Assessing factors that influence the utilization of modern contraceptives among men and women of reproductive age in Northern Ghana and strategies to improve uptake

Prince Akebo Abugri
Ghana

51st International Course in Health Development/Master of Public Health (ICHD/MPH)
September 22, 2014 – September 11, 2015

KIT (ROYAL TROPICAL INSTITUTE)
Vrije Universiteit Amsterdam
Amsterdam, The Netherlands

Assessing factors that influence the utilization of modern contraceptives among men and women of reproductive age in Northern Ghana and strategies to improve uptake

A thesis submitted in partial fulfilment of the requirement for the degree of Master of Public Health

By

Prince Akebo Abugri

Declaration:

Where other people's work have been used (either from a printed source, internet or any other source) this has been carefully acknowledged and referenced in accordance with departmental requirements.

The thesis (**Assessing factors that influence the utilization of modern contraceptives among men and women of reproductive age in Northern Ghana and strategies to improve uptake) is my own work.**

Signature 

51st International Course in Health Development (ICHD)

September 22, 2014 – September 11, 2015

KIT (Royal Tropical Institute)/ Vrije Universiteit Amsterdam

Amsterdam, The Netherlands

September 2015

Organized by:

KIT (Royal Tropical Institute) Health Unit

Amsterdam, The Netherlands

In co-operation with:

Vrije Universiteit Amsterdam/ Free University of Amsterdam (VU)

Amsterdam, The Netherlands

Contents

List of Figures

List of Tables

ACKNOWLEDGMENT

First and foremost, I thank Almighty God for His abundant grace and favour which has enabled me to complete this course successfully. I also sincerely say a 'Big' thank you to the Dutch Government for the opportunity to study at the Royal Tropical Institute (KIT), Amsterdam under the Netherlands Fellowship Program (NFP). Without this fellowship, it probably would have been difficult to acquire a European education.

Special thanks to my parents, Mr. and Mrs. Abugri and siblings who were a great inspiration even while I was away from home. God richly bless you for your prayers, encouragement and support throughout this course.

Surely without support and guidance, this thesis would not have been possible. Sincere thanks to my Adviser and Back stopper who were very supportive, critical and pushed me to meet timelines. Your encouragement and flexibility throughout the writing of this thesis enabled me to complete this write up even before the deadline. I am really grateful to you for the time spent 'coaching' me.

To the course coordinators and administrators of the ICHD program, I say a big thank you. As students, you were our backbone and to all the staff of KIT including external tutors who took us through the course, God richly bless you for sharing this useful information with us.

Special thanks to my course mates (51st ICHD Students) for the good times we had and for the experiences and skills shared throughout the course of the program.

DEFINITION OF TERMS

Family Planning/Contraception:

The World Health Organization defines family planning as a service which allows individuals and couples to anticipate and attain the desired number of children and spacing and timing of their birth. It is achieved through the use of contraceptive methods and the treatment of involuntarily infertility (WHO 2015).

Utilization:

Is the measure of people who have need for a service and actually having access and using the service in sufficient quality (Peters et al. 2008).

Contraceptives:

Substances or devices that is capable of preventing pregnancy. Some examples are male and female condoms, injectable, oral pills, and intrauterine devices (IUD) (WHO 2015).

Contraceptive Prevalence Ratio:

Percentage of women of reproductive age who are currently using or whose partner is currently using, at least one contraceptive method, regardless of the method used (WHO 2015).

Fertility Rate:

The number of children a woman would have by the end of her childbearing years if she were to pass through those years bearing children at the current observed age specific rate (GDHS 2014).

Unmet need

Unmet need for contraception is a term that describes women who either want to postpone child birth for the next two or more years or women who want to stop childbearing altogether but are unable to use a contraceptive (GDHS 2014).

LIST OF ABBREVIATIONS

CHN	Community Health Nurse
CHO	Community Health Officer
CHPS	Community-Based Health and Planning Service
CHW	Community Health Workers
CPR	Contraceptive Prevalence Ratio
CSO	Civil Society Organization
DFID	UK Department for International Aid
DHMT	District Health Management Team
DTTU	Delivery Team Topping Up
EPI	Expanded Program on Immunization
FBOs	Faith-Based Organizations
GDHS	Ghana Demographic and Health Survey
GHS	Ghana Health Service
GSMF	Ghana Social Marketing Foundation
GSS	Ghana Statistical Service
HIV	Human Immunodeficiency Virus
ICPD	International Conference on Population and Development
IEC	Information, Education and Communication
IPPF	International Planned Parenthood Federation
IPS	Population Services International
IUD	Intrauterine Device
MDG	Millennium Development Goal
MOH	Ministry of Health
NGOs	Non-Governmental Organizations
NHIS	National Health Insurance Scheme
NPC	National Population Council
NRHSP	National Reproductive Health Strategic Plan
PPAG	Planned Parenthood Association of Ghana
SPARHCS	Strategic Pathway to Reproductive Health Commodity Security
STI	Sexual Transmitted Infection
UHC	Universal Health Coverage
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations Children Fund
USAID	United States Agency for International Development
WHO	World Health Organization

ABSTRACT

Background: An understanding of factors influencing utilization of modern contraceptives is relevant for efforts aimed at increasing utilization among the general public. This study therefore sorts to contribute to the discussion on how the utilization of modern contraceptives can be improved in Northern Ghana.

Method: Literature review was the method used for the study. Only English literature published after 2005 were included in the study. However, selected classics and strategic documents that were published before 2005 were included. Andersen's behavioural model was used to analyse the factors that influenced contraceptive utilization in Northern Ghana.

Results: Factors that influenced utilization was not just limited to health care factors like availability of contraceptives, cost and service provision. It was also influenced by economic, social and cultural factors. However, the factors that exerted the most influence in Northern Ghana included availability of contraceptives, service quality, gender norms and values, education and perceived risks and fear. People who lived in urban centres generally used contraceptive more than those in rural areas.

Conclusion and Recommendation: Increasing utilization therefore requires a well-planned horizontal approach that considers all these factors influencing utilization. Programs that were client cantered, addressed gender norms and ensured access to contraceptive were found to be more successful. The study recommends establishment of contraceptive delivery teams, value clarification and tasks shifting among others to dealing with the problem.

Key words: factors, family planning, contraceptives, systematic reviews, evidence, Northern Ghana.

WORD COUNT: **12, 161**

INTRODUCTION

As a program manager who worked with a network of Christian institutions in Ghana, I realized that the major health challenge in the Northern part was maternal and neonatal mortality. The rates at which these deaths occur compared to other parts of the country were totally unacceptable. As an organization, we had worked over the years trying to address these problems by developing maternal and adolescent health programs across the three northern regions. Within the last three years, our organization came to the realization that the approaches used in dealing with the problem especially in rural communities were not helping. A needs assessment in 2013 revealed low acceptance and utilization of modern contraceptives as the main contributor to the high maternal and neonatal deaths in the area. Evidence shows that increasing the utilization of contraception especially in developing countries can reduce maternal and neonatal mortality by 35% and 13% respectively (Eliason et al. 2014).

As a result, my organization after 2013 began to integrate contraception as a major component in all of its programs and projects as a measure to dealing with the maternal deaths and the increasing rates of teenage pregnancies among young girls in Northern Ghana.

Choosing this topic was deliberate as it would afford me the opportunity to learn and understand the factors that influenced utilization of contraceptives in the areas in which I work. Family planning and contraception which is also an area of interest is quiet a new area for me and so working on such a topic would help increase my knowledge and understanding of the topic to better support in my field of work.

Contraception according to the United Nations is cost effective and Ghana as a country stands to gain if it is able to increase the utilization of contraceptives across the country. Apart from the percentage reduction in maternal and neonatal mortalities, every investment in promoting contraceptives yields more than four times the amount that would have been spent treating complications as a result of pregnancies and unsafe abortions (Singh et al. 2009; Spiedel et al. 2009).

Globally, contraception has received wide recognition because of its positive contribution to health outcomes and it is no wonder that leaders across the world have thrown their support behind it.

Hillary Clinton, a former US Secretary of State argues that "you cannot have maternal health without reproductive health and reproductive health includes contraception and family planning and access to legal safe abortion". It is also not surprising that contraceptive prevalence was included as an indicator of the new Millennium Development Goal (MDG) 5 target, which is achieving universal access to reproductive health by 2015.

STRUCTURE OF REPORT

The study is structured in a manner so as to correspond with the objectives outlined in the report. The study is made up of six main chapters which are further divided into sub-chapters. Chapter one of the study discusses the background information of Northern Ghana which includes the geography, demographics, economic and educational status, gender practices, fertility and some health indicators of the area.

This is followed by Chapter two which discusses the problem statement and justification for the study. The methodology used for the study and conceptual framework used to organize and analyse the findings are discussed there. The main research findings or results of the study are discussed in Chapter three. This chapter explains how these factors when in place positively or negatively influences utilization. This then leads to Chapter four, which identifies a number of proven interventions in Africa which could be adapted by stakeholders in Northern Ghana to increase contraceptive utilization. Chapter five is a discussion of the findings and describes what can be done to overcome these challenges. Chapter Six which is the last of the report draws a conclusion and offers some recommendations based on the best practices identified in the study.

CHAPTER 1: BACKGROUND INFORMATION

1.1 Geography and Demographic Information

Situated in the northern part of the country, Northern Ghana is composed of three of the ten regions of Ghana: the Upper East, Upper West and Northern regions. It shares borders with Burkina Faso in the north-west, the Brong-Ahafo region to the south and Togo in the north east as depicted in annex 1. With close proximity to the Sahel and Sahara, the climate of Northern Ghana is much drier compared to the rest of the country. It has savannah woodland vegetation that is characterized by short scattered trees which are drought resistant. Two main seasons exist in the area: the wet season which spans May to October and the dry season from April to November. According to the last census report, the population of Northern Ghana is estimated at 4.2 million, with female population a little over 50%. A greater proportion of the population is between the ages of 15 and 24 (GSS 2012).

1.2 Economy

Northern Ghana is typically agrarian with a high proportion of its people engaged in subsistence farming and animal rearing. The farming activities are usually carried out in the wet season. Women and the youth are usually the ones seen working on the farms. They produce the food but do not have the decision making power over the farm produce. A little over 30% of the people are also engaged in formal and some other informal employment. Most of these are in the urban centres especially at the regional and district levels. About three of 10 people are estimated to be poor in Northern Ghana (GSS 2012).

1.3 Education/Literacy Level

Education and literacy levels in Northern Ghana are low compared to other regions in Ghana. Whereas the national average literacy level is estimated to be 74%, that of Northern Ghana is below 50% with more women than men being unable to read and write. The proportion of the population that has never been to school ranges from 45% to 55% across the three regions (GSS 2012).

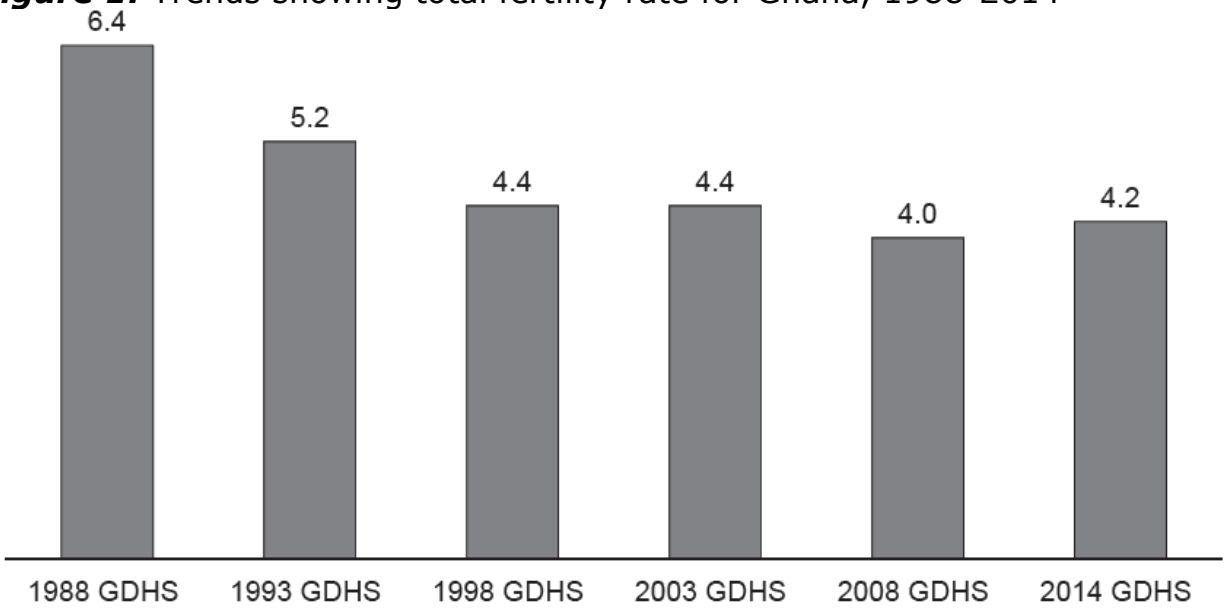
1.4 Socio-Cultural Practices

Northern Ghana is a mix of several ethnic groups spread across the length and breadth of the area. The major ethnic groups include Dagombas, Gonjas, Kokombas, Grusi, Kusasis, Dagaatis and Waales. Traditional religion which is one of the dominant religions in the region is largely practiced in the rural settings. Christianity and Islam are practiced more in the urban than in the rural centres (GSS 2012). With a patriarchal system of inheritance, women have no stake in the sharing of family property. Men normally are the heads of households and make all the decisions concerning the family or household (Achana et al. 2015).

