FACTORS INFLUENCING MODERN CONTRACEPTIVE USE AMONG REPRODUCTIVE AGE WOMEN ACCESSING HEALTH SERVICES IN THE LEDZOKUKU KROWOR MUNICIPAL HOSPITAL IN THE GREATER ACCRA REGION, GHANA

BY

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THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF PUBLIC HEALTH DEGREE

JULY, 2016
DECLARATION

I hereby declare that, except for references to other people’s work which have been duly acknowledged, this work is the result of the original independent work done by me under supervision. I further declare that it has neither in whole nor in part been submitted for any degree in this university or elsewhere.

PAUL BESON (STUDENT)  

DR. AUGUSTINE ADOMAH-AFARI (ACADEMIC SUPERVISOR)

DATE…………………………………  DATE………………………………
DEDICATION

This work is dedicated to God, the Almighty who has ordered every step taken in this entire process. I also dedicate this work to my late father, James Eranko Beson, my mother, Selina Maalse Beson, my guardian Dooyir Jakul and Sarah Danduor for their unreserved support and encouragement throughout this journey.
ACKNOWLEDGEMENT

This work could not have seen the light of day without the unfailing grace, strength, wisdom and direction from the almighty God. I wish, therefore, to first and foremost thank the Almighty God for making this work a success.

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# TABLE OF CONTENT

DECLARATION ................................................................................................................... i  
DEDICATION ...................................................................................................................... ii  
ACKNOWLEDGEMENT .................................................................................................. iii  
TABLE OF CONTENT ....................................................................................................... iv  
LIST OF TABLES ............................................................................................................. vii  
LIST OF FIGURES .......................................................................................................... viii  
LIST OF ACRONYMS ....................................................................................................... ix  
OPERATIONAL DEFINITION OF TERMS ....................................................................... x  
ABSTRACT ......................................................................................................................... xi  

## CHAPTER ONE  
INTRODUCTION ................................................................................................................ 1  
1.0. Background to the study ............................................................................................. 1  
1.1. Problem Statement ..................................................................................................... 2  
1.2. Justification ................................................................................................................ 4  
1.3. Objectives ................................................................................................................... 6  
  1.3.1. General Objective ................................................................................................ 6  
  1.3.2. Specific Objectives .............................................................................................. 6  
  1.3.3. Research Questions .............................................................................................. 7  
1.4. Outline of the Dissertation ......................................................................................... 7  

## CHAPTER TWO  
LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK ..................................... 8  
2.0. Introduction ................................................................................................................ 8  
2.1. Conceptual framework ............................................................................................... 8  
2.2. Contraceptives .......................................................................................................... 10  
2.3. Types and methods of contraception ........................................................................ 12  
2.4. Knowledge and awareness of contraceptives ........................................................... 12  
2.5. Availability of contraceptives .................................................................................. 16  
2.6. Attitudes toward contraception ................................................................................ 18  
2.7. Religious beliefs and contraceptives ........................................................................ 19  
2.8. Socioeconomic Factors ............................................................................................. 20  
  2.8.1. Marital Status, Partner support and Contraceptive use ......................................... 20  
  2.8.2. Educational level, Employment Status and Contraceptive use .......................... 22  
2.9. Chapter Summary ..................................................................................................... 23  

## CHAPTER THREE  
METHODS ......................................................................................................................... 24  
3.0. Introduction .............................................................................................................. 24  
3.1. Type of study ............................................................................................................ 24  
3.2. Study Area ................................................................................................................ 25  
3.3. Variables .................................................................................................................. 27
CHAPTER FIVE ................................................................................................................. 53
DISCUSSION OF FINDINGS ............................................................................................... 53
5.0. Introduction .............................................................................................................. 53
5.1. Socio-demographic characteristics ........................................................................ 53
5.2. Knowledge and awareness of modern contraceptives ........................................... 55
5.3. Current Contraceptive Use .................................................................................... 57
5.4. Attitude towards modern contraceptives usage .................................................... 60
5.5. Knowledge of religious beliefs on modern contraceptives .................................. 61
5.6. Knowledge of sources of availability of modern contraceptives ........................... 62
5.7. Factors influencing modern contraceptive use ..................................................... 62
5.8. Chapter Summary ................................................................................................. 64

CHAPTER SIX ................................................................................................................... 65
SUMMARY, CONCLUSION AND RECOMMENDATIONS ............................................. 65
6.0. Introduction .............................................................................................................. 65
6.1. Summary of the study ............................................................................................. 65
6.2. Conclusions ............................................................................................................. 65
6.2.1. Knowledge and awareness of modern contraceptives ....................................... 66
6.2.2. Attitude towards modern contraceptives ........................................................... 66
6.2.3. Availability of modern contraceptives .............................................................. 66
6.2.4. Religious beliefs and contraceptives ................................................................. 66
6.3. Recommendations .................................................................................................. 66
6.4. Contribution to knowledge ..................................................................................... 67
6.4.1. Contribution to policy and practice ................................................................. 67
6.5. Limitations to the study ......................................................................................... 67
6.6. Future Research ..................................................................................................... 68

REFERENCES ............................................................................................................... 69

APPENDICES ................................................................................................................. 76
Appendix A: Participant’s Informed Consent Form ....................................................... 76
Appendix B: Assessment Tool/Questionnaire ............................................................... 78
LIST OF TABLES

Table 4.1: Socio-demographic characteristics of study participants.......................................40
Table 4.2: Knowledge and awareness of contraceptives ..........................................................42
Table 4.3: Relationship between knowledge and awareness and socio-demographic characteristics ..........................................................................................................................43
Table 4.4: Current contraceptive use and background characteristics ......................................45
Table 4.5: Association between background characteristics and attitude towards contraceptives ..........................................................................................................................48
Table 4.6: Logistic regression of factors influencing modern contraceptive use among ...51
LIST OF FIGURES

Figure 2.1: Conceptual framework of factors influencing contraceptive use among reproductive age women ...................................................10

Figure 3.1: Map of Ledzokuku Krowor Municipal Assembly ........................................26

Figure 3.2: Map of LEKMA Hospital ........................................................................27

Figure 4.1: Attitude towards modern contraceptives ....................................................46

Figure 4.2: Knowledge of religious beliefs on modern contraceptives .........................49

Figure 4.3: Knowledge of sources of modern contraceptives ....................................50
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immuno Deficiency Syndrome</td>
</tr>
<tr>
<td>ACOG</td>
<td>American College of Obstetricians and Gynecologists</td>
</tr>
<tr>
<td>CHPS</td>
<td>Community based Health Planning and Services</td>
</tr>
<tr>
<td>CI</td>
<td>Confidence Interval</td>
</tr>
<tr>
<td>DHIMS</td>
<td>District Health Information Management System</td>
</tr>
<tr>
<td>ECG</td>
<td>Electricity Company of Ghana</td>
</tr>
<tr>
<td>GDHS</td>
<td>Ghana Health Demographic Survey</td>
</tr>
<tr>
<td>GHS</td>
<td>Ghana Health Service</td>
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<td>GSS</td>
<td>Ghana Statistical Service</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>IUD</td>
<td>Intra-Uterine Devices</td>
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<tr>
<td>LEKMA</td>
<td>Ledzokuku Krowor Municipal Assembly</td>
</tr>
<tr>
<td>LARC</td>
<td>Long Acting Reversible Contraceptives</td>
</tr>
<tr>
<td>MAF</td>
<td>Millennium Development Goals Acceleration Framework</td>
</tr>
<tr>
<td>MDG</td>
<td>Millennium Development Goals</td>
</tr>
<tr>
<td>MOH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>NMTC</td>
<td>Nursing and Midwifery Training College</td>
</tr>
<tr>
<td>OPD</td>
<td>Out Patient Department</td>
</tr>
<tr>
<td>OR</td>
<td>Odds Ratio</td>
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<tr>
<td>STI</td>
<td>Sexually Transmitted Infections</td>
</tr>
<tr>
<td>SDGs</td>
<td>Sustainable Development Goals</td>
</tr>
<tr>
<td>US$</td>
<td>United States Dollars</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
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OPERATIONAL DEFINITION OF TERMS

**Contraceptives:** These are devices used to prevent pregnancy from occurring.

**Family Planning:** A method used in planning pregnancy in order to space the number of children born.

**Use of contraceptives:** This is the consistent use of any method of contraceptive to prevent pregnancy.

**Knowledge and awareness:** This is what the respondents know about the type of contraceptives.

**Attitude:** This is how the respondents feel about contraceptives and how willing they are to use them.

**Availability:** This is the respondents’ knowledge of sources of availability of modern contraceptives and how accessible respondents say contraceptives are to them.

**Religion:** This is the belief systems of the respondents.

**Reproductive age women:** Women aged between 15-49 years.
ABSTRACT

Background: Promoting the use of contraceptives, particularly in developing countries has been widely noted as an imperative intervention as it has proven to reduce maternal and child mortalities, avert unintended pregnancies and control population explosion. In spite of the enormous benefits of contraceptive use, the uptake still remains low in most developing countries. The objective was to describe the factors influencing modern contraceptive use among reproductive age women in the Ledzokuku Krowor Municipality in the Greater Accra Region of Ghana.

Methods: This was a cross-sectional study design using quantitative research tools. Simple random sampling strategy was used to recruit 217 women aged 15-49 years. Data from administered questionnaire was analyzed using STATA version 13.

Results: The study found widespread knowledge and awareness of modern contraceptives among respondents despite low prevalence of use (21%). Attitude of respondents was significantly associated with modern contraceptive use (p<0.001) as well as religious influence (p<0.038).

Conclusion: Family planning programs should target at getting reproductive age women to develop positive attitude towards modern contraceptives as this influences use instead of simply creating knowledge and awareness.

Keywords: Knowledge, Attitude, Availability, Modern, Contraceptives, Religious, Beliefs.
CHAPTER ONE
INTRODUCTION

1.0. Background to the study

The untimely occurrence of pregnancy is a hazard faced by all fecund women engaging in sexual activity. Throughout the ages, efforts have been made to protect women against this eventuality through the use of contraception. However, it has been noted that in spite of the wide range of effective contraceptive options available to women and the enormous benefits of contraceptive use, the uptake still remains low with unintended pregnancies continuing to occur in large numbers even in developed countries (Apanga & Adam, 2015). For instance, out of the about 6.5 million pregnancies occurring annually in the United States, roughly 50% are unplanned and this has been described by the American College of Obstetricians and Gynecologists (ACOG) as a public health crisis (Morgan, 2014).

Available data suggests that induced abortion and related complications are the most common outcomes of unintended pregnancies with an estimation of induced abortions accounting for about 12% of maternal deaths in Ghana, third after hemorrhage (22%) and unclassified causes (14%) (Eliason, Baiden, Yankey, & Asare, 2014). Maternal deaths are estimated to be 1.8 times higher in women without contraceptive use (Hameed, Azmat, Ali, & Ish, 2014). Evidence shows that if couples can space their pregnancies by at least, two years apart through the use of various contraceptive methods in planning their families, up to 35% of maternal deaths and 13% of child mortalities could be averted whilst 25% of under-five mortalities could be prevented if birth intervals were at least three years (Eliason et al., 2015).
Planning for pregnancy is important to optimize not only clinical outcomes, but also the context and the circumstances surrounding the pregnancy, and the use of various methods of contraception in family planning interventions are widely acknowledged as important interventions towards achieving the Millenium Development Goals (MDGs) 4 and 5 (Apanga & Adam, 2015), and now Sustainable Development Goals (SDGs) 3. The use of contraceptives continue to remain low in Sub-Saharan Africa (SSA), and this may contribute to the high rates of unwanted pregnancies, unplanned deliveries, unsafe abortions and maternal mortalities and high transmission rates of sexually transmitted diseases of which Ghana is no exception (Apanga & Adam, 2015).

