularly among Shia and Nyive women. Evidence from this study suggested that socio-cultural behaviors such polygamy, having multiple pregnancies, and uterine purification were some of the main causes of the rise in maternal mortality in the studied groups. It was interesting to notice that none of these stakeholders made a single effort to address the socio-cultural practices, particularly uterine purification and polygamy, in the research communities. Activities to decrease maternal mortality have also not been incorporated into programmes to fight poverty. There were no programmes aimed towards reducing multiple pregnancies through abstinence. Thus, these constituted the study's discovered interventional gaps shown in Table 6.4.

Table 6.4: Areas of strengths and weaknesses of interventions for maternal mortality eradication

Touched Areas	Abandoned / Untouched Areas
Promotion of contraception	Polygamy
Maternal Mortality Sensitization	TBA Training
Obstetric Medical / Hygiene Instruction	Including maternal mortality prevention in projects to fight poverty
Pre-eclampsia prevention	Education on sexual abstinence
Maternal Counselling	
STD/ HIV Awareness Creation	Social and economic services (structural services)
Childbirth Frequency Reduction	Education on gender equality

Source: Fieldwork, 2023

In general, the examination of the results of maternal mortality preventive actions by state and non-state institutions in the study communities revealed that the health centers in the 4 study communities, the Ho Municipal Directorate of Health, the Adaklu District Assembly, and the Ho Municipal Assembly, as well as the various community-based NGOs and FBOs, only focused on behavior and biomedical interventions to the detriment of structural interventions such as rural or urban poverty eradication. This study's finding confirms the requirement for a structural approach in addition to other strategies for state- and non-state-actor interventions to reduce maternal mortality. For instance, it is essential to incorporate interventions for eradicating poverty, empowering women, addressing sociocultural practices, and securing special programs for traditional birth attendants into the mainstream interventions of the non-state and state institutions' efforts to reduce maternal mortality. This is the study's main argument. The conceptual frameworks that guided the research process reflect the need for structural mode of service delivery to maternal mortality prevention to be combined with

behavior and biomedical modes of service delivery. This need was established by a review of the literature. The maternal mortality interventional gaps found in this study are unquestionably consistent with the overall plea of this research, which is to combine a structural approach with other prevention interventions for a successful fight against maternal mortality.

CHAPTER SEVEN

SUMMARY, CONCLUSION AND RECCOMENDATIONS

7.1 Introduction

Maternal mortality is still a significant development and public health concern in Ghana and sub-Saharan Africa in general, despite decades of intervention for prevention by state and non-state institutions. This study broadly examined the success or otherwise of institutions (both state and non-state) in their actions and programmes to reduce maternal mortality in the study communities. The study specifically aimed to explore the trend in maternal mortality between 2016 and 2023 and identify factors which fanned the flames of maternal mortality in Sofa, Waya, Shia, and Nyive. Additionally, the research project aimed at assessing the challenges faced by institutions, both state and non-state, in reducing maternal mortality. A mixed method study design was used for the evaluation of the success or otherwise of maternal mortality preventive services being provided by state and non-state institutions in four (4) specifically chosen communities. These are the Sofa, Waya, Shia, and Nyive communities. Data from 241 respondents, including 98 lactating mothers, 15 staff members of chosen NGOs, CSOs, FBOs, Health Institutions, District Assemblies, 40 traditional birth attendants, and 48 pregnant women from the four (4) study communities—Sofa, Waya, Shia, and Nyive—was gathered using questionnaires, tables, in-depth interviews/key informant interviews, and focus group discussions. Using a non-probability sampling technique, the two hundred and forty-one (241) sample size was achieved.

Descriptive statistics, content analysis, comparative analysis, direct quotes from respondents, and, when appropriate, the use of photographs to provide a visual representation of the situation being described were used to analyze data collected through the administration of questionnaires, focus group discussions, and in-depth/key informant interviews. To present the

results, tools including percentage distribution, frequencies, bar graphs, pie charts, and tables were employed. Below is a summary of the main conclusions drawn from the data collected:

7.2 Summary of Major Results

7.2.1 Maternal Mortality Trends

The trend study showed that the frequency of maternal death in Sofa, Waya, Shia, and Nyive was irregular rather than constant. The study communities' efforts to reduce maternal mortality may be impacted in certain ways by this discovery. This underlines the necessity of stepping up efforts to educate people vigorously, particularly in *Sofa* and *Waya* communities, to adopt healthy reproductive practices and to change their traditional views regarding reproduction. Maternal mortality incidence and rate can only be reduced to the absolute lowest by changing reproductive behavior and following disseminated strategies and recommendations on fighting structural poverty within the countryside and major towns of developing countries of the world.

7.2.2 *Factors Driving Maternal Mortality in the Communities*

The study's empirical findings highlighted a few factors which fanned the flames of maternal mortality in the study communities further. The results of the study provided evidence that structural poverty in the study communities may cause women to eat improperly, failing to meet their nutritional requirements for labor and delivery in the process. It could also result in women's inability to pay obstetric medical charges and take care of their personal needs. Repeated and multiple pregnancies and births as well as home deliveries with traditional birth attendants were also found to influence maternal mortality. Another factor contributing to maternal mortality in the communities was discovered as dietary restrictions as a result of culture or religious belief. Finally, some traditional practices, such as not talking to young women about dreaded obstetric medical disorders and uterine purification, may also be damaging to the affected women. The hazard of maternal mortality may ultimately be presented to women by all of these factors together.

7.2.3 Maternal Mortality Preventive Actions by State Institutions

The study's results demonstrated that the Ho Municipal Directorate of the National Commission on Civic Education, the Adaklu District Directorate of Health, the Adaklu District Assembly, the Ho Municipal Assembly, the Ho Municipal Directorate of Health, the Nyive Community Health Center, the Waya Community Health Center, the Health Center in Sofa, and the Health Center in Shia were at least making an effort to provide interventions and services for maternal mortality prevention in the study areas**.** The provision of financial and nutritional education and support for expectant and nursing mothers from underprivileged backgrounds, the posting of qualified midwives to CHPS compounds, the distribution of free contraceptives, maternal counseling, obstetric medical screening, obstetric medical care services, pre-eclampsia screening, and management of pre-eclampsia were some of the interventions for preventing maternal mortality. Given the upward trajectory in the study areas' maternal death rates over the years, it was determined that these interventions and services had some beneficial effects on reproductive behavior modification, institutional obstetric care decentralization and structural poverty eradication in the study communities.

7.2.4 Maternal Mortality Preventive Actions by Non-State Institutions

The study's findings also showed that a small number of non-governmental organizations (NGOs), faith-based groups, and civil society organizations were active in the study communities and dedicated to preventing maternal death. The study discovered Society for Women and Maternal Health (SWAMH) Ghana, Youth Alive, and Kekeli Foundations in the Nyive community. It found the Queen Mothers Association as well as Youth and Women Empowerment (YOWE) in Sofa, the Christian Council was found in Shia, as well as (Heart, Hand, Head and Health (4H) Ghana in Waya.

These groups participated in activities like implementing educational campaigns to prevent repeated pregnancies and births, domiciliary self-assisted deliveries, female genital mutilation, dietary restrictions, child marriage and to eradicate structural poverty and unemployment, providing referrals for maternal counseling, hosting sensitization events with opinion leaders, distributing food items and items that improve personal hygiene, informing the public about maternity health services through community educators, and promoting the use of free contraceptives. Although there is still room for improvement, analysis of the outcomes of these programmes showed some good benefits on reproductive behavior modification and structural poverty reduction.