1.5 Fertility

Total fertility rate increased over the last five years. According to the last demographic health survey, fertility rate increased slightly from 4 in 2008 to 4.2 in 2014. However, these rates are much higher in rural communities than in urban communities. Evidence suggests that the rate in rural settings is estimated at 5.2 while an estimate for urban centres is at 3.4. With Northern Ghana being largely rural and poorer than other parts of the country, the fertility rates in this area are much higher than in other regions of Ghana (GDHS 2014). This has led to low Contraceptive Prevalence Rate (CPR) in Northern Ghana. Estimated CPRs for Greater Accra, Ashanti and Volta regions are 29%, 27% and 32% respectively. Those of Upper East, Upper West and Northern regions which make up Northern Ghana have CPRs of 24%, 25% and 11% respectively (GDHS 2014).

Figure 1: Trends showing total fertility rate for Ghana, 1988-2014



Source: GDHS 2014

1.6 Contraception in Ghana

Reproductive health and contraception is regarded as a human rights issue and is clearly spelled out in the MDGs and other international instruments such as the International Conference on Population and Development (ICPD) which was held in Cairo in 1994. Government through the Ministry of Health (MOH) over the years has committed itself to improving contraceptive utilization across the Nation. This commitment was reaffirmed in 2007 with the development of a National Reproductive Health Strategic Plan (NRHSP). The plan had among other objectives sort to "increase contraceptive prevalence through promotion of, access to and quality of family planning services" (GHS 2007).

Both long and short term contraceptive methods are usually provided by health facilities. Long term methods are contraceptive methods that provide protection for more than months, years or even forever. Examples include the intrauterine device (IUD), Implanon and Jadelle. Others are female sterilization and vasectomy which are irreversible and permanent. Short term contraceptives which last for about a day and a few months include injectables (Norigynon and Depo Provera), oral contraceptives (microgynon and microlut), and male and female condoms (GHS 2014). However, the most common and most used contraceptives are the male condom, injectables, and oral contraceptives (GDHS 2014).

Procurement of all modern contraceptives is usually by the MOH with assistance from United State Agency for International Development (USAID), United Nations Populations Fund (UNFPA), World Health Organization (WHO) and USAID/Deliver Project. When procured, the contraceptives are distributed from the national medical stores through regional medical stores of the GHS to districts and sub-districts. In most instances, some districts and facilities do not receive their share of contraceptives because of the lack of transportation or fuel to convey these contraceptives (GHS 2014). In some instances the Ghana Health Service (GHS) may involve Non-Governmental Organizations (NGOs) and other private establishments to engage in the distribution of these commodities (MOH 2004-2010).

Nationally, the family planning acceptance rate increased slightly from about 25% in 2013 to 29% in 2014. Within Northern Ghana, the acceptance rate also increased slightly from what was recorded in 2013. Upper West region recorded a high acceptance rate of 51%, well above the national average. Northern and Upper East regions recorded 19% and 29% as acceptance rates for family planning in 2014 (GDHS 2014) as shown graphically in annex 3.

1.7 Health Systems

1.7.1 Health Service delivery

Under the MOH, GHS is the main health service provider in the country. While the ministry is responsible for policy direction, GHS acts as the implementing body of the ministry. Scattered across the nation, GHS is present in all three regions of the North right from the regional to the community level (Abor 2008). However, the number of health facilities in especially rural Northern Ghana is not sufficient to meet the demands of the people. Also, health staff are inadequate and thus compromising the quality of health care provided to the people. Nurses and midwives who provide essential services especially to the poor are inadequate for the masses. Community Health Workers (CHWs) as part of their activities have been trained by the GHS to include the provision of modern contraceptives to clients in their communities (GHS 2014). Complementing the shortfall in health service provision are the faith-based organizations (FBOs), private service providers, and traditional practitioners made of traditional healers and traditional birth attendants.

1.7.2 Health Insurance System

Introduced in the year 2005, the national health insurance scheme replaced the 'cash and carry system'. The scheme's objective is to ensure Universal Health Coverage (UHC) through the payment of premiums. It has made modest achievements over the years. The introduction of the National Health Insurance Scheme followed by the free maternal care policy contributed significantly to the decline in maternal deaths (Asamoah et al. 2011). However, the payment of premiums still remains a challenge for the poor who live especially in rural areas. As such, a number of people are still not registered with the scheme. Due to limited financial resources to run the scheme, the scheme is unable to cater for the cost of all illness and has therefore excluded others from its treatment list. Some disease conditions excluded in the scheme's list include chronic illnesses like cancers, diabetes and heart diseases and also including simple services like the provision of modern contraceptives (Dixon et al. 2013).

CHAPTER 2: PROBLEM STATEMENT, OBJECTIVES, METHODOLOGY AND CONCEPTUAL FRAMEWORK

1.8 PROBLEM STATEMENT

The issues of maternal health in most developing countries are recognized as one of the most important development issues because of its impact on society such as reduction in maternal and child mortality and savings on government expenditure on health, education, water and sanitation and housing (Eliason et al. 2014; Speidel et al. 2009). Maternal mortality is undoubtedly the leading cause of death among women of reproductive age globally (Asamoah et al. 2011). The global estimate for maternal mortality shows that the rate is decreasing. However the rate of 289 deaths per 100,000 live births in 2013, most of which occurred in Africa is worrying (WHO 2015).

These high maternal deaths recorded are no different in Ghana. Even though the rate of maternal mortality has been decreasing from 760 deaths in 1990 to 503, 451 and 350 deaths/100,000 live births for the years 2005, 2008 and 2010 respectively, the current estimation of 380/100,000 live births is still unacceptably high (MOH 2013).

A major contributor to these deaths is the low utilization of modern contraceptive/family planning methods in Ghana. The WHO defines family planning as a service which allows individuals and couples to anticipate and attain the desired number of children and spacing and time of their birth. It is achieved through the use of contraceptive methods and the treatment of involuntarily infertility (WHO 2015).

Not only does the uptake of modern contraceptive services help individuals and couples in attaining the desired the number of children, it has direct impact on a woman's health and wellbeing and also contributes significantly to the reduction of mortality in women and neonates (Eliason et al. 2013).

In Sub-Saharan Africa, it has also been proven that the use of modern family planning and contraceptive methods in the spacing of pregnancies by at least two years can reduce maternal mortality by 35% and reduce neonatal mortality by about 13% (Eliason et al. 2014).

According to Rutstien, high under-five mortality in Africa, which is also a problem in Ghana, could be reduced by 25% if contraceptives were

promoted effectively and women spaced their pregnancies by at least three years (Rutstien 2008).

Other studies have also revealed the importance of contraception including its contribution to the general economic growth of societies (Cunning & Schultz 2012). Investing in the promotion of contraception does not only benefit the individuals but improves the economic status of families, households and society in general (Eliason et al. 2014). Singh and Speidel in their study found that an investment of $1 into family planning yields a $4 return that would have been spent treating complications as a result of unintended pregnancies and unsafe abortions. Similarly, reduction in fertility saves governments about $31 from health care, education, housing and water and sanitation expenditures (Singh et al. 2009; Speidel et al. 2009).

However, even though the benefits of contraceptive services are numerous and cannot be overemphasized, the utilization of modern contraceptive services in Ghana is still low (Eliason et al. 2014). Currently, the CPR which is a measure of all married women currently using a method of contraception is 27%. On average, only 17% of all married women use any form of modern contraceptive method. Regional disparities in modern contraceptive use are evident. Northern Ghana, which is made up of Northern, Upper East and Upper West regions, records the lowest use of modern contraceptives compared with other regions in the country (GDHS 2014).

Of all the women in Ghana (15-49 years), 19% use some kind of contraceptive method, whether modern or traditional, while 30% of women who want to use some form of contraceptive method do not have access to it (unmet need) as shown graphically at the end of the report in annex 2. Therefore an appropriate strategy for ending these unnecessary deaths of women associated with pregnancy is by promoting the increased utilisation of contraceptive services among men and women of reproductive age in the area (Campbell & Graham 2006).

1.9 JUSTIFICATION

Since the late 1960's, Ghana has encouraged the promotion and use of family planning and contraceptive methods and was one of the first countries in Africa to adopt a population policy (Stanback & Twum-Baah 2001). Ghana was also one of the 179 countries in Cairo that endorsed the Program of Action after a successful International Conference on Population and Development was held in Egypt in 1994 (Barot 2014). Since then Ghana has integrated contraceptive services into its reproductive and child health programs (Eliason et al. 2014).

Despite all these efforts by the national government to increase the utilization of modern contraceptives across the country, the northern parts of Ghana still record low utilization compared with other regions in the South. This study therefore wants to find out why the utilization of modern contraceptives is still low in the study area and what can be done about it.

1.10 MAIN OBJECTIVE

This study (literature review) aims to contribute to the discussion on how the utilization of modern contraceptives can be improved in Northern Ghana.

1.11 SPECIFIC OBJECTIVES

1. Identify the different factors that influence the utilization of modern contraceptive methods among men and women of reproductive age in Northern Ghana using an adapted version of Andersen's conceptual framework;

2. Identify interventions that have proven to improve utilization of modern contraceptives among men and women of reproductive age in Ghana and outside of Ghana;

3. Make recommendations to health managers in Northern Ghana for improved utilization of modern contraceptives among men and women of reproductive age.

1.12 METHODOLOGY

The method used for this study was literature review. Categorized in two parts, the first part comprised of the search for factors that influenced the utilization of modern contraceptive methods in Northern Ghana while the second part concerned strategies that have been proven to work within Ghana and outside of Ghana which could be adopted by health managers in Northern Ghana to increase the uptake of modern contraceptives.

Literature from published and peer reviewed journals were used. These were obtained from databases such as Cochrane and PubMed. The VU University e-Library was also visited to access peer reviewed journals. Literature from websites of international organizations such as WHO, UNICEF, UNFPA, and IPPF, Pathfinder and PSI and Government institutions like Ghana Statistical Service (GSS), MOH, GHS and National Population Council (NPC) were all searched. Only English literature published later than 2005 was reviewed for this study. However, classics and strategic documents such as ICPD 1994, National Population policy 1994 and other articles before 2005 were also included.

The first search strategy combined terms and synonyms that described factors responsible for the utilization of contraceptives while the second strategy combined words relating to strategies or interventions.