1.1. Problem Statement

Unintended pregnancies and related consequences such as unsafe abortion among reproductive age women occur due to non-use of contraceptives during sexual activity (Adjei, Enuameh, Asante, Baiden, Nettey, Abubakari, Mahama, Gyaase & Owusu-Agyei, 2015). This poses a lot of problem for reproductive age women, their families and nations at large. It is estimated that about 210 million women around the world become pregnant each year of which about 75 million (36%) are unplanned and/or unwanted and could have been prevented through the use of contraceptives (Amalba, Mogre, Appiah, & Mumuni, 2014).

Studies have suggested that unplanned pregnancies are associated with poorer maternal and infant health outcomes and unintended pregnancies also place a significant financial burden on the public sector (Payne & Fanarjian, 2014). Due to the limited use of contraceptives, the World Health Organization (WHO) estimated that one woman dies every eight minutes in developing countries from unsafe abortion arising from unplanned
pregnancies, which constitutes one of the leading causes of maternal mortality and morbidity (Amalba et al., 2014).

Apanga and Adam (2015), observed that women face many barriers to access and use of contraception; and the low uptake of family planning services in Africa, is largely blamed on several factors. Consequently, most pregnancies in Sub-Saharan Africa are unplanned and contraceptives use continues to be low (Nyarko, 2015). Omideyi et al. (2011), found that Sub-Saharan Africa (SSA) stands out as the region with the lowest prevalence of contraceptive use at 15% and this may be associated with high incidence of unintended pregnancies, unsafe abortions, and maternal deaths (Eliaison et al., 2014).

Ghana, like the rest of West Africa, has very low contraceptive prevalence and is one of a few nations that reports declines in contraceptive use over time based on two of the most recent national surveys (Hindin, Mcgough, & Adanu, 2014). The modern contraceptive prevalence as reported by the Ghana Demographic Health Survey (GDHS) was as low as 17% with unmet need of family planning for women between 15 and 49 years at 35% and this was attributed to several factors (GSS, 2014; Adjei et al., 2015).

For instance, fear of side effects due to inadequate knowledge was found to be a leading cause of non-use of contraception in Ghana (Hindin, Mcgough & Adanu, 2014). In addition, a study in the Talensi District of the Upper East Region of Ghana, found opposition from husbands as the major reason for women not accessing family planning services (Apanga & Adam, 2015). These differences in findings probably indicate that the factors influencing the use of contraceptives are multifaceted and there may be unique contextual factors that are specific to different groups and areas. Studies on the
perceptions and use of contraceptives in Ghana are predominantly from the Navrongo-based demographic surveillance site and rural contraception project in the country’s north. Far fewer such studies focus on urban Ghana, where family planning use is lower than expected (Osei et al., 2014).

In spite of the provision of free family planning services, contraceptives use over the years in the Ledzokuku Krowor Municipal Assembly (LEKMA) area in the Greater Accra region of Ghana, has been below the Ghana Health Service national family planning acceptor target rate of 23.3% (Adjei et al., 2015). This could be due to several influencing factors. Statistics from the 2010 population census indicate that the Ledzokuku Krowor Municipality was one of the settlements in Accra, with high density of population, fertility, teenage pregnancy and poverty level (GSS, 2011). From the aforementioned, there is an increased need to investigate the factors influencing contraceptive use among reproductive women in the LEKMA to provide data on contraceptive use in the area.

1.2. Justification

Using various methods of contraception in family planning has been found to promote gender equality as well as promote educational and economic empowerment for women (Apanga & Adam, 2015). This indicates that the use of contraception among reproductive age women can be an important and cost-effective tool in poverty reduction and socio-economic development in the developing countries. Evidence showed that every dollar spent on family planning saved at least, US$4 that could have been spent treating complications from unintended pregnancies and saved governments up to US$31 in health care, water, education, housing, sewers, and many more (Eliason et al., 2014).
Additionally, it could be argued that apart from freeing women from the anxiety of involuntarily becoming pregnant, contraceptives use enable couples to space their children so that adequate care is given to those children they choose to have. Hence, women who use contraceptives in planning their families have stopped being slaves to their reproductive capacity and this gives them a fuller enjoyment of their sexuality and there is the need to identify any barriers influencing contraceptive use among reproductive women. The acceptance of family planning methods varies within and between societies and there are many factors, which are responsible for such variation at community, family and individual levels (Humera & Parwez, 2013). Moreover, evidence shows that promoting contraceptive use through integrated family planning and maternal and child health programs can contribute to improved economic security for families, households, and communities through larger incomes, greater accumulation of wealth, and higher levels of education (Eliason, et al., 2014).

Despite the enormous benefits of contraceptives use to both an individual and a country as a whole, there are limited studies that have assessed factors influencing contraceptive uptake in the LEKMA. Hence, it will be instructive to identify the factors that influence contraceptive use among reproductive age women in the LEKMA as findings will contribute immensely towards eliminating the barriers to contraceptive use. This will help promote contraceptive use in the municipality and aide in the implementation of effective family planning programs geared at enabling women to plan their pregnancies and families; to have fewer and healthier children, which will help reduce the socio-economic burden on them and help break the cycle of poverty.
The stimulus for this study emanated from the fact that the researcher works in Ghana’s health sector and is abreast with the challenges confronting health providers in the uptake of contraceptives among women. Thus, the experiences and insights gained over time helped to put the discussion of the topic into perspective so as to contribute to existing literature on the topic.

1.3. Objectives

The objectives of the study are divided into general and specific as indicated below.

1.3.1. General Objective

To assess factors influencing contraceptive use among reproductive age women in the Ledzokuku Krowor Municipal Assembly area.

1.3.2. Specific Objectives

The following objectives were pursued:

1. To assess the influence of knowledge and awareness of contraceptive on usage among reproductive age women.

2. To determine the attitude of reproductive age women towards contraceptive use.

3. To determine the influence of knowledge of availability of contraceptives on contraceptive use.

4. To investigate the influence of religion on contraceptive use among reproductive age women.
1.3.3. Research Questions

The following research questions helped to find answers to address the objectives of the study:

- How does knowledge and awareness of contraceptive influence usage among reproductive age women?
- What is the attitude of reproductive age women towards contraceptive use?
- How does knowledge of sources of availability of contraceptives influence usage among reproductive age women?
- How does religious orientation influence contraceptive usage among reproductive age women?

1.4. Outline of the Dissertation

This thesis comprises of six chapters. Chapter one presents the introduction where the background, problem statement, justification, objectives and questions are explained. Chapter two presents conceptual framework and review of literature of related studies pertaining to the subject matter under investigation. Chapter three presents the methods used in conducting the study. Chapter four presents the results of the study. Chapter five presents discussions of the findings. Chapter six presents the summary, conclusion and recommendations of the study.
CHAPTER TWO

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.0. Introduction

This chapter presents a conceptual framework of the study and review of literature of related studies on the topic under consideration. The concepts and key variables used in the current study have been explained and efforts made to reveal the gaps in the current literature. The review of literature was done under the various sections of interest of the study. Section one presents the conceptual framework of the study. Section two presents contraceptives. Section three presents types and methods of contraceptives. Section four presents knowledge and awareness of contraceptives. Section five presents availability of contraceptives. Section six presents attitude towards contraception. Section seven presents religious beliefs and contraceptives. Section eight presents socio-economic factors and contraceptives. Section nine presents chapter summary.

2.1. Conceptual framework

The conceptual framework in figure 2.1, illustrates the relationship between the dependent and independent variables. Contraceptive use is based on the knowledge users have of the particular method of contraception. For instance, Hindin, Mcgough & Adanu (2014), suggested that programs aimed at increasing contraceptive prevalence in Ghana, should target at addressing poor knowledge of how to use methods of contraceptives.

However, another study assessed the knowledge, attitude and practice of family planning among women of reproductive age group in Sikkim in India, and concluded that knowledge and awareness did not always lead to the use of contraceptives (Prachi, Das, Ankur, Shipra, & Binita, 2008). It is expected that awareness and availability of various
methods of contraceptives will have an impact on contraceptive use. A study in Tamale, found that high level of awareness and availability were associated with use of the Emergency Contraceptive Pills among reproductive age women (Amalba et al., 2014).

Furthermore, the educational level, marital status and employment status of reproductive age women are factors influencing their use of contraception. Results from a study of spatial and socio-demographic determinants of contraceptive use in the Upper East Region of Ghana, indicated that factors associated with use of contraceptives included the level of education, socioeconomic status and marital status of women among others (Achana et al., 2015). Contraceptive prevalence was found to be the highest among female adolescents with secondary or higher education (19.9%) while the lowest was among those without formal education (Nyarko, 2015).

The religious affiliation of reproductive age women could influence their use of contraceptives since the different religious groups provide different teachings on the subject of contraception. Studies in northern, central, and western Nigeria, found that differentials in contraceptive behavior existed among women as a result of differences in the teachings of their religions while other studies in Cameroon, Ghana and Malawi, support the proposition that contraception differentials among the religious faithful were attributable to variations in the doctrinal positions of religion on contraceptive use (Wusu, 2015).
2.2. Contraceptives

Contraceptive use (family planning) and reproductive health issues in general have assumed central focus in many health care settings across the globe, and this is as a result of the growing global recognition and concern about increasing population growth, maternal and child mortality, especially in developing countries (Appiah-Agyekum & Kayi, 2013). Egede et al. (2015), argued that unexpected or unplanned pregnancy poses a major public health challenge for women of reproductive age, especially in developing countries. It is estimated that approximately 210 million pregnancies occur annually worldwide, with 80 million (38%) being unplanned and 46 million (22%) ending in abortion. Further evidence indicates that the contraceptive prevalence rate of a country is related to the maternal mortality rate, and it has been shown that countries with a low prevalence of contraception have high maternal mortality rates (Egede et al., 2015).
The use of contraceptive is thus, seen as a reliable intervention or tool for combating population explosion, reducing maternal and child death, preventing unwanted pregnancies and subsequent induced abortions as well as improving the socio-economic development of countries (Apanga & Adam, 2015). Hence, the Ghana Health Service (GHS) holds the view that increasing the acceptor rate of contraceptives in planning families will lead to an improvement in the lives of mothers and their children (Apanga & Adam, 2015). Contraceptive use (Family Planning) has been explained as a way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes and responsible decisions by individuals and couples, in order to promote the health and welfare of family groups and thus contribute effectively to the social development of a country (Prachi et al., 2008).

Omideyi et al. (2011), indicated that the extent of consistent contraceptive use within a country was indicative of its level of preparedness to prevent unwanted pregnancies and induced abortions as well as uncontrolled population growth. Hence, higher levels of contraceptive use suggest fewer unwanted pregnancies and thus, fewer abortions. Studies have shown that India, was the first country in the world to implement a National Family Planning program in 1952 (Anjum, Durgawale, & Shinde, 2014). The program promoted contraceptive use through mass media campaigns and information, education and communication with the sole aim of controlling population growth (Anjum et al., 2014).

Ghana was one of the first countries in Sub-Saharan Africa to engage in family planning activities, although political commitment has varied over time (Osei et al., 2014). However, over the years some efforts have been made by the Government of Ghana and non-governmental organizations through the formulation and implementation of various
programs to improve the coverage of family planning services in the country. Although some successes have been chalked in the area of awareness of family planning services in the country, the Ghana Demographic and Health Survey observed that, the unmet need for family planning still remains high (GSS, 2014; Apanga & Adam, 2015).

2.3. Types and methods of contraception

In several studies on the subject of contraception, contraceptives have generally been classified into two types: modern and traditional methods (Appiah-Agyekum & Kayi, 2013). The modern methods include the pill, intrauterine device, injectables, spermicide, condoms (male and female), female and male sterilization and norplant while the traditional methods usually include periodic abstinence or rhythm, withdrawal and folk methods (such as using charms, herbs, etc). In some settings, the known methods of contraception include prolonged abstinence, breastfeeding, billing or mucus or natural family planning (Appiah-Agyekum et al., 2013).

