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CONTRACEPTIVE USE AMONG WOMEN OF REPRODUCTIVE AGE IN JIRAPA DISTRICT

BY

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DECLARATION

I, Mathilda Deri the author of this dissertation, do hereby declare that apart from specific references which have duly been acknowledged, this work is the result of my original research.

…… ……

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(SUPERVISOR)

DEDICATION

I dedicate this book to my lovely mother; Ms. Lucy Venkumwini. I simply say "A mother in need is a mother indeed". A special dedication also goes to my dear sisters; Mavis, Mildred and Martina, not forgetting all my friends.

ACKNOWLEDGEMENT

The Holy Book says that, 'one can have the horse ready for battle but it is the Lord who gives victory. Prov. 1:31. In the light of this, my ultimate thanks goes to the Almighty God through our Redeemer Jesus Christ for the source of my knowledge and strength in ending this project.

I obviously owe a debt of gratitude to my mother; Ms. Lucy Venkumwini and my very good friend, Lee Felix Anzagira for their support and encouragement which enabled me to come this far. I highly appreciate their efforts.

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ABSTRACT

Background: Studies have indicated that the use of contraceptives within a woman's reproductive ages helps prevent unwanted pregnancies, unsafe abortions, and maternal deaths. In spite of these benefits, the use of contraceptives in Jirapa district is still low.

Objectives: This study accessed knowledge on contraceptives, determined the prevalence of use of contraceptives and finally identified factors serving as enablers and barriers to the use of contraceptives in the Jirapa district of the upper west region of Ghana.

Methods: The study was a cross-sectional study which employed a purely quantitative method. Using a structured questionnaire, 350 women were interviewed. Data collected were entered and analysed with Statistical package for Social Sciences (SPSS) version 20. Frequencies and percentages of data were displayed using tables. Chi-square (bi-variate analysis) test was done to ascertain associations between the dependent and independent variables. Simple logistics regression was used to test the strength of associations between various variables and the outcome variable. Multiple logistic regressions were also used to control for confounders.

Results: Knowledge on contraceptives was universal with almost every respondent being knowledgeable in at least one method. Although knowledge was universal (100%), prevalence was 57.4%. Reasons for use included birth spacing (39%), limiting birth (14%) and to prevent unwanted pregnancy (13%). Reasons for non-usage were: to get pregnant (20%), not being sexually active (41%), fear of side effects (22%), husbands disapproval (1%), financial problems (2%) and currently pregnant (21%).

Conclusion: Low percent on the use of contraceptives despite the high knowledge indicates the need to improve awareness among the study population.

LIST OF ABBREVIATIONS

CPR-	Contraceptive Prevalence Rate
FP-	Family Planning
GDHS-	Ghana Demographic Health Survey
GHS-	Ghana Health Service
GNPP -	Ghana National Population policy
GSS-	Ghana Statistical Service
ICPD-	International Conference on Population and Development
IEC-	Information, Education and Communication
IUCD-	Intra Uterine Contraceptive Device
JDH-	Jirapa District Hospital
JDHD-	Jirapa District Health Directorate
KAP-	Knowledge, Attitude and Perception
LTM-	Long-Term Method
MDG-	Millennium Development Goals
MOH-	Ministry of Health
STM-	Short-Term Method
TFR-	Total Fertility Rate
UN-	United Nations
WHO-	World Health Organization
WIFA-	Women of Reproductive Age

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DEFINITION OF TERMS

Contraception: The deliberate use of artificial methods or other methods to prevent pregnancy

Contraceptive Prevalence rate: Is the proportion of women of reproductive age who are using (or whose partner is using) a contraceptive method at a given point in time

Family planning: plan on when to have children, and the use of birth control and other techniques to implement such plans.

Family Planning Method: Spacing or limiting child birth by using traditional or modern means

Modern methods: Technologically assisted method of birth control.

Woman in Fertility Age: Any female aged between 15-49 years.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the study

Contraceptives refer to any family planning method used to prevent a pregnancy. This is achievable by interfering with the normal process of ovulation, fertilization, and implantation (Geske, Quevillon, Struckman-Johnson, & Hansen, 2015). The idea behind contraceptive is as old as time itself; but for just as long, finding an effective method that anyone can easily access has been the major hurdle to cross (Edgerton, 2011; Tone, 2002). This challenge exists primarily because of the push-pull forces of various contextual factors which can be socio-demographic, cultural, economic, religious or even psychological (Kamhawi, Underwood, Murad, & Jabre, 2013; Soe, Than, Kaul, Kumar, & Somrongthong, 2012; Williamson, 2008).

Access to family planning is both a human right and a socio-economic necessity. It is a human right issue because every woman has the fundamental right to determine how many children she wants and when she wants to have them (Miller, 2010). The socio-economic necessity flows out of the fact that uncontrolled population growth will inevitably lead to overpopulation and its attendant consequences of high unemployment and youth dependency, rampart poverty, high child and maternal mortality, scarcity of resources like water that often leads to conflicts, and general environmental degradation (Hinrichsen & Robey, 2000; Macpherson, 2005). As such, easing access to family planning is a practical imperative.

Presently, the world's population has exceeded 7 billion, and it is still growing at the rate of 1.13% per year (U.S. Census Bureau, 2015). Also, sub-Saharan Africa's population has been projected to increase from 860 million in 2010 to 1.96 billion in 2050 (Bongaarts &

Casterline, 2013). This growth is based on a Total Fertility Rate (TFR) of 5.4 (Westoff, Bietsch, & Koffman, 2013). In Ghana, population growth has been high with estimates of a 2.1% national population growth rate in 2013, and a TFR of 4.2 (Ghana Statistical Service (GSS), Ghana Health Service (GHS), & ICF Macro., 2015; World Bank, 2015).

These imply that although there have been an increase over the past 40 years in the prevalence of contraceptive practice from less than 10% to 60%, and fertility reductions in developing countries from 6 to about 3 births per woman, there are still distances left to cover in ensuring universal access to family planning (Cleland, Bernstein, Ezeh, Faundes, Glasier, & Innis 2006).

Striving to attain universal access to reproductive health by the year 2015, The 1994 International Conference on Population and Development (ICPD) and the Millennium Development Goal 5, both pledged to work to increase the growth in the prevalence of the use of contraceptives, since both have formed embankments of political commitment and funding for expanding the coverage of family planning globally. In sub-Saharan Africa, these have translated to efforts such as information, education, and communication (IE&C) interventions, decreasing cost of contraceptives and building better supply lines to assure access in the more remote places (Chola, McGee, Tugendhaft, Buchmann, & Hofman, 2015; Mwaikambo, Speizer, Schurmann, Morgan, & Fikree, 2011).

Post ICPD-1994, Ghana has also undertaken several interventions to scale up the use of contraceptives such as the introduction of Ministry of Health-led reproductive health and family planning programs (to reduce maternal and infant deaths, increase the use of contraceptives among women of reproductive age, promote and improve access to reproductive health service at all levels of health care delivery), the Navrongo Community and Family Planning Research project, Behavioral Change Communication

(BCC) Health intervention, and the integration of family planning and HIV services (Agyarko, 2003; Achana, Bawah, Jackson, Welaga, Awine, Asuo-Mante, & Phillips, 2015).

However, while much of the attempts in Ghana have had some impact on the use of contraceptives with an increase in contraceptive prevalence from 13% in 1988 (GSS et al., ,1988) to 27% in 2014 (GSS et al., 2015), it remains to be seen exactly if locally-sourced solutions that take into consideration long-standing health disparities, would have greater impact on local barriers, constructs and narratives around the use of contraceptives. Also, the factors and circumstances that help in expanding the use of contraceptives among those who should use them – women of reproductive age - are not totally understood in some local socio-cultural contexts.

Therefore, this study was conducted to clear that uncertainty by determining what barriers exists in the use of contraceptives, and what promotes the use in a largely rural district in Ghana.

1.2 Problem Statement

Globally, the use of contraceptives have increased from 55% to 63% between 1990 and 2010, but Sub- Saharan Africa still has the lowest prevalence (31%) and is currently facing a problem in fertility decline (Probability, Kantorova, Menozzi, Affairs, Nations, & National, 2015).WHO indicates that in Africa, the proportion of women aged 15-49 reporting use of a modern contraceptives has realized a slight increase from 23.6% in 2008 to 27.6% in 2014? (Cleland et al., 2006)In Ghana, the 2014 Demographic and Health Survey indicates that the demand for family planning is 57%, but only 47% of that need is being met (Ghana Statistical Service & Ghana Health Service, 2015).This obviously shows that there are barriers to getting family planning, with such barriers resulting in

uncontrolled population increase of 30.4% between 2000 and 2010. This comes to confirm the GDHS reporting that maternal mortality rate is 380 deaths per 100,000 live births, a high youth dependence rate of 67% and also a sizable infant mortality rate of 46 per 1000 live births ((Ghana Statistical Service, 2012; World Bank, 2014).

However, this saddening description must be balanced by the fact that contraceptive prevalence in Ghana has increased from 13% in 1988 to 27% in 2014, while the TFR has dropped from 6.43 in 1988 to the current 4.2 reported in the 2014 DHS (GSS et al., 2015) and as such, a holistic picture shows that some factors are leading to an increase in the use of family planning across Ghana. However, the fact remains that even the current TFR and population growth rate is unsustainable and if left unchanged will cause Ghana serious problem that may obstruct its future development.

Yet, while it is accepted that a discrepancy exists between the desire to prevent unwanted pregnancy among women of reproductive age and their actual use of contraceptives, it is still not fully clear why they do not use contraceptives. While studies have been done in Ghana that have sought to unravel this reason nationally (Crissman, Adanu, & Harlow, 2012; Doctor, Phillips, & Sakeah, 2009; Cleland et al., 2006), there exist only little information on how health facilities enable or hinder use, other provider behaviors and socio-economic factors affecting parts of Ghana in relation to use of contraceptives with their specific contexts. Also, they have often not provided an exhaustive understanding and relative importance of the determinants of the use of contraceptive in many communities in Ghana.

This is especially true in Jirapa district with a TFR of 3.5, where more than half of women demand for family planning, but only a fourth of them have their needs met(Jirapa District Health Directorate, 2015). To further highlight the gap in the use of contraceptives in

Jirapa, child spacing is poor with one in four women giving birth again less than two years after a previous delivery. This has led to a situation where the Jirapa hospital recorded a total of 200 unsafe abortions and 34 maternal deaths between 2007 and 2015 (Jirapa District Health Directorate, 2015)

Furthermore, the establishment of tertiary training institutions including the Community Health Training School, Mid-wifery Training school and Nursing training school all in Jirapa, in addition to three second cycle institutions in the Jirapa District has often been cited as among others being responsible for the high rate of abortions in the District.

This study therefore tried to describe and analyze the rounded perspective about the obstacles and enablers to the use of contraceptives and examine both socioeconomic and provider factors affecting the family planning services women have access to. Understanding these relationships will help develop culturally sensitive recommendations and key messages about strategies towards meeting contraceptive needs of women in Jirapa and other similar communities across the nation.

1.3. Conceptual Framework

This work was guided by a conceptual framework reviewed literature (Chernick et al., 2015; Nalwadda,2012). The framework describes how a mix of factors result in either the use or non-use of contraceptives.

Individual factors such as the socio-demographic characteristics of a woman (age, education, occupation and residence), her spouse's characteristics (including his approval of use and non-use), how many living children she has, how many pregnancies she has had and how many children she wants determined her demand for contraceptives and the provider factors she is exposed to. Her individual circumstances also dictated her income, what information she is exposed to and her Knowledge, Attitude and Practice (KAP) about

contraceptives and her relationship to the belief of family and friends on contraceptives. These socio-economic characteristics also determined her provider exposure, such as where she gets her contraceptives from when she needs them in regards to proximity to source and cost of contraceptives. It also determined how she experiences the attitudes and skills of the provider and if she gets her preferred method. Obviously, the provider factors determined if the woman had access to the contraceptives she needed and wanted, and whether she experienced high quality of service and satisfaction, and if it made her use the contraceptive or turned it off. Good health provider outcomes in terms of quality and satisfaction inspired a higher demand for contraceptives, and those who did demand for the contraceptives certainly found where to get such good outcomes. The researcher also discovered that theer is a two way relationship between demand for children and demand for contraceptives, as higher and immediate demand for children resulted in lower demand for contraceptives, and a woman who demanded for contraceptives more, had decreased demand for children.

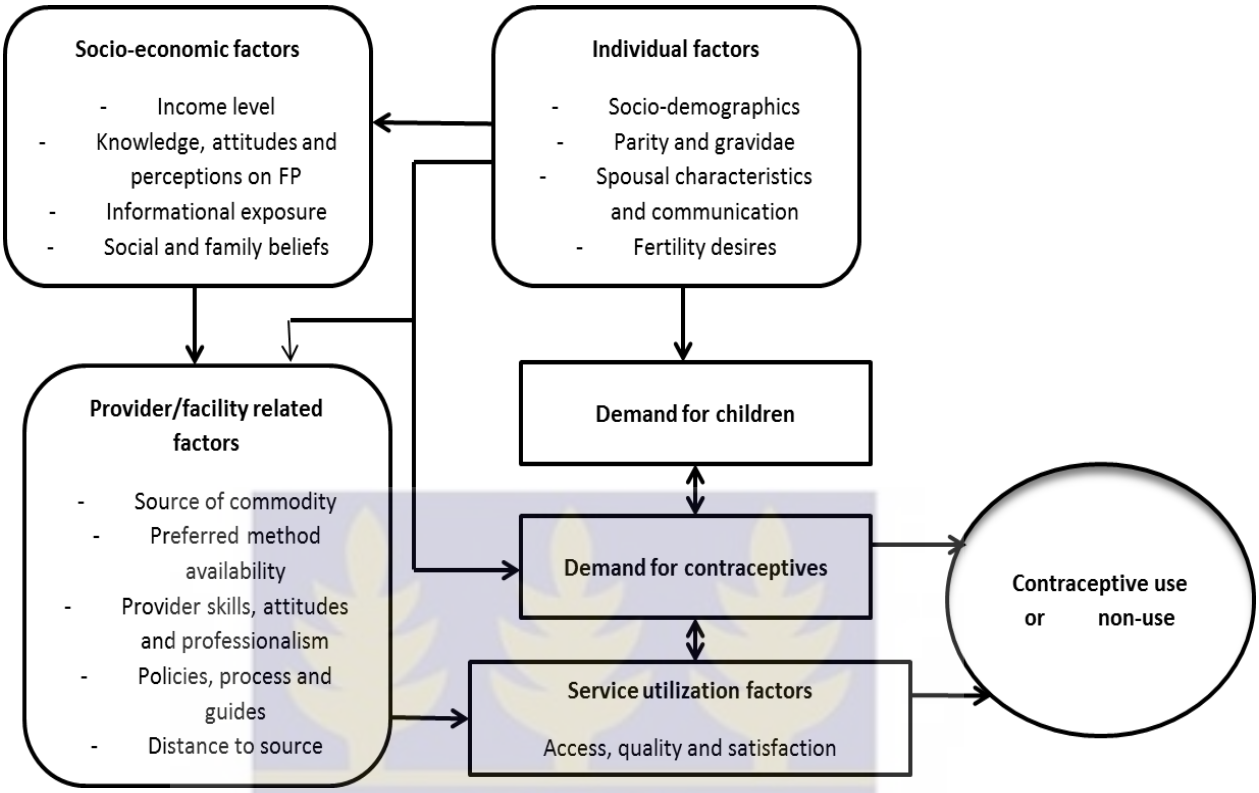


Figure 1: Conceptual Framework on the Use of Contraceptives

Source: Chernick et al., 2015; Nalwadda, 2012

This conceptual Frame Work is guided by literature reviewed (Chernick et al., 2015; Nalwadda, 2012).