Numerous articles and reports were obtained using these search strategies. For the influencing factors, the following criteria were used to limit the number of articles obtained so as to use only relevant articles for this study:

- Reviews on determinants of contraceptive utilization by UNFPA, WHO, IPPF and other international organizations
- Larger qualitative studies on determinants in Africa and West Africa
- Studies and reports for Ghana specifically

On the second search strategy for proven interventions in improving modern contraceptive utilization, these were used as inclusion criteria for the study. All others were excluded:

- Systematic reviews on effective interventions using Cochrane database
- Studies that particularly worked for Africa and why these interventions succeeded

The diagram below describes a summary of the processes used in the search for literature;

Table 1: summary of search strategy

STUDY OBJECTIVE	**SOURCE**	**KEY WORDS**
1. Identify the different factors that influence the utilization of modern contraceptive methods among men and women of reproductive age in Northern Ghana using an adapted version of Andersen's conceptual framework	PubMed Cochrane VU e-library Reference lists of classics and strategic documents Institutional websites	Health system Policies and strategies Demography Socio-cultural Health beliefs Income Residence Region Service quality Myths Attitude Preference Ghana Northern Ghana Africa
2. Identify interventions that have proven to improve utilization of modern contraceptives among men and women of reproductive age in Ghana and outside of Ghana	Institutional websites PubMed Cochrane	Strategies Interventions Evidence Systematic reviews Contraceptives Northern Ghana Africa

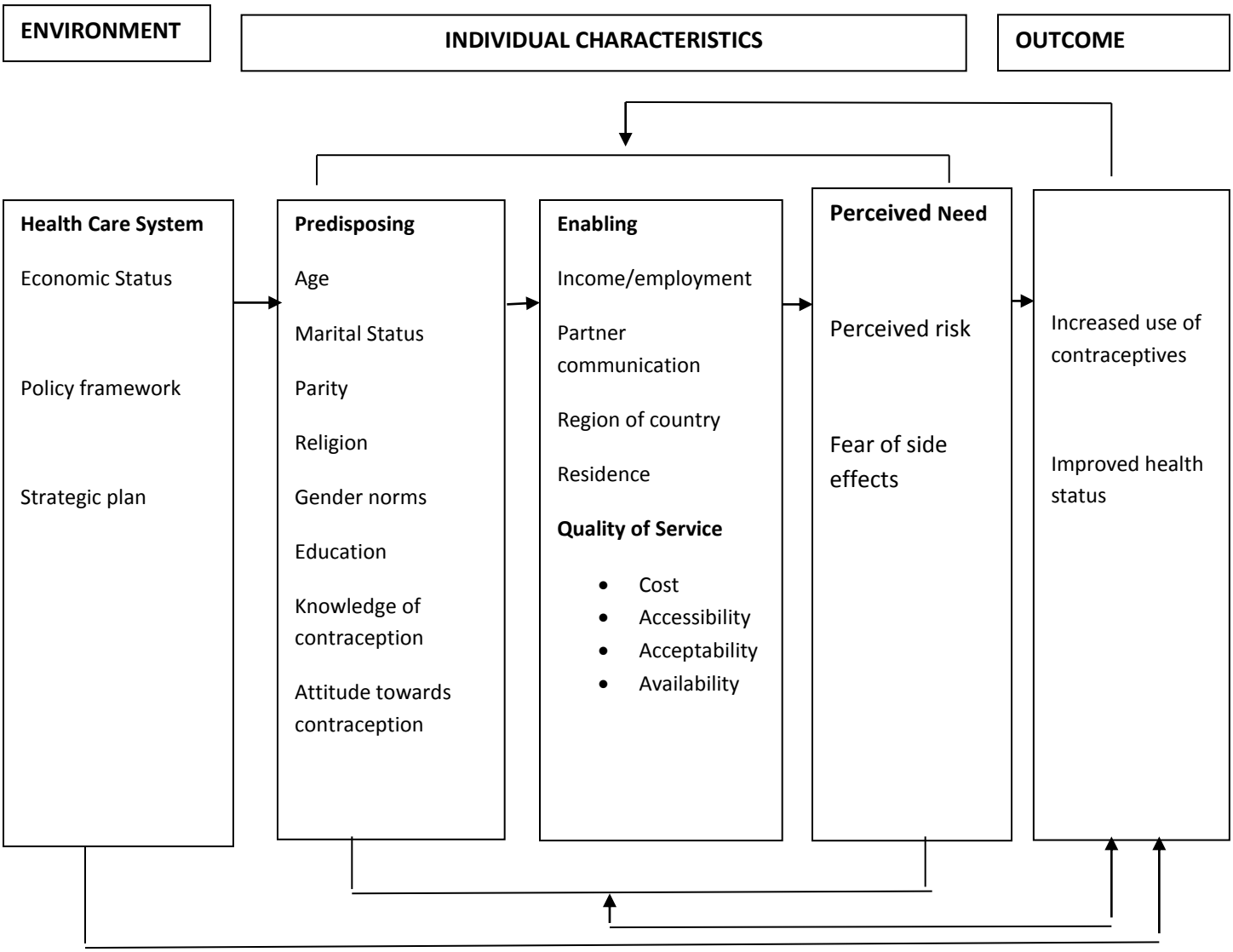
1.13 CONCEPTUAL FRAMEWORK

To better analyse the factors that influenced the utilization of modern contraceptive among men and women in Northern Ghana, there was the need to identify a suitable conceptual framework that best identified these factors and situated well in the context of Northern Ghana. After a series of discussions and Internet searches, the Anderson's behavioural model of health services utilization was considered suitable for this study. Originally developed in the 1960s to explain health service utilization among families, the model has under gone several revisions over time and has therefore changed its unit of analysis from families to individuals and expanded to cover broader contextual level of the external environment and health care system (Andersen & Davidson 2001). Apart from the fact that the model explains individual behaviour in the utilization of family planning and contraceptive methods which is the focus of this study, the model was also chosen because of context similarities which best fits into the context of Northern Ghana. Adapting the revised frame work for this study, some changes were made to fit the context of this study. Therefore, partner communication, region of country and residence which are major determinant of contraceptive utilization in Northern Ghana were included in the enabling factors. Need characteristics which include evaluated need, and perceived health and consumer satisfaction were replaced with perceived risk and fear of side effects which discuses some myths and misconceptions about contraceptives in Northern Ghana. These changes were made and incorporated to accommodate the Northern context. A systematic review study conducted to assess the use and implementation of the framework reported it being used extensively to investigate the use of health services in a broader context such as health systems resources and their relation to a wide number of diseases and health outcomes (Babitsch, Gohl, & von Lengerke 2012).

The adapted framework describes how the environment in which people live and individual characteristics can affect the likelihood of a person to use modern contraceptive methods. It also explains the inter-relational nature of these factors and argues that both the environmental factors and individual characteristics are not independent but are largely influenced by one another. The environmental factors include the health system, favourable policies and a well-developed strategic document to ensure that contraceptives are available, accessible and affordable to all those who want

to use them. The environment sets the context and determines the conditions for success or other wise of programs or interventions put in place to promote the use of modern contraceptives. If there are no favourable policies, then the individual characteristics, no matter how favourable they are to the individual, may not be able to achieve maximum results. The individual characteristics are made of three components: predisposing factors, enabling factors and need factors. The predisposing factors are those factors which are predetermined and usually out of the control of the individual. Examples of such factors include demographic factors such as age and marital status. Socio-cultural factors, values and gender norms, perceptions, knowledge and attitude all fall under predisposing factors. Enabling factors are those that determine the means and know-how to satisfy the health needs of an individual where health facilities and personnel are available. According to Andersen, enabling factors are personal and communal. These can include the health care system, education, income, employment and spousal communication and community factors like residence, region, and quality of services. The need based factors are the immediate reasons an individual decides to use a health care service. These needs include perceived need which may be increased or decreased through health education and evaluated need which is a professional judgment about an individual's health status and their need for medical care. The factors identified in this study as part of the factors influencing the utilization of contraceptives include perceived fear of side effects, perceived risk of infertility and perceived risk of developing other diseases.

Figure 2: Adapted Andersen's Behavioural Model



Source*:* Andersen & Davidson 2001

1.14 STUDY LIMITATIONS

One of the main limitations of this study was the unavailability of research information on modern contraceptives in Northern Ghana. Few studies were identified to have been conducted in the study area. The study therefore based its findings on other studies in Ghana and outside of Ghana with similar characteristics such as geography, gender norms, livelihoods and rural/urban mix and author's own knowledge of Northern Ghana. The limited number of studies in Northern Ghana may miss specific information and considerations that may not have emerged in the studies.

Besides the review on determinants and effectiveness of interventions, numerous studies were identified. This literature review was too broad and the time available to systematically review all studies limited. As a result, relevant studies may be missing in this review.

CHAPTER 3: FACTORS INFLUENCING UTILIZATION OF MODERN CONTRACEPTIVES

1.15 Introduction

Several factors account for the low utilization of modern contraceptives especially in the developing world. The UNFPA in its latest report noted that poverty and a majority of those who reside in rural communities lack access to modern contraceptive services. The challenge of reaching out to these groups of people is still prominent and has left more than 200 million women who desire to use contraceptives not being able to use them (UNFPA 2014).

The determinants that are attributed to the utilization of modern contraceptives in Africa and particularly West Africa are most often similar among countries. The latest DHS comparative report indicates a numbers of factors which may or may not compel an individual to use a contraceptive. According to the report, geographical location, either rural or urban, influenced utilization. People who lived in urban centres used contraceptives much more than those who lived in rural areas. It also confirmed the many studies which stated that education positively influenced utilization. Among women between 15-24 years, higher education showed a statistically significant association with contraceptive utilization. However, in countries like Burkina Faso, Liberia, Mauritania and Senegal, education showed an inverse relationship with utilization. Other factors the report mentioned included individual wealth/income, parity and knowledge of contraceptives (Macquarie 2014).

A study on contextual influences of modern contraceptive use in sub-Saharan Africa also outlined similar factors as contributing to the utilization in sub-Saharan Africa. Demographic characteristics such as age, marital status and gender were mentioned as determining factors. Others were partner consent, cultural norms and the general economic development of the country or region. Quality of service provision, education especially of women and religion also influence contraceptive utilization (Stephenson et al. 2007).

1.16 ENVIRONMENTAL FACTORS

Many studies have linked economic development and poverty as contextual factors that determine the use of sexual and reproductive health services, especially modern contraceptives (Sileo 2014). Northern Ghana is regarded as the poorest part of the country with the majority of inhabitants living in rural communities. It is largely agrarian with an average of three out of 10 living below the poverty line (GSS 2010). A clear manifestation of the economic level of Northern Ghana is seen in its health system; poor health infrastructure, inadequate health personnel and medical supplies and equipment. With a population above four million, there are few hospitals and health centres providing reproductive health services. The staff required for contraceptive services such as midwives and community health nurses are woefully inadequate to meet the demand in Northern Ghana (USAID 2006). The nurse and midwife to population ratios in Northern Ghana are much higher than the national averages of 1:1,240 and 1:1,478 respectively. These shortfalls necessitated the task shifting policy where CHWs were trained to provide contraceptive services to clients in rural communities through the house to house strategy (GHS 2011).

Apart from the economy and its effects on the health system, the need for a suitable policy environment to ensure continued utilization of modern contraceptives cannot be overemphasized. As a result, the government of Ghana in 1994 set up the National Populations Council (NPC) to develop policies and strategies that would promote the use of contraceptives in Ghana. In accordance to its mandate, the 1969 National Population Policy was reviewed and updated in 1994. After about 21 years, Ghana still relies on this document for policy direction (NPC 1994).

Also important to ensuring the promotion of modern contraceptives is the development of strategies to achieve policy objectives. The last national strategic framework to ensure the availability of contraceptives (contraceptive security) was implemented between 2004 and 2010. Five years after the last strategic plan, there is still no strategic document to guide or ensure contraceptives promotion and utilization (MOH 2004-2010).

1.17 PREDISPOSING FACTORS

1.17.1 Age

According to the International Conference on Population and Development's (ICPD) plan of action, women of all ages have the right to use contraceptives when and how they choose to use them. Among young females between 15-24 years, only 22% had access to contraceptives globally while for those above 30 years, 60% of them used modern contraceptives (UNFPA 2014). The use of modern contraceptives varies with age in Ghana (Achana et al. 2015). In Ghana, only 5.2% of women between the ages of 15-19 who are usually referred to as adolescents used modern contraceptives and 17.4% of those between 35-39 years also used contraceptives (GDHS 2008). The last demographic and health surveys confirms this finding when it summarized its finding by stating that the use of modern contraceptives were lowest among sexually active adolescents (GDHS 2014). Due to societal and gender norms, young people who are sexually active and wish to have sex do so without any form of contraception because they are denied services especially in health facilities. This is because young people who are not married are assumed not to engage in sex (Eliason et al. 2014). This also explains why only 3.6% of adolescents indicated the health centre as their source of contraceptives in a study conducted in Kintampo (Boamah 2014).