2.4. Knowledge and awareness of contraceptives

Knowledge of contraceptives among reproductive age women is important in order to promote contraceptive use. A good knowledge of the different types or methods of contraceptives and how they function will clear a lot of misperceptions associated with contraceptive. This will make users better informed and more confident in deciding which form or method of contraception to use. For instance, in industrialized countries with high knowledge level of contraceptives, virtually all married women use contraception at some time in their reproductive lives, with contraception viewed as a basic right of women and most women are armed with the information, education, and means to use it (Morgan,
In contrast, the proportion reporting such use in developing countries is extremely low (Egede et al., 2015).

Hindin, Mcgough & Adanu (2014), found that knowledge of how various contraceptive methods work and of basic reproductive biology was low among respondents and hence, acting as a barrier to contraceptive use in Ghana. This low knowledge of contraceptives and how they are used gave rise to misperceptions such as fear of side effects and the need for a woman to do a blood test to determine which method of contraceptive was appropriate to use. It was thus, recommended that addressing poor knowledge of how various methods of contraceptives are used as well as myths and misperceptions about contraceptive use would be key in efforts to improve contraceptive prevalence. Currently, the knowledge of any contraceptive method in Ghana, is almost universal with 98% of all women and 99% of all men knowing at least, one method of contraception (Amalba et al., 2014).

In addition, findings from a study in Uganda, which assessed the knowledge and attitudes of reproductive age women towards long acting reversible contraceptives (LARC) revealed that knowledge of method and site of administration were positively associated with use of the method (Anguzu et al., 2014). However, another study in Sikkim in India, concluded that high knowledge level of contraceptives did not always lead to the use of contraceptives and that there was the need to understand the practices in the community before implementing strategies to improve contraceptive use (Prachi et al., 2008). This is probably highlighted in view of the fact that unintended pregnancies continue to occur and rates of sexually transmitted infections remaining high even in developed countries in this age of widespread availability of effective contraceptives (Srikanthan & Reid, 2008).
Against this backdrop, it could be suggested that knowledge of contraceptives alone may thus not be influential a factor to cause improvement in contraceptives or family planning services uptake and there is the need to explore other contextual factors or barriers in order to address them holistically. A greater understanding of the contextual factors associated with modern contraceptive use has the potential to inform the development of community-level programs aimed at increasing contraceptive use and to allow the targeting of programs to communities in need (Stephenson, Baschieri, Clements, Hennink, & Madise, 2007).

The creation of knowledge and awareness among the public about various types and methods of contraception and the need to use them is an integral part of any decision or effort to promote contraceptive use. In Ghana, both print and electronic media carry adverts on daily basis to sensitize and create awareness about the different types of contraceptives (Hindin, Mcgough & Adanu, 2014). These mass enlightenment programmes are usually initiated by the government through the Ghana Health Service, Development partners, Non-governmental Organizations with special interest in reproductive health and population growth or even individuals to create knowledge and awareness about reproductive health problems or issues, including contraceptive use (Mehra, Agardh, & Petterson, 2012). This knowledge and awareness creation is expected to impact on contraceptive use.

Studies have found the use of communication channels such as conversation, the town crier, the market place, churches, schools, health officers and radio very useful in creating and sustaining knowledge and awareness of health needs and health-care delivery in Ghana (Okereke, 2010). Furthermore, if sexually active females are to evade unintended
pregnancy, they need to be provided with adequate information on reproductive health, including contraceptive use. Hence, there is the need to use different media properly and wisely to strengthen communication support to health projects geared towards contraceptive use (Okereke, 2010).

Ghana was one of the first African countries to adopt and formulate a National Population Policy in 1969, which was revised in 1994 (Adjei et al., 2015). The revised national policy states the aims of the family planning component in the reproductive health policy and these include: provision of information to individuals as well as making available a full range of safe and effective contraceptive methods and currently, the Ghana Demographic and Health Survey has knowledge and awareness of modern contraceptives amongst women of reproductive age at 98% (GSS, 2014; Adjei et al., 2015).

A study assessed the fertility decisions and contraceptive use at different stages of relationships, and observed that respondents exhibited high levels of knowledge and awareness of the various contraceptives available in Ghana, with the most commonly cited methods as the male condom, the calendar method and the injectable. Others included the pill, the Intra Uterine Device (IUD), the implant and spermicides; a few women talked about local preparations (mostly herbal) used for pregnancy prevention. Female sterilization, male sterilization and emergency contraception were mentioned infrequently (Osei et al., 2014).

It is estimated that more than 200 million women in developing countries would like to delay their next pregnancy or even stop bearing children altogether (Egede et al., 2015). However, lack of knowledge and awareness of available contraceptives serves as a barrier
and thus, preventing them from contraceptive use. In a sharp contrast, studies in Nigeria, have demonstrated that there was widespread knowledge and awareness of contraceptive options, but in spite of such awareness, the contraceptive prevalence rate among women in the reproductive age group was only 15% (Egede et al., 2015). This is further supported by a study in Uganda, which found that approximately 97% of all people of reproductive age were acquainted with at least, one method of contraception (Mehra et al., 2012). However, that does not translate into behavior or contraceptive use for no clear reasons (Mehra et al, 2012). This may be indicative of the fact that knowledge and awareness alone or the lack of it may not influence contraceptive use and there is the need to explore other factors that may be influencing contraceptive use.

2.5. Availability of contraceptives

In order to promote contraceptive use, there is the need to ensure availability of all the different types and methods. This could be an integral part of the practice of contraception or promoting contraceptive use. Egede et al. (2015), found that ensuring the availability and use of appropriate contraceptive methods for family planning were important in controlling population growth and other complications of pregnancy; and should always be the focus of most family planning programs seeking to promote contraceptive use. They further noted that the ability to choose among the range of methods available was central to the practice of contraception, adding that appropriate methods for couples and individuals varied according to age, parity, family size preference, and level of awareness, as well as the cultural and religious acceptability of the methods available.

The importance of making available family planning commodities in order to improve contraceptive use and family planning coverage is further emphasized by the Ghana
Millennium Development Goals Acceleration Framework (MAF) in a recently released Country Action Plan in which it stated that making available family planning commodities in health facilities was one of the major bottlenecks that needed to be addressed in order to improve maternal health in Ghana (Apanga & Adam, 2014). It further recognizes that making available family planning commodities is also linked with improved accessibility to family planning, increased family planning coverage as well as acceptability of these methods as all these lead to improved maternal and neonatal health (Adjei et al., 2015).

Moreover, adolescent pregnancy is a recognized public health problem that has diverse consequences for the individual adolescent, the family, and society at large; and promoting adolescent contraceptive use has been found to contribute significantly in reducing the rate of unintended adolescent pregnancy (Morhe, Tagbor, Ankobea, & Danso, 2012). In view of this, making contraceptives available to all may be a necessary intervention towards preventing adolescent pregnancy. Amalba et al. (2014), found availability to be associated with use of the Emergency Contraceptive Pill among reproductive age women (15-49 years) and health care providers are admonished to make contraceptives readily available to help prevent unwanted pregnancies.

Ghana, is known for operating a pluralistic health system, which is guided by policies and legislations such as the Ghana Health Service and Teaching Hospitals Act 525 amongst others (Adjei et al., 2015). Health care in the country is thus obtained primarily from two main providers: the private and the public. It is estimated that more than 50% of Ghanaians obtain their health care, including contraceptives from private providers (Adjei et al., 2015).
The ability of these providers to discharge their mandate of making various types and methods of contraceptives readily available to the Ghanaian public is crucial due to the fact that substantial evidence from studies indicates that limited choice of contraceptive methods limits the opportunity for users to choose a method that suits their needs, resulting in lower levels of contraceptive prevalence. Thus, the availability of a wide range of contraceptive options affords users the ability to make active, free, and informed choices (Egede et al., 2015).

2.6. Attitudes toward contraception
At the center of every program put in place is the reasoning that knowledge of and awareness will help change people’s attitude towards contraceptives, hence, leading to use. It is thus, quite simple and logical to think that when people have significant knowledge of and awareness about contraceptives and have easy access to them it may change their attitude relative to contraceptive usage (Amalba et al., 2014).

However, Okereke (2010), reports that in spite of the numerous programs and action plans initiated by various governments in Nigeria; to create awareness about the catastrophic consequences of not using contraceptives, through the radio, television and print media, there exists clear evidence that this has not achieved the desired impact of changing people’s attitude towards contraceptives as 78.5% of the sub-population that affirmed the existence of reproductive health centers in their neighborhood was unwilling to buy contraceptives at the centers. This he suggested, was the presence of a deep-seated issue that inhibits their demand for contraceptives, hence, the need for re-orientation to erase fossilized prejudice against contraceptives.
Moreover, studies have shown that the contraception method of choice differs among women with different social and cultural backgrounds and this may suggest that background has an influence on attitudes toward different methods of contraception (Erlenwein et al., 2015).

2.7. Religious beliefs and contraceptives

Of all the socio-economic factors known to influence contraceptive usage, religion exerts a profound and an overriding influence on contraceptive usage. For instance, irrespective of one’s educational level or income status, one’s religious beliefs on contraceptive use influences greatly the usage of contraceptive by the person. Thus religion plays a pivotal role in human society and predominant religious values shape and regulate individual behavior, including sexual and reproductive health behavior (Wusu, 2015), hence the need to examine its influence on contraceptive usage among reproductive age women.

Studies in northern, central, and western Nigeria, showed that differentials in contraceptive behavior existed among women as a result of differences in the teachings of their religions (Agadjanian et al., 2009; Monjok et al., 2010; Olugbega-Bello et al., 2011; Avong, 2012; Envaladu et al., 2012; Odusina et al., 2012; Akintunde et al., 2013). Studies in Cameroon, Ghana and Malawi, support the position that contraception differentials among the religious faithful are attributable to variations in the doctrinal positions of religion on contraceptive use (Doctor et al., 2009).

According to the 1992 constitution of the Republic of Ghana, Ghana is a secular state and guarantees religious pluralism (Republic of Ghana, 1992). What is more, Ghanaians are among the most religious people in the world, the major religious groups being
Christianity, Islam and Traditional religion (Gyimah, Takyi, & Addai, 2006). The Ghanaian society has been described as a society where religion has become a framework for interpreting life events and is replete with all kinds of worship centers with a regular high traffic of people trooping to these centers to worship. The popular religious groups propagate varied teachings on contraception, which are expected to shape and regulate the contraceptive behaviour of reproductive aged individuals (Gyimah, Takyi, & Addai, 2006). About 98% of Ghanaians belonged to a religious organization with about 82% reporting regular religious worship in 2000 (Gyimah, Takyi, & Tenkorang, 2008).

It was suggested that women of Islam and Traditional religions were more likely to have never used or not to be using modern contraceptives compared with Catholics and Protestants as at 2008 in Ghana (Wusu, 2015). These statistics point to the relevance of religion on the Ghanaian social fabric and there is the need to examine its role or influence on various facets of social life, including contraception.

2.8. Socioeconomic Factors

Improving women’s socioeconomic status or characteristics is an imperative in the promotion of modern contraception as it empowers women to take informed decision regarding contraceptive usage (Egede et al., 2015).

2.8.1. Marital Status, Partner support and Contraceptive use

It is believed that marital status may impact on contraceptive use among reproductive age women since husbands may hold a different view about the issue of contraception. Research shows that in Sub-Saharan Africa, contraceptive use is strongly influenced by men’s opinions and couples’ dynamics (Anguzu et al., 2014) For instance, a study found
that 43% of Namibian men and 46% of Ghanaian men believed that a woman who uses contraceptives might become promiscuous and some women also opposed contraception for fears of spousal disapproval (Burdette, Haynes, & Hill, 2014). This was supported by a study in Uganda, which found that men’s opposition to contraception was associated with an increase in women’s unmet need, as well as increased reliance on traditional methods instead of modern ones and in Zambia, where two in five women who were not practicing family planning said their husband’s disapproval was a reason for not using contraceptives (Do & Kurimoto, 2006).