1.4. Justification

The findings of this study provided essential information regarding family planning use in Jirapa District, which intends to advise district level policy makers on what areas to set and formulate the policies that would speed up wider adoption of contraceptives among eligible women. It also informed programme developers on framing the objectives, activities and expected outcomes form any program interventions targeted at improving contraceptive prevalence in Jirapa.

1.5. Objectives

General objective

To determine the enablers of and barriers to the use of contraceptives in Jirapa district of the Upper West Region of Ghana

Specific objectives

1. To assess the knowledge of contraceptives among women of reproductive age
2. To determine the prevalence of contraceptive use among women of reproductive age
3. To identify factors serving as enablers and barriers to the use of contraceptives

1.6 Research Questions

Main Research Question

What are the barriers and enablers to the use of contraceptives among women of reproductive age in Jirapa district**?**

Specific Questions

1. Do women of reproductive age in Jirapa know about contraceptives?

2. What is the prevalence of the use of contraceptives among women of reproductive age in Jirapa?

3. What factors serve as enablers and barriers to the use of contraceptives in Jirapa?

CHAPTER TWO

2.0. LITERATURE REVIEW

This section reviewed document relating to the topic 'the use of contraceptives among women of reproductive age in Jirapa district'

The literature was organized based on history of contraceptives, knowledge of contraceptive methods, barriers to the use of contraceptives and prevalence of the use of contraceptives among women. Information for the review was obtained from; journals, books, online articles, newspaper articles all obtained from various offline and online sources such as Google Scholar, HINARI, PUBMED, Elsevier, Science Direct, Online Wiley Oxford Journals, SCOPUS, SAGEPUB, Taylor and Francis and other databases.

Key words used for the web search on this topic include "contraceptive use", "barriers to contraceptive use", "enablers of contraceptive use", "side effects of contraceptives". "Women of reproductive age and use of contraceptives" "contraceptive prevalence" and "family planning services"

Barriers, according to Shelton et al., (1992) are practices or reasons that deny people from accessing family planning services despite their wish for it (Shelton, Jacobstein, & Angle, 1992). Enablers are those that promote the use of contraceptives.

2.1. Contraceptives: History and importance

It is important that at the beginning of a review of literature about contraceptives, it is explained that contraceptives are essentially about preventing pregnancy and birth. As such, it stands as a catch-all word for any method which is aimed at that singular purpose. However, as this is an academic endeavour, it is vital to discuss contraceptives within the bounds of academic literature.

Contraceptives are the methods of the family planning framework which allows program persons and couples to define the number of children, when and at what interval to have them. (IntraHealth, 2010).

The concept of contraceptives and family planning, as earlier stated, is an old one. It rose out of a universal need for people to enjoy sex and not be saddled with a pregnancy after the act; that is, being able to space or limit births (Glasier, Gülmezoglu, Schmid, Moreno, & Van Look, 2006). Methods such as celibacy, sexual taboos, abstinence, withdrawal (coitus interruptus), and induced abortion were commonly used by many ancient societies (Frejka, 2008; Woods, Hensel, & Fortenberry, 2009).

By the middle ages, barrier methods such as vaginal sponges and cervical caps were also used in the Middle East including ancient Egypt several thousand years before the common-era, while rock salts were used as spermicides (McFarlane & Grossman, 2014). In China, women drank lead and mercury to control fertility, which often resulted in sterility or death (Reuben, 2004).

In the West, the combination of the witch-hunt and the great plague in medieval times helped suppress birth control. But the articulated views and activities of Robert Malthus, Francis Place, and later, Margaret Sanger and Marie Stopes led to the revival of the use of contraceptives (McFarlane & Grossman, 2014). The 20th century witnessed an unprecedented expansion in the use of contraceptives as it became increasingly clear that the prodigious increase in global population explained by the demographic transition theory was unsustainable (Newson, Postmes, Lea, & Webley, 2005; Reher, 2004).

It has become increasingly clear that contraceptives are indispensable with various studies having shown the benefits of the use of contraceptives. Ahmed et al., (2012) found that contraceptives were responsible for a 44% (272,040 lives saved with uncertainty interval

127,937–407,134) reduction in maternal deaths in 172 countries across the globe in 2008 and that satisfying unmet need at that time would have led to a further 29% reduction (104 000 maternal deaths avoidance) (Ahmed, Li, Liu, & Tsui, 2012). Another study buttressed this point by stating that increasing use of contraceptives in developing countries in the 20 years previous to their work has resulted in a 40% decline in maternal deaths, and each 1 percentage point increase in the use of contraceptives reduces the maternal mortality ratio by 4-8 deaths per 100,000 live births. They go further to say that two years spacing of children can translate into a 10% reduction in the risk of death in infancy, and 21% in children of ages 1–4 years (Cleland, Conde-Agudelo, Peterson, Ross, & Tsui, 2012). Reynolds et al., (2008) found that in 2008, unintended HIV-positive births averted by use of contraceptives ranged from 178 in Guyana to over 120 000 (Reynolds, Janowitz, Wilcher, & Cates, 2008).

The MATLAB Controlled long-term studies in Ghana and Bangladesh also showed that better access to contraceptives and increased use effects reduced fertility, improved birth spacing, women's participation in the paid labour-market, earnings, assets, and body-mass indexes, and also improved children's schooling and body-mass indexes (Canning & Schultz, 2012). In sub-Saharan Africa, contraceptive implants alone have the potential to avert 1.8 million of the 14 million unintended pregnancies that occur annually (Hubacher, Mavranezouli, & McGinn, 2008).

In 2012, contraceptives used in developing countries were projected by the World Health Organisation to have prevented 218 million unintended pregnancies, averted 55 million unintended pregnancies and births, 138 million abortions (40 million of which were unsafe), 25 million miscarriages and 118,000 maternal deaths. Further, they estimate that meeting all unmet need for family planning in the developing world would lead to the prevention of an additional 54 million unintended pregnancies, including 21 million

unplanned births, 26 million abortions (of which 16 million would be unsafe) and seven million miscarriages. Also, it would help avoid 79,000 maternal deaths and infant deaths of 1.1 million (Singh & Darroch, 2012). Cleland et al., (2006) underline the macroeconomic importance of the use of contraceptives in reducing poverty, youth dependency and hunger, and restated how important it is in attaining the MDGs (Cleland et al., 2006). As such, use of contraceptives is essential for many reasons.

2.2 Contraceptive prevalence

Considering this clear importance of contraceptives, it is worthwhile to understand the prevalence and pattern of contraceptive use, globally and in Ghana.

Around the world, the contraceptive options available to women have increased, a factor which a review by Ross and Stover (2013) found as instrumental in the increased use of contraceptives globally between 1982-2009 (Ross & Stover, 2013). Specifically, their review showed that the availability of 1 method to at least half the population correlates with an increase of 4–8 percentage points in total contraceptive use.

Currently, there are two major classifications of contraceptives – modern contraceptives and traditional contraceptives. The medically accepted modern contraceptives are the barrier methods (both male and female condoms, diaphragms, cervical caps, contraceptive sponges and spermicides), hormonal methods (combined oral contraceptives, progestin-only pills, contraceptive patch, injectable birth control, vaginal rings, implantable rods), emergency contraceptives, intrauterine methods (copper IUD and hormonal IUD) lactational amenorrhoea method (LAM), and sterilization (tubal ligation, sterilisation implant and vasectomy). The traditional methods are rhythm (or fertility awareness/periodic abstinence method), withdrawal (coitus interruptus) and folk methods (other traditional culture-specific methods).

However, in studies and programs focused on family planning, traditional methods (which are used even by highly educated, urban, non-poor women) are often discounted because of their low effectiveness.

The United Nations in a 2013 report explain that globally, contraceptive prevalence is 63%, with nine out of ten woman of reproductive age in a union who uses a contraceptives, relies on a modern contraceptive (United Nations, 2013). The same report states that sub-Saharan Africa has a prevalence of 25%, and that the most common methods worldwide are female sterilisation (26%), IUDs (14%) and the emergency contraceptive (the pill at 9%) .

In Ghana, the 2014 Ghana Demographic and Health Survey (GDHS) reports that contraceptive prevalence among currently married women of ages 15-49 years is 26.7%, of which 22.2% was from the use of modern contraceptives and 4.5% was from traditional methods . Among these population, injectable (8.0%), implants (5.2%) and pills (4.7%) are the most commonly used modern methods and rhythm method (3.2) which is the most common traditional method is more used than male condoms (1.2%) (GSS et al., 2015).

In many developing nations, a method imbalance persists with a study of 123 countries by Ross et al., (2015) showing that a single contraceptive method may account for as much as 50% of all contraceptive use in that country (Ross, Keesbury, & Hardee, 2015). However, a broader mix expands contraceptive method choice, allowing women choose the method that suits them best and change methods as their circumstances and needs change (Skouby, 2004). As such in any society, a poor method mix hinders the use of contraceptives, independent of prevailing high or low contraceptive prevalence (Ross et al., 2015).

They were also able to identify trends in the use of contraceptives that aided expansion of use such as the increased popularity of a previously underrepresented or new method, a

decline in the dominating popularity of a single method and the substitution of traditional with modern methods (Ross & Winfrey, 2002). Differences in the use of contraceptives pattern has also been ascribed to social and cultural differences (Skouby, 2004). There are many such factors affecting the use of contraceptives, and it would be fruitful to identify what such factors are

2.3. Determinants of the use of contraceptives

Determinants of the use of contraceptives in this study refers to both barriers and enablers of the use of contraceptives. Barriers, according to Shelton et al., (1992) are practices, derived at least partly from a medical rationale, that result in a scientifically uncalled-for barrier to, or denial of contraception (Shelton et al., 1992). Enablers are those which remove pre-existing obstacles and helps increase the use of contraceptives. These two bifurcation of determinants are what this study assessed. They were looked at from the Individual, socio-cultural and provider perspectives.

2.4. Individual characteristics

These are the factors that are focused on the characteristic of the women. They include demographic and obstetric characteristics

2.4.1 Age

The age of a woman has been found to be significantly associated with the use of contraceptives, with older women generally less likely to use contraceptives than younger women. Blanc et al., (2009) found that in 40 developing countries, adolescents (aged 15-19) were more likely to use contraceptives than adult women, even though continuation rates were lower among them (Blanc, Tsui, Croft, & Trevitt, 2009).

In the United States, women who were aged above 35 years were found by Frost et al. (2007) to be more likely to use contraceptives with another study by Upson et al.(2009)

confirming this by finding that women aged 40-44 years were twice as likely not to use a contraceptive methods when compared with a younger group (Frost, Singh, & Finer, 2007; Upson, Reed, Prager, & Schiff, 2010).

However, in Uganda, modern contraceptive use was found to be much lower among younger married women compared with older women (Asiimwe, Ndugga, Mushomi & Ntozi2014). The class of older women in the study were aged 25-34 years and the comparative fat about 25-34 years.

This study also had other interesting findings, including the fact that age has indirect roles to play in governing contraceptive use. While fertility desires among women aged 15-34 years predicted contraceptive use, residence also predicted it among those aged 15-24 years, while education level, household wealth did so among those 25-34 years (Asiimwe et al., 2014). Also, a similar study found that age variations in perception on distance covered to access health facility, listening to radio and geographical variances also influenced the use of contraceptives (Asiimwe et al., 2014).

A multivariate logistic regression done in a study by showed that among women in Western Ethiopia, age was an independent predictor of contraceptive use, with women aged 25–34 years standing a double probability than other age groups to use modern contraceptive devices (Tekelab, Melka, & Wirtu, 2015). Age was also found to be correlated to contraceptive use in the Democratic Republic of Congo, with a Pearson correlation showing a negative correlation of increasing age with ever use of contraceptives (Izale, Govender, Fina, & Tumbo, 2014).

A study in Angola had similar findings, showing that high educational level and living in the capital region were strongly related with the use of contraceptives, whereas age below 20 years was negatively associated with use (Decker & Constantine, 2011). In Ghana, a

study using bivariate analysis showed age as significantly associated with the ever use of modern contraceptives (Aryeetey, Kotoh, & Hindin, 2011).

It can be inferred from literature focused on the developing world that women aged around 25–34 years were most likely to utilize modern contraceptive methods than other age groups (Borges, OlaOlorun, Fujimori, Hoga, & Tsui, 2015; Qazi, Hashmi, Raza, Soomro, & Ghauri, 2010; Stephenson, Baschieri, Clements, Hennink, & Madise, 2007; Tekelab et al., 2015). A reason advanced for the difference in age-influenced contraceptive use is that usage is lower among younger women because they are trying to delay or space births and have a stronger fertility desires as such using contraceptives was not as pressing as for the older women who want to limit their family size (Mehata, Paudel, Dotel, Singh, Poudel, & Barnett, 2014). Another is that younger people have less self-efficacy and are often not as empowered (economically and socially) as middle-aged people (who use more contraceptives) or are they free from fertility expectations (much older people > 40 years), and as such have no significant say over their reproductive health (Crissman, Adanu, & Harlow, 2012; Islam, 2014).

2.4.2 Residence

It is a well-known fact that urban dwellers generally fare better than their rural counterparts across different health and development indicators (Clifton, 2015). the use of contraceptives is not different, as the residence of a woman is a major predictor of her use of contraceptive, and can act as both a barrier and an enabler of use (Mutangadura et al., 2007). Although there are a few exceptions to the rule, such as Rwanda (where the gap is within the margin of error), this rural-urban disparity often hold true across the developing world (Clifton, 2015).

While the gap between rural and urban usage of contraceptive has begun to shrink, it still remains an important determinant in the developing world, especially sub-Saharan Africa. In Bangladesh, Islam et al. (2013) found upwards of 3% difference in the use of contraceptives to space and limit birth between urban and rural women with rural women being disadvantaged. They also found in rural areas, twice the unmet need to space found in urban areas (Islam, Islam, & Rahman, 2013).

The findings of a study conducted in Osun state, south-western Nigeria showed that although fertility was higher among urban women than rural women, only 16.8% of rural women used contraceptives, as opposed to 46.7% of urban women (Olalekan & Olufunmilayo, 2012).

A study by Tawiah (2013) in examining maternal health care disparities in five sub-Saharan Africa found that as at 2007, rural women were about twice less likely to use modern contraception than their urban mates in Ghana and Kenya (Tawiah, 2013). This has led to a situation where urban women in Ghana were found in a study, to be at lower odds of unintended pregnancy than their rural counterparts (Johnson & Madise, 2011). However, the latest GDHS shows that swift improvements have been made with the gap in contraceptive usage narrowing from 16% in 1998 to 0.7% in 2014 (GSS et al., 2015)

This discrepancy might likely be a result of differences in the availability of contraceptive sources (family planning clinics and medical facilities), preferred methods in the rural areas as compared to the urban area (Ezeh, Kodzi, & Emina, 2010; Salinas, Al Snih, Markides, Ray, & Angel, 2010). It could also be due to differences in fertility desires, as rural women may want larger families than urban women who perceive a higher cost of having children and have exposure to family planning ideation (Ezeh et al., 2010). A study that tried to determine current modern contraceptive practices in Ethiopia, which found

that compared to urban women, rural women were about three times less likely to use modern contraceptive, also propounded that rural-urban differences might speak to community level factors of socio-cultural acceptance of contraceptives, independence with family relations and women empowerment which are all .lower in rural areas (Bogale, Wondafrash, Tilahun, & Girma, 2011).