1.17.2 Marital status

The marital status of a woman can determine whether or not she uses a contraceptive. Unmarried sexually active women are seven times more likely to use contraceptives than their married counterparts in other to prevent pregnancy (GDHS 2008). In some areas, unmarried women who are mostly younger refuse to use contraceptives because they felt they usually have sex once in a while and because of the stigma attached to it (Parr 2003). However, for unmarried women in urban areas, the use of contraceptives was common and accepted among the general populace. While married women in a monogamous relationship were twice more likely to use modern contraceptives than single women, those in polygamous marriages were less likely to use modern contraceptives compared with their counterparts in monogamous marriages (Achana et al 2015).

1.17.3 Parity

The proportion of women who currently used modern contraceptives increased with increasing parity. Among women who do not have children, only 17% used contraceptives compared to an average of 26% among those who had five or more children (GDHS 2008). Women from the Upper East region in the Talensi district who felt they had had enough or the required number of children then resorted to the use of contraceptives (Apanga & Adam 2015). This is confirmed by a study in Nigeria where the use of modern contraceptives increased after mothers had had their third child (Ankomah et al. 2011).

1.17.4 Religion

Northern Ghana is largely rural with traditional religion being the major religion practiced in the area. Religion is an important social component especially in rural communities and largely influenced every aspect of their lives. Whereas other studies conducted in time past linked the use of modern contraceptives to religion (Srikanthan & Reid 2008; Adongo et al. 1998), a recent study in the Upper East region showed no relationship between religion and use of modern contraceptives. Religious teachings could influence couples decisions but couples/women may ignore these teachings (Achana et al 2015). However, Adongo and his colleagues also showed that traditional religion in Northern Ghana places a premium on child bearing and regards children as a blessing from the ancestors or gods. Preventing child bearing through the use of modern contraceptives is believed to be offending the ancestors or gods which could attract a curse or banishment from the community (Adongo et al. 1997).

1.17.5 Gender norms

Northern Ghana still lacks behind other parts of the country in terms of women's empowerment and development as compared to Southern Ghana. The matrilineal system in the south gives women a voice, the ability to make decisions in the family, and a right to own some property (Asante-Sarpong 2007). Women in Northern Ghana do not make their own decisions even when it has to do with their reproductive health. It is strictly patriarchal; men are the head of households and make all the decisions. A woman cannot decide to use a modern contraceptive without the approval of her husband or partner (Achana et al. 2015).

Generally, child bearing is also seen as the biological duty of a woman and so trying to stop child birth or even delay it is frowned upon by the society.

Households value children and the more children you have, the more respect you earn from the society. Besides they are a good source of labour for work on farms and parents stand the chance of having their children care for them at old age. Also because of the patriarchal nature of Northern Ghana, boys are more valued than girls. Boys have the right to inheritance and the ability to become ancestors; whereas girls are unable. For this reason, women who may have even had about four or five girls would still prefer to give birth to a boy and would persists till she gets her boy child to avoid being stigmatized and left out of the sharing of any family property in the event that the husband dies (Achana et al. 2015).

Some believe that women who used modern contraceptives are promiscuous and unfaithful. Those who chose to carry with them some contraceptives such as condoms are described as 'flirts'. Because of the associated stigma and not wanting to be labelled as such, most women choose to use other contraceptives which may be easier to hide from partners who disapprove of the use of contraceptives than carrying condoms. As such most married women prefer the injectable over the condom and other methods. The high influence of urbanization makes the South much accommodating than the North. In some cases refusing to use contraceptives was an option to save the marriage of a woman because no man wants to keep a 'flirt' as a wife (Prinsloo 2011). However, providing a platform for learning through community action and learning process helps community members ask critical questions on norms, values and beliefs about contraception which leads to changes in attitude that could result in demand and increased utilization of contraceptive services (Gordon & Cornwall 2004).

1.17.6 Education

Higher educational attainment increases a man or woman's ability to use modern contraceptives and affords women the chance to seek higher education if they desire (WHO 2015). Women with at least a secondary education were twice more likely to use a modern contraceptive compared with women with no education (GDHS 2014). This is consist with a study in Northern Ghana where about 33% of women who used modern contraceptives had some level of education compared to 13% who had no education at all (Achana et al. 2015). Utilization was much higher among educated women whose male partners also had some level of education as they supported their wives to plan their families appropriately. It is however not surprising to see women with high education opting for modern contraceptives because education empowers women and increases their decision making power in the family or relationship. Their knowledge of the benefits of contraceptives also puts them in the right position to opt for and use modern contraceptives (Eliason et al. 2014).

1.17.7 Knowledge of contraception

For women in Northern Ghana to successfully and consistently use modern contraceptives, their knowledge of the various methods of modern contraceptives cannot be over emphasized (Prinsloo 2011). Knowledge is important because it informs of what methods women have and may decide to use. More than 95% of men and women had heard of at least one contraceptive method. An average of 94% of all married women in Northern Ghana had heard of any modern contraceptive out of which only about 14% currently used these contraceptives (GDHS 2008). This therefor supports the fact that just being aware of the existence of a modern contraceptive does not lead to acceptance and utilization among women. Knowledge goes beyond awareness and in this case has to do with the knowledge of appropriate service delivery and other enabling factors (Downes 2012).

The majority of women in the Upper East region who had heard of modern contraceptives were encouraged to go for them by health workers. According to Apanga and his colleagues, after initial usage, most women declined to continue because they experienced some side effects. Lack of knowledge of the side effect compared to the benefit women stood to gain was completely misunderstood (Apanga et al. 2015). The main source of information about modern contraceptives was from health workers. A good number of women, especially the unmarried ones felt the use of modern contraceptives was for

only married couples. However, women who had enough knowledge on issues of family planning and modern contraceptives were more likely to use contraceptives as compared to those who knew least about them (Eliason et al. 2014).

1.17.8 Attitude towards contraception

Information from the GDHS revealed that a good number of men and women still had some negative attitudes towards modern contraceptives and family planning in general. Concerning the common statement in Ghana that family planning and contraception is a woman's business, more than 30% of men supported it and felt men had no business with contraceptives. Surprisingly, about 50% of women felt contraception was women's business and men should have no role in it. 60% of men agreed with the statement that women who used contraceptives were promiscuous and would therefore not allow their wives to use any form of modern contraceptive services made available (GDHS 2008).

1.18 ENABLING FACTORS

1.18.1 Income/employment

Use of contraceptives had been rising over the years in Northern Ghana, however, noted as a general concern globally, the poor use much less of these contraceptives than those who are financially independent (Creanga et al. 2011). Those who were either self-employed or work for the formal public or private sector and earned a decent income were in a better position to afford modern contraceptives than those who had no means of decent income. Such unemployed clients, especially women who were not financially empowered totally depended on their husbands or partners for their personal needs. This gave men total control and even took away the ability of the woman to take decisions concerning her sexual and reproductive health. Employed women on the other hand were financially empowered, independent of their partners and able to make decisions concerning their sex and reproductive life (Do & Kurimoto 2012). As stated earlier, many women who reside in Northern Ghana are generally peasant farmers, poor, and do not earn any income. These women who most likely lived in the rural communities where access was a challenge and support to use modern contraceptives from partners was lacking were still however willing to delay or limit the number of children bearing (Creanga et al. 2011).

1.18.2 Partner communication

Partner communication on modern contraceptive services was found to positively increase utilization among couples. Eliason and his colleagues in a study in the Nkwanta district of Ghana found that couples who frequently discussed family planning and contraception were more likely to opt for contraceptives than those who did not (Eliason et al. 2014). Partner communication which could improve the use of contraceptives especially in Northern Ghana was associated with male hostility towards contraception and cultural restrains in discussing about sex (GDHS 2008).

1.18.3 Region of country

The rate of utilization of modern contraceptives in the country was not evenly distributed. Southern Ghana had much higher utilization rates than Northern Ghana. Across the ten regions, the three northern regions were the lowest in contraceptive utilization as mentioned earlier. Several studies have tried explaining the huge difference between the South and North of Ghana (Achana et al. 2015).

1.18.4 Residence

An individual's place of residence influenced to some extend men and women's use of modern contraceptives. Northern Ghana as opposed to southern Ghana is largely rural with a larger fertility rate of about six, the largest in Ghana (Prinsloo 2011). Urban dwellers may be better educated and may desire to have fewer children to better educate and care for them than their colleagues in rural communities (Parr 2002). Women in rural areas who may desire to use contraceptives do not have access to them in their communities and where they are available; may have to walk long distances in order to have access to them. This may serve as a discouragement and limit the use of modern contraceptives among rural women (Osei-Boateng 2011).

1.18.5 Quality of Contraceptive Services

Evidence also shows that apart from the desire to become pregnant, most clients especially women mainly discontinue the use of modern contraceptives because of poor service quality at centres that provide contraceptive services (Blanc et al. 2002). Elements that influence the quality of services are discussed below.

1.18.5.1 Cost of contraception

The cost of acquiring contraceptives either from public or the private sector determines utilization of contraceptives. Poor and rural women were most at risk of the consequences of not being able to afford contraceptives. These costs included both direct and indirect cost. The direct cost is the amount paid for the services and contraceptives received, depending on where one went, either public or private. The indirect cost on the other hand related to transportation and time spent in receiving these services (Emmart 2010; Do & Kurimoto 2012). Though contraceptive services in public health facilities were free, the costs of commodities were estimated at about 0.5 to 3 Ghana cedis depending on the kind of contraceptive. This cost which currently is not covered by the National Health Insurance Scheme (NHIS) was a bit high for the majority of women in Northern Ghana who are classified as poor (Eliason et al. 2014; GDHS 2008).

1.18.5.2 Geographical accessibility

The distance at which clients would have to travel to access contraceptive services played a critical role in whether they would use it or not (GMHS 2007). This was in line with a study which found that health centres that were 2km or less away from a client's location were more likely to receive

women opting for contraceptive services than those that were beyond 2km (Achana et al. 2015). Northern Ghana is considered the poorest part of the country and has inadequate health facilities. The available ones were quite a distance from client's locations which made it difficult for especially women to access contraceptive services (GMHS 2007; Adongo et al. 1998).

1.18.5.3 Acceptability

With growing demand for contraceptive services in Northern Ghana, several factors of which attitude of health staff was one factor found to influence the use of contraceptives among men and women (Stanback & Twum-Baah 2001). Though GHS has integrated family planning and contraceptive services at all levels of health care and so opening up access to all who needed it, some health provider's attitudes and perceptions made it difficult for clients to access and continue to use these services (Eliason et al. 2014; Sebikali 2011). Rather than counselling and allow the clients choose their preferred methods, some providers recommended methods that were easier and faster to provide. These poor service attitudes lead to misunderstanding of side effects by clients and eventually discouraged them from using any contraceptives thereafter (Sebikali 2011).

1.18.5.4 Availability

Though many of the health centres and drug shops may have in their records the availability of modern contraceptives, just a limited number of methods may be actually available. According to the latex health and demography survey, the most common contraceptives that are usually available are condoms, injectables and pills. Most other methods like the IUD, implant and other long term methods are usually not available (GDHS 2014). This is in line with a study in Ghana to access the readiness of family planning services that concluded that progesterone-only pills and other long term contraceptive services were not available in most health facilities but almost 70% of contraceptives were injectables (Hess 2007). In 2013, government's expenditure on specialized programs to improve reproductive and maternal health was almost negligible. Out of a total of 40 million Ghana cedis spent on specialized programs which consisted of malaria, neglected diseases, expanded program on immunization (EPI) and reproductive and maternal health, only 3.2% of the total amount was allocated to improve reproductive health services. This almost lack of investment resulted in the unavailability of some modern contraceptive methods within health facilities (GHS 2013).