Furthermore, Apanga and Adam (2015), studied factors influencing the uptake of family planning services among reproductive age women in the Talensi District of the Upper East Region of Ghana, and found that one of the major reasons for not accessing family planning services was opposition from husbands. Additionally, Do and Kurimoto (2006), found that many men in Ghana and Zambia, were concerned about control over their wives’ reproductive behavior. Hence, the achievement of their own desire for a large family and many Ghanaian women who used contraceptives feared physical abuse and reprisals not only from their husband, but also from members of their extended family. They further reported that men thought it was acceptable to beat their wife if she adopted family planning and some women indicated that their husband’s disapproval was a common reason for their non-use of contraceptives due to fear that they would lose his affection.

Other studies in Ghana, have suggested that the promotion of family planning cannot be successful without addressing gender-related factors, and men’s attitudes toward contraception, which are rooted in the society (Do & Kurimoto, 2006). Another study in
Zambia, found that covert contraceptive use among women was strongly associated with difficulties in spousal communication about contraception (Do & Kurimoto, 2006). In addition, a study found that some women were prevented from using contraception by a partner or were unable to access services because of their youth or unmarried status in India (Anjum et al., 2014).

2.8.2. Educational level, Employment Status and Contraceptive use

Since the 1994 International Conference on Population and Development, women’s empowerment has been recognized as important to their access to reproductive health services, including family planning (Do & Kurimoto, 2006). Wusu (2015), reports that the reason that women of Islam and Traditional religions were more likely to have never used or not to be using modern contraceptives compared with Catholics and Protestants in 2008 in Ghana, could be explained by their poorer socioeconomic status relative to Catholics and Protestants.

A study in Hohoe in the Volta region of Ghana, found that female adolescent contraceptive use was significantly determined by education, work status, among others, and contraceptive prevalence was found to be highest among female adolescents with secondary or higher education (Nyarko, 2015). Furthermore, a study of fourteen Sub-Saharan African countries; to determine the impact of women's schooling on fertility and contraceptive use, found that female schooling had a positive relationship with contraceptive use at all levels (Ainsworth, Beegle, & Nyamete, 1996).
2.9. Chapter Summary

This chapter reviewed existing literature in relation to the subject of study and findings indicates that knowledge and awareness as well as attitude of reproductive women regarding modern contraceptives influence usage. Also availability of different contraceptive methods provides options in terms of choice suitable methods by women but does not necessarily derive usage. Different socio-economic factors have also been reported to influence contraceptive use among reproductive age women with religion playing a significant influence compared to other socio-economic factors.

However, as far as the literature reviewed in this study is concerned, no study has assessed the independent influence of knowledge, attitude, availability and religion on contraceptive use particularly in the study area, hence the need for this study. The next chapter presents the methods employed in the study.
CHAPTER THREE

METHODS

3.0. Introduction

This chapter presents the methods applied in collecting primary data for the study. It is comprised of eleven sections. Section one describes the type of study. Section two describes the study area. Section three presents the variables of interest in the study. Section four presents sampling. Section five presents study population. Section six presents data collection techniques. Section seven presents data processing and analysis. Section eight presents data quality. Section nine presents ethical considerations. Section ten presents funding of the study. Section eleven presents chapter summary.

3.1. Type of study

A method involves a set of guiding principles in the design of research (Hunter & Schmidt, 2007). It thus involves specified procedures, techniques, ideas and thought processes followed in getting specific things done, and or in achieving particular objectives. The methods comprise of considering the source of data, the mode of collecting the data and the type of instruments to be used in analyzing the data. These techniques collectively come under research methods guided by scientific principles.

The study was a descriptive cross-sectional design using quantitative tools to describe the factors influencing contraceptive use among reproductive age women in the Ledzokuku Krowor Municipality. Creswell and Clark (2007), defined a cross-sectional study design as a study, which limits its observations to a single point in time. They explained that a descriptive research is concerned with describing a phenomenon within its context. The quantitative research method shares the theoretical assumption of the functional or
positivist paradigm, which is based on the assumption that social reality has an objective ontological structure and individuals are responding agents to this objective environment (Creswell & Clark, 2007).

Cunliffe (2010), holds the view that measurements in quantitative research are reliable, valid, and generalizable in predicting cause and effects. Hence, researchers using the quantitative method have in mind the view to quantifying the data they generate in order to establish relationship between variables. The quantitative data was derived from structured questionnaires, which were interviewer-administered with the assistance of two trained research assistants to randomly selected respondents; to collect data on the research variables.

3.2. Study Area
The Ledzokuku Krowor Municipal Assembly (LEKMA) is one of the 16 Metro, Sub-metro and districts in the Greater Accra Region of Ghana. It has a total land area of 50 square kilometers. LEKMA is bounded on the south by the Gulf of Guinea and is wedged between the Accra Metropolitan Assembly on the west and Tema Metropolitan Assembly on the East. It is made up of 82 communities with an estimated population of 320,000 as at 2010 (GSS, 2014). Key demographic characteristics of LEKMA are as follows:

1. About 51% of the population is females and the rest 49% males giving a sex ratio of 1:1.04 males to females.

2. The population of the municipality is described as youthful with 50.7% under the age of 24 years.
3. About 89.89% of the people in the municipality are Christians while only 4.4% and 1.1% are Muslims and Traditionalists respectively while 4.61% covers other religious groupings.

The LEKMA Hospital where the study was conducted is situated in Teshie in the municipality about 100 meters away from the Electricity Company of Ghana (ECG) office and adjacent to the Nursing and Midwifery Training College (NMTC). It is a Ministry of Health (MOH) facility built by the Chinese Government as a China-Ghana Friendship Hospital in 2010. It offers various services, including reproductive health services and serves as the Municipal Hospital for the Ledzokuku Krowor Municipality and beyond. Figures 3.1 and 3.2 show Google Maps of LEKMA and a detailed direction to the study area.

Figure 3.1: Map of Ledzokuku Krowor Municipal Assembly (Adapted from GSS, 2010)
3.3. Variables

The study measured both the dependent and independent variables to be able to establish relationships between them.

3.3.1. Dependent variable

The dependent variable in this study is contraceptive use among reproductive age women (15-49 years).

3.3.2. Independent variables

The following are the independent variables expected to influence contraceptive use among reproductive age women:

1. Socio-demographic characteristics: age, marital status, partner support, income level, educational level and religion.
2. Knowledge and awareness: this was measured by how well respondents knew the types of contraceptives.

3. Attitude towards contraceptives: this was measured by how well respondents knew where to acquire contraceptives and how willing they were to using contraceptives.

4. Availability of contraceptives: this was measured by the knowledge respondents had of sources where they could access contraceptives.

5. Religious influence: this was measured by how the respondents said their religious beliefs played a role in their use of contraceptives.

3.4. Sampling

Sampling as a step in the conduct of research is very fundamental. It forms the basis on which interpretation of the research results are done and inference are made to the entire population (Creswell & Clark, 2007).

3.4.1. Sampling method

The simple random sampling method was used in selecting respondents to ensure that each respondent in the sampling frame had an equal chance of being included or excluded from the sample. The simple random sampling is a probability sampling procedure, which ensures that every individual unit in the population under investigation has a chance of being selected into or excluded from the sample (Creswell & Clark, 2007).

The ballot method, which is a method of simple random sampling, was employed. All reproductive age women accessing services at the hospital on each of the days sampling was done were made to pick from a box containing pieces of papers with numbers. These
pieces of papers were collected back from them and their respective numbers noted against their names. The papers were put into a container and thoroughly mixed and then picked out one by one at random until the 24 desired sample size apportioned for the particular day was drawn except on the last day when 25 respondents were sampled in order to achieve the 217 estimated sample size. Structured questionnaires for the study were administered to these selected respondents. Any respondent who refused to take part in the study was skipped and a different number picked from the box. This process was done on each day until the calculated sample size of 217 for the study was obtained after the 9 days of sampling. The sampling was done on working days.

3.4.2. Sampling size

A sample size of 217 was derived based on a sample size formula for a single population shown below (Cochran, 1977):

\[ n = \frac{Z^2 P (1-P)}{(d)^2} \]

Where,

\( n = \) sample size required.

\( Z = \) confidence level (95% level of confidence - 1.96).

\( P = \) Reported national prevalence of contraceptive use (17% = 0.17). Derived from the literature.

\( d = \) Margin of error (5% = 0.005).

Substituting,

\[ n = (1.96)^2 \times (0.17 \times 0.83) / (0.05)^2 = 217. \]
3.5. Study Population

The study population involved reproductive age women living in the Ledzokuku Krowor Municipality and accessing health care services at the LEKMA hospital at the time of the study.

3.5.1. Inclusion Criteria

All reproductive age women (15-49 years) who were living in the Ledzokuku Krowor Municipality and accessing health services at the LEKMA hospital at the time of the study were included in the study. Only those eligible and were willing to participate in the study were selected.

3.5.2. Exclusion Criteria

Women who fell within the category but were not willing to take part in the study were excluded. Furthermore, reproductive age women who were not living in the Ledzokuku Krowor Municipality were excluded from the study.

3.6. Data Collection Techniques/Methods & Tools

A structured questionnaire was designed and administered to reproductive age women who accessed health services at the LEKMA hospital at the time of the study. The questionnaire was in 5 sections. Section one collected data on socio-demographic characteristics of respondents. Section two was on knowledge and awareness of respondents regarding modern contraceptives. Section three was on availability of modern contraceptives. Section four was on attitudes towards contraceptives. Section five gathered data on religious influence on contraceptive use. The questionnaire was interviewer administered with the assistance of two trained research assistants. Items on
the questionnaires were read and explained to individual respondents who chose the options they deemed fit. A maximum of between five and ten minutes were used to administer each questionnaire depending on the caliber of respondent being interviewed in terms of whether the respondent speaks English language or not hence requiring translation.

The data collection was done between 6th June, 2016 and 10th June, 2016 in the first week of sampling and between 13th June, 2016 and 16th June, 2016 in the second week of sampling.

3.7. Data Processing and Analysis

The administered questionnaires were cleaned, coded and entered into Microsoft Excel. A data entry form was created with limits to prevent entry of wrong figures. The data was validated and exported to STATA (statistical analysis software) Version 13. Descriptive analysis was carried out to explore respondents’ knowledge and awareness levels regarding different types of modern contraceptives, sources of contraceptive information, attitude towards contraceptives, knowledge of sources of availability and knowledge of religious beliefs relative to modern contraceptives. This was done by quantifying responses in whole numbers, fractions and percentage terms.

Pearson’s chi-square test was conducted at 95% confidence interval (CI) to establish associations between the independent variables and the dependent variable. The dependent variable was made a dichotomous response variable that was assigned a response of Yes and value 1, if the respondent was using any modern contraceptive method and a response of No and value 0, if not using any modern contraceptive method. Logistics regression
analysis was carried out to determine influence of the independent variables on modern contraceptive use. Statistical significance was considered at 95% confidence interval and p-values less than 0.05 ($p<0.05$). The results were presented in tables, graphs and charts.

### 3.8. Data Quality

The following measures were taken to ensure quality control of the study:

1. Questionnaires for the study were brief, elaborate and easy to understand.
2. Two research assistants were recruited, trained and supervised to administer questionnaire effectively and also monitored appropriately throughout the data collection process until the end of the study.
3. Pre-test of the questionnaire was done at La General Hospital in the La Dade Kotopon Municipality, which has similar characteristics with the study area to check for consistency of variables and identification of errors.