7.2.5 Challenges

Some of the difficulties faced by state and non-state entities were found by the study. Some of these issues were the respondents' reception toward the advice about contraception and the pieces of obstetric medical advice given as well as a lack of funding. The topic of socio-cultural practices, particularly uterine purification, was a significant barrier in the study communities' efforts to reduce maternal mortality. In the study communities, gender inequality was perhaps the biggest obstacle to preventing maternal death. Gender disparity was regarded as posing difficulties for the study communities' pregnant women, breastfeeding mothers, and intervention implementers as well. Due to the gender prejudice that existed, even among public servants, expectant women were reluctant to attend public educational events.

7.2.6 Interventional Deficiencies

Even though the study identified a number of interventions, it was discovered that stakeholders have not made a single effort to address detrimental cultural practices against women and had no single intervention for preventing maternal deaths while also reducing poverty, but for traditional birth attendants, some interventions were made. This was an illustration of the

stakeholders' interventional deficiencies in the study communities' maternity preventive efforts. In the study communities, this circumstance might result in an increase in maternal mortality.

According to the main claim made in this study, the data generally support the necessity for a structural approach to interventions for the prevention of maternal mortality to be combined with behavioral and biomedical therapies. These findings are related to numerous pregnancies among lactating mothers, the presence of harmful practices against women that promote gender inequity, and poverty in the research communities. The optimal strategy for preventing maternal mortality is a combination of strategies, according to an assessment of the evidence. The structural approach to maternal mortality prevention has been recognized by this study as a gap in state and non-state institutions' actions for the prevention of maternal mortality. As a result, the study made the case for their combination as a supplement to behavioral and biological therapies for the reduction of maternal mortality.

The study's conclusions support the argument put forth in the conceptual framework that served as the research process's main guide. In other words, it has been very helpful to grasp the many concerns that have arisen from the study's findings thanks to the conceptual framework. As an example, it helped in the understanding of the factors that drive-up maternal mortality as discovered in the literature analysis in the study communities and the necessity of having a variety of prevention intervention techniques including, notably the structural approach.

The mixed method approach used in this study was also highly helpful because it helped to uncover the study's complicated concerns in a way that a single methodological approach could not have. On the one hand, the qualitative approach helped the study comprehend respondents' opinions of maternal mortality and related topics of concern and understand them from their perspective without any element of prejudice or distortion. On the other hand, it allowed the

research to obtain in-depth explanations from respondents on certain important issues, such as womb purification and polygamy. However, the quantitative approach helped the study obtain precise numbers, percentages, and numerical values for quantification. One methodological technique would not have been sufficient to accomplish this.

7.4 Contribution to Knowledge

Empirically, the study has contributed in helping to understanding respondents' experiences with issues identified in the maternal health literature. It brought clarity to core issues like home birth, early marriage, fertility rites, food taboos, gender inequality and structural poverty. It has provided empirical evidence of interventional gaps in the study communities by critically examining areas of concentration and neglect in intervention terms, thereby contributing to knowledge in the area of maternal health interventions. It pointed out the neglect of structuralist interventions in favor of behaviorist interventions and medical charity work. The research brought a nuanced understanding of interconnections between maternal death drivers, interventions and the burden of maternal death with perspectives from key populations and stakeholders.

Theoretically, the study has successfully applied Paulo Friere's education theory and Connell's theory of gender and power to maternal health studies within a developing country context in the communities of Shia, Nyive, Sofa and Waya.

Policy-wise, the study has contributed to target 3.1 of SDG goal 3's progress monitoring effort in the study communities which is critical to achieving Target 1 of SDG 3.

Methodologically, it used the mixed methods research design to examine maternal mortality preventive interventions of state and non-state institutions in the study communities, which was identified as a methodological gap in maternal health intervention studies

7.5 Conclusions

The trend analysis revealed that maternal mortality incidence in Sofa, Waya, Shia and Nyive was not steady but rather fluctuates.

The study makes it clear that poverty is a significant motivator for pregnant women to choose home delivery, which may eventually put them at risk for maternal mortality.

The study revealed that interventions from state institution in the study communities towards the eradication of maternal mortality were mainly provision of antenatal, skilled delivery and postnatal care, opportunistic infection management, education on reproductive behaviour change and distribution maternal health commodities such as food supplements, dewormers, insecticide treated -nets and contraceptives.

In the same vein, the non-state institutions were likewise repeating basically the same interventions from contraceptive distribution, maternal counselling services through community entry techniques including drama, training of community educators on maternal health issues to organizing maternal health education programmes on radio without any creativity relative to state institutions.

Interventions in the study areas were on track though there was more room for improvement. This notwithstanding, the targeted education on reproductive behaviour change was not going down well with the people within Sofa, Waya, Shia and Nyive communities as envisaged. The result of the educational effort is probably not translating into sustained decline in the incidence rate of maternal mortality in the study communities and therefore probably not yielding the expected result. Regardless of the level of community education and sensitization available, maternal death remains a problem in the study communities. .

If Ghana is to accomplish target 3.1 of SDG goal 3 which highlights the need to reduce global maternal mortality ratio to less than 70 per 1,000,000 live births by the 2030, state and non-

state entities must re-consider and re-position their preventive actions and programmes to effect changes in the economic and social structure of Ghana's society. As a result, it is established that in order to fulfill target 3.1 of the SDG Goal 3, the cooperation of government institutions, development partners, bilateral and multilateral organizations, NGOs/CSOs/FBOs are unquestionably critical in the fight against maternal mortality in Ghana, the African continent, and, by extension, the entire world.

7.3 Recommendations

Since maternal mortality rises and falls in spite of the quantum of information availed in the study communities, it is recommended that the district assemblies, health directorates and NGOs double their efforts on maternal health education and reproductive behaviour change. They must channel most of their resources beyond contraceptive promotion and re-direct more of their resources towards educating the couples about skilled delivery care, prenatal and postnatal support services and employ more of community entry techniques such as drama to ensure maximum compliance as advanced by Paulo's education theory

It came to light from the result of the study that women were having more than two childbirths in thirty-six months, it is recommended the district assemblies, health directorates and NGOs engaged in maternal health activities in these areas consider programmes on birth space expansion for women of reproductive age in these communities in their maternal mortality prevention interventions

It is recommended that district assemblies and NGOs intensify their campaign on educating and providing information on the need to avoid sidelining women and integrate them in maternal health programmes. Behavioural change educational programmes must be intensified by NGOs and FBOs in local communities to change the reproductive behaviour of women of

reproductive age, to encourage them to patronize maternity hospitals, to avoid multiple childbirths and adopt balanced dietary habits.

It is suggested that the issues of socio-cultural practices should be addressed by the district assemblies, health directorates and NGOs engaged in maternal mortality eradication interventions through more diplomacy and well-informed targeted education through community and radio sensitization in a gradual manner.

The assemblies should team up with traditional bodies to find ways of modifying those traditional practices that could expose women to maternal death

Generally, low income status among women has been identified as one of the factors driving maternal mortality in the study communities and elsewhere. Since farming was the major livelihood activity of the people in the study communities, most especially Shia and Nyive, it is recommended that the Ho municipal assembly and NGOs engaged in maternal health activities in Shia and Nyive set up additional micro-lending facilities specifically for farmers to assist them to be able to expand their farms with improved farming techniques. This therefore made the conceptual framework of the study very useful as it identifies these interventional gaps so that authorities could be guided appropriately

The study found that women of reproductive age were not involved in planning and executing interventional programmes, it is recommended that district assembles, health directorates and NGOs actively involve women of reproductive age in planning interventional programmes.