1.19 PERCEIVED NEED FACTORS

1.19.1 Perceived risk

Some people in Northern Ghana, especially those living in rural communities, consider the use of modern contraceptives as alien and therefore have formed their own perceptions about it (Adongo et al. 1998). To this effect, women see it as a risky medical process which could lead to bareness or infertility, increase in weight gain and sometimes cancers (Ankomah et al. 2011). A study conducted in some parts of Northern Ghana revealed that women who had ever used modern contraceptives and no longer use them explained they found it difficult to give birth when they wanted to and that it took them long time to conceive, which was unusual to them (Achana et al. 2015). For such women and many others across the three regions of the north, these perceived risks linked to the use of modern contraceptives have kept many out of patronizing family planning and contraceptive services even if they had good knowledge of contraceptives and its benefits (Asante-Sarpong 2007).

1.19.2 Fear of side effects

The perceptions of women about the side effects of modern contraceptives to a large extend also determine the level of utilization in Ghana. Though most medicines and other medical procedures have their side effects, patients and clients continue to use them. However, with the use of modern contraceptives, women who refrained from using them cited side effects as one of the major reasons why they declined use. Common side effects which lead to non-use included waist and abdominal pains, high body temperature, increase in weight, irregular menstrual flow and hypertension which were a common occurrence but kept a number of clients away (Hindin et al. 2014).

1.20 Summary of Results

Though several factors were found to influence the utilization of modern contraceptives across Ghana, the major factors that exerted high influence over utilization in Northern Ghana were accessibility, staff attitude, educational levels, gender norms, perceived risks and fears and lack of conducive a policy.

Accessibility to contraceptive services; be it geographical or financial accessibility was found to exert considerable influence over contraceptive utilization. Whereas those in urban areas were found to have better access to contraceptives, those in rural communities barely had access to them.

The quality of service which in this case was also more related to staff attitude was also found to have kept a number of clients especially adolescents away from using contraceptives. Discriminating and stigmatizing adolescents who desired to use contraceptives, made it difficult for them to access. As a result, whereas only 5.2% of adolescent girls had access, about 17.5% of women between 35-39 years used contraceptives.

Northern Ghana is noted as the region in Ghana with low level of formal education. Those with higher education had a positive attitude towards contraception than those who had no education. Men and women who had at least a secondary education were twice more likely to use modern contraceptives. Knowledge of contraception was found to be above 90% for both men and women. It was however surprising to note that this high rate of knowledge only yielded 14% of women currently using modern contraceptives.

Besides these factors, it was also revealed that some gender practices such as women's inability to make decisions concerning their reproductive health, early and forced marriages greatly influenced contraceptive utilization. These practices take way the self-confidence and economic means of women and also put them in a position that makes it difficult to negotiate contraceptive use with their male partners.

An association between perception of people and contraception utilization was also established. According to literature, perceived risks and fear of side effects such as weight gain, infertility, cancers, waist pains, high temperatures and irregular menstrual flow negatively reduced contraceptive utilization.

CHAPTER 4: PROVEN STRATEGIES THAT IMPROVED THE UPTAKE OF MODERN CONTRACEPTIVES

1.21 Introduction

Contraceptive programs are widely regarded as development programs and are clearly stated in MDG 5 which has a target of making reproductive health services universally accessible. The impact of effective programs or projects on global fertility and in lives of individuals and families has been widely documented (Bongarts et al. 2012). In their comprehensive literature review, Richey and Salam have shown that well planned and implemented contraceptive programs have increased utilization of modern contraceptives and reduced fertility rates all over. Some other benefits these programs have yielded include reduced unintended pregnancies, maternal and neonatal deaths and helping couples to space child birth (Richey & Salam 2008). Discussed below are a review of the effectiveness of interventions and strategies based on systematic reviews and other effective studies internationally, articles and reports of interventions on what worked in Ghana and other countries whose context is relevant to Northern Ghana.

1.22 Political commitment and Leadership

Government's commitment through policies and financial support for contraceptive programs has been shown to improve utilization. Before 1997, support for contraceptive programs in Zambia was poor. Government's interest was low and so financial support for the promotion of contraceptives was not forthcoming. However, after 1997, the MOH resolved to address the increasing fertility rate in Zambia by introducing policies that favoured and promoted the utilization of modern contraceptives. In that year, the ministry developed a strategic plan and frameworks to ensure successful implementation of the policies. As a result, Zambia was able to increase utilization of modern contraceptives from 9% in 1992 to 23% in 2002. Also good leadership at the institutional level that included service contracts between governments and NGOs contributed greatly to the increased utilization of contraceptives in Columbia. When funding for contraceptive programs from international donors and government began to drop, Miguel Trias innovatively signed service contracts with the government and NGOs in the country. Through this they increased their internally generated funds to about 80% of expenditure in 2002 from about 60% in 1990s. As a result the NGO almost single handily reduced Columbia's fertility rate from 6.6 in 1965 to 2.4 in 2007 (Richey & Salam 2008).

Although it has been proven internationally that political commitment is important for the promotion and utilization of modern contraceptives (Richey & Salam 2008), political commitment in Ghana to dealing with issues of contraceptives is rather on the low side. Budgetary support for contraception has been inadequate over the years. Of the total budget spend on special programs which included promotion of modern contraceptives by the MOH in 2013, only 3.2% was allocated and spent on contraception (GHS 2013). As a result, Ghana though a low middle income country with enough resources, still relies on external support for the procurement of modern contraceptives. International organizations like USAID, DFID and UNFPA constantly provide budgetary support for contraceptives. It therefore stands to mean that without the support of these organizations Ghana will not be able to ensure contraceptive security and is therefore no surprise as it keeps running out of commodities especially condoms annually. It is therefore important that the government through the MOH shows more commitment and invest much more resources into modern contraceptives if it wants to achieve its goal of reducing fertility and ensuring health family lives (MOH 2004-2010).

1.23 Client Centeredness

Client centred services are the anchor of any health program. The needs of clients when taken into consideration deliver the best of results. When client perceived needs are taken more seriously, clients are more likely to find the methods suitable, continue to use contraceptives and be willing to return to the provider if the need arises (Richey & Salam 2008). A client cantered approach can bring providers and clients together to improve quality from each perspective. A project in Peru brought both providers and clients together to collectively define quality and develop strategies to improve it using videos and dramas about good and bad practices. After one year of implementation, there was 24 hour service provision, feedback for providers and clients jointly established and publicly posted price lists and staff schedules. These achieved results lead to increased utilization of contraceptive services in the project area (Heerey et al. 2003).

The MOH/GHS has over the years worked to improve the quality of contraceptive services provided to clients in its facilities. By training CHWs to provide contraceptive services and including contraception as part of the task of CHNs, contraceptive services have been extended to rural communities and even to their door steps (WHO 2013). Despite these efforts, many, especially adolescents, still prefer private services to the public service. Whereas the private sector including NGOs consider issues of

privacy, rights and counselling as very important, the same cannot be said of public health facilities. Unmarried young people including adolescents are usually stigmatized, denied, or discriminated against in public health facilities. This is the result of un-clarified personal values against professional values causing health staff to bring along their beliefs and values in the execution of their professional duties (Lopez et al. 2013).

1.24 Contraceptive Availability/Security

The success of any contraceptive program relies heavily on the availability of the contraceptives or commodities. This ensures variety and enables individuals to make their preferred choices especially on those they are very comfortable with. Many countries all over the world have adapted the Strategic Pathway to Reproductive Health Commodity Security (SPARHCS), a tool used by programs to ensure adequate supply of contraceptives (Hare et al. 2004). An innovative system developed in Zimbabwe in 2004 is the "Delivery Team Topping Up" (DTTU). With this system, a team of experts are assigned to track and monitor the contraceptive availability every four months. Before the fourth month ends, the team takes stock and makes estimation for the next four months for quick supply of contraceptive commodities (Richey & Salam 2008).

In Ghana, MOH usually runs out of stock of contraceptive commodities within the year. As a result of low investments by government on contraception, even at instances where commodities are available especially at the national or regional level, they most often are unable to get to the districts in time. This is usually the inability of the GHS which is the main service provider to raise resources for transportation or fuel to get the commodities to the various districts and sub-districts. The main problem here has to do with the lack of political commitment to promoting contraception and as a result no or less funds are allocated to its activities (GHS 2013).

1.25 Male involvement

There is more to male involvement than just increasing the number of men using condoms and other contraceptive methods. Male involvement "should be understood in a much broader sense than male contraception, and should refer to all organizational activities aimed at men as a discrete group which have the objective of increasing the acceptability and prevalence of family-planning practice of either sex" (Toure 1996). A study in Northern Ghana revealed some gains when men were involved in all stages of a contraception program. Known as the Zurugelu (togetherness) approach, the Navrongo experiment involved traditional social institutions by using men as volunteers. These volunteers sensitized their fellow men on gender and reproductive health issues and challenged traditional norms sustaining high

fertility. As a result, male acceptance increased which then also lead to an increase in CPR among women in the intervention communities between 54 and 63%. The intervention which proved to be effective especially in rural areas was not effectively scaled up due to lack of commitment (Debpuur et al. 2002). Couple counselling was also found to be an important strategy by which men can be involved in the whole process of decision making on contraception. A cross-sectional study by Mbwenza and his colleagues in Malawi revealed deciding to use a contraceptive was based on three processes: initiation of communication, exploration of options, finding solutions and then making the final decision. They concluded that it was hard to reach the last step unless both partners sat together for a discussion (Mbwenza et al. 2008). Also in Bangladesh, couple counselling on modern contraceptives was used as major strategy to reduced discontinuation of long acting contraceptives like Norplant (Shattuck et al. 2011).

Within the health system in Ghana, GHS recognizes it as an important strategy and advocates for it. However, there is no specific strategy targeting men by the Ghana health service. They constantly encourage men's involvement by asking women who usually come for services to bring their husbands or partners along. This approach of engaging men has not worked effectively as many men in Ghana especially in Northern Ghana still do not support their female partners to use modern contraceptives and therefore do not go with their partners for contraceptive services (GDHS 2008).

1.26 Involving Religious Leaders and Family Planning Champions

In a largely rural environment, the influence of village and religious leaders cannot be underestimated. Religious leaders in all settings command some level of authority and could positively influence the use of contraception if properly engaged in any contraceptive program (Adongo et al 1998). A study by Bongaarts revealed that engaging religious and village leaders had the potential of addressing social and familial objection to contraceptive use by community members and can lead to an increase in demand and utilization of modern contraceptives if community leaders support it (Bongaarts 2014).

Coleman and Lemmon in 2011 revealed that engaging religious leaders in the counselling and provision of information on contraceptive issues and addressing values and beliefs that are hindering the utilization of modern contraceptives helped to reduce maternal mortality by 35%, abortion in developing countries by 70%, and lowered infant mortality by 10 to 20%, greatly improving the health and wellbeing of women, children and whole families (Coleman & Lemmon, 2011). TAHSEEN, a project in Egypt which engaged 254 male and 24 female Christian and Islamic leaders on

contraceptives and reproductive health issues including birth spacing, early marriage and pregnancy, resulted in increased acceptance and utilization among each of these groups including reduction in early pregnancies through contraceptive use. An evaluation of the project showed that the religious leaders began to appreciate and promote contraceptive utilization during their teachings. The project also recorded some level of increase utilisation among the religious leaders and their followers. The use of these leaders as family planning champions in Malawi like the example in Navrongo advocated at national and district levels for increased support for contraceptive utilization. They also lobbied political leaders to support and finance contraceptive programs. Initiated in the 1990s, the approach was largely responsible for the almost universal access to contraceptives in Malawi (Richey and Salam 2008).

After the Navrongo project, the government of Ghana through the MOH decided to role the project out across the entire country. Components of the project such as the construction of CHPS compounds, training of CHNs and CHWs were quickly adopted and rolled out. This greatly improved utilization rates of modern contraceptives after the adoption. However, aspects of the project which were not effectively incorporated into the activities of the GHS were the use of religious leaders and family planning champions. Currently, under the National Population Policy, there is no policy or strategy instructing how the GHS can effectively use this strategy to further improve utilization especially in rural communities in Northern Ghana.

1.27 Improved program coordination

Contraceptive programs in many countries have several different stakeholders involved. Some of these stakeholders include government, civil society, NGOs, service providers and community members. These groups have their own interest and may also have different approaches to meeting the same target. With this kind of situation, establishing a coordinating team to manage resources and monitor the activities of the various stakeholders involved is necessary for program efficiency. A United Nations (UN) pilot project in 2007 in eight different countries proved coordination as an effective method of increasing contraceptive utilization. The project known as "Delivering as One", supported these countries with trainings and logistics to pool resources and monitor effectively the use of these resources. At the end of the pilot, the conclusion was good program coordination ensures efficiency and also increases utilization (Richey & Salam 2008).