Data collected on each respondent was cross checked after each day’s field work to ensure that the questionnaire were completely and appropriately filled and all information accurately collected.

#### 3.8.1. Training of Research Assistants

Prior to the start of field work, a day training session for the two research assistants was organized by the researcher with the prime aim of equipping them with the required skills needed to assist in the study. The training helped to clearly spell out their tasks, including a discussion of the purpose of the study, ethical issues and administration of questionnaires.
3.8.2. Pre-Test/ Pilot Study

The questionnaire in this study was pre-tested at La General Hospital. This healthcare facility is in the same category of hospitals of the Ghana Health Service and has almost the same number and caliber of clients as the study area. The municipality also has similar characteristics as the Ledzokuku Krowor Municipality where the study was conducted. Concerns raised during the pretesting aided in standardizing and finalizing the questionnaire for the study. In the pre-test of the questionnaires and methodology of this study, it was realized that some reproductive age women were influenced to use modern contraceptives due to the fact that they had conceived a number of times and had had to resort to abortion because they were not ready to have a child. Hence, the question on the number of children by respondents was changed to number of times conceived.

3.8.3 Strength of the study

The questions for data collection were brief and elaborate which facilitated easy understanding to elicit the right responses.

3.9. Ethical Considerations

To ensure that the research meets ethical standards, an approval was sought from the Ethical Review Committee of the Ghana Health Service (GHS), Research and Development Division, Accra. The approval letter was duly obtained (Ethics Approval ID NO: GHS-ERC: 30/12/15) before the study was conducted.
3.9.1. Access and approval of study area

The researcher prior to the study, had been to the study area to informally established contact with the head and management of the LEKMA hospital. Subsequently, an introductory letter was obtained from the Head of Department of Health Policy, Planning and Management, School of Public Health, College of Health Sciences, University of Ghana and sent to the head of the hospital. The Municipal Health Directorate of the Ledzokuku Krowor Municipal Assembly was also notified and served a copy of the introductory letter. In addition, the clearance letter from the Ghana Health Service Ethical Review Committee was shown to the head and management of the hospital before the study was conducted.

3.9.2. Study subjects

The study subjects included reproductive age women in LEKMA who were accessing health care at the LEKMA hospital and were willing to take part in the study.

3.9.3. Privacy and confidentiality

To ensure confidentiality, the questionnaires were coded and names of respondents were not required in filling out the questionnaire. Respondents were given the optimum privacy during filling of the questionnaires by ensuring that the interviewer and the respondent were isolated from other participants and people around before the interview was conducted. Participant’s names were not also mentioned in the report of the study and information gathered on participants was kept strictly confidential between the researcher and the study participants.
3.9.4. Compensation

There was no compensation for participating in the study and this was made known to participants before they chose to take part in the study or not. However, the researcher provided refreshment or snacks after administering questionnaires.

3.9.5. Risk and Benefits

Apart from the time that was lost by study subjects in answering the questionnaires, there was no risk or cost associated in choosing to participate in the study. Participants were not also given any direct benefits. Meanwhile, it was expected that findings from the study would contribute towards policy decisions about reproductive health in the study area, which would be beneficial to both the study participants and the researcher.

3.9.6. Voluntary withdrawal

Participation in this study was voluntary and participants could choose not to answer any individual question or all the questions. Participants were at liberty to withdraw from the study at any point in time. However, participants were admonished and encouraged to fully participate to ensure that results from the study would be a true reflection of the factors influencing contraceptive use in the study area. In the event of any withdrawal by a participant, all data gathered on the participant were deleted.

3.9.7. Consenting process

Every single participant in the study was approached to explain the objectives of the study to her and their consent sought. The decision to take part in the study was absolutely voluntary and refusal to take part did not affect the study in any way neither did it affect the relationship between the participant(s) and the researcher. In addition, respondents
were made to sign a written consent form after a detailed explanation to them before they participated in the study.

3.9.8. Data storage and usage

Data collected in this study was strictly for research purposes and was stored with passwords on electronic media and in safely locked boxes. Anonymity was ensured in dissemination of findings from this study since participants were not identified by their names.

3.9.9. Declaration of conflict of interest

The researcher as the principal investigator had no conflict of interest in this study and this was declared prior to the study.

3.10. Funding of the study

The study was conducted in partial fulfilment of requirements towards the award of a Master of Public Health (MPH) degree at the School of Public Health, College of Health Sciences, University of Ghana, Legon. Hence, there was no funding from any source and all estimated cost that was incurred was fully borne by the researcher.

3.11. Chapter Summary

This chapter presented the methods used to conduct this study. It described in detail the various steps followed in the conduct of the study. This chapter outlined the study variables, how the sample size of the study was determined, how the respondents were selected, the processes through which the questionnaire were administered and how the
data obtained was processed and analyzed. It also described the study area as well as steps that were taken to ensure data quality. The next chapter presents the results of the study.
CHAPTER FOUR

RESULTS

4.0. Introduction

This chapter presents the results of the empirical study. There are seven sections in this chapter. Section one presents results on the socio-demographic characteristics of respondents. Section two presents analysis of results on the knowledge and awareness of contraceptives. Section three presents results on the availability of contraceptives. Section four presents results on the attitude of respondents towards contraceptives. Section five presents results on the influence of religious beliefs of respondents on contraceptive use. Section six presents results on relationship between the dependent variable and selected independent variables in line with the objectives of the study. Section seven presents the chapter summary.

4.1. Socio-Demographic Characteristics of Respondents

A total of 217 questionnaires were administered. All questionnaires were appropriately completed and there was a 100% (217/217) response rate. The socio-demographic characteristics provide a clear understanding of the study respondents. Data collected on their age, marital status, religion, educational level, employment status, number of times conceived and monthly income were analyzed. Table 4.1 illustrates a detailed distribution of the results.

Majority, 120 (55%) of the respondents were within the age group of 20-29 years. Out of the 217 reproductive age women, 147 (68%) reported that they were married. Additionally, most 120 (55%) of the married women were within the age range of 20-29 years. In terms of occupation or employment status, whilst majority 75 (35%) reported
that they were not in any form of employment, trading was the predominant occupation 65
(30%). While only 39 (18%) of the respondents were civil servants, 38 (17%) was
engaged in other forms of self-employment such as seamstress/ sewing, and hairdressing.
The minimum monthly income range of respondents was GHS50-300 (Ghana cedis) and
the maximum monthly income range was GHS1000 (Ghana cedis) and above. Of the 217
participants, 146 (67%) could not tell their monthly income. Among the respondents who
reported their monthly income, majority 24 (11%) had a monthly income of GHS301-600
(Ghana cedis). Only 11 (5%) of the respondents reported earning a monthly income of
GHS1000 (Ghana cedis) and above.
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</tr>
<tr>
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</tr>
<tr>
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<td>67</td>
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<td><strong>Religion</strong></td>
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<td></td>
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<tr>
<td>Christianity</td>
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<td>87</td>
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<td>African Traditional Religion</td>
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<td>2</td>
</tr>
<tr>
<td>Others</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>217</td>
<td>100</td>
</tr>
</tbody>
</table>
Responses to educational level attained revealed that over 90% had received some level of education. Whilst a large (31%) number had education up to the Junior High School, 24% had Senior High School and Tertiary level and 8% had had no formal education. Data was gathered on the number of times respondents had conceived. Most 147 (68%) of them had conceived between the range of 1-3 times and no respondent had conceived within the range of 7-9. Christians constituted the majority, 189 (87%) and those who were of the African Traditional Religion faith were only 5 (2%).

4.2. Knowledge and awareness of contraceptives

Knowledge and awareness of contraceptives was found to be almost universal among respondents. Of the 217 respondents, 213 (98%) had heard of contraceptives with only 4 (2%) who had no knowledge and awareness of contraceptives. With regards to sources of information on contraceptive knowledge and awareness, respondents were asked to choose the sources from which they obtained contraceptive information. The television was the major source 122 (56%). This was followed by the hospital 83 (38%) and the least was newspaper/magazines 1 (0.5%). In terms of which contraceptive methods respondents were aware of, majority, 140 (64.5%) knew of the Injectable whilst 134 (61.8%) were aware of the pills. The least was the Diaphragm 9 (2.8%). Table 4.2 shows results of respondents’ sources of contraceptive information, methods of contraceptives constituting knowledge and awareness of contraceptives.
Table 4.2: Knowledge and awareness of contraceptives

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<th>Percentage (%)</th>
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<td>Female condom</td>
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<td>38.7</td>
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</tr>
<tr>
<td>Pills</td>
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</tr>
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<td>Implants</td>
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</tr>
<tr>
<td>IUD</td>
<td>34</td>
<td>15.7</td>
</tr>
<tr>
<td>Foam/Jelly</td>
<td>9</td>
<td>4.1</td>
</tr>
<tr>
<td>Diaphragm</td>
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<td>2.8</td>
</tr>
<tr>
<td>Male sterilization</td>
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<tr>
<td>Female sterilization</td>
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<td>7.8</td>
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<th>Source of knowledge</th>
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<th>Percentage (%)</th>
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<tr>
<td>Radio</td>
<td>56</td>
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<td>Hospital</td>
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<td>Friends</td>
<td>31</td>
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<tr>
<td>Posters/Banners</td>
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<td>2.3</td>
</tr>
<tr>
<td>Newspapers/Magazines</td>
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<td>0.5</td>
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<td>Community social clubs</td>
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<td>School</td>
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4.2.1. Knowledge and awareness and socio-demographic characteristics

The study found no statistically significant association between socio-demographic characteristics of respondents and knowledge and awareness of contraceptives in a chi-square test done at 95% confidence interval as presented in table 4.3.
Table 4.3: Socio-demographic characteristics and Knowledge and awareness (N = 217)

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<th>Frequency</th>
<th>Have Knowledge of contraceptives</th>
<th>Do not have knowledge of contraceptives</th>
<th>P-Value</th>
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<td></td>
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<td>N (%)</td>
<td>N (%)</td>
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<td>None</td>
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<td><strong>Conception</strong></td>
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<td>Trader</td>
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<td><strong>Total</strong></td>
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4.2.2. Current contraceptive use and background characteristics

Of the 217 responses, only 46 (21%) responded in the affirmative that they presently use a modern contraceptive whilst the majority 171 (79%) reported that they do not use any modern contraceptives. Overall, the prevalence of modern contraceptive use was found to be 21%. Of the 23 adolescents aged 15-19 years, none of them reported current contraceptive use whilst the highest (12.9%) use of contraceptives was found among women aged 20-29 years. Contraceptive use was found to be high among married women (29%) compared to women who were single and never married (5%).

Also, marital status ($p<0.002$), partner support ($p<0.004$) and employment ($p<0.049$) were statistically associated with modern contraceptive use. On the other hand, background characteristics such as age, educational level, number of conception, monthly income, and religion showed no association with modern contraceptive use as shown in table 4.4.
Table 4.4: Current contraceptive use and background characteristics (N = 217)

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<td>92 (77)</td>
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<td>52 (75)</td>
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<td>42 (79)</td>
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<td>17 (9)</td>
<td>1 (6)</td>
<td>16 (94)</td>
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<td>27 (18)</td>
<td>119 (82)</td>
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<td>7 (22)</td>
<td>25 (78)</td>
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</table>
4.3. Attitude towards modern contraceptives

The attitude of study participants towards contraceptives was assessed by asking respondents how they felt about modern contraceptives. They were to indicate ‘yes’ if they had positive attitude and ‘no’ if they had negative attitude. The general attitude was positive as majority (63%) reported to have positive attitude towards contraceptives. However, 28% indicated that they did not see contraceptives as a good thing and therefore, had a negative attitude whilst 9% was undecided about their attitude towards modern contraceptives. Figure 4.1, shows results of the attitude of respondents towards modern contraceptives.