2.4.3 Spousal characteristics and communication

Spousal characteristics are key to the use of contraceptives by women, just as frequent communication is also important. These characteristics centre on spousal education, religious beliefs and income. A study went as far as to conclude that identifying barriers to use is best done by looking at spousal characteristics than a woman's own (Clements & Madise, 2004).

A spouse's education is vital in determining a woman's contraceptive use. A study in Nepal found that better educated spouses were likelier to use male sterilisation and condoms, with this odds increasing when the spouse had higher education relative to the wife (Gubhaju, 2009). A study by Uchudi (2001) that reviewed DHS data in sub-Saharan Africa made the finding that lower educated women will not wish to discontinue childbearing without the support of a husband with some education. But that as her education increases, the effects of the husband's education wears off (Masudi Uchudi, 2001).

A paper by Bawah et al. (2005) that uses bargaining theory to interrogate the predictor influence of women's relative income on contraceptive use posits that a woman's relative income to her spouse's affects her contraceptive use. They point out that women who earn a higher income relative to their spouses have higher "threat points", and are more empowered to regulate their fertility as they see fit (Bawah, Phillips, & Wak, 2005). This

buttresses a finding in Nigeria that women with higher education and income than their husbands were likelier to use contraceptives than those of equal or lower income & educational stature to their husbands (Stephen & Enoch, 2014). A study in Ethiopia had a similar finding that showed that women who had disproportionate education with their husband (higher or lower) used contraceptive more than those on an equal footing (Tadesse, Teklie, Yazew, & Gebreselassie, 2013).

However DeRose and Ezeh (2005) made the finding that the spouse's education has a stronger influence on the woman's fertility intentions and contraceptive use than her own education does (Derosea & Ezeh, 2015). Also, it has been found in Ghana that the age of the spouse relative to the wife's matters, as age differential increases, use of contraceptives decline (Oheneba-Sakyi & Takyi, 1997).

A study in Burkina Faso found that a couple's education, wealth, place of residence and religion are important predictors of contraceptive use by the woman. A fervently religious spouse who has a negative perspective to contraceptive because of his religious belief, would discourage the wife using such contraceptives. It also found that marital power and spousal communication were important and significant predictors of contraceptive use (Klomegah, 2006).

The importance of spousal communication in contraceptive use in Ghana was identified early on, as Tawiah's 1997 seminal (and in some ways pioneering) work on factors affecting contraceptive use in Ghana showed that those who discussed family planning often were thrice as likely to use contraceptives as those who never discussed with their husbands, and those who only engaged in spousal discussion of family planning once or twice had twice the odds of using contraceptives as those who never did .

Years after, these increased odds of using due to spousal discussion still holds, as evidenced by a study that showed that women whose husband had a say in their reproductive health were 5% point likelier to use modern contraceptives than those whose husband didn't have a say (Nketiah-Amponsah, Arthur, & Abuosi, 2012).

Further underscoring this is a study by Johnson and Madise (2011) in Ghana showed that women who engaged in spousal communication where less likely to have an unintended pregnancy; further the odds of having such pregnancy lowered with increased frequency of spousal communication (Johnson & Madise, 2011). A study in the Accra Metropolis by Boamah (2005) reported that a major lack of communication between husbands and their partners on the acceptance of contraceptive contributed to the low prevalence rate in the area. Importantly, a longitudinal causality study in Navrongo, which asked if spousal communication predicted a woman's contraceptive use, or if her use of contraceptives would be what generated the spousal communication found that spousal communication consistently predicted contraceptive use (Bawah, 2002). A study in Accra by Osei et al. (2014) found that women had supportive spouses were more likely to continue using modern contraceptives regardless of fear of side effects than those with non-supportive partners (Osei, Mayhew, Biekro, Collumbien, & Team, 2014).

Many women who fail to gain spousal permission also resort to covertly using contraceptives, and according to Biddlecom & Fapohunda (1998), a survey in Ghana showed that as much as 57% of contraceptive use is covert, with the spouse unaware of the woman's use. However, such use had sometimes negative consequences on the women, especially when economically dependent on the husband. Overall, Tilahun et al. (2014) as found, the husband's favourable attitude towards family planning has a major role to play in a couple's use of contraception (Tilahun, Coene, Temmerman, & Degomme, 2014).

2.4.4 Education and religion

As already stated above, a woman's education governs her contraceptive use, with higher education correlating with higher odds of use, independent of spousal characteristics. Other studies have further elaborated the association of a woman's education on contraceptive decision making and choice as well as having an influence on women reproductive desires and behaviours (Ali & Okud, 2013; Andalón, Williams, & Grossman, 2014; Asfaw & Gashe, 2014; Asiimwe et al., 2014; Meskele & Mekonnen, 2014).

Concerning the role of religion in determining contraceptive use, a study in Cambodia, a deeply Buddhist country, shows that religious belief has had little or no effect on the use of contraceptives (Vathiny & Hourn, n.d.). A comparative study in Nigeria done on data 18 years apart also confirmed the negligible influence of religion on the use of contraceptives (Wusu, 2014).

Tawiah's (1997) study on factors affecting contraceptive use in Ghana came out with the finding that religion and culture did not affect use of contraceptives (Tawiah, 1997). The study gave a possible reason that once a woman attains higher education, her ethnicity and religious affiliation do not have a significant effect on her current contraceptive use. This was confirmed by Adanu et al., (2009) whose findings revealed that religious affiliation did not affect contraceptive use in Accra. They however, attributed a possible reason to the fact that Accra is an urban area (Adanu et al., 2009). Women were able to make decisions regarding contraceptives use without the influence of religion and culture. However, two studies in Pakistan, a Muslim country and among Muslim minorities in India and Bangladesh was able to pinpoint religion as a substantial influence on the knowledge and use of contraceptives (Farid-ul-Hasnain, Johansson, Gulzar, & Krantz, 2013; Sahu & Hutter, 2012). Doctor et al. (2009) found that switching from traditional to the Christian

or Islamic faith in the Kassena-Nankana area of Upper East region in Ghana was significantly associated with increased contraceptive use and decreased fertility (Doctor, Phillips, & Sakeah, 2009). A study by Bawah et al., (1999) in Ghana also revealed that there is fear of ancestral punishment with the use of contraceptives. Some women may want to desire to use contraceptives but will not do so, because there is a belief among most of these women that their ancestors are against the use of contraceptives, and that one may die or may not get any blessing from the ancestors if she practices contraception (Bawah, Akweongo, Simmons, & Phillips, 1999).

2.4.5 Parity and Fertility desires

The number of children a woman wants to have, as well as the number she successfully gives birth to, are important markers of her contraceptive use, constituting enablers or barriers to it. A study by Jaraman et al. (2009) found that in South Asia, when the number of children generally but sons specifically increased, women's desire for children decreased and their use of contraceptives increased (Jayaraman, Mishra, & Arnold, 2009). Another study in Bangladesh had similar findings that showed that fertility decreased as the number of sons increased and concerns on child and infant mortality decreased (Saha & Bairagi, 2007).

This indicates the role culture has in shaping fertility desires, where son-preference in Asia can make women either perform sex-selective abortions or refuse to use contraceptives and keep giving birth till they birth the number of sons they want (Westley, Choe, & Center, 2007).

This is also a phenomena found in sub-Saharan Africa, where a study in Nigeria among women in polygamous marriages showed lower use of contraceptives if the women had no male child, or had 3 or more female children (Audu et al., 2008). However, this is

debunked somewhat by Bongaarts (2013) when he explained that sex-selection while existing in north, west and central Africa may actually correlate with higher contraceptive use (Bongaarts, 2013).

Another study that examined the role of community-level factors in explaining geographic variations in modern contraceptive use in sub-Saharan Africa found that in East Africa, women with no children were less likely to use modern contraception than multiparous women (Stephenson et al., 2007). It however found such effects marginal in West Africa. This corroborates a study in Ethiopia (in East Africa) where parity (the number of living children), and religious norms were significant predictory factors of temporal and spatial patterns of contraceptive uptake, with the risk of contraceptive uptake increasing by 40% with each additional child (Alvergne, Gurmu, Gibson, & Mace, 2011).

In Ghana, Achana et al. (2015) showed that a couple's fertility preference and parity were important determinants of contraceptive use in the Upper East region. They found that the odds of contraceptive use among women who have 1–4 children is 2.62 times compared to women with no children, and among those who had 5 or more children, was threefold the odds of use among women who had no child (Achana et al., 2015).

A secondary analysis of DHS data in Ghana found that women who have experienced childhood mortality were found to use contraceptives less, and had significantly higher number of additional children than those who hadn't (Gyimah & Fernando, 2004). In addition, a study in Accra found that when couples reach their reproductive aims, they revert to using traditional methods due to perceptions of chemical harm by modern contraceptives (Osei et al., 2014).

2.5. Socio-economic factors

2.5.1 Income and poverty

Poor women are usually dependent woman, robbed of the chance to take charge of their own health choices. As such contraceptive use has been found to be more prevalent among women who have high income in Ghana (GSS et al., 2015). However, given the fact that unintended pregnancy, which implies low contraceptive use, is higher among poor women, there are studies that show that poverty is not associated with contraceptive use, nor can it predict specific contraceptive method choice (Foster et al., 2004; Frost & Darroch, 2008; Frost et al., 2007; Upson et al., 2010). A study showed that women who work outside the home were more likely to use contraceptives than those who were housewives (Palamuleni, 2013). However, Adanu et al. (2009) found that in Accra, self-employed women were less likely to use contraceptives than those in formal employment

2.6 Socio-cultural factors

Essential to the use of contraceptives is the knowledge of contraceptives, its methods and its importance. Knowledge of contraceptives is very high around the world, with the Demographic and Health Survey program of the USAID putting knowledge in the developing world as near universal (Khan, Mishra, Arnold, & Abderrahim, 2007). A definitive estimate of knowledge in Ghana, is that provided by the 2014 GDHS which puts knowledge of at least one method of contraceptive among men and women aged 15-49 at 99%, with women knowing on average 8.5 contraceptive methods compared with an average of 8.2 methods for men(Ghana Statistical Service & Ghana Health Service, 2015). However, knowledge is governed by several factors such as income, residence, age and education (Blanc et al., 2009; Palermo, Bleck, & Westley, 2014) . It is important to note that while knowledge of contraceptives is important in improving use as shown in as study by Cheng et al., (2011), it does not assure use, as many know and do not use or begin use

and discontinue (Cheng, 2011; Lamvu, Steiner, Condon, & Hartmann, 2006; Mekonnen, Enquselassie, Tesfaye, & Semahegn, 2014).

Beyond mere knowledge, there are attitudes and perceptions that influence use. Contraceptives use are plagued with differing attitudes and perceptions that can hinder or enable its use. Some perceptions gotten from a study in Malawi showed that perceptions of side effects, such as prolonged menstruation, male impotence and genital sores, weight gain or loss, and infertility hindered the use (Chipeta, Chimwaza, & Kalilani-Phiri, 2010). Also, attitudes towards pregnancy and birth affects contraceptive use, as women who did not view avoiding pregnancy as important were more than twice as likely not to use any contraceptive method (Frost et al., 2007). However, a study in Nigeria found that women also show positive attitudes towards contraceptives, stemming from challenging economic situation of the family or economic aspirations, need to have time for personal development, desire to maximize child development, desire to maintain health and avoid potential negative health consequences of high fertility (Aransiola, Akinyemi, & Fatusi, 2014). The study as well as Cheng (2011) also showed that the mass media and social network of the woman are also important as contraceptive use factors, as the desire to imitate friends who are living happily and progressing well in their careers as a result of limited number of children can influence increased contraceptive use (Aransiola et al., 2014; Cheng, 2011).

Attitudes may be mediated by societal norms, such as high fertility expectancy from a woman, beliefs that contraceptives are indicators of promiscuity and attitudes of cultural alienism to contraceptive use that could incur ancestral wrath (Sedgh, Hussain, Bankole, & Singh, 2007). Also, family members can be pressure points determining a woman's use of contraceptive, as they may insist on a change in her parity status to fit their interests and social perception of masculinity (Aransiola et al., 2014; Population Council`, 2015).

2.7 Sexual behaviours and norms

This refers to prevailing sexual behaviour specific to societies and individuals. This includes having multiple sexual partners, polygamy, and frequency of sexual encounters.

Studies show that women reporting multiple sex partners within a six month time period, were almost half as likely to use any contraceptive as those who didn't report such, just as having sexual intercourse equal to or less than once per month reduced the odds of using contraceptives (Germek, 2012). Adanu et al. (2009) in their Accra population study found that women who has more sexual partners were significantly more likely to use contraceptives than those with just one sexual partner, but when adjusted for some socio-demographic factors such as age, household size, marital status and education, only those with two partners remained significantly likelier to use..

Further, a study has shown that women in polygamous homes were less likely to use contraceptives than those in monogamous homes as they compete for children with mates, have less frequent sex and adhere more to traditional beliefs about birth control (Palamuleni, 2013). However, studies in Nigeria, Malawi and Ghana showed that being in a polygamous marriage had no bearing on likelihood of using contraceptives until age and parity adjustments are made (Achana et al., 2015; Audu et al., 2008; Baschieri et al., 2013).

2.8. Provider Factors

The availability of a contraceptive is integral to its use, and the factors contingent on the provider of contraceptives are without doubt, very important.

At the very beginning of such considerations is defining the source of such contraceptives used. According to the 2014 GDHS, Ghanaian users of contraceptives mainly obtained it from government hospitals or polyclinics (29 percent) and government health centres or

clinics (25 percent) while others got it from chemical or drug stores (22 percent) and pharmacies (7 percent)(Ghana Statistical Service & Ghana Health Service, 2015). Understanding this is important because an association between contraceptive source and use has been observed, with a study showing that those who had a usual source of health care were 28.1% more likely to use contraceptives compared to those who did not have a usual source (Germek, 2012). Also, women who do not have a source of contraceptive services were less likely to use the pill and long-acting methods, but more likely to use condoms relative to women who had a non-government contraceptive source (Frost & Darroch, 2008).

In sub-Saharan Africa where the concentration of medical facilities as indicated by hospital beds per 1000 people is as low and public transportation systems are poor, the distance to a contraceptive source matters in contraceptive use (Obasi, 2013; World Health Organization - WHO, 2014) This is especially relevant in the rural areas where distances to health facilities can be long, meaning that women are less inclined to go such distances for contraceptives. However, distances can also aid contraceoptive use by women who are using without social and spousal approval, as the distance gives them the desired confidentiality they desire

Also, waiting time to get the contraceptive is important. A study by Speizer et al. (2000) that process hurdles such as the increase in a women's psychic and time loss due to waiting for contraceptive services or requiring women to wait till their next menstrual period before getting the contraceptive they desire has led to increased unmet need in Tanzania (Speizer & Pearson, 2011).

If a woman endeavours to get to the source, it is also obvious that if she is not able to get the method she prefers, she defers or stops use. A study in Vietnam showed that ready

access to contraceptives in terms of distance and method availability significantly increased the odds of contraceptives use (Thang & Anh, 2002).