As shown by the UN project, a well-coordinated contraception program yields better results. To this effect, the MOH realized it was more effective to integrate contraceptive programs into the main health stream than let it operate alone. As a result, contraceptive services were integrated into the

main health system to avoid fragmentation. Integrating it with maternal and child health services have improved contraceptive services for women (Eliason et al. 2014). However, on the other hand, it has kept many men away from seeking contraceptive services as they feel is a women's issue. Going to sit with pregnant and lactating mothers makes men feel uncomfortable and not willing to seek services in health facilities. GHS has over the years not also been able to coordinate effectively the activities of private providers and NGOs working to promote contraceptive utilization across the country. This has resulted in duplication of efforts and contradictory messages to clients. This may be the result of the lack of commitment and poor leadership to ensuring effective monitoring and supervision of activities of NGOs and the private sector.

1.28 Women's empowerment

Though contraceptives may be available and even offered at a reduced cost, attempts to increase utilization of modern contraceptives may fail if women are not empowered to make their own decisions and choices. Empowerment gives women more self-confidence and economic means, making them less dependent on their husbands for financing contraceptives and also puts them in a better position to negotiate contraceptive use with their partners (HEN 2006). According to Save the Children, universal access to contraceptive services would be not be achieved without empowering women to demand for it and encouraging men to support them(Save the Children 2012). This can be achieved through participatory actions and learning programs in which these women are fully involved from inception to completion of the programs. Ensuring women achieve higher education and improving knowledge of contraception is essential for the success of any contraceptive program (Eliason et al. 2014).

Under the current national reproductive health strategic plan, no strategies have been developed by the GHS to empower women effectively in other that they will be able to make decisions and negotiate effectively contraceptive utilization with their male partners. The only effort to empower women is through the sharing of information. Though information is very important in relation to empowerment, information alone is unable to bring the necessary change if the woman has no right over her body and cannot make decisions and choices that concern her own reproductive health (GHS 2007-2011).

1.29 Summary of Proven Interventions

With respect to these factors influencing utilization of modern contraceptives, the study found proven strategies/interventions in Ghana and outside of Ghana that could be adapted to improve utilization in Northern Ghana. First among such strategies was a project in Zimbabwe that improved access to contraceptives through an innovative method known as 'Delivery Team Topping Up' (DTTU). The method ensured restocking of contraceptives every four months making contraceptives readily available to the general public. The second strategy which was implemented in the Upper East region of Ghana and known as the Navrongo project involved men who were recruited as advocates. They were used to address gender and cultural norms that did not favour the promotion of contraceptives and as a result succeeded in increasing the CPR by about 54-63%. The TAHSEEN Project which is somewhat similar to the Navrongo project used religious leaders to challenge religious and gender norms against contraception. The rate of utilization among these religious leaders and their followers was found to have increased at the end of the project. In addressing staff performance and improved attitudes in the delivery of contraceptive services, many countries were found to introduce task shifting and value clarification programs. Countries such as Madagascar, Uganda and Ethiopia used this program to reduce work load by training CHNs and CHWs to offer contraceptive services. The Navrongo project which also introduced this strategy in Ghana confirmed the above findings. Other strategies the study found to have impacted possibly on contraceptive utilization were projects that improved program coordination, those that were client centred, empowered women and worked to improve leadership and management in the execution of contraceptive programs.

CHAPTER 5: DISCUSSION

Improving access to modern contraceptive methods has been an issue of international concern as reflected in MDG 5 with a specific target of ensuring universal access to reproductive health services. Northern Ghana as compared to other parts of the country is noted to be disadvantaged in terms of access and utilization of modern contraceptives. The study identified availability and accessibility, gender norms, quality of services, education, perceived risks and fears, government leadership and commitment as the main determinants of utilization in Northern Ghana.

In order to address all these factors identified by the study, there is the need to carve out programs that best suit the context in which these problems exists. It is also important to learn from programs that have been documented and have proven to be successful in other areas and which can be easily replicated in a similar context. Documented and proven contraceptive programs which have proven to be successful such as the TAHSEEN project in Egypt, Puentes project in Peru, Navrongo project in Ghana, DTTU approach used in Zimbabwe and other interventions stated earlier were conducted in resource poor countries and communities. With similar characteristics like low education, poverty and negative gender practices, these programs could be adapted and replicated in Northern Ghana to address the challenges identified.

Government leadership and commitment

Generally the policy environment for the promotion and utilization of modern contraceptives in Ghana has been noted to be conducive. There is a policy in place and government supports the active participation of the private sector. Despite this positive environment, the use of modern contraceptives still remains low. It is therefore important to back whatever policy put in place with some level of commitment to ensure the success of that policy. Since 1994, this policy on population which forms the basis for all population strategies and activities has not been reviewed. Though some portions of it may still be relevant, it is also important to note that a lot of issues would have changed after about two decades. Renewed leadership and commitment by the MOH/GHS is necessary to ensure that Ghana's policy on population and contraceptive matters is up to speed with current and international trends. Commitment is also necessary to improve budgetary

allocations for contraceptive programs which have not been adequate over the years.

Availability/Accessibility of modern contraceptives

Many people in Northern Ghana are faced with challenges when trying to access contraceptives as shown by the study. Apart from the fact that health facility in these areas is inadequate and usually far from clients, the unavailability of contraceptive commodities in most health facilities worsens the ability to use contraceptives. Normally, health management staff attributes their ability to ensure contraceptive security to transportation and fuel to convey commodities from national stores to regional medical stores for onward distribution to districts and sub-districts. As a result these contraceptive are locked up in the stores for months while clients who want these services are denied. These delays which deny clients the right to health can also lead to unintended pregnancies spread of STIs and many other negative consequences associated with not using contraceptives. Making contraception a priority in the region or district would compel managers to adequately invest in contraceptive programs as discussed earlier. Like the delivery team approach used in Zimbabwe, establishing teams solely responsible for ensuring contraceptive security through effective stock tracking and replacement systems could be adapted to ensure availability of contraceptive commodities in all districts. With district health management teams (DHMTs) already in place, this delivery team could be carved out of it using some of its members. Financing the team may be the only challenge but with commitment, all districts would be in a position to effectively finance such a team.

Quality of contraceptive services

Another problem that keeps clients away from using modern contraceptives is the poor service quality provider's offer to clients. Over the years, stakeholders including the GHS have tried several strategies to address this problem. From the training of CHWs to support in reproductive health programs to task shifting, GHS has made some gains in ensuring that client utilization goes up through improved services. However, many clients, especially unmarried young people and adolescents, still complain of poor services quality meted out to them. Apart from the fact that many providers disregard the privacy and confidentially of clients, many still stigmatize and discriminate against young people and adolescents who come for services.

The problem with service provision especially within public health facilities is that services are not tailored to meets the needs of clients. Providers think and decide what they assume is best for clients. Creating a platform for clients to interact with providers enables both parties to come to a common understanding of what quality is and how it can be achieved. Regular interactions, either formal or informal with adolescents and young people helps providers to offer services that meets the needs of these groups of people. Using community structures such as already existing youth groups, girls clubs and many others could be an advantage and saves cost in mobilizing these groups.

Women's empowerment

Addressing gender and societal norms that place men as the head of households and fears of men that contraceptives will lead to them losing control over their wives hinder accessibility of contraceptives of women in need. Programs that therefore encourage women's empowerment through sharing information, couple counselling and challenging these norms improve women's agency and decision making. Empowering women by sharing contraceptive information and education is good and to some extend contributes to increased utilization. However information sharing especially in Northern Ghana where norms and values prevent women from using contraceptives may be ineffective if these norms are not changed for women to practically exercise the information they receive. Because the male partner is usually uninformed and not willing to support the women, well informed women who try to exercise their right by using contraceptives sometimes suffer abuse and violence from the male partner. It is therefore important to ensure that while information is given to women, steps are taken to address the gender and value systems of communities. Encouraging couple counselling by using community advocates and champions like in the Navrongo project would get men involved in making decisions on contraceptive methods to adopt. Changing norms and values is not a one day's job and one must be aware of the resistance that may come from some community members. However, continuous education and engagement would certainly lead to a positive change in behaviour towards the use of modern contraceptives. Creating a platform for reflection on gender and societal norms through discussions and dialogue in a community action and learning process also supports and ensure women's empowerment at these levels.

Gender norms and beliefs

Dealing with gender norms and beliefs that serve as a hindrance to the utilization of contraception has persisted in Northern Ghana for many decades. Though norms and values may take a long time to change, the use of innovative approaches and proper engagement have proven to be successful in many African countries including the Navrongo project in Ghana. Like the Navrongo project, men as advocates and champions of contraception are better placed to engage their colleague men and challenge gender norms and values than using health staff. Developing a data base of champions and advocates for each community under the supervision of DHMTs and creating an interactive platform with these champions leads to the development of innovative ways of addressing norms that do not hurt the sensitivity of community members. Avoiding this entirely may not be possible but men as agents of change may be more effective.

Perceived risks and misconceptions

Finally, misconceptions and misperceptions about modern contraceptives can be described as one of the major factors hindering utilization in Northern Ghana. Ensuring clients receive the right information and are properly counselled are strategies that GHS and many NGOs in Northern Ghana have resorted to. However, the uncoordinated manner in which information on contraception is sent to the general public leaves much to be desired. Apart from the fact that this state of environment results in duplication of efforts, it also confuses the public as much contradictory information is sent out. Rather than help solve the problem, it worsens it and leaves clients more confused and unwilling to use any modern contraceptive method. A concerted effort by stakeholders where information and communication materials on contraception are agreed upon before they are sent out is one of the best ways of tackling this challenge. Learning from a UN pilot project, Delivering as One, a technical working group that is established to solely work on communication and developed IEC materials for the an entire region or district streamlines all messages and ensures that they fit into the cultural and value systems of the people.

CHAPTER 6: CONCLUSION

Increasing the utilization of modern contraceptives is most important for improved health outcomes amongst the people of Northern Ghana. Its contribution to improved maternal, neonatal and child health is too great to be over looked. However the challenges associated with promoting and increasing utilization of modern contraceptives appears to seem as though stakeholders do not regard it as important.

A complex of interacting factors is responsible for the low response to using modern contraceptives by men and women in Northern Ghana. These factors which are grouped as predisposing, enabling and perceived need factors must therefore be tackled holistically if progress on modern contraception would be made in this area. The selective or vertical approach by stakeholders in dealing with the problem has not proved effective and will not be, considering the complexities identified in the study.

A more holistic or horizontal approach to contraceptive programming especially at the lower levels which focuses on availability/access, quality of service, gender norms and beliefs, women's empowerment, education and perceived risks and fear have proven to increase the success rates of such programs. Achieving success is thus a continuous process and even the most successful programs in the world continue to improve and reach out to numerous people who demand modern contraceptives.

CHAPTER 7: RECOMMENDATIONS

Based on the literature review of the factors which influence the utilization of modern contraceptives in Northern Ghana and the best practices identified within and without Ghana, the following recommendations are made for improved contraceptive programming in the study area;

COMMUNITY LEVEL

1. Programs at community and district levels should incorporate gender norms, values and beliefs of the various communities using men and contraceptive champions to reduce the impact of negative cultural practices on the utilization of modern contraceptives;

2. Religious and opinion leaders and influential persons in the communities who are engaged directly in program implementation can bring their influence to bear on the whole community;

3. The DHMTs should in Northern Ghana establish contraceptive delivery teams whose core duty is to ensure that health facilities do not run out of contraceptives.

HEALTH FACILITY LEVEL

1. Regional health managers should ensure there are a variety of contraceptive methods available to clients in health facilities to make their choice and not compelled to use a method because it is the only one available;

2. Clarification of personal and professional values should be conducted for all staff before they are posted. Tasks of each staff should also be well clarified to prevent conflict;

3. Health facilities should ensure privacy during the provision of contraceptive services by allocating a room solely for counselling and service provision.