![Figure 4.1: Attitude towards modern contraceptives](http://ugspace.ug.edu.gh)
4.3.1. Background characteristics and attitude towards modern contraceptives

There was a statistically significant association between age ($p<0.01$), marital status ($p<0.001$), number of times conceived ($p<0.03$) and employment status ($p<0.001$) of respondents and attitude towards modern contraceptives. Meanwhile, religious affiliation, educational level, income and partner support were not associated with attitude towards modern contraceptives. Additionally, knowledge of contraceptives is expected to shape women’s attitude towards modern contraceptives. However, this study found no association between knowledge of respondents and attitude towards modern contraceptives. The results are indicated in table 4.5.
Table 4.5: Background characteristics and attitude towards modern contraceptives (N = 217)  

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<th>Negative attitude</th>
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<th>P-Value</th>
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<td>38 (72)</td>
<td>11 (20)</td>
<td>4 (8)</td>
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<td>11 (64)</td>
<td>3 (18)</td>
<td>3 (18)</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Number conceived</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.025</td>
</tr>
<tr>
<td>1-3</td>
<td>42 (19)</td>
<td>26 (62)</td>
<td>12 (29)</td>
<td>4 (9)</td>
<td></td>
</tr>
<tr>
<td>4-6</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>7-9</td>
<td>28 (13)</td>
<td>10 (36)</td>
<td>14 (50)</td>
<td>4 (14)</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Employment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.001</td>
</tr>
<tr>
<td>Trader</td>
<td>65 (30)</td>
<td>47 (72)</td>
<td>11 (17)</td>
<td>7 (11)</td>
<td></td>
</tr>
<tr>
<td>Civil servant</td>
<td>39 (18)</td>
<td>23 (59)</td>
<td>14 (36)</td>
<td>2 (5)</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>75 (34)</td>
<td>35 (47)</td>
<td>30 (40)</td>
<td>10 (13)</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>38 (18)</td>
<td>32 (84)</td>
<td>5 (13)</td>
<td>1 (3)</td>
<td></td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.174</td>
</tr>
<tr>
<td>50-300</td>
<td>22 (10)</td>
<td>12 (54)</td>
<td>5 (23)</td>
<td>5 (23)</td>
<td></td>
</tr>
<tr>
<td>301-600</td>
<td>24 (11)</td>
<td>19 (79)</td>
<td>5 (21)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>601-1000</td>
<td>14 (7)</td>
<td>10 (71)</td>
<td>4 (29)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1001 above</td>
<td>11 (5)</td>
<td>7 (64)</td>
<td>4 (36)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Can’t tell</td>
<td>146 (67)</td>
<td>89 (61)</td>
<td>42 (29)</td>
<td>15 (10)</td>
<td></td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.624</td>
</tr>
<tr>
<td>Christianity</td>
<td>189 (87)</td>
<td>121 (64)</td>
<td>53 (28)</td>
<td>15 (8)</td>
<td></td>
</tr>
<tr>
<td>Islamic</td>
<td>14 (7)</td>
<td>8 (58)</td>
<td>3 (21)</td>
<td>3 (21)</td>
<td></td>
</tr>
<tr>
<td>ATR</td>
<td>5 (2)</td>
<td>2 (40)</td>
<td>2 (40)</td>
<td>1 (20)</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>9 (4)</td>
<td>6 (67)</td>
<td>2 (22)</td>
<td>1 (11)</td>
<td></td>
</tr>
</tbody>
</table>
4.4. Knowledge of religious beliefs on modern contraceptives usage

Results in figure 4.2 show the respondents’ knowledge of the teachings of their religion vis-à-vis modern contraceptives usage. There was low knowledge (23%) of respondents with regards to the stands of their religions on the matter of modern contraceptives usage. Majority, 113/217 (52%) could not state the position of their respective religions on contraceptives usage.

![Knowledge of religious beliefs on modern contraceptives usage](image)

Figure 4.2: Knowledge of religious beliefs on modern contraceptives usage

4.5. Knowledge of sources of availability of modern contraceptives

This study found that 100% of reproductive age women in the study area had knowledge of sources of modern contraceptives. Each study participant was able to mention at least a source from which to access modern contraceptives. Pharmacy (59%) was the highest
known source reported. Other respondents identified the hospital (34%) as their source of modern contraceptives whilst 22% knew the chemical shop as a place to obtain contraceptives. In addition, others mentioned Maternity homes (2%) and Traditional Birth Attendants (0.4%) as their sources. The results are shown in figure 4.3.

![Figure 4.3: Knowledge of sources of modern contraceptives](image)

4.6. Association between Factors and Contraceptive Usage (Logistic Regression)

Results of logistic regression models (bivariate and multivariate) performed to test level of significance and association between the dependent and independent variables of interest as outlined in the conceptual framework of this study are shown in table 4.6.
Table 4.6: Logistic regression of factors influencing modern contraceptive use: N=217

<table>
<thead>
<tr>
<th>Variable</th>
<th>Contraceptive use</th>
<th>Bivariate OR(95% CI)</th>
<th>p-Value</th>
<th>Multivariate AOR(95% CI)</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge and awareness</td>
<td>Yes</td>
<td>0.8 (0.1-7.9)</td>
<td>0.851</td>
<td>0.7 (0.1-8.8)</td>
<td>0.807</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Ref</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>Yes</td>
<td>4.2 (1.8-9.8)</td>
<td>0.001</td>
<td>3.9 (1.7-9.4)</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Ref</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Availability</td>
<td>Yes</td>
<td>1.9 (0.2-16.0)</td>
<td>0.546</td>
<td>2.2 (0.3-19.0)</td>
<td>0.482</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Ref</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious influence</td>
<td>Yes</td>
<td>0.4 (0.2-0.9)</td>
<td>0.019</td>
<td>0.5 (0.2-0.9)</td>
<td>0.038</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Ref</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In bivariate analysis, women who had positive attitude towards modern contraceptives were 4.2 times more likely to use modern contraceptives compared to those who did not have positive attitude towards modern contraceptives (OR = 4.2, CI: 1.8-9.8). This was still significant after multivariate analysis (OR = 3.9, CI: 1.7-9.4).

On religious influence, women who indicated that they would consider their religious beliefs in making decisions about modern contraceptives use, had an increased odds of 0.4 times (OR = 0.4, CI: 0.2-0.9) compared to those who would not consider their religious beliefs in their contraceptive decisions. In multivariate analysis, this was still significant with (OR = 0.5, CI: 0.2-0.9). Knowledge and awareness and availability of modern contraceptives were not significantly associated with use.
4.7. Chapter summary

The chapter has presented the results obtained from analysis of the empirical data. The results have shown that 98% of reproductive age women in the study area had knowledge of modern contraceptives and the television was the major source of information on contraceptives. Only 21% of reproductive women were currently using some form of modern contraceptives and the pharmacy was the major source of modern contraceptives of respondents. Also, majority (63%) of them had positive attitude towards modern contraceptives. However, while majority could not state their religion’s position on the use of modern contraceptives, religious beliefs was 0.4 times more likely to influence contraceptive decision making of reproductive women. The next chapter presents the discussion where the findings have been explained on the basis of existing literature.
CHAPTER FIVE
DISCUSSION OF FINDINGS

5.0. Introduction

This chapter explains the findings of the study in relation to other studies that have explored the subject matter of contraceptives with the view to identifying similarities, disparities and fill gaps in the literature. The discussion is done along the thematic areas outlined in the results.

5.1. Socio-demographic characteristics

The study participants consisted mainly of women between the ages of fifteen and forty-nine years due to the fact that the focus of the study was on reproductive age women. The study found the general age characteristic of the study population to be of younger adult age as most of the respondents (55%) were in the age range of 20-29 years. This finding is consistent with report of the Ghana statistical service which described the population of the study area as youthful with more than 50% under the age of 30 years. Also, a case control study on determinants of modern family planning use among women of reproductive age in the Nkwanta District of the Volta Region of Ghana, reported that most (49%) of the cases and controls were in the 20-29 age group (Eliaison et al., 2014).

Majority of the study participants were married (68%) and were housewives or not in any employment (35%). This is similar to the findings by Prachi et al. (2008), that almost all (95.7%) of the reproductive age women were married and majority (80.1%) were housewives and without employment. The differences in percentages may be due to the large sample size (443) used in their study compared to the 217 sample size used in this study. Apanga et al. (2015), found similar results in the Upper East Region. Consistent
with the assertion that marriage occurs relatively early among women in Ghana, this study found majority (55%) of the married respondents to be in the age range of 20-29 years. This further confirms the national statistics that among women aged 25-49 years, 45% marry by age 20 years and 58% by age 22 years (GSS, 2014).

Results of the study on employment revealed that majority of the study respondents were employed in the informal sector predominantly trading. This could be attributed to the fact that educational level of the participants was generally low as majority (31%) of them had attained only Junior High School education and thus lack the skills needed for formal employment.

Findings in this study revealed that majority (68%) of the respondents had conceived 1-3 times. This indicates a lower fertility rate when compared with the total fertility rate of 4.2 children per woman for Ghana. However, this finding is similar to the lower fertility rate of 3.4 children per woman reported for women in urban areas (GSS, 2014). A study on fertility decisions and contraceptive use in Accra, also reported a total fertility rate of 3.1 (Riyami, et al., 2004).

With regards to religious affiliation, the findings are in conformity with the statistics that Christianity is the dominant religion of the people of Ghana, and thus LEKMA representing 89.9% (GSS, 2014). As many as 87% of the participants in this study were Christians belonging to different denominations whilst the African Traditional Religion (2%) was the least practiced religion. Gyimah, Takyi & Tenkorang (2008), in their study on denominational affiliation and fertility behaviour in an African context reported similar
findings with 64.3% of study participants been Christians, 20.7% been Muslims and 15% belonged to the African Traditional Religion.

5.2. Knowledge and awareness of modern contraceptives

The findings on knowledge and awareness of reproductive women regarding modern contraceptives suggest that there was widespread knowledge as 98% reported having had knowledge and awareness. This is affirmed by studies in India (Humera & Parwez, 2013). The Ghana Demographic Health Survey (GSS, 2014), report also showed that 99% of women knew of a modern contraceptive method. A study in Ethiopia, reported that about 99% of women knew at least a modern method of contraceptives (Mekonnen & Worku, 2011). This near universal knowledge of modern contraceptives could be partly due to the various behaviour change communication or social marketing strategies in the form of visual and audio advertisements and educational interventions put in place to promote contraceptive use (Humera & Parwez, 2013).

In sharp contrast to findings from Nigeria, that friends were a major source of contraceptive knowledge or information among market women of reproductive age at 33.8% (Egede et al., 2015), the television was the main source of contraceptive knowledge or message in this study at 56%. This difference in the source of contraceptive knowledge or information may be due to the fact that the study participants in the Nigerian study were purely a cohort of market women of reproductive age. And by their commonality in trade, this may foster information sharing, including contraceptives. Furthermore, the findings in this study may be caused by the increasing availability of televisions stations and sets.
Eliason et al. (2014), revealed that the main source of family planning knowledge or information was health workers in the Nkwanta District, Volta Region. This may be attributable to the reported widespread presence of the community based health planning and services (CHPS) system in the communities of the district, which provides health service at the doorstep of the people. Additionally, the Nkwanta District compared with this study area, generally has very poor television reception, hence, making it difficult to obtain regular family planning information from such a medium. This finding is instructive since contraceptive information obtained through the television medium is more reliable and educative compared to information from friends, which is described as more likely to be incorrect and contain a lot of misinformation, distortion, falsehoods, and misconception, and may be self-centered (Egede et al., 2015). Humera and Parwez (2013), reported similar findings.