However, assuming a woman does get the method she prefers, she must be able to afford to get it. Many times, in the procurement of modern methods of contraceptives, a fee is charged. For many married women in their reproductive age (15-49 years) the cost of these contraceptives are unaffordable (Creanga, Gillespie, Karklins, & Tsui, 2011).

In the developed world, cost is not much of a barrier, and an increase in cost might actually be followed by increased use (Campbell, Sahin-Hodoglugil, & Potts, 2006). This problem occurs mostly in developing nations like Ghana where many women of reproductive age are inhibited from using contraceptives by poverty and financial dependence on their partners (Greene & Stanback, 2012). However, some studies have shown that increased cost causes only small reductions in use in the developing world, and in many surveys, financial cost does not often place high among the reasons women do not use contraceptives (Campbell et al., 2006; Darroch & Singh, 2013).

Respondents in rural Bangladesh were asked whether cost influences contraceptive use, the respondent placed little emphasis on cost (Levin et al., 1999). Molyneaux (2000) as cited in Matheny (2004) found that the increase in prices of contraceptives by 100% decreased its use by only 3 to 5% (Matheny, 2004). Ciszewski and Harvey (1994) found, however, that an average price rise of 60% for condoms in the Bangladesh social marketing program caused sales to drop by 46% (Ciszewski & Harvey, 1994).

A study by Bawah (1999) showed that women cannot access contraceptive use because getting money for these contraceptives could evoke conflict in their homes (Bawah et al., 1999).

Critical to a woman's use of contraceptive is the attitude of the provider. This is especially important in conservative or religious cultures and among young users of contraceptives (Biddlecom, Munthali, Singh, & Woog, 2007). The provider must also provide counselling and advise on the use and possible side-effect and its management. The gender of the provider is also a factor as observed in Pakistan, where a scheme known has the Lady Health Workers (LHW) Programme has reduced a substantial part of the obstacles faced by rural dwellers in accessing family planning services (Population Council`, 2015). Essential to these is the provider's respect of the clients' privacy and confidentiality. The provider's ability to give apt information counselling services also predict client usage and continuity (Bongaarts & Bruce, 1995). Clients may desire information about contraceptive methods available, usage procedures, risks, and side effects which will dictate their satisfaction (Sedgh & Hussain, 2014). Studies have shown that clients desire information, and those who got such information and who had received counselling were more likely to use contraceptives (Darroch & Singh, 2013; Darroch, 2013; Sedgh & Hussain, 2014). Importantly, some providers exhibit provider bias, which means they dictate the method to be useful to clients either clearly or by implications (Nalwadda, Mirembe, Byamugisha, & Faxelid, 2010). This also affects contraceptive use.

Finally, some contraceptive providers demand tests and spousal approval before providing the service: this may form an encumbrance to contraceptive usage (Sedgh & Hussain, 2014)

CHAPTER THREE

3.0. METHODOLOGY

This chapter describes study design, study area, variables, study population, sample size estimation and sampling technique, data collection/technique, quality control, data processing and cleaning, data analysis and ethical considerations procedures involved in the study .

3.1. Study design

This work employed a cross-sectional analytic study design which involved the use of quantitative method of data collection.

3.2. Study Area

The study was conducted in Jirapa District of the Upper West Region of Ghana. It was formerly known as the Jirapa-Lambussie District and it is currently one of the eleven districts in the region. It occupies a total area of 1,667 square kilometers and shares boundaries with Nadowli to the south, Lambussie to the North, Lawra to the west and Sissala West to the East.

Jirapa District covers about 13.1% of the regional population and the projected population for 2014 from the 2010 population and housing census is 88,402 with the males constituting 41,592 and the females been 46,810 among which are 22875 women of fertile age (WIFA). The district has several ethnic groups domiciled there including Sissalas, the majority Dagaabas; most residents of the district are subsistent farmers. The district has a large population of Christians who are mostly monogamous, and polygamy is a common practice among Muslims and those who practice African traditional religion ((GSS et al., 2015)).

The district has one district hospital established by the Catholic missionaries, one poly-clinic, 6 health centers and 12 community based health planning and services (CHPS). It is divided into sub-districts and also has 137 communities of varying sizes. Two of these communities share boundaries with Burkina Faso, and 15 of the communities are hard to reach during the rainy season which affects health service delivery due to poor road network in the district (JDHMT, 2015).

3.3. Variables

3.3.1. Dependent/outcome variable

The outcome variable for this study is contraceptive use. This was measured by looking at current use of contraceptives among women of reproductive age (15-49). This outcome variable is binary in nature, which is either a woman in her reproductive age is currently using contraceptives or not.

3.3.2. Independent Variables

In reviewing literature, some variables that were shown to have a significant association with contraceptive use were included in this study. The independent variables for the study included the following;

- Individual Factors
    - Socio-demographics
    - Parity
    - Gravidae
- Socio-cultural factors
    - Knowledge of contraceptives – Details on how knowledge was measured is given in section 3.8.1.
    - Ever-use of contraceptives

- Family opinion on use

- Provider Factors
  - Source of contraceptives
  - Process to get contraceptives
  - Cost of contraceptive
  - Provider attitude
  - Privacy, confidentiality and discussion
  - Service quality and satisfaction

3.4. Study Population

The study population consisted of women in fertile age (WIFA) in the district who were willing to take part in the study. WIFA in the district is 22,875 (JDHD report) based on which a minimum sample size of 288 was derived.

3.5. Sampling

3.5.1. Sample size estimation

The sample size was calculated based on the Cochran (1977) single proportion population formula. The sample size was estimated based on the assumption of a 25% contraceptive prevalence rate in Upper West region with a confidence interval of 95% and a significance level of 5%.

The formula is as follows;

$$n = \frac{z^2 pq}{d^2}$$

Where n= sample size

p= probability of the event occurring, in this study the CPR of Upper West region which is 25% (0.25)

q= 1-p= probability of the event not occurring, in this case 1-0.25= 0.75

d=margin of error (0.05)

Z= 1.96 normal deviate representing a 95% confidence interval

The sample size was estimated as follows

$$n = \frac{1.96^2 * (0.25)(1 - 0.25)}{0.05^2}$$

$$n \approx 288$$

Hence, a sample size of 288 was used for the study. Adjusting for an anticipated 10% non-response rate, a minimum of 320 participants could be used but a total number of 350 participants were used in the study.

3.5.2. Sampling Technique

The Jirapa district consists of seven sub-districts. Of these, Jirapa sub-district qualified to be classed as an urban area, while the other six are classed rural areas. These rural areas have a fairly equal population distribution, of which each is about a fourth of Jirapa sub-district's target population. Due to financial and logistical constraints, three sub-districts were used in the study. Due to its size and being the only urban sub-district, Jirapa was purposively picked as one of the sub-districts to be sampled. Two rural sub-districts of the seven were then randomly picked. This random selection was done by listing them and giving each a number. Then a random number generator from Microsoft Excel was used to randomly generate two numbers with the range the rural sub-districts were listed under. Yagha and Duori sub-districts were selected. The two sub-districts whose assigned

number generated were then sampled and in each of the sub-districts, one community was selected at random by listing all the communities in pieces of papers and picking randomly.

The probability proportional to size weighting procedure was used in the allotment of women aged 15-49 years to the three study sites that were selected. (Total WIFA population for the 3 selected sub districts is 13,557. Duori population of WIFA=1,844 (a SS of 48 was derived), Jirapa population of WIFA =9417 (a SS of 243 was derived), Yagha population of WIFA =2,296 (a SS of 59 was derived). A total sample size of 350 was obtained

Eligible participants were selected using the systematic random sampling technique. This was done by using the households list from the health facility which served as the community specific sampling frame. Sampling interval for each community was derived by dividing the total number of women of reproductive age by the required sample size in each community, thereafter, every n^{th} household was selected from the list.

On arrival in a household, a screening question was asked to identify eligible women. In order to give equal chance to all the women in fertile age in a household where there was more than one eligible woman, women were made to select from a basket containing pieces of papers with yes or no. Anyone who selected yes and was willing to participate in the study was interviewed.

This continued until the total number of women of reproductive age needed for each chosen community were interviewed.

Table 1: Distribution of sample size

Community	WIFA	Sample Size
Duori	1, 844	48
Jirapa	9, 417	243
Yagha	2, 296	59
Total	13, 557	350

3.6. Data collection/techniques

The 2015 Ghana Demographic Health Survey questionnaire (GSS et al, 2015) on contraception was adapted and modified. Data collection for the study was done using quantitative methods to gather information on the subject. Hence, structured questionnaires was used for data collection. Questionnaire consisted of both close - ended and open - ended questions. Female research assistants were recruited and trained for one day so that they will have basic knowledge and techniques in data collection and also adhere to ethical principles particularly regarding protecting study participants from any harm. Questionnaires were administered to participants by these trained female research assistants. The questions covered background information as well as questions aiming to answer the research questions.

3.7. Quality Control

To ensure the good quality of data, the researcher recruited and trained 3 female data collectors. The training equiped them with basic knowledge on data collection techniques, how to translate questions into dagaare, communication and ethical principles adherence. Data collected were entered twice by two people to ensure accuracy.

3.8. Data processing and cleaning

Questionnaires were given unique identification (ID) numbers and entered into SPSS. Data were manually entered into the spread sheet and the same software (SPSS) was used for analysis.

3.8.1. Data analysis

Data were analyzed by categorizing some variables as required, including age and marital status. Age was categorized into 7 categories 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, and 45-49. In some of the analysis, cohabiting was merged with married into one category for marital status.

Regarding knowledge on contraceptives, participants were asked if they ever heard of some contraceptive methods that were mentioned to them and the source. Out of 6 methods asked by the researcher and any other one they knew of that was not mentioned, participants were graded on a scale of 7. Participants who knew about 6 or 7 methods were regarded as having high knowledge on contraceptives whiles those who knew about 1-5 methods were classed as having some knowledge on contraceptives.

Chi-square analysis was used to determine associations between demographic variables and ever use of contraceptives, current use of contraceptives and knowledge of contraceptives. These analysis are presented in tables and figures. Further analysis was done using logistic regression. A binary logistic regression was used because the outcome variable of the study is binary in nature. Unadjusted and adjusted odd ratios (ORs) were calculated with a 95% confidence interval (CI 95%). All variables selected for unadjusted odds ratio were used to run for adjusted odds ratio. All p-values were reported and considered statistically significant at $p < 0.05$.

3.9. Ethical Consideration

Before the study commenced, ethical approval was obtained from the Ghana Health Service Ethical Review Committee of the Research and development Division of the Ghana Health Service (ETHICAL APPROVAL-ID NO: GHS-ERC: 40/12/15). Permission and approval was also obtained from the upper west regional health directorate, Jirapa district health directorate and chiefs and elders of the various communities the study was conducted. Participation conformed to the required ethical guidelines since the study involved human subjects.

Conflict of interest

Apart from the academic and public health importance of the study, the researcher also declared that there was no other personal interest in the study.

Right to refuse

Participants were informed that participating in the study was purely voluntary. They were also told of the right to refuse to participate or withdraw from the study at any point.

Potential risks/benefits

Both the target population and the society stand to benefit from the study. The target population would gain appreciable knowledge about contraceptives. Also, identified barriers and enablers to contraceptives would be used as a platform to address contraceptive needs of women of reproductive age (15-49 years) in Jirapa district. In addition, decisions about prevalence and barriers to contraceptives were informed from the study. This research posed no risk to the target population.

Informed consent

Informed consent for participation in this study was obtained from the study participants. The process of the study was explained in the language the client is conversant with. They

were made aware that they had the option to opt out of the study if they found it uncomfortable. Respondents were also made to understand that they had the option of declining to answer any question. Details of the consent process is given in Appendix A (Consent Form)

Privacy/confidentiality

All interviews were conducted in a conducive environment free of a third party to ensure privacy. Data were reported using codes of ID numbers to reduce the possibility of tracing the information gathered back to respondents. This was to ensure the confidentiality and anonymity of respondents.

Compensation

Respondents were given no compensation during the data collection. Their inputs were however recognized and appreciated verbally at the time of data collection.

Data storage and usage

Coded questionnaires are securely locked in a shelf in the researcher's room, with only the researcher having access to it. For the duration of data collection, data collected daily were immediately coded at the end of each day and entered within 24 hours of collection into SPSS.

Entered data were saved with a password known to only the researcher. A digital copy of the dataset is stored on an external hard drive. All data collected is being kept by the researcher for 3-5 years, after which questionnaires would be properly destroyed.

3.10. Inclusion and exclusion criteria

This study included all women aged between 15-49 years who have resided in the district for at least six months. This implies that women under 15 years and above 49 years were excluded in the study. Women who had lived in the area for less than six months were similarly excluded and also women who were not willing to take part in the study were respected as such.

3.11. Pre-testing

The questionnaires were administered to women of reproductive age in Kalsegra, a community under Nadowli District which is close to Jirapa. This ensured better understanding of the questions by both the researcher and research assistants. All necessary corrections were made before the actual data collection.

CHAPTER FOUR

4.0 RESULTS

This chapter presents the analysis done to achieve the objectives of the study. It includes Background characteristics of respondents, knowledge on contraceptives, use of contraceptives among respondents, barriers and enablers of contraceptive use and quality of service delivery.

4.1. Background Characteristics of respondents

Table 4.1 presents the distribution of socio demographic characteristics. A total number of 350 women between the ages of 15-49 years were interviewed regardless of previous contraceptive use, gravida and parity. The data were obtained in Jirapa township, Duori and Yagha sub-districts with sample size of 243, 48 and 59 respectively

As shown in table 4.1, the largest section of respondents were in the age category of 20-24 years 118 (33.7%). After this followed the age category 25-29 years 87 (24.9%) whiles the least section of respondents were found to be between the ages of 45-49 years 2 (0.6%). This age distribution indicates that younger participants in the study are more.

Majority of the participants in this study were educated. It was recorded that 135 (38.6%) of participants had senior high school (SHS) as their highest level of education. This was followed by 78 (22.3%) who had attained tertiary education. Also, about one fifth of respondents 68 (19.4%) obtained junior high school (JHS), 44 (12.6%) had obtained primary education whiles 20 (5.7%) had no formal education. A small section of the study population 5 (1.4%) acquired middle school education

In terms of employment status, only 91 (26.0%) were employed whiles the rest were not. In relation to religious denomination, majority of the women 241 (68.9%) were Christians

followed by 64 (18.3%) being Muslims. 40 (11.4) were Traditionalist whiles 5 (1.4%) recorded no religion. A greater proportion, 167 (47.7%) of women were not married, 161 (38.9%) were married, whiles 16 (4.6%) and 6 (1.7%) were widowed and divorced respectively.

A little above half, 220 (62.9%) women reported ever being pregnant of which 145 (66%) had 1 or 2 pregnancies whiles 75 (34%) reported having between 3 and 8 pregnancies. It was realized that 170 respondents had given birth of which 122 (72%) of them gave birth to 1 or 2 children whiles 48 (28%) of them gave birth to between 3 and 8 children.

107 (30.6%) of the respondents were rural dwellers whiles 243(69.4%) of them were urban dwellers.

Regarding family type, 202 (57.7%) of the participants lived in nuclear family whiles 148 (42.3%) lived in extended family.

Table 2: Background and socio-demographic characteristics of respondents (N 350; unless otherwise stated)

Characteristic	Frequency(n=350)	Percent (%)
Demographic Characteristics		
Age of respondent		
15-19	69	19.7
20-24	118	33.7
25-29	87	24.9
30-34	42	12.0
35-39	21	6.0
40-44	11	3.1
45-49	2	.6
Educational level of respondent		
Primary	44	12.6
Middle	5	1.4
JHS	68	19.4
SHS	135	38.6
Tertiary	78	22.3
Never	20	5.7
Employment status of respondents		
Employed	91	26.0
Unemployed	259	74.0
Religious denomination of respondent		
Christian	241	68.9
Muslim	64	18.3
Traditionalist	40	11.4
no religion	5	1.4
Marital status of respondents		
Married	161	46.0
Not married	167	47.7
Widowed	16	4.6
Divorced	6	1.7
Women who have ever been Pregnant		
Ever pregnant	220	62.9
Number of pregnancies		
1 or 2 pregnancies	145	66
3-8 pregnancies	75	34
Number of Births		
1-2 birth	122	72
3-8 births	48	28
Currently Pregnant		
Currently pregnant	35	10.0
Currently not pregnant	300	85.7
Not sure	15	4.3
Type of Family		
Nuclear family	202	57.7
Extended family	148	42.3

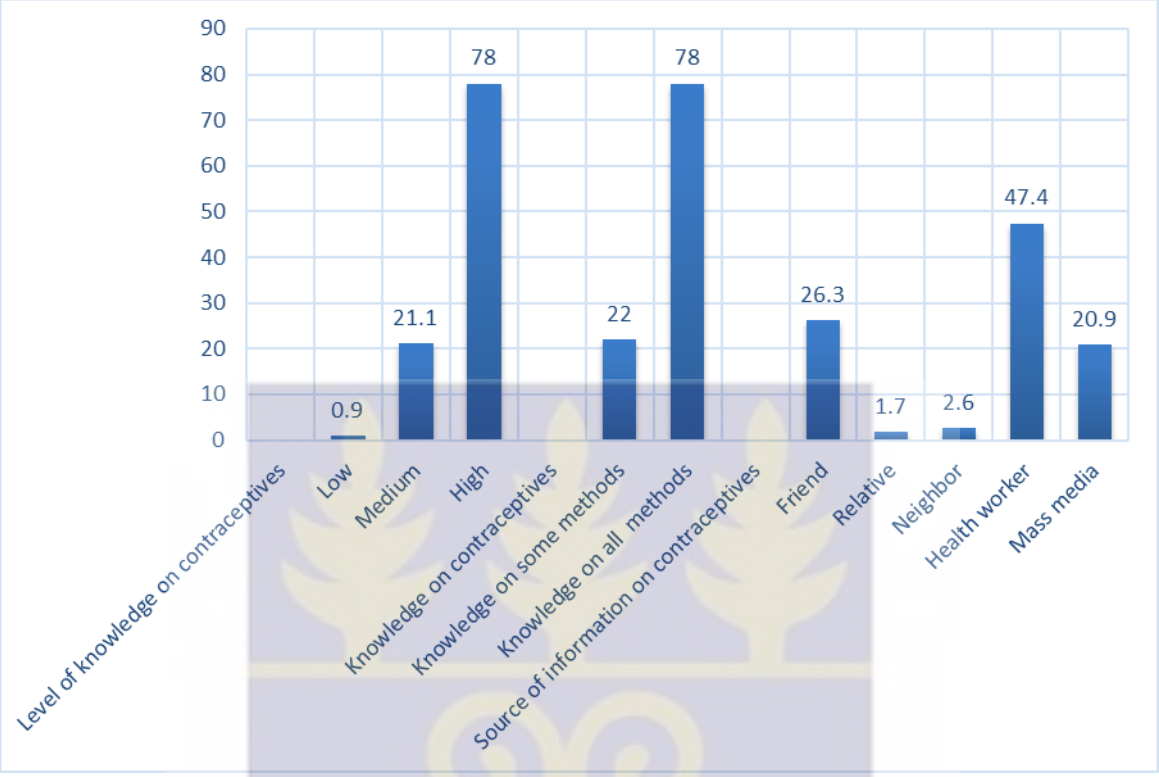
4.2: Women's Knowledge, level of knowledge and source of information on contraceptives.

Figure 2 presents findings on contraceptive knowledge, level of knowledge and source of information on contraceptives. Gaining knowledge on contraceptives can determine its use.

All the women had knowledge on at least one method of contraceptive with majority 273 (78%) having high knowledge which means that they had knowledge on 6-7 methods of contraceptives. Medium knowledge (knowledge on 3-5 methods) and low knowledge (knowledge on 1-2 methods) were 74 (21.1%) and 3 (0.9%) respectively. Knowledge was further dichotomized into having high knowledge and some knowledge. Of all women, 273 (78.0%) had high knowledge which meant that they were knowledgeable in 6 or 7 methods out of a total of 7 methods whiles 77 (22.0%) had some knowledge on contraceptives. Women who had knowledge on 1 to 5 methods were classified under having some knowledge. This distribution implies that there is universal knowledge on at least one method of contraceptive.

Nearly half of the participants 166 (47.4%) had their information on contraceptives from health facility whereas 92 (26.3%) got informed by friends. Also, 73 (20.9%) had information from the mass media whiles information from neighbors and relatives represented 9 (2.6%) and 6 (1.7%) respectively.

Figure 2: Women's knowledge and source of information on contraceptives (N = 350; unless otherwise stated)



Low: Heard of 1-2 contraceptive methods

Medium: Heard of 3-5 contraceptive methods

High: Heard of 6-7 contraceptive methods

Knowledge on some methods: Heard of 1-5 contraceptive methods.

Knowledge on all methods: Heard of 6-7 contraceptive methods.

4.3: Use of contraceptives among respondents

All the women interviewed were asked about ever use and current use of contraceptives. More than half of the respondents 275 (78.6%), indicated that they had ever used a method of contraception at some point in time whiles 201 (57.4%) of the women were currently using some method of contraception, putting the prevalence of contraceptive use among participants in the district at 57.4%. The remaining 149 (42.6%) were not using any

method of contraception at the time of study. Reasons for contraceptive use among current users were Birth spacing 78 (39%), limiting birth 28 (14%) and to prevent unwanted pregnancy 95 (47%). Among the 201 participants who reported current use, 89 (44.3%) reported using injectable. 49 (24.4%) of them indicated using pill whereas 29 (14%) used implant. Among the respondents, condom was a current method used by 20 (10%) women, 6 (3%) used emergency contraception, 3 (1.5%) used IUD whiles 3 (1.5%) and 2 (1%) were using periodic abstinence and withdrawal respectively. Regarding the source of current contraceptives, 139 (71.3%) of women who are currently using contraceptives reported that they obtained the method from the public hospital/clinic. There is only one district hospital in Jirapa which is owned by Catholics and thus no family planning services are rendered. It is obvious services were obtained from government clinics. 26 (13.2%) obtained their services from outreach services. Pharmacy served as a source of contraceptives for 23 (11.8%) of the participants whiles peer educators represented contraceptive source for 7 (3.6%) of participants.

Concerning preferred method, majority, 162 (46.3%) of women said injectable was the most preferred method whiles 67 (19.1%) said pill was their preferred method most effective contraceptive. Also, 51 (14.6%) preferred condom whiles 37 (10.6%) and 14 (4.0%) considered preferred methods to be periodic abstinence and withdrawal respectively. 11 (3.1%) preferred emergency pill whiles the least figure, 8 (2.3%) considered IUD as their preferred method. Of the 149 respondents who were not using any method of contraception at the time of the study, 61 (41%) reported not being sexually active as a reason for not using. 32 (22%) said they were not using for the fear of side effects. 31 (21%) were currently pregnant and indicated that they were not on any contraception because of the pregnancy whiles 20 (13%) of the women indicated they wanted to get pregnant and so were not using any form of contraception. 3 (2%) and 2

(1%) were not using contraceptives because of financial problems and husbands disapproval respectively. These results are presented in table 2 below.

Table 3: Use of contraceptives among women aged 15-49 years (N = 350; unless otherwise stated)

Variable	Frequency (n=350)	Percent (%)
Ever use of contraception		
Women who have ever used contraceptives	275	78.6
Current use of contraception		
Women currently using contraceptives	201	57.4
Reason for currently using contraceptives		
Method efficacy (Birth spacing)	78	39
Method efficacy (Limiting birth)	28	14
Method efficacy (Prevent unwanted pregnancy)	95	47
Total	201	100.0
Current contraception method		
Injectable	89	44.3
Pill	49	24.4
Implant	29	14
Condom	20	10
Emergency contraception	6	3
IUD	3	1.5
Periodic abstinence	3	1.5
Withdrawal	2	1
Total	201	100
Source of contraception among current users		
Public hospital/clinic	139	71.3
Outreach	26	13.3
Pharmacy	23	11.8
Peer educator	7	3.6
Total	195	100
Preferred method of contraception		
Injection	162	46.3
Pill	67	19.1
Condom	51	14.6
Periodic abstinence	37	10.6
Withdrawal	14	4.0
Emergency pill	11	3.1
IUD	8	2.3
Women currently not using any contraception		
Women not currently using contraceptives	149	42.6
Reasons for currently not using any contraception		
Not sexually active	61	41
Side effects	32	22
Currently pregnant	31	21
To get pregnant	20	13
Financial problems	3	2
Husbands disapproval	2	1
Total	149	100

4.4 Barriers and enablers of contraceptive use

Identifying barriers and enablers to the use of contraceptives was the main objective of this research. Frequencies and percentages are more than 350 and 100% due to multiple responses. Of all the respondents, 207 (59.1%) responded that contraceptives were not patronized because of fear of side effects. Lack of confidentiality in service providers was mentioned by 43 (12.3%) women as a reason for not using contraceptives whiles 11 (3.1%) respondents thought that they were too young and feared the perception the community will have about them upon seeing them assessing family planning services. Also, 57 (16.3%) stated husbands disapproval as a barrier to contraceptive use whiles 4 (1.1%) said it was due to personal issues.

Distance to access service was a reason stated by 8 (2.3%) of the women, provider attitude was a barrier identified by 6 (1.7%) of the women whiles religious restriction was mentioned by 13 (3.7%) of women as reason for non-use. Of all respondents, 128 (36.6%) stated that uncomfortable examination done before service is rendered is a reason for contraceptive non-use, whiles 53 (15.1%) mentioned that service providers ask for the presence of husbands before rendering service which served as a barrier whereas 16 (4.6%) said husbands/partners were the main decision makers when it is about contraceptive use. Other family members especially mothers and mother in-laws made decisions for some women and this was a barrier stated by 54 (15.4%) women whiles 63 (18.0%) said some husbands wanted more children and so that prevented women from using contraceptives.

Regarding enablers, almost all participants 304 (86.9%) established that contraceptives were affordable to them which motivated women to use contraceptives whiles 291 (83.1%) of respondents indicated information given by service providers as a motivation to use. Availability of preferred methods was an enabler to contraceptive use stated by 276

(78.9%) of respondents whereas information given on actions regarding side effects was indicated by 260 (74.3%) respondents. Encouragement from friends was stated by 209 (87%) as an enabler whiles 163 (46.6%) of the women said that the ability of women to make decisions unanimously without husbands or family members was a motivating factor. efficacy of contraceptives to prevent unwanted pregnancy was stated by 148 (42.3%) women as a motivation to use whiles 130 (37.1%) stated birth spacing as a motivation to use contraceptives. Also, 122 (83%) said motivation by family members was a reason for contraceptives use by some women, 117 (33.4%) stated that taking decisions with spouses jointly regarding contraception was a motivation. Limiting birth was a motivation for 49 (14.0%) current users of contraceptives. These results are shown in Table 3 below.

Table 4: Barriers and enablers of contraceptive use (N = 350; unless otherwise stated)

Characteristic	Frequency (n=100)	Percent (%)
Barriers		
side effect	207	59.1
lack of confidentiality	43	12.3
Perception about age and contraceptive use	11	3.1
husbands disapproval	57	16.3
other personal issues	4	1.1
Distance to health facility	8	2.3
provider attitude	6	1.7
religious restriction	13	3.7
Examination done which women are not comfortable with	128	36.6
Request Husband's Presence	53	15.1
mainly husband/partner's decision to use contraceptives	16	4.6
Decision on contraception use made by other family members	54	15.4
Husband wants more children	63	18.0
Enablers		
Contraceptive efficacy (birth spacing)	130	37.1
Contraceptive efficacy (limiting birth)	49	14.0
Contraceptive efficacy (prevent unwanted pregnancy)	148	42.3
Effectiveness	23	6.6
Affordability of contraceptives	304	86.9
Availability of preferred contraceptive methods	276	78.9
Information given on side effects by service providers	291	83.1
Information given on actions of side effects	260	74.3
Encouragement from friends to use contraceptives	209	87
Encouragement from family members to use contraceptives	122	83%
mainly respondent	163	46.6
joint decision to use contraceptives	117	33.4

4.5: Quality of service delivery (N = 350; unless otherwise Stated)

Table 4 depicts how quality of care was rated by participants. In terms of privacy, 184 (52.6%) were satisfied with the way privacy was respected at service delivery point. Regarding respect, 79 (22.6%) were very satisfied with respect for privacy while 53 (15.1%) were fairly satisfied with respect for privacy. The least number, 34 (9.7%) indicated dissatisfaction about respect for privacy at the service delivery point.

With regards to provider attitude, 160 (45.7%) acknowledged that service providers were respectful, 129 (36.9%) said attitude of service providers was friendly, 33 (9.4%) saw service providers as disrespectful whiles the minority 28 (8.0%) said service providers were unfriendly. Waiting time at facility was graded good by 133 (38.0%) of respondents and about a quarter, 92 (26.3%) acknowledged that waiting time at the health facility was very good. Waiting time was regarded fair by 70 (20.0%) of participants whiles 55 (15.7%) said it was poor.

As regards to time allowed for clients to ask questions, majority 151(43.1%) had good time to ask questions, 89 (25.4%) rated question time to be very good, time allowed for questions was fair to 61 (17.4%) whiles 49 (14.0%) saw it to be poor. In terms of involvement regarding decision making on contraceptive method, 169 (48.3%) regarded it as good, 100 (28.6%) said it was very good, 38 (10.9%) considered it fair whiles 43 (12.3%) said it was poor. In rating confidentiality about information shared with service providers, 170 (48.6%) said it was good, 93 (26.6%) believed it was very good, 47 (13.4%) regarded it fair whiles the minority 40 (11.4%) considered it poor.

Of the respondents, 48 (13.7%) of them said they were treated badly because of their age and 33 (9.4%) were treated badly because of their social class. With regards to service delivery, 167 (47.7%) of women were satisfied, 78 (22.3%) were somewhat satisfied, 57

(16.3%) were not satisfied whiles 48 (13.7%) were very satisfied. On the subject of quality of service delivery, 185 (52.9) said it was good, 82 (23.4%) said it was very good, 44 (12.6%) indicated it was fair whiles 39 (11.1%) said it was poor. Of all the women, 273 (78.0) stated they were willing to visit same facility subsequently.

Figure 3 still explains quality of service delivery but using the negatives from table 4 to plot. One would realize that care of service delivery is generally good.

Table 5: Quality of service delivery (N = 350; unless otherwise Stated)

Variable	Frequency (350)	Percent (%)
Rate Privacy		
Very satisfactory	79	22.6
Satisfactory	184	52.6
Fairly satisfactory	53	15.1
Not satisfactory	34	9.7
Rate Provider Attitude		
Friendly	129	36.9
Respectfully	160	45.7
Disrespectfully	33	9.4
Unfriendly	28	8.0
Rate Waiting Time		
Very good	92	26.3
Good	133	38.0
Fair	70	20.0
Poor	55	15.7
Rate Questions Time		
Very good	89	25.4
Good	151	43.1
Fair	61	17.4
Poor	49	14.0
Involvement in Decision making		
Very good	100	28.6
Good	169	48.3
Fair	38	10.9
Poor	43	12.3
Rate Confidentiality		
Very good	93	26.6
Good	170	48.6
Fair	47	13.4
Poor	40	11.4
Women who were treated Badly because of age		
Treated badly because of age	48	13.7
Women who were treated Badly Because of Social Class		
Treated badly because of social class	33	9.4
Satisfaction with Service Delivery		
Not Satisfied	57	16.3
Somewhat satisfied	78	22.3
Satisfied	167	47.7
Very satisfied	48	13.7
Quality of service		
Very good	82	23.4
Good	185	52.9
Fair	44	12.6
Poor	39	11.1
Willing to visit same facility again		
Yes	273	78.0

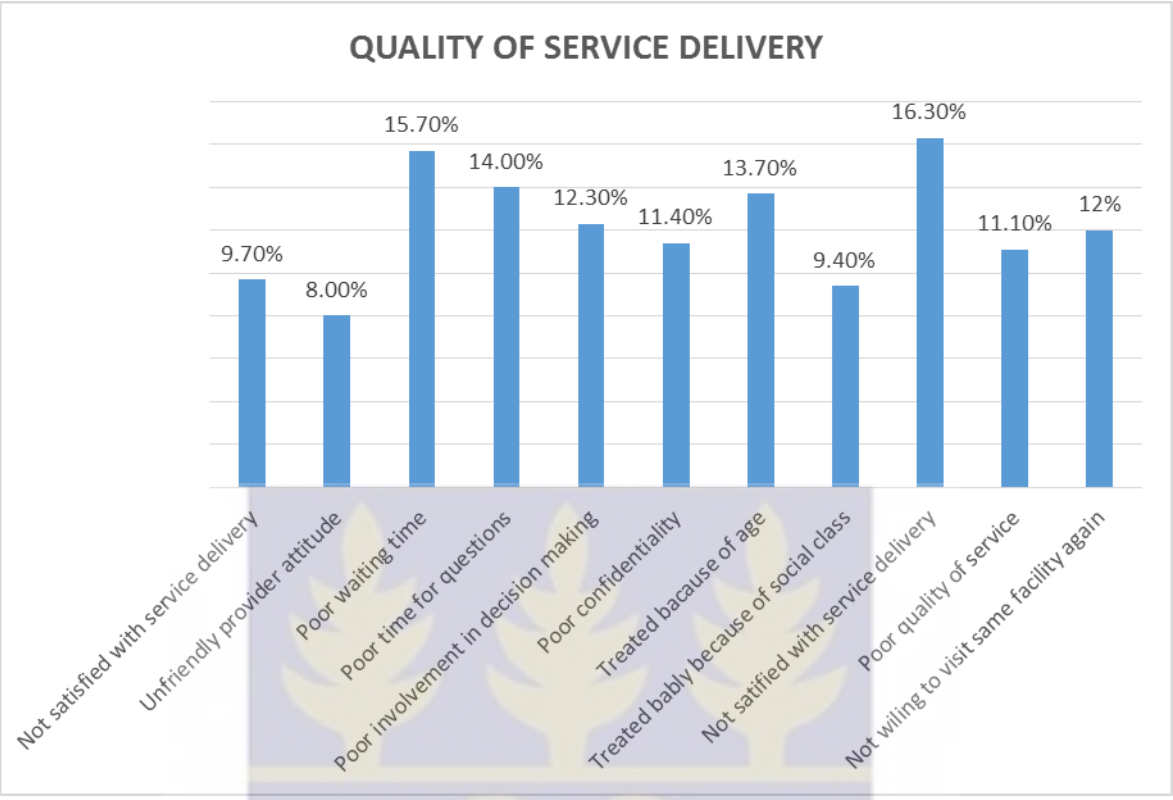


Figure 3: Quality of service delivery

4.6 Associations between current use of contraceptives and socio-demographic characteristics as well as some selected characteristics

A chi-square analysis was done to identify the possible associations between current use of contraceptives and some selected characteristics including socio-demographic characteristics. This analysis presented in Table 5 identified marital status of respondents ($p < 0.001$), \ever pregnant ($p < 0.001$), family type (0.049) and pregnancy intentions at the time of pregnancy ($p < 0.001$) to be associated with current use of contraceptives.. Although knowledge on at least one contraceptive method was high as presented in Figure 2, it had no significant association with current use of contraceptives as shown in table 5.

Table 6: Associations between current use of contraceptives and socio-demographic characteristics as well as some selected characteristics

CURRENT USE OF CONTRACEPTIVES			
Characteristic	**Currently using contraceptives**	**Currently not using contraceptives**	**p-value**
Age of respondents			0.416
15-19	35 (50.7%)	34 (49.3%)	
20-24	68 (57.6%)	50 (42.4%)	
25-49	98 (61.1%)	50 (42.4%)	
Educational level			0.424
primary	30 (68.2%)	14(31.8%)	
Middle	2(40.0%)	3 (60.0)	
JHS	36 (52.9%)	32 (47.1%)	
SHS	74 (54.8%)	61 (45.2%)	
Tertiary	45 (57.7%)	33 (42.3%)	
Never	14 (70.0%)	6 (30.0%)	
Employment Status			0.157
Employed	58 (63.7%)	33 (36.3%)	
Unemployed	143 (55.2%)	116 (44.8)	
Religious denomination			0.473
Christian	137 (56.8%)	104 (43.2%)	
Muslim	35 (54.7%)	29 (45.3%)	
Traditionalist	27 (67.5%)	13 (32.5%)	
No religion	2 (40.0%)	3 (60.0%)	
Marital status			<0.001**
Married	113 (70.2%)	48 (29.8%)	
Not married	73 (43.7%)	94 (56.3%)	
Widowed	13 (81.3%)	3 (18.8%)	
Divorced	2 (33.3%)	4 (66.7)	
Women who have ever been pregnant			<0.001**
Ever pregnant	145 (65.9%)	75 (34.1%)	
Never pregnant	56 (43.1%)	74 (56.9)	
Family type			0.049*
Nuclear family	107 (53.0%)	95 (47.0%)	
Extended family	94 (63.5%)	54 (36.5%)	
Pregnancy intentions at the time of pregnancy			<0.001**
Intended to get pregnant	97 (66.9%)	49 (33.6%)	
Did not intend to be pregnant	48 (64.9%)	26 (35.1%)	
Knowledge on contraception			0.271
Heard of 1-5 methods of contraception	40 (51.9%)	37(48.1%)	
Heard of 6 -7 methods of contraception	161 (59.0%)	112 (41.0%)	

*p-value significant at <0.05; **p-value significant at <0.001

4.7 Associations between ever use of contraceptives, socio-demographic characteristics and selected characteristics

The theory of ever use of contraceptives by respondents was also explored and displayed in table 6. This intended to identify the possible association between ever use of contraceptives and some selected characteristics including socio-demographic characteristics. There was a statistically significant association between ever use of contraceptives and age of respondents ($p < 0.001$), educational level ($p < 0.001$), marital status of respondents ($p < 0.001$), women who have ever been pregnant ($p < 0.001$) and women who perceived contraceptives to be affordable ($p < 0.001$). However, there was no association between ever use of contraception and employment status, religious denomination, family type, knowledge on contraceptives and enablers of contraceptives ($p > 0.05$).

Table 7: Associations between ever use of contraceptives, socio-demographic characteristics and selected characteristics

Characteristics	Ever use of contraceptives		p-value
	Ever used contraceptives	Never used contraceptives	
Age			< 0.001**
15-19	46 (66.7%)	23 (33.3)	
20-24	88 (74.6)	30 (25.4%)	
25-49	141 (86.5%)	22 (13.5%)	
Educational level			< 0.001**
primary	41 (93.2%)	3 (6.8%)	
middle	4 (80%)	1 (20.0)	
JHS	43 (63.2%)	25 (36.8%)	
SHS	103 (76.3%)	32 (23.7%)	
Tertiary	64 (82.1%)	14 (17.9%)	
Never	20 (100.0%)	0 (0.0%)	
Employment Status			0.054
Employed	78 (85.7%)	13 (14.3%)	
Unemployed	197 (76.1%)	62 (23.9%)	
Religious denomination			0.277
Christian	184 (76.3%)	57 (23.7%)	
Muslim	51 (79.3%)	13 (20.3%)	
Traditional	36 (90.0%)	4 (10.0%)	
No religion	4 (80.0%)	1 (20.0%)	
Marital status			<0.001**
Married	147 (91.3%)	14 (8.7%)	
Not married	108 (64.7%)	59 (35.3)	
Widowed	16 (100.0)	0 (0.0)	
Divorced	4 (66.7%)	2 (33.3%)	
Women who have ever been pregnant			<0.001**
Ever pregnant	199 (90.5%)	21 (9.5%)	
Never pregnant	76 (58.5%)	54 (41.5%)	
Family type			0.132
Nuclear family	153 (75.7%)	49(24.3%)	
Extended family	122 (82.4%)	26 (17.6%)	
Knowledge on contraceptives			0.271
Heard of 1-5 contraceptive methods (some)	57 (74.0)	20 (26.0%)	

Table 7: Associations between ever use of contraceptives, socio-demographic characteristics and selected characteristics continued

Characteristics	Ever used contraceptives	Never used contraceptives	p-value
Heard 6-7 contraceptive methods (all)	218 (79.9%)	55 (20.1%)	
Affordability of contraceptives			<0.001**
Affordable	251 (82.6%)	53 (17.4%)	
Not affordable	24 (52.2%)	22 (47.8%)	
Enablers of contraceptive			0.354
Birth spacing	106 (81.5%)	18.5%)	
Limiting birth	39 (79.6%)	10 (20.4%)	
Prevent unwanted pregnancy	110 (74.3%)	38 (25.7%)	
Method Effectiveness	20 (87.0%)	38 (25.7%)	

***p-value significant at <0.05; **p-value significant at <0.001**

*p-value significant at <0.05; **p-value significant at <0.001

4.8 Associations between knowledge of contraception and socio-demographic characteristics, as well as use of contraceptives

Knowledge on at least one contraception method was universal among respondents although the level of knowledge varied. Knowledge on at least 1 method of contraception among respondents was 100%. There was statistical significance between knowledge and educational level with p-value 0.021. There was however no association between knowledge and the other selected characteristics (p > 0.05) as indicated in table 7.

Table 8: Associations between knowledge of contraception and socio-demographic characteristics, as well as use of contraceptives

Characteristic	Knowledge of contraceptives		P-VALUE
	Heard of 1-5 methods	Heard of 6-7 methods	
Age of respondents			0.116
15-19	21 (30.4%)	48 (69.6%)	
20-24	23 (19.5%)	95 (80.5%)	
25-29	33 (20.2%)	130 (79.8%)	
Educational level			0.021*
Primary	12 (27.3)	32 (72.7%)	
Middle	2 (40.0%)	3 (60.0%)	
JHS	23 (33.8%)	45 (66.2%)	
SHS	19 (14.1%)	116 (85.9%)	
Tertiary	15 (19.2)	63 (80.8%)	
Never	6 (30.0%)	14 (70.0)	
Employment Status			0.237
Employed	16 (17.6%)	75 (82.4%)	
Unemployed	61 (23.6%)	198 (76.4%)	
Religious denomination			0.140
Christian	46 (19.1%)	195 (80.9%)	
Muslim	16 (25.0%)	48 (75.0%)	
Traditionalist	14 (35.0%)	26 (65.0%)	
No religion	1 (20.0%)	4 (80.0%)	
Marital status			0.807
Married	32 (19.9)	129 (80.1%)	
Not married	40 (24.0%)	127 (76.0%)	
Widowed	4 (25.0%)	12 (75.0%)	
Divorced	1 (16.7%)	5 (83.3%)	
Family type			0.524
Nuclear family	42 (20.8%)	160 (79.2%)	
Extended family	35 (23.6%)	113 (76.4%)	
Ever use of contraception			0.271
Ever used	57 (20.7%)	218 (79.3%)	
Never used	20 (26.7%)	55 (73.3%)	
Current use of contraception			0.271
Currently using	40 (19.9%)	161 (80.1%)	
Currently not using	37 (24.8%)	112 (75.2%)	

*p-value significant at <0.05; **p-value significant at <0.001

4.9 Socio-demographic predictors of current use of contraceptives

As indicated in Table 8, women who have never been pregnant have higher odds of using contraceptives (OR 2.555, CI 1.637-3.988) as compared to women who have ever been pregnant. After adjusting for other independent variables (age, educational level, employment status, Religious denomination, marital status, family type and perceived affordability of contraceptives), the odds of current contraceptive use is about 2 times as great if women had never been pregnant as compared to women who have ever been pregnant (aOR=1.862, CI 1.070-3,239).

Women who lived in extended family system were 0.6 times less likely to use contraceptives as compared to those who lived in nuclear family system, however, after adjusting for other independent variables, it was found not to be significant.

As compared to women who perceived contraceptives to be affordable, those who perceived contraceptives to be unaffordable had an association with decreased odds of current use of contraceptives (OR 2.915, CI 1.523-5.578) and after adjusting for other variables (age, educational level, employment status, Religious denomination, marital status, women who have ever been pregnant and family type), the association still remained significant (aOR=2.491, CI 1.230-5.047).

Table 9: Socio-demographic and selected characteristics predicting current use of contraceptives

	Current use of contraceptives	
Characteristics	**Unadjusted Odds ratio, OR (95% CI)**	**Adjusted Odds ratio, a aOR (95% CI)**
Age of respondents		
15-19	Ref	Ref
20-24	0.757 (0.417-1.375)	0.878 (0.436 1.769)
25-49	0.683 (0.387-1.203)	1.412 (0.664-3.004)
Educational level		
Primary	1.089 (0.346-3.431)	1.426 (0.429-4.746)
Middle	3,500 (0.460-26.616)	1.482 (0.158-13.852)
JHS	2.074 (0.713-6.037)	1.235 (0.368-4.145)
SHS	1.923 (0.697-5.307)	1.290 (0.405-4.108)
Tertiary	1.711 (0.595-4.922)	1.669 (0.495-5.625)
Never attended school	Ref	Ref
Employment Status		
Employed	Ref	Ref
Not employed	1.426 (0.871-2.333)	1.486 (0.794-2.782)
Religious denomination		
Christian	0.506 (0.083-3.084)	0.485 (0.066-3.544)
Muslim	0.552 (.086-3.533)	0.561 (0.073-4.301)
Traditionalist	0.321 (0.048-2.162)	0.423 (0.052-3.412)
No religion	Ref	Ref
Marital status		
Married	0.212 (0.038-1.199)	0.190 (0.030-1.212)
Not married	0.564 (0.101-3.156)	0.411 (0.063-2.682)
Divorced	Ref	Ref
Women who have ever been pregnant		
Ever pregnant	Ref	Ref
Never pregnant	2.555 (1.637-3.988)*	1.862 (1.070-3.239)*
Family Type		
Nuclear family	Ref	Ref
Extended family	0.647 (0.419-0.999)*	0.618 (0.381-1.003)
Affordability		
Affordable	Ref	Ref
Not affordable	2.915 (1.523-5.578)*	2.491 (1.230-5.047)*

*; OR significant at 95% CI; OR (95% CI), unadjusted odds ratio from simple logistic regression with accompanying 95% confidence interval; aOR adjusted odds ratio determined using multiple regression. –n2 log likelihood = 434.827; Cox & Snell R^2= 0.115; Nagelkerke R^2 = 0.154

4.10: Socio-demographic and selected characteristics predicting ever use of contraceptives

Table 9 shows that among the various age categories and with reference to the lowest age bracket 15-24 years, women in age bracket 25-49 were significantly associated with ever use of contraceptives (OR= 0.312, CI 0.159-0.611). However, after adjusting for other covariates (employment status, religious denomination, women who have ever been pregnant, family type, perceived affordability of contraceptives and factors promoting contraceptive use) there was no significance (aOR 0.753, CI 0.321-1.764). Women who have never been pregnant have higher odds of ever using contraceptives (OR=6.733 CI 3.811-11.896) as compared to women who have ever been pregnant. After adjusting for other independent variables, women who have never been pregnant have a higher odds of ever use of contraceptives as compared to women who have ever been pregnant (aOR 5.318, CI 2.832-9.985).