NATIONAL/POLICY LEVEL

1. The MOH should always adequately budget for contraceptives to prevent stock outs during the course of the year and also ensure that long term methods are available at all levels of the health system;

2. The MOH should recognize CHWs/volunteers by integrating them into the health system to motivate and attract others to join the service;

3. Regional health directorates should as a matter of urgency compose communications teams who would develop accurate IEC materials for all stakeholders to use in their communication activities;

4. Considering that Northern Ghana is largely rural, deprived and generally poorer than the other regions of the country, central government through the MOH should allocate more resources to these regions to effectively deal with the issues of low utilization of modern contraceptives;

5. The MOH in collaboration with relevant stakeholders should take the necessary steps to update the 1994 policy document on population and other strategic documents before the year 2010;

6. Further research (qualitative research) by the MOH/GHS should be conducted to ascertain further the reasons why utilization of modern contraceptives in the Northern parts of Ghana is low.

REFERENCES

Abor, PA, Abekah-Nkrumah, G, & Abor, J 2008, 'An examination of hospital governance in Ghana', *Leadership in Health Services*, vol. 21, pp. 47-60

Achana, FS, Bawa, AA, Jackson, EF, Welaga, P, Awine, T, Asuo-Mante, E, Oduro, A, Awoonor-Williams, JK & Phillips, JF 2015, 'Spatial and socio-demographic determinants of contraceptive use in the Upper east region of Ghana', *Reproductive health*, vol. 12, no. 29

Adongo, PA, Phillips JF & Binka, FN 1998, 'The influence of traditional religion on fertility regulation among the Kassena-Nankana of Northern Ghana', *Studies in Family Planning*, vol. 29, no. 1, pp. 23-40

Adongo, PB, Phillips JF, Kajihara, B, Fayorsey C, Debpuur, C and Binka, FB 1997, 'Cultural factors constraining the introduction of family planning among the Kassena-Nankana of northern Ghana', *Social Science Medicine*, vol. 45, no. 12, pp. 1789-804

Andersen RM & Davidson PL 2001, 'Improving access to care in America: individual and contextual indicators. In: Andersen RM, Rice TH, Kominski EF, editors. Changing the U.S. health care system: key issues in health services, policy, and management, San Francisco, CA: Jossey-Bass, pp: 3–30

Ankomah, A, Anyanti J & Muyiwa, O 2011, 'Myths, misconception and communication about family planning and contraceptive use in Nigeria', *Open Access Journal of Contraception*, vol.2, pp. 95-105

Apanga, AP & Adam, MA 2015, 'Factors influencing the uptake of family planning services in the Talensi district, Ghana, *The Pan African Medical Journal,* vol. 20, no. 10

Asamoah, OB, Moussa, KM, Stafstrom, M & Musinguzi G 2011, 'Distribution of causes of maternal mortality among different socio-demographic groups in Ghana: a descriptive study', *BMC Public Health*, vol. 11, no. 159

Asante-Sarpong, H 2007, 'From their own perspective: perceptions of women about modern and natural/traditional methods of contraception in Koforidua and Asokore in the Eastern region of Ghana', Master's thesis, Norwegian University of Science and Technology, Trondham, Norway

Awoonor-Williams, JK, Sory, EK, Nyonator, FK, Phillips, JF, Wang, C & Schmitt, ML 2013, 'Lessons learned from scaling up a community-based

health program in the Upper East Region of northern Ghana', *Glob Health Sci Pract*, vol. 3, no. 1, pp. 117-133

Babitsch B, Gohl D & von Lengerke T, 2012, 'Re-revisiting Andersen's Behavioral Model of Health Services Use: a systematic review of studies from 1998-2011', *Psychosoc Med*, vol. 9, no. 11

Bongaarts, J 2014, 'The impact of family planning programs on unmet need and demand for contraception', *Studies in Family Planning*, vol. 45, n0. 2, pp: 247-262

Bongaarts, J, Cleland, J, Townsend, J, Bertrand, J & Gupta, MD 2012, *Family Planning Programs for the 21st Century: Rationale and Design*, Population Council New York

Barot, S 2014, 'Looking back while moving forward: Marking 20 years since the international conference on population and development', *Guttmacher Policy Review*, vol. 17, no. 3

Blanc, AK, Curtis, SL & Croft, TN 2002, 'Monitoring contraceptive continuation: links to fertility outcomes and quality of care', *Studies in Family Planning*, vol. 33, no. 3, pp. 127-140

Boamah, EA, Asante, KP, Mahama E, Manu, G, Ayipah ER, Adeniji, E & Owusu-Agyei, S 2014, 'Use of contraceptives among adolescents in Kintampo, Ghana: a cross-sectional study, *Open Access Journal of Contraception*

Campbell OM & Graham WJ 2006, 'Strategies for reducing maternal mortality: getting on with what works', *The Lancet [Maternal Survival Series],* vol. 368, no. 9543, pp. 1284-99

Coleman, I & Lemmon, G (2011), *Family Planning and US Foreign Policy, Council on Foreign Relations*, viewed on July 24, 2014, http://www.cfr.org/maternal-and-child-health/family-planning-us-foreign-policy/p24683

Creanga, AA, Gillespie, D, Karklins S & Tsui, AO 2011, 'Low use of contraception among poor women Africa: an equity issue, *Bulletin of the World Health Organization*, vol.89, pp. 258-266

Cunning, D & Schultz, TP 2012, 'The economic consequences of reproductive health and family planning', *The Lancet*, vol. 380, no. 9837, pp: 165-171

Debpuur, C, Phillips, JF, Jackson, EF, Nazzar, A, Ngom, P & Binka, FN 2002, 'The Impact of the Navrongo Project on Contraceptive Knowledge and Use, Reproductive Preferences, and Fertility' Studies in Family Planning, vol. 33, no. 2, pp. 141–164

Dixon, J, Tenkorang, K.Y & Luginaah, I 2013, 'Ghana's national health insurance scheme: a national level investigation of members perception of service provision' BMC International Health and Human Rights, Vol. 13, no. 35

Do, M & Kurimoto N 2012, 'Women's empowerment and choice of contraceptive method in selected African countries', *International Perspective on Sexual and Reproductive Health*, vol. 38, no. 1

Downes, S 2012*, Downes on connectivism and connective knowledge,* viewed 10 April, 2015*,* <http://www.connectivism.ca>

Eliason, S, Awoonor-Williams, JK, Eliason, C, Nonvignon, J, Nonvignon, J & Aikins M 2014, 'Determinants of modern family planning use among women of reproductive age in the Nkwanta district of Ghana: a case control study', *Reproductive Health*, vol. 11, no. 65

Eliason, S, Baiden, F, Quansah-Asare, G, Graham-Hayfron, Y, Bonsu, D, Phillips, J, and Awusabo-Asare, K 2013, 'Factors influencing the intention of women in rural Ghana to adopt postpartum family planning', *Reproductive Health*, vol. 10, no. 34

Emmart, P 2010, *Policy Barriers to Long-Acting and Permanent Method Use in Ghana*, Futures Group, Health Policy Initiative, Task Order 1, Washington, DC

Ghana Health Service (GHS) 2007, Reproductive Health Strategic Plan 2007-2011, GHS, Accra

Ghana Health Service (GHS) 2011, *2011 Annual report*, GHS, Accra

Ghana Health Service (GHS) 2013, *2013 Annual report*, GHS, Accra

Ghana Health Service (GHS) 2014, *2014 Family health Annual report*, Family Health Division, GHS, Accra

Ghana Statistical Service (GSS) 2012, *2010 population and housing census: summary of final results,* GSS, Accra, Ghana

Ghana Statistical Service (GSS), Ghana Health Service (GHS) and ICF Macro 2015, *Ghana Demographic and Health Survey 2014: Key Indicators*, GSS, GHS and ICF Macro, Accra, Ghana

Ghana Statistical Service (GSS), Ghana Health Service (GHS) and Macro international 2009, *Ghana maternal health survey 2007*, GSS, GHS and Macro International, Calverton, Maryland, USA

Ghana Statistical Service, Ghana Health Service and ICF Macro 2009, *Ghana Demographic and Health Survey 2008*, GSS, GHS and ICF Macro, Accra, Ghana

Gordon, G, & Cornwall, A 2004, *Participation in Sexual and Reproductive Well-being and Rights, Critical Reflections, Future Directions*, Ed. Robert Chambers, Nicole Kenton, and Holly Ashley, IIED, London, Vol. 50, pp: 73-80

Gyimah, SO, Adjei, J & Coffie, N 2011, *Ghana's family planning policy: A review and preview of the success story of Ghana's family planning policy,* Think Africa Press, Accra, Ghana

Heerey, M, Merritt, AP & Kols, AJ 2003, *Improving the quality of care: Quality improvement projects from the Johns Hopkins University Bloomberg School of Public Health Center for Communication Programs*, Baltimore, Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs, Center Publication no. 101, pp: 27, http://www.jhuccp.org/pubs/cp/101/101.pdf

Hess, S 2007, 'Assessing facility readiness of family planning services in Ghana' Master's Thesis, Emory University, Atlanta Georgia, USA

Hindin MJ, McGough LJ & Adanu RM 2014, 'Misperceptions, misinformation and myths about modern contraceptive use in Ghana' *J Fam Plann Reprod Health Care*, vol. 40, pp: 30-35

Lopez, LM, Stockton, LL, Chen, M, Steiner, MJ & Gallo, MF 2013, 'Behavioral interventions for improving dual-method contraceptive use (Review), *Cochrane Library*, Issue 3

MacQuarrie, K L.D, 2014 'Unmet Need for Family Planning among Young Women: Levels and Trends', *DHS Comparative Reports* No. 34, ICF International Rockville, Maryland, USA

Mbweza E, Norr KF & McElmurry, B 2008, 'Couple decision making and use of cultural scripts in Malawi. J Nurs Scholarsh, vol. 40, no. 1, pp: 12–19

Ministry of Health (MOH) & United Nations Populations Fund (UNFPA) 2013, Ghana: accelerating progress towards MDG 5, viewed 15 March 2015, <http://www.ghana.unfpa.org/assets/user/file/factsheets/ghana%20accelerating%20progress%20towards%20MDG5.pdf>

Ministry of Health (MOH) 2004-2010, Meeting the commodity challenge: The Ghana national contraceptive security strategy 2004-2010, MOH, Accra, Ghana

National Population Council (NPC) 1994, *National population policy: At a glance,* NPC, Accra, Ghana

Osei-Boateng, C 2011, Increasing access to family planning methods and other health products in Ghanaian rural communities, Health Keepers Network, Ghana

Parr, N 2002, 'Family planning promotion, contraceptive use and fertility decline in Ghana', *African Population Studies*, vol. 17, no. 1, pp. 83-101

Parr, NJ 2003, 'Discontinuation of contraceptive use in Ghana', *Center for Health and Population Research,* Vol. 21, no. 2, pp. 150-157

Peters, DH, Garg, A, Bloom, G, Walker, DG, Brierger, WR & Rahman, MH 2008, 'Poverty and access to health care in developing countries', *Annals of New York Academy of Sciences*, vol. 11, no. 36, pp: 161-171

Prinsloo, A 2011, *Fertile poverty: Northern Ghana's high birth rate,* viewed 10 April 2015, <http://polity.org.za/article/fertile-poverty-northern-ghanas-high-birth-rate-2011-07-21>

Richey, C & Salem, RM 2008, 'Elements of Success in Family Planning Programming,' *Population Reports*, Series J, No. 57, INFO Project, Johns Hopkins Bloomberg School of Public Health, Baltimore

Rutstien SO 2008, 'Further evidence of the effects of preceding birth intervals on neonatal, infant and under five year's mortality and nutrition', *Measure DHS*, Vol. 86, no. 41

Save the Children 2012, *Every woman's right: How family planning saves children's lives,* London, UK

Sebikali, B 2011, *How Health Workers Influence Attitudes and Decisions about Family Planning,* IntraHealth International, viewed 4 May 2015, http://www.intrahealth.org/blog/how-health-workers-influence-attitudes-and-decisions-about-family-planning#.VZZkHvmqqkp

Sileo, KM 2014, 'Determinants of Family Planning Service Uptake and Use of Contraceptives among Postpartum Women in Rural Uganda', Master's thesis*,* University of Connecticut, Connecticut, USA