REFERENCES

Adaklu District Assembly (2018) Annual Report on Adaklu District Assembly

Adaklu District Assembly (2020) Annual Report on Adaklu District Assembly

Adaklu District Health Directorate (2023) Annual Report

Aggleton, P, Parker. R. (2022). Teenage pregnancy and teenage mother related stigma and discrimination: A conceptual framework and implications for action. Social Science & Medicine; 57:1324.

Agyemang, S. (2019). Addressing maternal mortality scourge in the EjuraSekyedumase District: a study of knowledge, attitudes and child delivery behavior among women of reproductive age 15–54-year-olds. Social Science and Medicine Vol.39, No:9 pp 1189 - 1201

Allen, T., and Heald, S. (2018). Maternal Health Policy in Africa: What has worked in Uganda and What has failed in Botswana? Journal of International Development, 16, 1141–1154.

Anarfi, J.K. and Appiah, F. N. (2019). Mitigating the Impact of maternal deaths in Ghana: The Role of Education. Paper Presented at the International Conference on Ghana at Half Century. TSSER and Cornell University. M-Plaza Hotel, Accra, July 18-20.

Anyang, N. (2020). Governance, Poverty and Sustainable Development in Africa: The Quest for Equity in Access to Health and Development, Tropical Institute of Community Health and Development in Kenya.

Ann, P (2019) Soils of the Volta Region of Ghana. Longman, London

Audet, C., M., Burlison, J., Moon, T., D., Sidat, M., Vergara, A., E., and Vermund, S., H. (2020). Socio-Cultural and Biomedical Aspects of Maternal Deaths in Mozambique. BMC International Health and Human Rights, 10:15.

Auerbach, J. (2021). Transforming Social Structures and Environments to help in Maternal Mortality Prevention. Health Affairs, 28 (6): 1655-1665.

Averting Maternal Mortality (2020). Preventing Malaria transmission http//www. AVERT.org.

Award, S. F., and Abu-Raddad,L.J.(2020). Could there have been substantial declines in reproductive risk behavior across sub-Saharan Africa in the early 2020s? Epidemics.-8: 9-17

Babbie, E. (2019). The Practice of Social Research. Eleventh Edition, Greg Hubit Bookworks, USA

Baiden, F., Akanlu, G., Hodgson, A., Akweongo, P., Debpuur, C., Binka, F. (2017). Using Lay Counsellors to Promote Community-based Voluntary Maternal Counselling and Prenatal Screening in Rural Northern Ghana: A Baseline Survey on Community Acceptance. J. biosoc. Sci, 1-13.

Bankole A. (2020) Risk and Protection: Youth and maternal mortality in sub- Saharan Africa, New York, Allan Guttmacher Institute.

Barnett, T. and Whiteside, A. (2022). Poverty and Maternal Mortality: Impact, Coping and Mitigation Policy - AIDS, Public Policy and Child well-being.

Barnett, T., and Parkhurst, J. (2021). Maternal mortality: Medical Aid, Poverty Alleviation, and Reproductive Behaviour Change. The Lancet, Health Problems, 5 (9): 590 - 593.

Boeije, H. (2021), Analysis in Qualitative Research, Sage Publications, London.

Bour, D. (2020) Help Break Taboos on Sexuality. General News of Monday, 18 September. Available at: www.ghanaweb.com

Boyatzis, R. (2021). Transforming qualitative information: Thematic and code development. Thousand Oaks, CA: SAGE.

Bradley, H., E., Curry, A., L., and Devers, J., K. (2021). Qualitative data analysis for health services research: Developing taxanomy, themes and theory. Health Research and Educational Trust, 42,1758-1772.

Brindis C, Sattlcy, D., and Mamo, L. (2021). From Theory to Action: Frameworks for Implementing Community-Wide Adolescent Pregnancy Prevention Strategies. San Francisco, CA: University of California, San Francisco, Bixby Centre for Reproductive Health Research and Policy, Department of Obstetrics, Gynaecology and Reproductive Sciences, and the Institute for Health Policy Studies

Brookes, D. (2021). Understanding quantitative research and its value in healthcare. Social Times, 104, 36-39.

Buor, D. (2020b). Help Break Taboos on Pregnancy. General News of Monday, 18 September. Available at: www.ghanaweb.com.

Campbell, C. (2017). "Letting them die" Why Maternal Mortality Prevention Programmes Fail. Bloomington and Indianapolis: Indiana University Press.

Cassillo, J.M. (2021) Social interaction among the Shia of Volta Region. African Studies Review 42 (2), 41-72

Cassiman, A, (2022) An Anthropological study of resident's paths and places among the Ewe of the Volta region of Ghana. Faculteit Psychologie en Pedagogische Wetenschappen Department Sociale en Culturele Anthropologie, Katholieke Universiteit Leuven, Leuven

Center for Disease Control and Prevention (2019). Maternal Mortality Surveillance Report (Vol. 11). Atlanta.

Coates, T., J., Richter L., Caceres, C. (2021). Behavioural strategies to reduce maternal mortality: how to make them work better. The Lancet. 372(9639):669–684.

Cohen, J. (2020). Maternal mortality in Asia: Thailand and Cambodia. SCIENCE, 301: 1658-1662.

Connell, P. and Dollar D. (2019) Aid Allocation and Poverty Reduction (Washington DC: World Bank).

Coveil, C. (2020). The Law of Nations in Political Thought: A Critical Survey from Vitoria to Hegel, Palgrave Macmillan, Basingstoke.

Crepaz, N., Lylesa, C., M., Wolitskia, R., J., Passina, W., F., Ramaa, Herbsta, J., H., Purcella, D., W., Robert M. Malowb, R., M., and Stalla, R. (2018). Do prevention interventions reduce maternal health risk behaviours among women of reproductive age? A meta-analytic review of controlled trials. Maternal health, 20 (2).

Dapaah, J.M. (2022). 'Maternal treatment in two Ghanaian hospitals: Experiences of patients, nurses and doctors. Leiden, The Netherlands: African Studies Centre, University of Amsterdam

De Waal, A. (2021a). 'How will maternal mortality transform African governance? African Affairs, 102, 1-23

De Waal, A. (2021b) maternal mortality and gender power: Why there is no Identity Crisis, Zed Books (ed.), and London, New York.

Dickson, K.B. and Benneh, G. (1988) A new Geography of Ghana, Longmann

Dominguez, A., M. (2021). The Challenges of maternal health in African Society.International Relations. E- International Relations Publishing.

Du Plessis, A (2018) Combining quantitative and qualitative approaches to social research in human geography - an impossible mixture? Environment and Planning A 30: 261-76.

Dzokoto, A. (2021). National Report on the Progress of the United Nations General Assembly Special Session (UNGASS) Declaration of Commitment on Maternal Health. Ghana. January 2006-December 2007. Accra: Ghana Health Service.

Economic Commission for Africa (2020) Economic Commission for Africa (2010). The Challenge of HIV/AIDS Treatment and Care.http// www.uneca.org Accessed 23rd October, 2012.

Environmental Protection Agency (2018) Volta Regional Profile. Co-ordinated by F.O. Amegbletor, Environmental Protection Agency, Ho

Fact Sheet on Maternal Communication (2020) Maternal mortality situation in sub-Saharan Africa.Macro-hill

Fako, T. (2020). The connection between poverty, sexual activity, knowledge about maternal mortality and willingness to go for antenatal counselling among young people. European Journal of Social Sciences, 15, (1): 115-120.