As compared to women who perceived contraceptives to be affordable, women who perceived contraceptives to be unaffordable had an association with increased odds of ever use of contraceptives (OR=4.341, CI 2.266-8.315) and after adjusting for other variables (age, educational level, employment status, Religious denomination, marital status, women who have ever been pregnant and family type), the association still remained significant (aOR=3.050, CI 1.464-6.357).

Table 10: Socio-demographic and selected characteristics predicting ever use of contraceptives

	Ever use of contraceptives	
Characteristics	**Unadjusted Odds ratio, OR (95% CI)**	**Adjusted Odds ratio, a aOR (95% CI)**
Age		
15-19	Ref	Ref
20-24	0.682 (0.356-1.306)	0.719 (0.339-1.523)
25-49	0.312 (0.159-0.611)*	0.753 (0.321-1.764)
Employment status		
Employed	Ref	
Unemployed	1.888 (0.983-3.627)	1.316 (0.612-2.830)
Religious denomination		
Christian	1.239 (0.136-11.311)	1.120 (0.104-12.091)
Muslim	1.020 (0.105-9.912)	0.757 (0.064-8.945)
Traditionalist	0.444 (0.039-5.011)	0.514 (0.038-6.935)
No religion	Ref	Ref
Women who have ever been pregnant		
Ever pregnant	Ref	Ref
Never pregnant	6.733 (3.811-11.896)*	5.318 (2.832-9.985)*
Family type		
Nuclear family	Ref	Ref
Extended family	0.665 (0.391-1.132)	0.715 (0.390-1.309)
Affordability of contraceptives		
Affordable	Ref	Ref
Not affordable	4.341 (2.266-8.315)*	3.050 (1.464-6.357)*
Factors promoting contraceptive use		
Method efficacy (Birth spacing)	1.509 (0,415-5.494)	1.433 (0.338-6.079)
Method efficacy (Limiting birth)	1.709 (0.422-8.187)	1.540 (0.316-7.502)
Method efficacy (Prevent unwanted pregnancy)	2.303 (0.648-8.187)	2.033 (0.495-8.352)
Method effectiveness	Ref	Ref

*; OR significant at 95% CI; OR (95% CI), unadjusted odds ratio from simple logistic regression with accompanying 95% confidence interval; aOR adjusted odds ratio determined using multiple regression. –n2 log likelihood = 297.949; Cox & Snell R^2= 0.171; Nagelkerke R^2 = 0.265.

4.11: Socio-demographic and selected characteristics predicting knowledge of contraceptives

Table 10 displays some associations between socio-demographic and selected characteristics predicting knowledge of contraceptives.

Using age bracket 15-19 years as reference, respondents in age category 20-24 and 25-49 had an increased odds of 1.8 and 1.7 respectively. Further analysis in multiple regression did not still find any association between age and knowledge of contraceptives (OR= 1.099; CI: 0.497- 2.432; OR= 1.102; CI: 0.464- 2.619).

Respondents who were not employed were 60% less likely to be knowledgeable on contraceptives as compared to those employed, though no associations were discovered (OR= 0.692; CI: 0.376- 1.276; OR= 0.964; CI: 0.453- 2.047).

Those who never had any education compared to all the other educational status categories were not associated with knowledge of contraceptives. Marital status as well as family type, women who have ever used contraceptives and women currently using contraceptives did not reveal any associations with knowledge of contraceptives as shown in table 10 below.

Table 11: Socio-demographic and selected characteristics predicting knowledge of use of contraceptives

	Knowledge of contraceptives	
Characteristics	**Unadjusted Odds ratio, OR (95% CI)**	**Adjusted Odds ratio, aOR (95% CI)**
Age		
15-19	Ref	
20-24	1.807 (0.910-3.588)	1.099 (0.497-2.432)
25-49	1.723 (0.909-3.267)	1.102 (0.464-2.619)
Level of education		
Primary	1.143 (0.359-3.660)	1.202 (0.358-4.038)
Middle	0.643 (0.085-4.889)	0.481 (0.052-4.470)
JHS	0.839 (0.285-2.470)	0.957 (0.276-3.321)
SHS	2.617 (0.895-7.646)	2.705 (0.772-9.474)
Tertiary	1.800 (0.593-5.461)	1.691 (0.458-6.242)
Never	Ref	Ref
Employment status		
Employed	Ref	Ref
Not employed	0.692 (0.376-1.276)	0.964 (0.453-2.047)
Religious denomination		
Christian	1.060 (0.116-9.706)	0.607 (0.053-6.944)
Muslim	0.750 (0.078-7.210)	0.486 (0.041-5.794)
Traditionalist	0.464 (0.047-4.565)	0.347 (0.028-4.278)
No religion	Ref	Ref
Marital status		
Married	0.806 (0.091-7.144)	0.493 (0.049-4.944)
Not married	0.635 (0.072-5.596)	0.362 (0.035-3.695)
Widowed	0.600 (0.053-6.795)	0.509 (0.040-6.426)
Divorced	Ref	Ref
Type of family		
Nuclear family	Ref	
Extended family	0.848 (0.509-1.410)	0.986 (0.568-1.711)
Ever use of contraception		
Ever used	Ref	
Never used	0.719 (0.399-1.296)	0.902 (0.399-2.037)
Current use of contraception		
Currently using	Ref	
Currently not using	0.272 (0.453-1.250)	0.805 (0.409-1.587)

*; OR significant at 95% CI; OR (95% CI), unadjusted odds ratio from simple logistic regression with accompanying 95% confidence interval; aOR adjusted odds ratio determined using multiple regression. –n2 log likelihood = 436.742; Cox & Snell R^2= 0.063; Nagelkerke R^2 = 0.085.

CHAPTER FIVE

5.0 DISCUSSION

The findings of the study are discussed in this chapter. The findings are situated in the context of existing literature.

This study sought to explore contraceptive use among women of reproductive age in Jirapa district by identifying some enablers and barriers. The study population comprised only of women aged between 15-49 years. More than three quarters (78%) of these women were below 30 years, this failed to mirror the population structure and age distribution of Ghana as indicated by (GSS et al., 2015) to be 52%. The increase in this study could be due to time interval between GDHS study and current study.

5.1 Knowledge on contraceptives

Knowledge of contraceptives is key in determining its use, therefore, every attempt to assess barriers to contraceptive use ought to consider existing knowledge (Sedgh et at., 2007). Low or no knowledge on contraception influences its use in one way or the other. Generally, global contraceptive knowledge is high. The USAID demographic and health survey declared contraception knowledge almost universal (Khan, Mishra, Arnold, & Abderrahim, 2007). This conforms to the findings of this study which realized that contraception knowledge was universal among respondents (100%). All women interviewed knew about at least one method of contraception putting the knowledge of at least one method of contraceptives at 100% in this study which is not so different from the 99% knowledge level on at least one contraception method determined in the (GSS et al., 2015). Knowledge on only one method of contraception is enough to make fertility choices/decisions. However, this high knowledge did not reflect in contraceptive use among respondents with 78.6% of respondents reporting ever use while only 57.4% were currently using contraceptives at the time of study. The Ghana Demographic and Health

Survey (2015) study similarly found that although there was high knowledge, current use of contraceptives was 23% among all women. This is in line with the conclusion that although knowledge on contraceptives improve use, it does not assure use because many have knowledge yet do not use (Cheng, 2011; Lamvu, Steiner, Condon, & Hartmann, 2006; Mekonnen, Enquselassie, Tesfaye, & Semahegn, 2014).

A study by Aryeetey et al. (2010) among women in greater Accra found that knowledge about contraceptives increases as level of education increases (Aryeetey et al., 2011). In this current study, knowledge was found to be associated with educational level in the bivariate analysis with p-value 0.021, however, it was not significant at multiple regression analysis.

5.2 Prevalence of contraceptive use

It was surprising to find that the high levels of knowledge on contraceptives (100%) did not reflect in its current use (57.4%). This is confirmed by a study findings that the high knowledge on contraceptives in developing countries do not always result to high usage (Sedgh et al., 2007). The study found the prevalence of current use of contraceptives to be 57.4% whiles that of ever use stood at 78.6%. This indicates that the prevalence of contraceptive use in this study is 57.4% which is different from the contraceptive prevalence rate (CPR) determined in the Ghana Demographic and Health Survey 2014 as 23% (Ghana Statistical Service, 2015). This could be due to the time interval between the two studies. Between 2014 when GDHS study was conducted and 2016 when current study was conducted, several interventions to educate people about contraceptives took place which could have promoted its use.. The observed rate in this study is also not so different from a study undertaken by Lauria et al., (2014) in Italy which found CPR to be 65%. The differences in CPR established in this study and that of Italy can partly be attributed to the family planning seeking behavior, where in Ghana, women still seek

family planning services secretly, not wanting people to know whereas in Italy, contraceptive use is discussed publicly

. This study discovered that among the methods used, injectable (44.3%), oral pill (24.4%) and implant (14%) were the methods mostly used. This again is comparable to the findings of GSS (2015) where injectable, oral pill and implant were the commonest methods used. Condom was the fourth highest (10%) method used by women in this study with periodic abstinence being 1.5%. In the study, withdrawal was 2% as compared to condom use being 10%, this is contrary to the findings that withdrawal method is used more than condom where GSS (2015) reported withdrawal as 3.2% and condom use as 2%.

It has been reported in a study in southern Ghana that, family planning services are accessed and used by women in secret. This is because their partners refused to consent to its use (Adongo et al., 2013). Marital status was found to be associated with current use of contraceptives (P-value, <0.001) however after controlling for a number of covariates no association was seen between them (OR=0.190, CI: 0.030-1.212: OR=0.411, CI 0.063-2.682). A study conducted in the US found that married women were more likely to use contraceptives with reasons of being able to take good care of their children than unmarried women (Parnell & National Research Council, 1989). Adanu et al. (2009) in their Accra population study found that women (both married and unmarried) who had more sexual partners were significantly more likely to use contraceptives than those with just one sexual partner. This was regardless of marital status but number of sexual partners (Adanu et al., 2009).

Women who have ever been pregnsant were found in the study to be significantly associated with current use of contraceptives with p-value <0.001. (OR=2.555, CI: 1.637-

3.988). It still remained significant after controlling for other variables (OR=1.862, CI: 1.070-3.239).

5.3 Barriers and enablers of contraceptive use.

Barriers, according to Shelton et al., (1992) are practices or reasons that deny people from accessing family planning services despite their wish for it (Shelton et al., 1992). Enablers are those that promote contraceptive use. Identifying Barriers and enablers was the main focus of this study. Barriers were obtained from questions regarding contraceptive current non-use and factors preventing other women from using it whiles enablers were discussed under reasons for current use of contraceptives and reasons why other women used it. In this study, it was revealed that 42.6% of the respondents in Jirapa district were currently non-users of contraceptives whiles 21.4% had never used any contraceptive method.

In this study findings, a regular trend observed was fear of side effects as a reason for not using contraceptives. 81.1% of all participants indicated side effects as a reason for non-use of contraceptives. (22% of current non-users and 59.1% of all participants). This supports a study in Malawi which showed that perceptions of side effects, such as prolonged menstruation, infertility and genital sores, weight gain or loss, and high blood pressure hindered contraceptives use (Chipeta et al., 2010). Information about side effects dictates contraceptive use (Sedgh & Hussain, 2014) although studies have shown that clients who received counseling on side effects were more likely to use contraceptives (Darroch & Singh, 2013; Darroch, 2013; Sedgh & Hussain, 2014). This also supports the findings of the 2014 Ghana Demographic and Health Survey which stated fear of side effects as a reason for contraceptive non-use (Ghana Statistical Service, 2015). It has similarly been stated that the fear of side effects or experienced side effects is a barrier to contraceptive use (Campbell et al., 2006).

The study realized that service provider attitude towards choice of method was a barriers although not a major one. It is backed by a study which discovered that service providers impede contraceptives use (Karavus et al., 2004). They introduce bias by dictating the method to be useful to clients either clearly or by implications is an attitude which also affects contraceptive use (Nalwadda, Mirembe, Byamugisha, & Faxelid, 2010).

Religious restrictions accounted for reasons for not using contraceptives as indicated by 13 (3.7%) of all respondents. The findings of this study confirms one that was done in Pakistan by Farid-ul-Hasnain, Johansson, Gulzar, & Krantz, 2013; Sahu & Hutter, (2012), where it was stated that religion is an important influence on the knowledge and use of contraceptives. In a contrasting view, a study conducted in Ghana showed that religion did not affect contraceptive use (Tawiiah, 1997; Adanu et al., 2009). Also, Doctor et al. (2009) found that switching from traditional to the Christian or Islamic faith in the Kassena-Nankana area of Upper East region of Ghana was significantly associated with increased contraceptive use and decreased fertility (Doctor et al., 2009) which may be because of the findings of a study done in Ghana which stated that there is fear of ancestral punishment with the use of contraceptives and for the fear of death, women do not use it even if they need it (Bawah et al., 1999).

Almost 50% of these current users used it with the reason to prevent unwanted pregnancy. This is similar to the findings by Mon & Liabsuetrakul, (2012) which had an association with of exposure to unintended pregnancy with contraceptive use. These findings contradicts another study which revealed that perceptions about susceptibility to unintended pregnancy did not translate in contraceptive use. (Rahman, Berenson, & Herrera, 3013). These observed differences could be due to identified barriers facing partners including fear of side effects as stated by many in this study. The reasons of using contraceptive to prevent unwanted pregnancy supports the study which said that use of

contraceptives reduces economic burden by reducing unintended pregnancies (Parnell & National Research council, 1989) . Majority of current users (39%) indicated birth spacing as a reason for use whiles 14% used it to limit birth. This finding agrees to that of GDHS (2008) which says that the primary use of contraceptive is limiting and spacing of birth.

5.4 Limitations of the study

In this study, cross-sectional design was used which is not very appropriate to establish a causal relationship between contraceptive use and demographic characteristics. The study findings are established from one district making it challenging to generalize the findings to all women of reproductive age in the region and in Ghana. Also, the quantitative method that was used in the study did not allow the researcher to collect in-depth information from respondents.

CHAPTER SIX

6.0 Conclusions

The objectives of this study were to assess the knowledge of contraceptives among women of reproductive age. to determine the prevalence of contraceptive use among women of reproductive age and identify factors serving as enablers and barriers to contraceptive use.