Shattuck, D, Kerner,B, Gilles, K, Hartmann, M, Ng'ombe, T & Greg Guest 2011, 'Encouraging Contraceptive Uptake by Motivating Men to Communicate About Family Planning: The Malawi Male Motivator Project' Am J Public Health, vol. 101, no. 6, pp: 1089-1095

Singh S, Daroch, JE, Ashford, LS & Vlassof M 2009, *Adding it up: the cost and benefits of investing in family planning and maternal and new born health*, Guttmacher institute & United Nations Population Fund, New York, viewed 20 March 2015, <http://www.guttmacher.org/pubs/AddingItUp2009.pdf>

Speidel, J, Sinding, S, Gillespie, D, Maguire, E, Neuse, M 2009, 'Making the case for US in international family planning assistance', Johns Hopkins Bloomberg school of public health, Bill and Melinda Gates institute for population and reproductive health, Baltimore, Maryland

Srikanthan, A & Reid, RL 2008, 'Religious and cultural influences of contraception', *Women's Health*, vol. 30, no. 2, pp. 129-137

Stanback, J, & Twum-Baah, KA 2001, 'why do family planning providers restrict access to services'? An examination in Ghana', *International Family Planning Perspectives*, vol. 27, no. 1, pp. 37-41

Stephenson, R, Baschieri, A, Clements, S, Hennink, M & Madise N 2007, 'Influences on modern contraceptive use in Sub-Saharan Africa', Am J Public Health, vol. 97, pp: 1233-1240

Toure, L 1996, *Male involvement in family planning: A review of selected program initiatives in Africa,* SARA Project

United Nations Populations Fund (UNFPA) 2014, *Annual report. A year of revival: renewing commitments to the health and rights of women and young people*. Viewed 23 June 2015, <www.unfpa.org/annual-report>

USAID 2006, *The Emerging Midwifery Crisis in Ghana: Mapping of Midwives and Service Availability Highlights Gaps in Maternal Care*, USAID, USA

World Health Organization (WHO) 2013, 'Task shifting to improve access to contraceptive methods, <http://www.optimizemnh.org/Annexes/Annex_8_Contexualizing_workbook.pdf>

World Health Organization (WHO) 2015*, Family planning/contraception,* viewed 23 July 2015, <http://www.who.int/mediacentre/factsheets/fs351/en

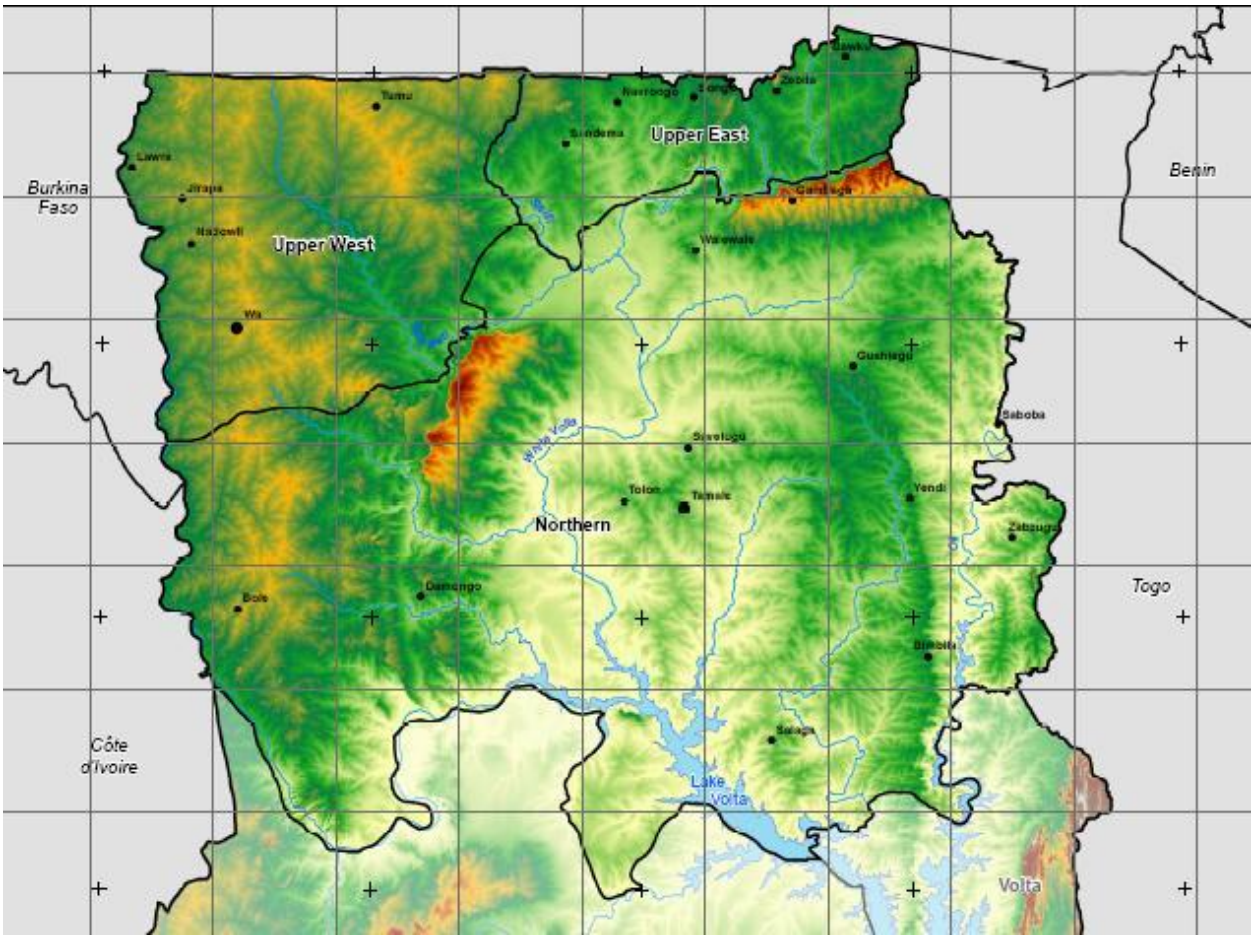
World Health Organization (WHO) 2015*, Family planning*, Health topics, viewed 21 February 2015, <http://www.who.int/topics/family_planning/en/>

World Health Organization (WHO) 2015, *Maternal mortality ratio (per 100, 000 live births),* Health statistics and information systems, viewed 21 February 2015, <http://www.who.int/healthinfo/statistics/indmaternalmortality/en/>

Annexes:

1.30 Annex 1:

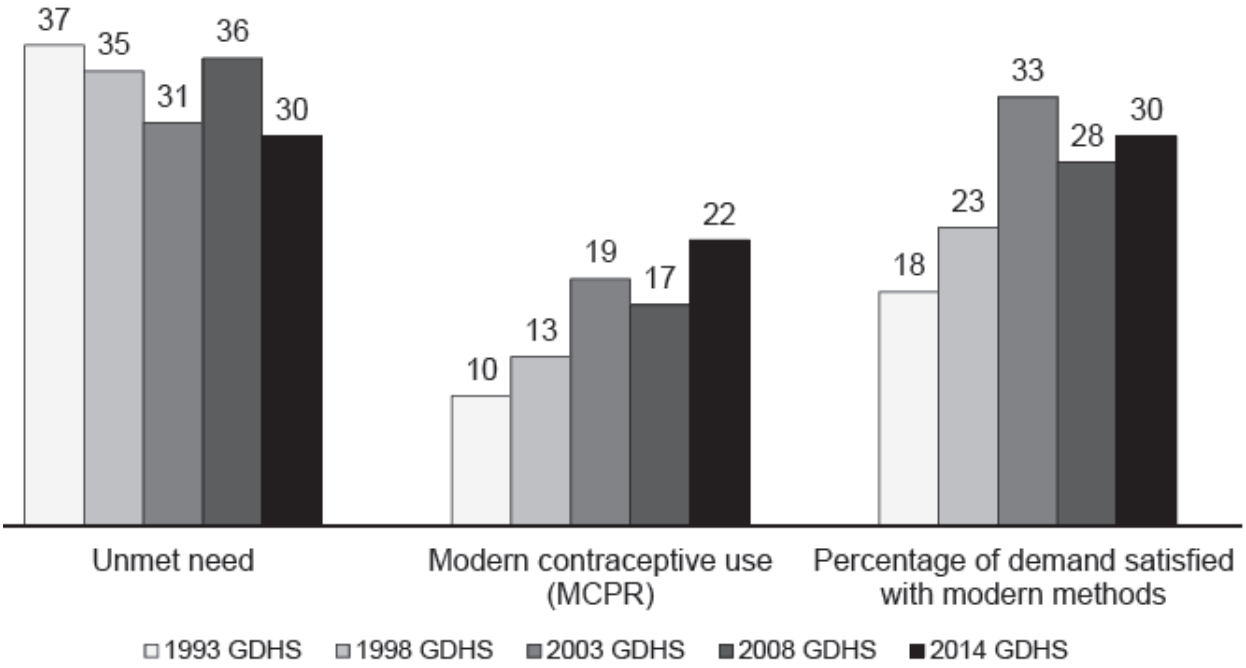
Map of Northern Ghana showing boundaries with neighboring countries



Source: Adapted from GSS 2012

1.31 Annex 2:

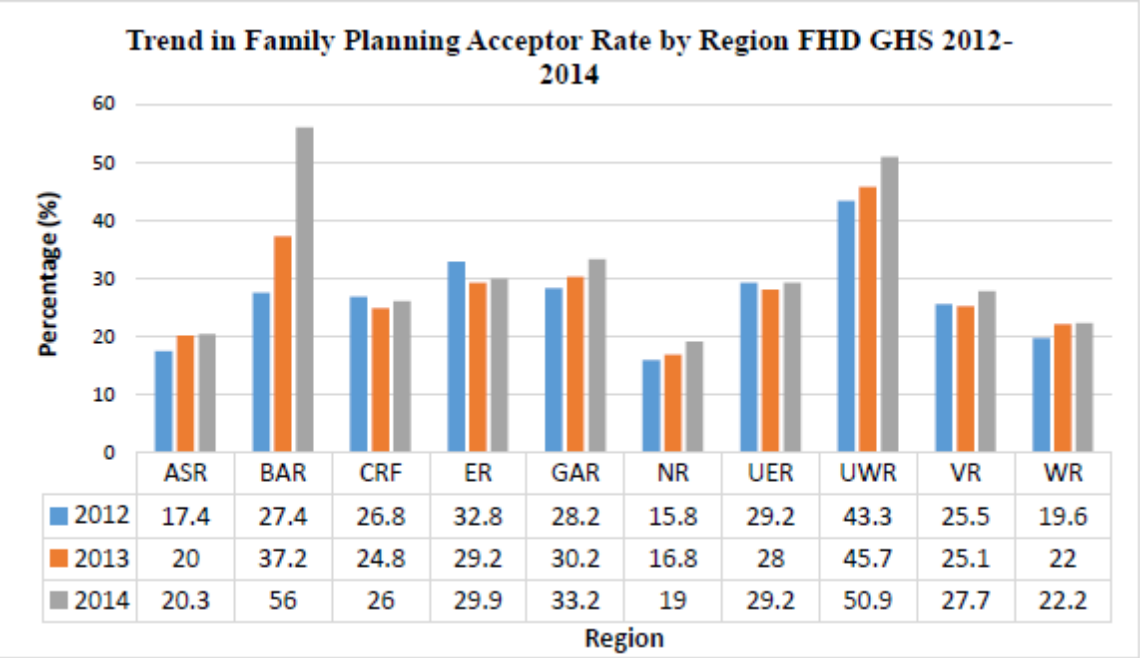
Trends in unmet need, modern contraceptive use and demand satisfied with modern methods among married women in Ghana, 1993-2014



Source: GDHS 2014

1.32 Annex 3:

Trend in family planning acceptor rate by Region in Ghana, 2012-2014



	ASR	BAR	CRF	ER	GAR	NR	UER	UWR	VR	WR
2012	17.4	27.4	26.8	32.8	28.2	15.8	29.2	43.3	25.5	19.6
2013	20	37.2	24.8	29.2	30.2	16.8	28	45.7	25.1	22
2014	20.3	56	26	29.9	33.2	19	29.2	50.9	27.7	22.2

SOURCE: GHS 2014