Family Health International (FHI) (2020). Service Delivery Models for Maternal Counselling and Screening (December article). The Free Library.

Fobil, J., N., and Soyiri, I., N. (2019). An assessment of Government Policy Response to Maternal Mortality in Ghana.Journal des Aspects Soci aux du VOH/SIDA 3 (2): 457-464.

Frankfort-Nachmias, C., and Nachmias, D. (2020). Research Methods in the Social Sciences

Gage, A., J., and Ali, D. (2021). Factors associated with self-reported pregnancy testing among women in Uganda. Maternal Health Care, 17(2): 153-165.

Gatrell, A., C. (2021). Geographies of Health: An Introduction. Blackwell Publishers Ltd, Oxford.

Ghana Demography and Health Survey (GDHS) (2018). Reproductive Health Statistics-Accra: Statistical Service, Macro International. GSS, GHS, and ICF Macro

Ghana National Population Council (2015) Draft Annual Report.

Ghana Health Service (2020). National Report on the progress of UNGASS Declaration of Commitment on Maternal Health, Ghana, Accra.

Ghana Health Service (2019). The Health Sector in Ghana, Facts and Figures

Gillespie, S., R., Greener, R., Whiteside, A., and Whitworth, J. (2018). Investigating the empirical evidence for understanding vulnerability and the associations between poverty, maternal death and maternal mortality impact. Maternal health, 21 (7): S1-S4.

Golafshani, N. (2018). Understanding Reliability and Validity in Qualitative Research. The Qualitative Report, 8 (4): 597-607.

Gregson, S., Nyamukapa, C., A., Garnett, G., Mason, P., Zhuwau, T., Carael, M., Chandiwana, S., K., Anderson, R. (2021). Child-sex mixing patterns and maternal mortality in rural Zimbabwe, The Lancet, 359: 1896-1903.

Grey, P., B. (2021). Maternal Mortality and Christianity: is maternal mortality incidence lower among Christians? Social Science and Medicine. Article in press.

GSS (2020a) Population Estimates. Ghana Statistical Service.

Gupta, G., R., Parkhurst J., O., Ogden J., A., Aggleton, P., and Mahal, A. (2020). Structural approaches to maternal mortality prevention. The Lancet. 372 (9640):764-775.

Harman, S. (2018). Fighting Maternal Mortality: Reconfiguring the State? Working Paper CUTP/004.City University London.

Hawe, P., Shiell, A., and Riley, T. (2019). Theorising Interventions as Events in Systems. Am J Community Psychol, 43:267-276.

Hecht, R,, Bollinger, L., Stover, J., McGreevey, W., Muhib, F., Madavo, C., E., and de Ferranti, D. (2019). Critical Choices in Financing the Response to The Global Maternal Mortality Scourge. Health Affairs, 28 (6): 1591-1605.

Ho Municipal Assembly (2021a) Annual Report, Ho: Ho Municipal Assembly

Ho Municipal Assembly (2021b). Profile of Ho Municipality, Field Survey

Ho Municipal Assembly (2023) Profile of Ho Municipality, Field Survey

Ho Municipal Assembly (2019) Profile of Ho Municipality, Field Survey

Hollow, F. (2020) Maternal Health Interventions in sub-Saharan Africa. Health Affairs **(27)** (5) 12-18

Howel, A (2021) The impact of maternal mortality on children's risk of dying: evidence from a population based surveillance study in rural south Africa (1992-2013). Reproductive health

Howell, A (2019) The Sociocultural itinerary of a Ghanaian people. Africa Christian Press, Achimota

Human Right Watch (2020) Access to Condoms and HIV/AIDS Information: A Global Health and Human Rights Concern. Backgrounder.

International Centre for research on women (2021). Maternal health challenges: Finding solutions to strengthen maternal mortality prevention programmes, Washington D.C. Elton John Foundation

Jewkes, R., Dunkle, K., Koss, M., P., Levin, J., B., Nduna, M., Jama, N., and Sikweyiya (2016). Rape perpetration by youngrural South African men: prevalence, patterns and risk factors. Social Science and Medicine, 63(11): 2949-2961

Kanabus, A. (2021). Gamma Spink British Guidelines: BHIVA British HIV Association and children. Maternal Health Association guidelines for the management of complications in pregnancy.

Katjavivi, P., H., and Otaala, B. (2023). African Higher Education Institutions responding to the Maternal Mortality Scourge. A paper presented at the AAU Conference of Rectors, Vice Chancellors and Presidents of African Universities (COREVIP) Mauritius, March 1721.

Kim, Y., J., and Ammann, A. (2021). Is the —3 by 5 Initiative the Best Approach to Tackling the maternal mortality? PLoS Medicine. 1 (2): 100-97.

King, R. (2019). Child Delivery Behavioural Change for Maternal Death: Where have Theories Taken Us? Geneva: WHO.

Kolawole, I., E. (2020). Awareness and Perceptions of Maternal Mortality Preventive Strategies among students of Universities of Zululand and Ado-Ekiti. A PhD thesis submitted to the Faculty of Education in fulfillment of the requirements for the degree of Doctor of Education in the Department of Educational Psychology and Special Education at the University of Zululand.

Krueger (2019) Provision and Use of Maternal Health Services Among Urban Poor Women in Kenya: What Do We Know and What Can We Do? Journal of Urban Health, 85(3), 428-442

Kumar, R. (2019). Research Methodology: A Step-by-Step Guide for Beginners Australia, Addison Wesley Longman, Australia Ply Limited.

Kvale, S. (2018). Interviews: An Introduction to Qualitative Research Interviewing. London, Sage Publications.

Kyakuwaa, M., and Hardon, A. (2022). Maternal mortality and public action. Clarendon Press, Oxford, U.K.

Lammers, J., Wijnbergen, S., V., and Willebrands, D. (2021). Genetic differences, maternal health risk perception and contraceptive use. Tinbergen Institute Discussion Paper.

Lawrence, J., S., and Scott, C., P. (2022). Examination of the relationship between African American adolescents' contraceptive use at sexual onset and later sexual behaviour: implications for contraceptive distribution programs. Maternal Mortality Prevention Education, 8 (3) 258-266.

Lesiba, S. and Maphoso, A. (2018) Geographies of Health: An Introduction. Oxford: Blackwell Publishing Limited.

Low-Beer, D., and Stoneburner, R., L. (2021). Behaviour and communication change in reducing maternal mortality: is Uganda unique? African Journal of Maternal Health Research 2(1): 9–2.

Lurie, M., Rosenthal, S., Williams, B. (2019). Rapid repeat childbirths driving the African maternal mortality epidemic: where is the evidence? Lancet, 374:1420-1421.

Mabogunje, A., L. (2021). Institutional Radicalisation, the state and the development process in Africa. Development Policy Centre, Ibadan, Nigeria.

Madise, A.K. and Hinde, N. (2020) Theory at a Glance: A Guide for Health Promotion Practice. National Institute of Health.

Maphoso, S (2018) Does Increase in Utilisation Rates Alone Indicate the Success of a User Fee Removal Policy? A Qualitative Case Study from Zambia. Health Policy 103, 244-254.

Maternal Mortality Communication (2020). Global Fact Sheet: Maternal Health.

Mbananga, A (2020) The Context of Informal Abortions in Rural Ghana. Journal of Women's Health, 18(12), 2017- 2022.

Merson, M., H., Malley, J., Serwadda, D., and Apisuk, C. (2021). Maternal mortality Prevention: The history and challenge of maternal mortality prevention. Lancet, 372: 475-88.

Merson, M., H., Padian N., Coates T., J. (2020). Maternal health education initiatives. Lancet, 374 (9652): 1805-1806.

Merson, M., H., Padian N., Coates T., J. (2018). Combination of maternal mortality prevention efforts. Lancet, 372 (9652): 1805-1806.

Mohiddin, A. and Johnson, D. (2021) Maternal mortality mitigation strategies and the State in sub-Saharan Africa - the missing link? Globalization and Health. 2:1

Morgan, D. (2021) Maternal Health, Governance and Development: The public administration factor in Public Administration and Development, 24: 7-18.

Mutangadura, D.K. (2018) Structural approaches to maternal mortality prevention. The Lancet. 372 (9640):764–775.

NDPC/GoG/UNDP (2020).Ghana& Sustainable Development Goals 2017 Report, Republic of Ghana.

Newman, M. (2021). Women and maternal mortality. In: Peiperl L, Coffey S, Volberding P.A., (eds.) Maternal mortality Site Knowledge Base. San Francisco: UCSF Center for maternal mortality Information.

NPC (2019). Population trends in Ghana, Accra, National Population Council

NPC/UNDP (2021) Statistical Annex: Millennium Development Goals, Targets and Indicators. New York

Odoi-Agyarko, K. (2022). Socio-cultural Factors and Determinants Affecting Childbearing BehaviourAmong the Young women of reproductive age in the Upper East Region of Ghana. Paper Presented at the National Maternal health Research Conference held at La Palm Royal Beach Hotel, Accra, Ghana, February 11-13.

Onwuegbuzie, A., J., and Leech, N., L. (2019). On Becoming a Pragmatic Researcher: The Importance of Combining Quantitative and Qualitative Research Methodologies. Int. J. Social Research Methodology, 8 (5) 375-387.

Oppong, C (2018). Maternal Mortality in West Africa: The Case of Senegal, Ghana, and Nigeria in Kalipeni, E., Craddock, S., Oppong, C and Ghosh, J. (2020) — Maternal Mortality

Oppong, C. (2020). Public Educational Intervention in West Africa: The Case of Senegal, Ghana, and Nigeria in Kalipeni, E., Craddock, S., Oppong, J., R., and Ghosh, J. (2004) — Public Educational Intervention in Africa. Blackwell Publishing Ltd. U.K

Park, L., S., Siraprapasiri, T., Peerapatanapokin, W., Manne, J., Niccolai, L., and Kunanusont, C. (2020). Maternal Mortality rates in Thailand: evidence of maternal mortality prevention and incidence decline. Journal of Maternal Health, 54(4): 430-436.

Parker and Mailman (2020) Factors Influencing the Use of Maternal Healthcare Services in Ethiopia.

Parkhurst, J. (2021) The crisis of maternal mortality and the politics of response: the case of Uganda! International Relations, 15 (6): 69-87.

Patton, M., Q. (2020), Qualitative Research and Evaluation Methods, 3rd Edn, Sage Publications, Thousand Oaks, California.

PEPFAR, (2021) Guidance for the prevention of uterus infections

Piot, P., Bartos, M., Ghuys, P.D., Walker, N. and Sch wart lander, B. (2021). The Global Impact of maternal mortality. Nature, Vol. 410.

Poku, N., K. (2022). Maternal Mortality in Africa: How the Poor Women are Dying, Polity (ed.), Cambridge.

Pope, C., and Mays, N. (2019). Reaching the parts that other methods cannot reach. British Medical Journal, 311:42-45.

Population Council, (2020). Behavioural and Social Theories Commonly Used in Maternal Health, Accra

Population Council (2015) Mid-term estimates, Accra

Rissel, C. (2020). Empowerment: The Holy Grail of Health Promotion. Health Promotion International, 9 (l):39-46.

Rivers, K., and Aggleton, P. (2022). Adolescent Sexuality, Gender and the Maternal Mortality Scourge.Women and Reproductive Health.Bulletin of Experimental Treatments for Maternal Mortality.14 (2): 35-40.

Rodrigo, C., and Rajapakse, S. (2020). Maternal mortality, Poverty and Women. Journal of International

Rubin, H., J., and Rubin, I. (2019). Qualitative Interviewing: The Art of Hearing Data, 2ndEdn, Sage Publications, Thousand Oaks, California.

Rugalema, G. (2016). Coping or struggling? A Journey into the impact of maternal mortality in Central AfricaRepublic. Review of African Political Economy, 86, 537-545

Review of maternal mortality prevention initiatives in Ghana (2020) Maternal mortality statistics. NDPC- Accra

Sachs, J., D. (2020). Task force on Reproductive and Mental Health and access to essential Medicine. Working Group on Maternal Health. The Millennium Project, London

Sale, J., E., Lohfeld, L., H., Brazil, K. (2021) Revisiting the Quantitative-Qualitative Debate: Implications for Mixed-Methods Research. Quality and Quantity 36: 43-53.

Sarantakos, M (2018) Women's Experiences and Views about Costs of Seeking Malaria Chemoprevention and other Antenatal Services: A Qualitative Study from Two Districts in Rural Tanzania. Malaria Journal, 9, 54-62.

Saunders, M., Lewis, P., and Thom, A. (2019). Research methods for business students. Fifth Edition. Pearson Education, London.

Schoepf, F (2019) Evaluation of Nutritional Education Intervention for Women Resident in Washington. Health Education Research, 22 (3), 425-439.

Seale, C., and Kelly, M. (2020). Coding and analysing data, in Researching society and culture, edited by C Seale. London: Sage: 146-163

Shannon-Stokes, C. (2019). Measuring impacts of maternal mortality on rural livelihoods and food security. Rome: FAO.

Shelton, J., D., Halperin, D., T., Nantulya, V., Potts, M., Gayle, H., D., Holmes, K., K. (2022). Childbirth reduction is crucial for balanced behavioural approach to maternal mortality prevention: Behaviour change programmes to prevent maternal death have mainly promoted while cultural prenatal practices remain the neglected component of maternal mortality prevention. BMJ, 328: 891-4

Silverman, D. (2021) Interpreting Qualitative Data: A Guide to the Principles of Qualitative Research, 4thEdn, Sage Publications, London.

Smith, M., K., (2023). Gender, poverty and intergenerational vulnerability to maternal mortality. Journal of Gender and Development, 10 (3), 1 – 9.

Sofaer, S. (2020). Qualitative Methods: What Are They and Why Use Them? Health Services Research 34:5 Part II.

Solomon, C., M., Alarly, M., Belleau, M., Bosu, W., K., Kintin, D., F., Nnorom, J., A., Seck, K., Victor-Ahuchogu, J., and Wilson, D. (2021). Western Africa Maternal Mortality and response synthesis: Characterization of Maternal Mortality and response in West Africa: implications for prevention. Washington, DC, World Bank

Solomon, K. Sinha, M., K., Olutunji, S., O and Babafemi, O., S. (2021) Does it Really Matter Where Women Live? A Multilevel Analysis of the Determinants of Postnatal Care in Nigeria.Maternal and Child Health Journal, 1- 10.

Sommer, B., and Sommer, R. (2019). A Practical Guide to Behavioural Research; Tools and Techniques. Third Edition, Oxford University Press, New York Oxford.

Stoneburner, R., L., and Low-Beer, D. (2018). Maternal Mortality Declines and Behavioral Risk Avoidance in Uganda. SCIENCE 304, 714

Sundong, S., N. (2018). Vulnerability, Poverty and Maternal Mortality in the Bawku East Municipality of Northern Ghana.Social Science and Health Vol 7 (1). Pp 12 - 28

Swidler, A. (2017). Syncretism and subversion in maternal health governance: How locals cope with global demand In Poku N.K., Whiteside A. and Sandkjaer B. Maternal health and governance, Ashgate, Aldershot

Tansey, Q. (2018). Process Tracing and Elite Interviewing: A Case for Non-Probability Sampling. Political Science and Politics, 40 (4): 23-1.

Tastemain, C., and Cole, P. (2021). Can an education Stop Maternal Mortality in its Tracks? New Scientist 139: 13-14.

UNAIDS (2021). Reproductive Behavioural Change for Maternal Health: Where have the theories taken us? Written by Rachel King. UNAIDS/99.27E

UNDP (2002). Conceptual shifts for sound planning: Towards an integrated approach to Maternal Health and poverty. Concept paper.

UNDP (2021). Conceptual shift for implementation mechanics: Towards corrective measures. Concept paper.

UNDP (2022). —The Role of Economic Policy in Poverty Reduction, Policy Note. United Nations (2000). Resolution Adopted by the General Assembly 55/2. Millennium Declaration, Millennium Summit, 6-8 September 2000, New York

UNDP (2020) -The Role of Economic Policy in Poverty Reduction, Policy Note. United Nations (2010). Resolution Adopted 55/2. Millennium Declaration, Millennium Summit, 6-8 September 2000, New York

UNFPA (2020). State of World Population 2004. The Cairo Consensus at Ten: Population, Reproductive Health and the Global Effort to End Poverty. New York: UNFPA.

UNICEF (2021) Global maternal mortality response: epidemic update and health sector progress towards Universal Access. Progress Report

United Nations (2020). Statistical Annex: Millennium Development Goals, Targets and Indicators. New York.

United Nations (2022). Statistical Annex: Sstainable Development Goals, Targets and Indicators. New York.

United State Department of State. (2023). Report on The Sustainable Development Goals. New York, USA.

USAID (2021). Women's Experiences with HIV Sero-disclosure in Africa: Implication for VCT and MTCT. Meeting Report. Washington, DC: USAID.

USAID (2020). ―Maternal Health Profile: Ghana. U.S Agency for International Development Publication.

Van Zyl, H. (2019). A qualitative exploration on how maternal mortality prevention programmes influenced lay perspectives among urban and rural South African adults. Social Science and Health Vol 9 (5) pp. 124 – 153

Varge, C., A. (2021). Delivery Site Decision-Making and Negotiation in the Midst of Maternal Mortality: Youth in KwaZulu/Natal, South Africa. Health Transition Review. 39 – 46

Wahyuni, D. (2020). The Research Design Maze: Understanding Paradigms, Cases, Methods and Methodologies. JAMAR, 10(1).

Wallerstein, N. (2019). Powerlessness, Empowerment and Health: Implications for Health Promotion programs. American Journal of Health Promotion; 6:197-205.

Weiser, S., William, W., Bangsberg, D., and and Marlink, R. (2021). Barriers to antenatal counsel adherence for pregnant women in Burundi. Journal of Maternal Health 34 (3) 281 – 288.

Whiteside (2022) The politics of national public health responses: A synthesis literature. HHLSP

WHO (2020). Towards Universal Access: Scaling up priority maternal health interventions in the Health Sector. Progress Report.

WHO (2022). Towards Universal Access: Scaling up priority maternal health interventions in the health sector. Progress Report.

WHO (2019) The World Health Report: Making a difference. Geneva: World Health Organization

WHO (2021) The prevention and management of unsafe abortion. Report of a Technical Working Group

WHO (2016). Making Pregnancy Safer; Meeting of Women Parliamentarians Report: Maternal and Newborn Health and Survival. From http://www.who.int/making_pregnancy/factsfile/women /en/index.html.

WHO/UNICEF (2017). Meeting the MDG drinking water and sanitation target: A mid-term assessment of progress.

WHO/UNICEF (2018). Progress on Drinking Water and Sanitation: Special Focus on Sanitation. New York: UNICEF, Geneva:

Wingood, G., M., DiClemente, R., J. (2021). Application of the Theory of Gender and Power to examine maternal mortality-related exposures, risk factors and effective interventions for women. Health Education and Behaviour, 27:539-565.

Wodi, B., E. (2021). Maternal mortality Knowledge, Attitudes, and Opinions Among Adolescents in the River States of Nigeria. The International Electronic Journal of Health Education, 8:86-94.

World Bank (2022). Maternal Mortality in Sri Lanka. WB.

World Bank (2018). Pregnancy Compilations in Sri Lanka. WB.

World Bank (2021) Life Eexpectancy Indicators, World Bank.

World Health Organisation. (2020) Trends in Maternal Mortality: 1910 – 2020. Estimates Developed by WHO, UNICEF, UNFPA, World Bank. Geneva, Switzerland

World Health Organization (2018). Maternal Mortality Fact Sheet No 360

Worldpress (2016). Maternal Health in Africa 2010- 2016, Major challenges ahead http// www. Worldpress.org: (accessed 23rd October, 2016)

Yin, R., K. (2021), Applications of Case Study Research, 3rd edn, Sage Publications, Thousand Oaks, California

YOWE (2023) Organisational Development Goals. Macro-Hill, New YORK

APPENDIX A

COLLEGE OF HUMANITIES

SCHOOL OF SOCIAL SCIENCES

UNIVERSITY OF GHANA, LEGON

TOPIC: MATERNAL MORTALITY REDUCTION ORIENTED EDUCATION INTERVENTIONS IN GHANA: AN ASSESSMENT OF THE ROLE OF GOVERNMENTAL AND NON-GOVERNMENTAL ACTORS

QUESTIONNAIRE FOR LOCAL PERSONS IN ADAKLU AND HO DISTRICTS

Date	
Interviewer's Name	
Interviewer's Remarks	
Interviewer's Signature	
Time	
Name of District	
Name of community	

SECTION A: SOCIO DEMOGRAPHIC BACKGROUND INFORMATION ON INTERVIEWEES

1. Gender:
   a) [ ] Male b) [ ] Female

2. Age: (Please tick as appropriate)
   a) [ ] 18-27 c) [ ] 48-57
   b) [ ] 28-37 d) [ ] 68+ others

3. How long have you stayed in this community?
   a) [ ]. [2- 6years] b) [ ] [7 – 11 years] c) [ ] [12 years +]

4. Religious affiliation:
   a) [ ] Christianity b) [ ] Islam c) [ ] Traditional
   d) [ ] Other (please specify……)

5. Formal education level attained:
   a) [ ] None c) [ ] SHS e) [ ] Post graduate
   b) [ ] JHS level d) [ ] Tertiary

6. Marital status:
   a) [ ] Married c) [ ] Divorced e) [ ] Separated
   b) [ ] Never Married d) [ ] Widowed

7. Employment Status:
   a) [ ] Formally Employed c) [ ] Artisan
   b) [ ] Informally Employed d) [ ] Unemployed

8. If employed, how much do you earn per month?
   a) [ ] Less than GH¢50 c) [ ] GH¢100 - GH¢200
   b) [ ] GH¢50 – GH¢ 100 d) [ ] Above GH¢200

SECTION B: AWARENESS AND KNOWLEDGE ON MATERNAL MORTALITY

9. Have you ever heard of maternal mortality?
   a) [ ] Yes b) [ ] No

10. How can a woman die during pregnancy or soon after delivery? (Please tick as appropriate)
   a) [ ] Through unsafe abortion
   b) [ ] Through the consumption of unprescribed herbal preparations
   c) [ ] From a lack of funds to evacuate a woman experiencing pregnancy complication
   d) [ ] through lack of necessary energy to labour
   e) [ ] Through the use of unskilled childbirth attendants

11. In which ways/way can a person avoid maternal death (please tick as appropriate)
   a) [ ] Abstinence of bearing multiple children
   b) [ ] Being faithful to antenatal clinic schedules
   c) [ ] By using contraceptives to space births.

12. A healthy looking pregnant woman can experience complication without warning
   a) [ ] Yes b) [ ] No

13. Maternal mortality can be orchestrated by evil spirits
   a) [ ] Yes b) [ ] No

14. Maternal mortality can be instigated by witchcraft, juju or other supernatural means
   a) [ ] Yes b) [ ] No

15. Maternal Mortality is avoidable
   a) [ ] Yes b) [ ] No

16. What is your source of information on maternal mortality/ health
   a) [ ] Television (TV)
   b) [ ] Radio
   c) [ ] Peer/Mass Educators
   d) [ ] Health personnel/ NCCE/ISD/NGOs/CBOs/FBOs/Assembly Personnel

SECTION C: PREGNANCY AND CHILD DELIVERY BEHAVIOUR

17. Have you had a child before?

[1] Yes

[2] No

18. At what age were you when you had your first child? .....

19. Do you get pregnant frequently?

a) [ ] Yes b) [ ] No c) [ ] I don't knows

20. Do you have a pregnancy during which you did not attend antenatal classes and clinic?

a) [ ] Yes b) [ ] No c) [ ] I don't knows

21. Do you use herbal preparations during pregnancy?

a) [ ] Yes b) [ ] No

22. 22. Did you use a clinic-based delivery service the last time you had delivered a baby?

a) [ ] Yes b) [ ] No c) [ ] I don't knows

23. Have you used contraceptives in the last 12 months?

a) [ ] Yes b) [ ] No c) [ ] I don't knows

24. How regular do you use contraceptives? (Please tick as appropriate)

a) [ ] Sometimes

b) [ ] Always

c) [ ] I don't knows

SECTION D: MATERNAL COUNSELLING AND SENSITISATION

25. Have you heard of any community outreach or home visit by any organisation that one can avail him/herself to voluntarily hear and learn more of maternal mortality and related issues?

    a) [ ] Yes

    b) [ ] No

26. Do you know of any facility where one can walk in for maternal mortality enlightenment?

    a) [ ] Yes

    b) [ ] No

27. Have you availed yourself?

    a) [ ] Yes

    b) [ ] No

APPENDIX B

COLLEGE OF HUMANITIES

SCHOOL OF SOCIAL SCIENCES

UNIVERSITY OF GHANA, LEGON

TOPIC: MATERNAL MORTALITY REDUCTION-ORIENTED EDUCATION INTERVENTIONS IN GHANA: AN ASSESSMENT OF THE ROLE OF GOVERNMENTAL AND NON-GOVERNMENTAL ACTORS

QUESTIONNAIRE FOR TRADITIONAL BIRTH ATTENDANTS

SECTION A: General Information of the respondents

1. Age
   a) [ ] 18 – 46 b) [ ] 46 – 50

2. What is your Educational Status?
   a) [ ] No formal education c) [ ] Secondary
   b) [ ] Basic level d) [ ] Tertiary

SECTION B: MATERNAL MORTALITY KNOWLEDGE

3. Have you ever heard of the maternal mortality?
   a) [ ] Yes b) [ ] No

4. What is your source of information on maternal mortality and maternal health?
   a) [ ] Television (TV)
   b) [ ] Radio
   c) [ ] Peer /Mass Educators
   d) [ ] NCCE Personnel / ISD Personnel /CHRAJ Personnel Health personnel / NGOs / CBOs / FBOs / Assembly personnel

SECTION C: MATERNAL MORTALITY AND CHILD DELIVERY BEHAVIOUR

5. Do you know the dangers involved in conducting unlicensed and unskilled child delivery?
   a) [ ]Yes b) [ ] No

6. Have you been using parturition table in the conduct of deliveries?
   a) [ ] Yes b) [ ] No

7. Have you used parturition table in the last delivery you conducted?
   a) [ ] Yes b) [ ] No

8. Have you used parturition table for a non- paying client during your last delivery?
   a) [ ]Yes b) [ ] No

9. How regular do you use parturition table with a non-paying client during conduct of deliveries? (Please tick as appropriate)
   a) [ ] Always b) [ ] Sometimes c) [ ] Never

10. Do you have a paying client?
    a) [ ] Yes b) [ ] No

11. Do you use parturition table for a paying client during delivery?
    a) [ ] Yes b) [ ] No

12. How regular do you use parturition table for your paying client? (Please tick as appropriate)
    a) [ ] Always
    b) [ ] Sometimes
    c) [ ] Never

APPENDIX C

COLLEGE OF HUMANITIES
SCHOOL OF SOCIAL SCIENCES
UNIVERSITY OF GHANA, LEGON

TOPIC: MATERNAL MORTALITY REDUCTION-ORIENTED EDUCATION INTERVENTIONS IN GHANA: AN ASSESSMENT OF THE ROLE OF GOVERNMENTAL AND NON-GOVERNMENTAL ACTORS

QUESTIONNAIRE FOR POSTPARTUMWOMEN

SECTION A: BACKGROUND CHARACTERISTICS OF RESPONDENT

1. In which month and year where you born?

2. What is your religious affiliation? (Please tick as appropriate) [1] Christian [2] Moslem [3] Traditional/Others (please specify……)

3. Marital Status [1] Single [2] Married [3] Widowed [4] Divorced

4. What is your Educational Status? [1] No formal Education [2] Basic [3] Secondary [4] Tertiary

5. 5. What is your Age? [1] 18.24[2] 25-35 [3] 36-46 [4] 46-50 others (please specify…….)

SECTION B: PREGNANCY AND CHILD DELIVERY BEHAVIOUR

6. How many children do you have? [1] 1 [2] 2 [3] 3 [4] 4 and above

7. Do you use clinic-based antenatal and delivery services during child delivery? [1] Yes] 2] No

8. Did you used a clinic-based delivery service during your last childbirth? [1] Yes [2] No

9. How regular do you use clinic based antenatal and delivery services during child delivery? [1] Always [2] Sometimes

SECTION C: ACCESS TO MATERNAL COUNSELLING & SENSITISATION

10. Do you know any facility where one can access maternal counselling? [1] Yes [2] No

11. Were you counselled during your last pregnancy? [1] Yes [2] No

12. How much does it cost you to access maternal counselling?

13. Are you able to pay for the cost of the counselling? [1] Yes [2] No

14. How regular did you access the maternal counselling? [1] Always [2] Sometimes [3] Not At all

15. Do you know any facility where you can go for antenatal classes? [1] Yes [2] No

16. Are you a registered member of any association of Mum's club? [1] Yes [2] No

APPENDIX D

COLLEGE OF HUMANITIES
SCHOOL OF SOCIAL SCIENCES
UNIVERSITY OF GHANA, LEGON

TOPIC: MATERNAL MORTALITY REDUCTION-ORIENTED EDUCATION INTERVENTIONS IN GHANA: AN ASSESSMENT OF THE ROLE OF GOVERNMENTAL AND NON-GOVERNMENTAL ACTORS