The ‘injectables’ was the widely known method of modern contraceptive among respondents (64.5%) followed by the pills (61.8%) and the least was the diaphragm (2.8%) in this study. This is supported by results of a comparative studies on the availability of modern contraceptives in public and private health facilities in Ghana (Eliason et al., 2014; Adjei et al., 2015). Findings of other studies in Ethiopia, concur with this finding (Tekelab, Melka, & Wirtu, 2015). This is, however, different from findings in the Ghana Demographic and Health Survey (GSS, 2014), where the male condom was reported as the most known method of contraceptive and in India, where the female sterilization was reported as the widely known method at 97.7% (Humera & Parwez, 2013).

It is expected that higher educational attainment will be associated with knowledge and awareness of contraceptives. However, this study found that educational level was not
associated with knowledge and awareness regarding modern contraceptives. This finding reflects the general educational curriculum of Ghana, which is often criticized as lacking reproductive health education components, especially at the primary and basic educational levels (Addai, 2015). Moreover, as expected, other socio-demographic characteristics such as religion, age, marital status, employment and income were not found to be associated with knowledge and awareness of modern contraceptives similar to earlier findings (Mohammed et al., 2014).

5.3. Current Contraceptive Use

The overall current use of modern contraceptives was found to be 21%, which is currently below the Ghana Health Service national family planning target rate of 23.3% (Apanga & Adam, 2015). However, this finding relates to similar percentages in the Ghana Demographic Health Survey that the current use of modern method of contraceptives among married women was 22% (GSS, 2014). Meanwhile, Trends (2000), reported that the current use of modern contraceptive methods among married women in urban centers of Iran, was 55%.

This high percentage of 55% compared to the 21% found in this study may be explained by the presence of a well formulated and coordinated program aimed at removing both cultural and economic barriers to family planning in Iran (Trends, 2000). For instance, population education is part of the curriculum at all educational levels. University students, for example, must take a two-credit course on population and family planning. Family planning is also included in the country’s adult literacy campaign. Couples who are planning to marry must participate in government-sponsored family planning classes.
before receiving their marriage license (Trends, 2000). Ghana could institute similar measures with the aim to improving modern contraceptives use.

In spite of the fact that knowledge and awareness of modern contraceptive was found to be near universal at 98%, current use was 21%. This reveals that knowledge and awareness may not result in contraceptive use. This is supported by findings in earlier studies in India (Prachi et al., 2008), and Nigeria (Egede et al., 2015), that knowledge of contraceptives does not equate to use.

The study observed that there was no reported use of contraceptive among 11% of respondents in the age range of 15-19 years. This does not reflect findings of 14.6% contraceptive prevalence reported by Nyarko (2015), in a study on “prevalence and correlates of contraceptive use among female adolescents in Ghana”. This disparity may be accounted for by the large female participants of 1037 aged 15-19 years involved in their study as against the 23 female adolescents in this study.

Be that as it may, the non-use of modern contraceptives by female adolescents of reproductive age in this study may be attributed to the widespread myths, misperceptions and misinformation about modern contraceptive use in Ghana (Hindin, Mcgough & Adanu 2014). They further found that fear of side effects, especially those perceived to impair fertility, remain the leading cause of non-use of modern contraception in Ghana. This corroborates fear of side effects in relation to inability to conceive in future reported by 78% of the female adolescents as the leading reason for modern contraceptive non-use in this study.
The marital status of women was strongly associated with modern contraceptive use 
\( (p<0.001) \) in this study. This is similar to studies in Uganda, Nigeria and Bangladesh, 
where users of long acting contraception were more likely to be married women (Anguzu 
\textit{et al.}, 2014). Achana \textit{et al.} (2015), found that most women who used modern 
contraception (about 70\%) did so for purposes of spacing births, and women who did not 
have a child were least likely to use contraceptives, and that with growing preference for 
small family size, married women might be resorting to modern contraceptives in order to 
limit child bearing as traditional contraceptives might be unreliable.

Moreover, partner support was strongly associated with use of modern contraceptives 
\( (p<0.01) \). This could be due to the dominant and instrumental role of men in decision 
making in traditional patrilineal societies like Ghana, and in many African countries where 
men make decisions almost in every aspect of life, including reproductive health service 
choices (Mekonnen & Worku, 2011). For instance, Mekonnen and Worku (2011), found 
that women who discussed family planning with their partners were 2.2 times more likely 
to use family planning in Ethiopia. This confirms reports in another empirical study that 
partners’ consent to the use of modern family planning methods was very crucial to the 
success of any family planning intervention (Eliason \textit{et al.}, 2014).

In addition, a study on fertility decisions and contraceptive use in Accra, explored 
interpersonal factors with a focus on influence of the sexual partner and power dynamics 
within the relationship (Osei \textit{et al.}, 2014). Osei \textit{et al.} (2014), revealed that men take 
almost every decision, including decisions on reproductive health matters. They added that 
since women are expected to be sexually passive to safeguard their dignity and honor, this
make them surrender even decisions on contraceptive use to the discretion and approval or support of their partners (Osei et al., 2014).

Stephenson et al. (2007), studied contextual influences on modern contraceptive use in Sub-Saharan Africa, and reported that fecund women and women whose husbands approved of contraception were more likely to use modern contraception. Anguzu et al. (2014), found that nearly half (48.1%) of the women in their study in Uganda, thought that their male partners should decide on the contraceptive to use suggesting partner support and approval is key to contraceptive use.

In addition, the employment status of study participants was associated with modern contraceptive use ($p<0.05$). This is consistent with findings in another study in Ghana, where work status was reported to be a significant correlate of contraceptive use (Nyarko, 2015). Contrarily, educational level, age, number of times conceived, income and religion were not associated with contraceptive use. This finding contradicts studies by Mekonnen and Worku (2011), in Nigeria; Nyarko (2015), in Ghana; Mohammed et al. (2014), in India; and Achana et al. (2015), in Kenya, who reported an association between educational level, age, number of children, income and religion of study participants and contraceptive use.

### 5.4. Attitude towards modern contraceptives usage

The background characteristics of study participants are expected to have a bearing on their attitude towards modern contraceptives. This study found a statistically significant association between age ($p<0.01$), marital status ($p<0.01$), number of times conceived ($p<0.05$) and employment status ($p<0.01$) of respondents and attitude towards
contraceptives. This may be explained by the fact that as women advance in age into the reproductive age, they may become conscious of unplanned pregnancies and this may impact on their attitude towards modern contraceptives as a mechanism for preventing unplanned pregnancies.

Married women as well as women who have conceived unplanned pregnancies may have different attitude towards contraceptives compared to unmarried women and women who have not conceived (Jones & Dreweke, 2011). This reflects reports in a study in Jordan (Bardaweel, Akour, & Kilani, 2015). Kallner et al. (2014), and Lamidi, (2015), also found significant association between marital status, number of times conceived, employment and attitude towards modern contraceptives in their studies in Sweden and Nigeria respectively.

5.5. Knowledge of religious beliefs on modern contraceptives

The study assessed the knowledge of respondents with regards to the teachings and stands of their individual religions on modern contraceptives and found that majority (52%) had no knowledge of the stands of their religion on modern contraceptives. This opposes the study of Jones and Dreweke (2011), which reported that 63% of all reproductive age women in the United States of America, cited religious positions with regards to their decisions on modern contraceptive use. This contradiction in findings could be attributed to the differences in educational levels of study respondents. Whilst the study respondents in the US attained high levels of education, the majority (31%) of respondents in this study reported educational attainment of only up to the Junior High School level. In addition, 8% and 12% of them had no education and primary education respectively. Thus, with this
low level of education, respondents may be incapable of understanding the doctrinal stances of their religions on modern contraceptives.

5.6. Knowledge of sources of availability of modern contraceptives

Knowledge of sources of availability of contraceptives was universal (100%) among respondents with each stating at least a source from where to acquire a modern contraceptive similar to the 99% reported in other studies (GSS, 2014). The Pharmacy (59%) was the main source of modern contraceptives identified by respondents and this concurs with the findings of an earlier study (Adjei et al., 2015). Similar findings of widespread knowledge of sources of availability of modern contraceptives have been reported by Mekonnen and Worku (2011), Kallner et al. (2014), and Egede et al. (2015), in Ethiopia, Sweden and Nigeria, respectively.

5.7. Factors influencing modern contraceptive use

In this study, whilst knowledge and awareness of modern contraceptives was 98% and knowledge of sources of availability was 100%, current contraceptive use was 21%. This suggests that knowledge and awareness and knowledge of source of availability alone may not translate into actual use of contraceptives. This high and widespread awareness but low utilization is consistent with other studies (Eliason et al., 2014; Egede et al., 2015).

This also contradicts what was envisaged in the conceptual framework of the study that knowledge and awareness will influence contraceptive use.

However, attitude was statistically associated with contraceptive use ($p<0.01$). The study found that women who had positive attitude towards modern contraceptives were 4.2 times more likely to use modern contraceptives compared to those who did not have
positive attitude towards modern contraceptives (OR = 4.2, CI: 1.8-9.8) in bivariate analysis. This was still significant after multivariate analysis (OR = 3.9, CI: 1.7-9.4), which revealed that attitude was a significant predictor of contraceptive use. This confirms the conceptual framework of the study that attitude influence contraceptive use. Bardaweel et al. (2015), also found in Jordan, that women with positive attitude were 75% more likely to use modern contraceptives than those with negative attitude.

Moreover, religious influence was significantly associated with contraceptive use in this study. In bivariate analysis, women who indicated that they would consider their religious beliefs in making decisions about modern contraceptives use, had an increased odds of 0.4 times (OR = 0.4, CI: 0.2-0.9) of using modern contraceptives compared to those who would not consider their religious beliefs in their contraceptive decisions. In multivariate analysis this was still significant with (OR = 0.5, CI: 0.2-0.9). This finding is in conformity with the conceptual framework of the study which envisaged respondents’ religious beliefs to influence contraceptive use.

This is supported by findings of a study in Uganda, that religious influence was a significant predictor of family planning use and service providers or study participants with knowledge of family planning but with religious convictions might not be willing to provide family planning services or use family planning (Orach et al., 2015). Similarly, Wusu (2015), reported that religious influence was significantly associated with contraceptive use (p<0.01) in Nigeria.

Nevertheless, Humera et al. (2013), found that apart from the need for more children (27.9%) cited by respondents as the major reason for not using modern contraceptives, the
next common reason was religious influence (17%) in India. Supporting this, Jones and Dreweke (2011), reported that in the United State of America, religious influence was not a significant predictor of modern contraceptive use as 99% of all women, including 98% of Catholic women who had had sex used modern contraceptives other than natural family planning method, despite the Catholic church’s formal opposition to contraceptive methods other than natural family planning.

This divergent finding compared to the observation made in this study may be due to the difference in level of development between Ghana and the United States of America. Whereas decisions regarding different facets of life of the people in the US may not be influenced by religious beliefs (Jones & Dreweke, 2011), in Ghana, religious beliefs have been described as the framework for interpreting and contextualizing life events and hence, religion cannot be decoupled from the question of modern contraceptive use in the African context given their interconnectedness and the fact that family planning decisions are often framed with religious undertones (Gyimah et al., 2008).

5.8. Chapter Summary
This chapter discussed the results of the study in relation to existing literature. Plausible explanations were given to the findings to enhance easy understanding and to address differences identified relative to findings of other studies. The next chapter presents the summary, conclusions and recommendations in view of the findings made.
6.0. Introduction

This final chapter presents a summary of the findings, conclusions and recommendations of this study, including limitations and directions for future research. This chapter has six sections. Section one presents summary of the study. Section two presents the conclusion. Section three presents recommendations. Section four presents contribution to knowledge. Section five presents limitations to the study. Section six presents considerations for future research.