In connection with objective one, knowledge on contraceptives was universal with all women knowing of at least one method of contraception. Association between knowledge and educational level was found to have a (p-value 0.021), however, at multiple regression socio-demographic characteristics could not predict contraceptive knowledge. The study found that the major sources of information about contraceptives was from health care providers, friends and mass media.

Regarding objective two, use of contraceptive was prevalent in more of the study population. Close to 80% had ever used contraceptives while 57% women were currently using contraceptives at the time the study was conducted. Use of injectable (44.3%) and oral pill (24.4%) were the commonest used among participants. Women who lived in extended family system were 40% less likely to use contraceptives as compared to those who lived in nuclear family system, however, after adjusting for other independent variables, it was found not to be significant.

The leading barrier to contraceptive use was fear of side effects whiles the primary enabler of use is the fact that contraceptives are affordable.

6.1 Recommendations

Based on the findings of this study, it is important that different approaches be used to improve contraceptive use among women of reproductive age. The following recommendations are suggested.

6.1.1 Practice

1. Fear of side effects was a major barrier identified in the study. Messages should be developed and disseminated to women by the District Health Directorate to reduce the level of fear about contraceptive use.
2. The District Health Directorate should conduct surveys periodically to identify some attitudes of service providers which discourage women from accessing contraceptives. This would help address negative provider attitude and increase the prevalence of the use of contraceptives.

6.1.2 Policies

1. Health care providers, friends and mass media are the major sources from which awareness on contraceptives is obtained, therefore, the Ghana Health Service (GHS) should have a policy on how to reach out to people with in-depth knowledge on the benefits of contraceptive use and barriers to contraceptive use through these groups.
2. The only district hospital in Jirapa do not render family planning services because it is owned by the Catholic Church. Government should set up a policy to include family planning as part of services rendered in Catholic health facilities

6.1.3 Research

1. Further research on contraceptive use should be conducted extensively and should involve a larger sample size so as to make it possible to generalize findings to all women of reproductive age.
2. Due to the fact that this research was not qualitative, further research using qualitative method should be conducted to further ascertain reasons accounting for use and non-use of contraceptives among women of reproductive age.

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APPENDICES

APPENDIX A: CONSENT FORM

INTRODUCTION AND CONSENT

PROJECT TITLE: CONTRACEPTIVE USE AMONG WOMEN OF REPRODUCTIVE AGE IN JIRAPA DISTRICT.

Institutional Affiliation:

School of Public Health, College of Health Sciences. University of Ghana, Legon.

Tel. 0247646723

Background

Personal Introduction:

Hello. My name is Deri Mathilda. I am a student of University of Ghana, Legon. I am conducting a research on Contraceptive use among women of reproductive age in Jirapa district. This study is for academic purposes and a requirement for the award of Master of Public Health Degree. It is supervised by Dr. Amos Laar of School of Public Health, University of Ghana, Legon. The questions usually take about 15 to 20 minutes. All of the answers you give will be confidential and will not be shared with anyone. You don't have to be interviewed in this research, but we hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time.

In case you need more information about the survey, you may contact the numbers of the lead investigator or the supervisor given.

Do you have any questions? Yes/No

May I begin the interview? Yes/No

SIGNATURE OF INTERVIEWER:…….. DATE:……..

RESPONDENT AGREES TO BE INTERVIWED. ……

RESPONDENT DOES NOT AGREE TO BE INTERVIWED. ……..

If volunteers cannot read the form themselves, a witness must sign here:

I was present while the details were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

Name of witness:……..

Signature/thumbprint……..

Date……

APPENDIX B: QUESTIONNAIRE

QUESTIONNAIRE ON CONTRACEPTIVE USE AMONG WOMEN OF REPRODUCTIVE AGE IN JIRAPA.

Form No.

Instructions to the interviewer:

1. Circle or tick the response or write in the space provided.

2. Be keen to follow the skip patterns.

3. Countercheck to ensure all the relevant questions are completed.

SECTION 1: SOCIO-DEMOGRAPHIC CHARACTERISTICS

1. How old were you on your last birthday……..
2. What is the highest level of school you attended?
   (1) Primary (2) middle, (3) JSS/JHS, (4) secondary, (5) SSS/SHS, or higher

3. What is your current employment status?
   (1) Employed (2) Not employed
4. What is your religion?
   (1) Christian (2) Muslim (3) Traditionalist (4) No religion
5. What is your current marital status?
   (1) Married (2) Not married (3) Widowed (4) Divorced (5) Cohabiting

Now I would like to ask about all the births and pregnancies you have had during your life.

6. Have you ever been pregnant?

   (1) Yes (2) No

If no, ask question 11

7. How many pregnancies have you had in your lifetime? (Include miscarriages, abortions and stillbirth)……
8. How many births have you had? (Both living and dead)……..
9. When you got pregnant, did you want to get pregnant at that time?
   (1) Yes (2) No
10. Are you currently pregnant?
    (1) Yes (2) No (3) Not sure
11. What type of family do you live in?
    (1) Nuclear family (2) Extended family
12. What is the main source of drinking water for members of your household?
    (1) Piped water (2) Tube well or borehole (3) Dug well (4) Water from spring/river
    (5) Rainwater (6) Bottled water (7) Sachet water (8) Other……

13. Where is that water source located?

(1) In own dwelling (2) In own yard/plot (3) Elsewhere

14. How long does it take to go there, get water, and come back?

(1) Minutes / Hours . . . . . (2) Don't know

15. Do you do anything to the water to make it safer to drink?

(1) Yes (2) No (3) Don't know

16. What do you usually do to make the water safer to drink?
    (1) Boil (2) Add bleach/chlorine/alum (3) Strain through a cloth (4) Use water filter ceramic/ (5) Sand/composite/etc.) (6) Solar disinfection (7) Let it stand and settle
    (8) Camphor/ naphthalene (9) Purification tablet (10) Nothing

17. How does your household store drinking water?
    (1) Plastic container/bucket (2) Pot/earthenware vessel (3) Metal container (4) Bottle/sachet (5) Other (specify)

18. Does your household have?

1. Electricity?
2. A wall clock?
3. A radio?
4. Television?
5. Telephone?
6. A refrigerator?
7. Generator/Invertor?
8. Washing machine?
9. Computer/Tablet computer?
10. Photo camera? (NOT ON PHONE)
11. Video deck/DVD/VCD?
12. Sewing machine?
13. Bed?
14. Table?
15. Cabinet/cupboard?
16. Internet access?

19 Main material of the floor. Record observation.

1. Natural floor
2. Earth/sand
3. Dung
4. Rudimentary floor
5. Wood planks
6. Finished floor
7. Parquet or polished
8. Wood
9. Vinyl or asphalt strips
10. Ceramic/marble/porcelain
11. Tiles/terrazzo
12. Cement
13. Woolen carpet/synthetic
14. Linoleum/rubber carpet
15. Other (specify)……

20 Main material of the roof. Record observation.

1. Natural roofing
2. Thatch/palm leaf
3. Rudimentary roofing
4. Rustic mat

5. Palm/bamboo
6. Wood planks
7. Cardboard
8. Finished roofing
9. Metal
10. Wood
11. Calamine/cement
12. Ceramic/brick tiles
13. Roofing shingles
14. Asbestos/slate
15. Roofing sheets
16. Other (SPECIFY)

21 Main material of the exterior walls. Record observation.

1. Natural walls
2. Cane/palm/trunks
3. Dirt/land Crete
4. Rudimentary walls
5. Bamboo with mud
6. Stone with mud
7. Plywood
8. Cardboard
9. Reused wood
10. Finished walls
11. Stone with lime/cement
12. Bricks
13. Wood planks/shingles
14. Other (SPECIFY)

22. Does this household own any livestock, herds, other farm Animals, or poultry?

(1) Yes (2) No

23. How many of the following animals? Does this household own?

	Mark here
1. Cattle	
2. Milk cows or bulls	
3. Horses, Donkeys, or mules	
4. Goats	
5. Pigs	

6. Rabbits	
7. Grass cutters	
8. Sheep	
9. Chickens	
10. Other poultry	
11. Others	

SECTION 2: CONTRACEPTION KNOWLEDGE AND PREVALENCE

FOR EACH METHOD KNOWN ASK QUESTION IN COL.3

24	Col 1.	Col 2.	Col 3
	Have you ever heard of (METHOD)?	**Knowledge of Method**	**Knowledge of Source**
A.	Pill Women can take a pill every day	Yes (spont.) 1 Yes (prompted) 2 No 3	**A1.** "Do you know any place or person where people could obtain this method? Yes 1 No 2
B.	Injection Women can have an injection every 2 or every 3 months	Yes (spont.) 1 Yes (prompted) 2 No 3	**B1.** "Do you know any place or person where people could obtain this method? Yes 1 No 2
C.	Condom A man can put a rubber device on his penis before intercourse	Yes (prompted) 1 No 2	**C1.** "Do you know any place or person where people could obtain this method? Yes 1 No 2
D.	Emergency Contraceptive Pills A woman can take pills soon after intercourse	Yes 1 No 2	**D1.** "Do you know any place or person where people could obtain this method? Yes 1 No 2
E.	Withdrawal A man can pull out of a woman before climax	Yes (prompted) 1 No 2	**E1.** "Do you know any place or person where people could obtain this method? Yes 1 No 2
F.	Periodic Abstinence/Rhythm A couple can avoid sex on days when pregnancy is most likely	Yes (spont.) 1 No 2	**F1.** "Do you know any place or person where people could obtain this method?

	to occur.		Yes 1 No 2
25	There are other methods of contraception that I have not mentioned. What other methods have you heard of? CIRCLE EACH METHOD MENTIONED.	IUD 1 Implant 2 Jelly/foam 3 Female Sterilization 4 Male Sterilization 5 Other (SPECIFY)…… …….. 6	**25A**. "Do you know any place or person where people could obtain this method? Yes 1 No 2
26	Who informed you about the method (s)?	Friend 1 Relative (specify) 2 Neighbour 3 Health worker 4 Mass media (TV, Radio) 5 Internet 6 Other…… …7	
27	Which method do you think is most suitable? CIRCLE ONE ANSWER	Pill 1 Injection 2 Condom 3 Emergency Pill 4 Withdrawal 5 Periodic Abstinence 6 Other…… …7	

28. Have you used a family planning method before?

(1) Yes (2) No””

29. If Yes, Which family planning method have you ever used? **CIRCLE ALL THAT APPLY**

(1) Oral pill (2) Emergency pill (3) Condom (4) IUD (5) Implant (6) Injectable (7) Sterilization/permanent (8) Female Sterilization (9) Male Sterilization (10) Rhythm/Calendar Method (11) Withdrawal. (12) Emergency Contraception (13) Others (specify) (14) Don't know

30. When was the last time you used it?

(1) Less than 24 hours (2) Less than1 week (3) Less than 1 month (4) Less than 1 year (5) More than 1 year.

31. Are you currently using any Family Planning method or doing something to delay or avoid getting pregnant? **If No, skip to question 38**

(2) Yes (2) No

32. Which method are you currently using?

1. Oral pill (2) Emergency contraceptive (3)Condom (4) IUD (5) Implant (6) Injectable (7) Sterilization/permanent (8) Female sterility (9) Male sterility (10) Rhythm/Calendar Method (11) Withdrawal (12) Others (Specify)

33. Where did you obtain the method from?

1. Public Hospital/clinic
2. Fieldworker/outreach/
3. Private hospital/clinic
4. Pharmacy /chemical store
5. Peer Educator
6. Other (specify)

34. What are you using your preferred method to achieve?

1. Birth spacing
2. Limiting birth
3. prevent unwanted pregnancy
4. Others (Specify)

35. Were you ever told by a health or family planning worker about side effects or problems you might have with the method?

(3) Yes (2) No

(4) Yes (2) No

37. For how long have you been using (CURRENT METHOD) now without stopping?

(5) Month (2) Year (3) Some few weeks

38. If No to question 31, why?

(1) To plan pregnancy (2) Not sexually active (3) Side effects (4) Opposition from husband (5) Financial problem (6) Child is still breastfeeding (7) Lack of knowledge (8) Religious restrictions (9) Lack of access (10) Others (Specify)

SECTION 3: FACTORS SERVING AS ENABLERS OR BARRIERS TO CONTRACEPTIVE USE.

39. Do you think Family Planning products and services are affordable in Gov't health facilities in this community?

a. Yes (2) No

40. Are your preferred methods always available at the health facility?

a. Yes (2) No

41. Do FP service providers usually tell you the side effects or problem you may encounter with your method of choice?

    a. Yes (2) No

42. Do they usually tell you what to do if you experience side effect or difficulty?

    (1)Yes (2) No

43. Do service providers ask you to do laboratory test or any other test/examination that you are not comfortable with?

    a. Yes (2) No

44. Do service providers request you to bring your husband before you obtain your preferred method?

    a. Yes (2) No

45. How would you rate the way your privacy was respected by the provider during your visit? (1) Very satisfactory (2) Satisfactory (3) Fairly satisfactory (4) Not satisfactory.

46. How would you describe the attitude of the provider?

    (1) Friendly (2) Respectfully (3) Disrespectfully (4) Hostile (5) Indifference

47. How would you rate the amount of time you waited before being attended to?

    a. Very Good (2) Good (3) Fair (4) Poor

48. How would rate your experiences of getting enough time to ask questions about the use of contraceptives?

    a. Very Good (2) Good (3) Fair (4) Poor

49. How would you rate your experiences of being involved in making a choice of preferred method?

a. Very Good (2) Good (3) Fair (4) Poor

50. How would you rate the way your personal information was kept confidential?

a. Very Good (2) Good (3) Fair (4) Poor

Do you feel that you were treated badly by the health care provider because of your?

51. Age ……..(1) Yes (2) No

52. Social class……(1) Yes (2) No

53. In general, would you say you are?

a. Not satisfied (2) Somewhat satisfied (3) Satisfied (4) Very satisfied

54. In general how would you rate the quality of service you receive any time you visit the family planning facility?

a. Very Good (2) Good (3) Fair (4) Poor

55. Would you want to ever go for the family planning in same facility again?

(1) Yes (2) No

56. Do you discuss family planning issues with your friends?

(1) Yes (2) No

57. Do they encourage discourage its use?

(1) Encourage (2) Discourage

58. Do you discuss family planning issues with your family members?

(1) Yes (2) No

59. Would you say that using contraception is mainly your decision, mainly your (husband's/partner's) decision, or did you both decide together?

(1) ..... Mainly respondent (2) Mainly husband/partner (3) Joint decision (4) Other (specify)

60. ..... Does your (husband/partner) want the same number of children that you want, or does he want more or fewer than you want?
(1) ..... Same number (2) More children (3) Fewer children (4) Don't know

61. Do family members encourage the use of Family Planning methods?

(1) Yes (2) No

62. Which

(1) Sister (2) Brothers (3) Mother (4) Father (5) Mother in-law (6) Sister In-law (7) others.

63. What are some of the factors that prevent you and other women from accessing family planning service?

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64. Which factors motivate you and other women to use family planning methods?

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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.

Research & Development Division
Ghana Health Service
P. O. Box MB 190
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Email: Hannah. Frimpong@ghsmail.org

3rd February, 2016

Mathilda Deri
University of Ghana
School of Public Health
Legon, Accra

ETHICS APPROVAL - ID NO: GHS-ERC: 40/12/15

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

"Contraceptive Use among Women of Reproductive Age in Jaripa District of the Upper West Region of Ghana"

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