QUESTIONNAIRE FOR PREGNANT WOMEN

SECTION A: BACKGROUND CHARACTERISTICS OF RESPONDENT

1. What is your Age? (Please tick as appropriate)

[1] 18-24 [2] 25-35 [3] 36-46 [4] 46-50

2. Marital Status [1] Single [2] Married [3] Widowed [4] Divorced

3. What is your Educational Status?

[1] No formal education [2] Basic level [3] Secondary [4] Tertiary

SECTION B: ACCESS TO MATERNAL COUNSELLING AND SCREENING (MCS)

4. Do you know any facility where one can go for maternal counselling and screening?
[1] Yes [2] No

5. If yes, have you attended any antenatal class? [1] Yes [2] No

6. Is it mandatory for a pregnant woman to attend antenatal class in the facility? [1] Yes [2] No

7. How much does it cost you to get to the nearest antenatal facility? GHS……

8. How regular do you visit such facility in a month?

[1] Once [2] Twice [3] Thrice [4] Others (Please specify……

APPENDIX E

COLLEGE OF HUMANITIES
SCHOOL OF SOCIAL SCIENCES
UNIVERSITY OF GHANA, LEGON

TOPIC: MATERNAL MORTALITY REDUCTION-ORIENTED EDUCATION INTERVENTIONS IN GHANA: AN ASSESSMENT OF THE ROLE OF GOVERNMENTAL AND NON-GOVERNMENTAL ACTORS

INTERVIEW GUIDE FOR HEALTH INSTITUTIONS

(DIRECTORATES / CENTERS)

1. Name of institution ……
2. Date of establishment ……
3. Do you have a maternal counselling and screening facility in your organisation?
4. How many people on the average access maternal counselling at your facility each month?
5. How much does it cost to undertake antenatal screening at your facility?
6. What are the main obstacles in the administering of maternal counselling and sensitisation service in your organization?
7. How many members of the public and pregnant women on counselling at your organisation require monitoring?
8. How many are being monitored currently?
9. Do you have prevention of fistula services for pregnant women?
10. How many pregnant women are undergoing antenatal classes?
11. It is mandatory for every pregnant woman to undergo antenatal classes?
12. What are some of maternal mortality prevention education interventions?
13. What are the main obstacles in maternal health education of clients at your facility?
14. What are some of the general obstacles you encounter in the provision of maternal mortality reduction interventions?

APPENDIX F

COLLEGE OF HUMANITIES
SCHOOL OF SOCIAL SCIENCES
UNIVERSITY OF GHANA, LEGON

TOPIC: MATERNAL MORTALITY REDUCTION-ORIENTED EDUCATION INTERVENTIONS IN GHANA: AN ASSESSMENT OF THE ROLE OF GOVERNMENTAL AND NON-GOVERNMENTAL ACTORS

INTERVIEW GUIDE FOR IN DISTRICT ASSEMBLIES, NGOs / FBOs /CSOs.

SECTION A: BACKGROUND

1. Name of organization ……
2. Date of establishment ……
3. Date of registration …….
4. 4. Status of NGO/FBO/CSO [1] Local [2] International
5. Does your organization carry out maternal mortality reduction-oriented educational activities in the Municipality/ District?
6. What aspect of maternal mortality reduction education activity do you provide in the community? 1. [Community culture] 2. [Livelihoods skills] 3. [Maternal health services] 4. [Pregnancy Complications signs] 5. [Prevention of obstetric fistula] 6. [Effects of maternal mortality] 7. [Family planning] 8. [Other Specify]
7. Do you encourage the public to subscribe to maternal counselling and sensitisation?
8. Do you encourage pregnant women and women postpartum to access antenatal and postnatal classes for full understanding of the childbirth continuum?
9. What kind of encouragement does your organization give to pregnant women, traditional birth attendants and new mothers?
10. What are the main obstacles of maternal health education that confront your organization in the implementation of maternal health education programmes in local communities?
11. Are there any traditional practices that make pregnant women and new mothers vulnerable to maternal death?

APPENDIX G

COLLEGE OF HUMANITIES

SCHOOL OF SOCIAL SCIENCES

UNIVERSITY OF GHANA, LEGON

TOPIC: MATERNAL MORTALITY REDUCTION-ORIENTED EDUCATION INTERVENTIONS IN GHANA: AN ASSESSMENT OF THE ROLE OF GOVERNMENTAL AND NON-GOVERNMENTAL ACTORS

INTERVIEW AND DISCUSSION GUIDE FOR INDIVIDUAL LOCAL PERSONS, WOMEN POST PARTUM, TRADITIONAL BIRTH ATTENDANTS AND FOCUS GROUPS OF SAME

DEMOGRAPHIC INFORMATION ON FOCUS GROUP PARTICIPANTS

1. Number of participants in focus group……
2. Number of males…….
3. Number of females…….
4. Age range of participants…….
5. Number of married participants…….
6. Number of unmarried participants……
7. Number of divorced participants……
8. Number of widows/widowers……
9. Number of participants with no formal education…….
10. Number of participants with primary education…….
11. Number of participants with secondary education……
12. Number of participants with tertiary education……

A. LOCAL PERSONS (INTERVIEW AND DISCUSSION)

1. Ask questions on why they are reluctant to inform relatives and health workers when pregnant especially in the early stages.
2. Ask why she/his partner would not eat certain types of foods during pregnancy
3. 3 Ask question whether she/his partner has ever eaten a culturally proscribed food during pregnancy
4. Ask why she/his partner would visit a spiritualist/herbalist for pregnancy protection
5. Ask why she/his partner would not go for antenatal clinic and classes
6. Ask if they (women) are able to convince their partners to use contraceptives
7. Ask why they would engage in bearing more children
8. Ask if they are able to discuss pregnancy issues with their husbands
9. Ask what they think contribute to maternal death in the community
10. Ask if there are any cultural practices that goes against them (women)
11. Ask question about the number of children they have
12. Ask question on whether she has been using contraceptives on a regular basis with partner
13. Ask question on educational level
14. Ask question on how maternal death can occur
15. Ask question on how maternal death can be prevented
16. Ask question on sources of information about maternal mortality/ health
17. Ask question on monthly income

B. WOMEN POSTPARTUM (INTERVIEW AND DISCUSSION)

1. Ask why they would not inform their families or health personnel of their pregnancy status
2. Ask them to share their experiences after pregnancy
3. Ask if they know pregnant woman who has committed suicide as a result of the way people behave towards her

4. Ask of their pregnancy coping strategies
5. Ask how women get to know of their pregnancy status
6. Ask if he/she had access to antenatal services and delivery services
7. Ask how much it costed to access antenatal services and delivery services
8. Ask why they would not go for ante natal care
9. Ask about the way their relatives treat them before delivery
10. Ask question on sources of information on maternal mortality / health
11. Ask question on how maternal death can be prevented
12. Ask question on educational status
13. Ask question on marital status
14. Ask question on the number of children
15. Ask question on how regular she uses contraceptives with partner

C. TRADITIONAL BIRTH ATTENDANTS (INTERVIEW)

1. Ask whether they use parturition table on a regular basis with paying clients and non-paying client
2. Ask why they would not use parturition table with a paying client or a non-paying client
3. Ask about the different categories of traditional birth attendants
4. Ask about whether they operate in one place or move from one place to the other
5. Ask about their challenges in the work
6. Ask about the way people who know them treat them
7. Ask about why they engage in childbirth attendant business
8. Ask where she gets information on maternal mortality/ health
9. Ask how maternal death occurs
10. Ask how maternal mortality can be prevented
11. Ask if maternal mortality can be avoided
12. Ask whether she has been verbally or physically abused before.