6.1. Summary of the study

The study explored factors influencing contraceptive use among reproductive age women in the study area with the objectives of assessing the influence of knowledge and awareness of contraceptives on usage, determining the attitude towards contraceptives and use, determining the influence of availability of contraceptive on usage and assessing the influence of religious beliefs on contraceptive use. A descriptive cross-sectional study design using quantitative study tools was used to gather data from study participants. The data was analyzed using STATA version 13 and the main conclusions of the study are presented below.

6.2. Conclusions

The following conclusions are made in relation to the objectives of the study.
6.2.1. Knowledge and awareness of modern contraceptives
The study found widespread knowledge and awareness (98%) among respondents regarding modern contraceptives despite low use (21%). Thus, it could be concluded that majority of reproductive age women in the study area had knowledge and awareness of modern contraceptives. However, this widespread knowledge and awareness did not influence use of modern contraceptives.

6.2.2. Attitude towards modern contraceptives
The general attitude of respondents towards modern contraceptives was positive and there was a significant association between attitude and use of contraceptives. Women with positive attitude towards modern contraceptives were more likely to use them.

6.2.3. Availability of modern contraceptives
Respondents’ knowledge of sources of availability of modern contraceptives was found to be 100%, but this was not associated with use. Thus, knowledge of sources of availability of modern contraceptives may not drive use.

6.2.4. Religious beliefs and contraceptives
Religious influence was significantly associated with contraceptive use in this study. However, knowledge of stands of religious beliefs on modern contraceptives was low.

6.3. Recommendations
Based on the findings of the study, the following recommendations are made for consideration by policy makers and health care practitioners.

1. In light of the findings of the study to the effect that partner support influences contraceptive use, it will be crucial for health care agencies and family planning
programs to target the involvement of men in family planning education and sensitization programs. This will enable men to have a better understanding of modern family planning methods in order to give the needed support in decision making regarding contraceptive use.

2. The fact that there was high knowledge and awareness (98%) of modern contraceptive yet low usage (21%) may suggest that there may be lack of understanding on how to use contraceptives despite the knowledge. Hence there is the need for education of reproductive age women on how to use modern contraceptive.

6.4. Contribution to knowledge

The study makes contribution to policy and practice in relation to the subject under review as follows:

6.4.1. Contribution to policy and practice

Against the backdrop of the findings in the study, recommendations were made which could be relied upon by policy makers improve on family planning services. Health care service providers could rely upon the recommendations on male involvement and education how to use various contraceptive methods to provide effective family planning services.

6.5. Limitations to the study

A limitation to the study was that it was conducted in only the Ledzokuku Krowor Municipal Assembly Hospital without taking into consideration the other health centers
and clinics within the municipality, due to financial constraints. Hence, this may limit the
generalization of the findings to the wider municipality. The study could not uncover
reasons behind responses of the respondents as this was a purely quantitative study with
closed ended questions. This limited the responses of respondents to specific set of
questions. This may have obscured the responses of respondents relative to the questions
asked on the subject matter. The sample size of the study was relatively small compared
to other sample sizes used in other studies and this could lead to conclusions which may
not be representative of the wider population in the study area.

6.6. Future Research

The following propositions were made for consideration by future research:

1. In view of the findings of the study to the extent that partner support was a
   significant factor of modern contraceptive use, future studies could involve male
   respondents to take into account their responses in order to ascertain their influence
   on contraceptive use.

2. Future studies could explore the knowledge of respondents on how to use modern
   contraceptives in relation to usage since there was high knowledge and awareness
   about modern contraceptives yet low usage as found in this study.

3. Future studies could apply qualitative research methods in order to unearth the
   reasons behind the responses as well as obtain the perceptions of participants in
   order to understand how their contexts could influence their attitude towards
   modern contraceptive use.
REFERENCES


Avong, N. H. (2012). Relationship between religion and use of modern contraceptives among the Atyap in Kaduna State, Nigeria. Research in Humanities and Social Sciences, 2(8), 82–89.


Ghana Statistical Service (GSS), Ghana Health Service (GHS) & ICF International (2014), Report of the Ghana demographic and health survey. Rockville, Maryland, USA, and


Asian Journal of Social Sciences, 3 (3.2), 1–10.


APPENDICES

Appendix A: Participant’s Informed Consent Form
School of Public Health
College of Health Sciences
University of Ghana

Project Title: Factors influencing contraceptive use among reproductive age women accessing health services in the Ledzokuku Krowor Municipal Assembly Hospital in the Greater Accra Region, Ghana.

Introduction
My name is Paul Beson. I am a student pursuing Masters in Public Health at the School of Public Health, College of Health Sciences, University of Ghana. I am the principal investigator and together with my research assistants we are conducting a study on factors influencing contraceptive use among reproductive age women in the Ledzokuku Krowor municipal assembly.

You are warmly invited to take part in the study. But before you make a decision to take part in the study or not, we would like you to read this consent or will read it to you to guide you in making your decision.

Procedures
You will be answering questions from a two (2) page questionnaire. There will not be coercion to obtain response from you. This is purely an academic research, which forms part of the requirements for the award of a Masters degree in Public Health. It will be appreciated if you could participate in this study.

Risk and Benefits
There will be no harm and costs for participating and there will be no payments awarded for participating in this research. However, your response will help in coming out with the true picture of factors influencing contraceptive use in the Ledzokuku Krowor municipality. This will aide in policy decisions to improve reproductive care in the municipality. The only cost you will incur will be the time taken to answer the questionnaire.

Confidentiality and Anonymity
Every piece of information you provide will be held in absolute confidence. Data collected in this study are strictly for research purposes and will be stored with passwords on electronic media and in safely locked boxes. Access to the data will be limited strictly to the researcher and supervisor. Anonymity will be ensured in dissemination of findings from this study since participants will not be identified by their names.

Right to Refuse
Participation in this study is entirely voluntary and you can choose not to answer any individual question or all the questions. You are at liberty to withdraw from the study at any point in time of the study. However, I will encourage you to fully participate in the study since your opinions are important to help assess the factors influencing modern contraceptives use in the study area.
**Ethical Approval**

The study has been reviewed and approved by the Ghana Health Service Ethical Review Committee (GH-ERC). This committee is there to ensure that participants in research are protected from harm and their rights are respected.

**Participant’s Consent**

I have read the foregoing information / the foregoing information has been read to me or translated to me in a language that I understand and I have fully understood it. I consent voluntarily to participate in this study.

(Name and signature of a witness should be provided in a case where the participant cannot speak or read English).

Signature/thumbprint: ____________________________________

Name of witness: __________________________________________

Signature/thumbprint of witness: ______________________________

**Interviewer's Statement**

I, the undersigned (your name), have explained this consent form to the participant in simple language that she/he understands, clarified the purpose of the study, procedures to be followed as well as the risks and benefits involved. The participant has freely agreed to participate in the study.

Signature of interviewer ..............................................

Date ............. / ............. / .............

**Address**

LEKMA Hospital
PMB
Teshie- Accra.
Telephone number: 0241776649
Email address: besonpaul@rocketmail.com

In case of any concern you can contact the Ethics Administrator, Miss Hannah Frimpong, GHS/ERC on: 0243235225 / 0507041223.
Appendix B: Assessment Tool/Questionnaire

School of Public Health
College of Health Sciences
University of Ghana

Factors influencing contraceptive use among reproductive age women in the Ledzokuku Krowor Municipal Assembly.

Serial No……………

This questionnaire is to collect data on factors influencing contraceptive use among reproductive age women in the Ledzokuku Krowor Municipal Assembly. I will be grateful if you could make time to complete it. Every piece of information will be held in absolute confidence. Thank you

Date……………………………………………………

Interviewer………………………………………………

Please fill in the blanks and mark (√) unless otherwise indicated.

Section 1: Socio-Demographic Data
1. Age (As at last birthday)
   A. 15-19 [   ]
   B. 20-29 [   ]
   C. 30-39 [   ]
   D. 40-49 [   ]

2. Marital status
   A. Single (never married) [   ]
   B. Married [   ]
   C. Divorced [   ]
   D. Widowed [   ]

3. Educational level
   A. Tertiary [   ]
   Secondary [   ]
   C. JHS [   ]
   D. Primary [   ]
   E. None [   ]

4. Number of times ever conceived
   A. 1-3 [   ]
   B. 4-6 [   ]
   C. 7-9 [   ]

5. What is the educational level of your spouse?
   A. Tertiary [   ]
   B. Secondary [   ]
   C. JHS [   ]
D. Primary [   ]
E. None [   ]

6. Does your partner support the use of contraceptives?
   Yes [   ]
   No [   ]

7. What is your employment?
   A. Trader [   ]
   B. Civil servant [   ]
   C. None [   ]
   E. Others specify………….

8. What is the average income of your family per month? (GHS)
   A. 50-300 [   ]
   B. 301-600 [   ]
   C. 601-1000 [   ]
   D. 1000 above [   ]

Section 2: Knowledge and Awareness of Contraceptives
9. Have you heard about contraceptives before?
   Yes [   ]
   No [   ]

10. From where did you hear about contraceptives?
    A. Radio [   ]
    B. Television [   ]
    C. Hospital [   ]
    D. Friends [   ]
    E. Posters/banners [   ]
    F. Newspapers/Magazines [   ]
    G. Community/Social club meetings [   ]

11. What method do you know about? Select all that apply.
    A. Female sterilization [   ]
    B. Male sterilization [   ]
    C. The pills [   ]
    D. Injectables [   ]
    E. Male condom [   ]
    F. Female condom [   ]
    G. Diaphram [   ]
    H. IUD [   ]
    I. Implants [   ]
    J. Foam/Jelly [   ]

12. Do you use any modern contraceptive currently?
    Yes. [   ]
    No. [   ]

13. What side effects are you aware of? Select all that apply
A. Weight gain [ ]
B. Excessive bleeding [ ]
C. Painful periods/ cramps [ ]
D. Nausea and vomiting [ ]
E. Dizziness [ ]
F. Irregular cycle
G. Palpitations [ ]
H. Headache [ ]
I. None [ ]

Section 3: Availability of Contraceptives
14. Do you get contraceptives in your area?
Yes [ ]
No [ ]

15. Where do you get contraceptives?
A. Hospital [ ]
B. Pharmacy [ ]
C. Chemical shop [ ]
D. Maternity home [ ]
E. TBA [ ]

16. How will you describe the process of getting contraceptives in your area?
A. Difficult [ ]
B. Very difficult [ ]
C. Not difficult [ ]

Section 4: Attitude towards Modern Contraceptives
17. I have positive attitude towards contraceptives
Yes [ ]
No [ ]
Don’t know [ ]

Section 5: Religious Beliefs and Contraceptives Use
18. My religion support contraceptive use
Yes [ ]
No [ ]
Don’t know [ ]

19. Would you consider your religious beliefs in deciding to use modern contraceptives?
Yes [ ]
No [ ]
GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

In case of reply the
number and date of this
Letter should be quoted.

My Ref. GHS/RDD/ERC/Admin/App/16/02
Your Ref. No.

Paul Beson
University of Ghana
School of Public Health
Legon, Accra

ETHICS APPROVAL - ID NO: GHS-ERC: 30/12/15

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol titled:

"Factors Influencing Contraceptive Use in Ledzokuku-Krowor Municipality"

This approval requires that you submit yearly review of the protocol to the Committee and a final full review to the Ethics Review Committee (ERC) on completion of the study. The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Please note that any modification without ERC approval is rendered invalid.

You are also required to report all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.

You are requested to submit a final report on the study to assure the ERC that the project was implemented as per approved protocol. You are also to inform the ERC and your sponsor before any publication of the research findings.

Please note that this approval is given for a period of 12 months, beginning 3rd February, 2016 to 2nd February, 2017. However, you are required to request for renewal of your study if it lasts for more than 12 months.

Please always quote the protocol identification number in all future correspondence in relation to this approved protocol.

SIGNED…………………………

DR. CYNTHIA BANNERMAN
(GHS-ERC CHAIRPERSON)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra