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**FACTORS INFLUENCING UPTAKE OF MODERN CONTRACEPTIVES AMONG
ADOLESCENTS IN YENDI MUNICIPALITY, NORTHERN GHANA.**

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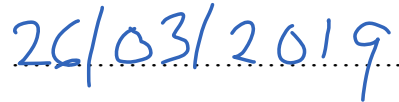
DECLARATION

I, Nyewie Martha hereby declare that except for published documents and unpublished which have been duly acknowledged, this dissertation is my own work put together as a result of an independent effort under the supervision of Professor Richard Adanu of the School of Public Health, University of Ghana, Legon.



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DEDICATION

I dedicate this work to my three beloved children named Hubert Zuvella, Miguel Yangkang and Michelle Songnumo.

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ABSTRACT

The use of modern contraceptives is still a challenge in many low income countries like Ghana. Amidst the low level of uptake of contraceptive use and increasing teenage pregnancies in the Northern region of Ghana, few studies have addressed the reasons why adolescents refuse to use modern contraceptive and go ahead to engage in unsafe sex.

A cross-sectional study design was used. Well-structured close and open ended questionnaire was used to collect data on proportion of adolescents (10-19 years) using modern contraceptive, knowledge of adolescents on modern contraceptives and factors that influence contraceptive use among adolescents. Descriptive, bivariate and logistic analytic technique was used to analyze data collected.

Results obtained from the field indicates that 93% of the respondents confirmed to have heard of modern contraceptives before. Nonetheless, modern contraceptive uptake among adolescents is low (36.3%) for the 38% of participants who were found to be sexually active. Among contraceptive users, 70.9% were using condoms and some 17.5% confirmed to be using long term methods like injectable.

Socio-demographic factors that were significantly associated with modern contraceptive use included religion and culture. Other factors such as health worker attitude, structural arrangement, privacy and confidentiality were also significantly associated with modern contraceptive use. Based on the study findings it is recommended that, both GES and GHS should intensify adolescent sexual and reproductive health education. Also GHS should educate healthcare providers on how to ensure privacy and confidentiality in serving adolescents who seek for sexual and reproductive health.

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LIST OF ABBREVIATIONS

WHO	World Health Organisation
UNESCO	United Nations Educational, scientific and cultural Organisation
UNFPA	United Nations Populations Fund
LMIC	Low Middle Income Countries
NGO	Non-governmental Organisation
UNFPA	United Nations Populations Fund
IPPF	International Planned Parenthood Federation
GSS	Ghana Statistical Service
GDHS	Ghana Demographic and Health Survey
IUD	Intrauterine device
ICPD	International Conference on Population and Development
MDGs	Millennium Development Goals
SDGs	Sustainable Development Goals
USA	United State of America
HIV	Human immunodeficiency virus
GWU	George Washington University
STIs	Sexually transmitted infections

IUCD	Intrauterine contraceptive device
COC	Combined Oral Contraceptive
LAM	lactation amenorrhoea method
GDHS	Ghana Demographic and Health Survey
TFR	Total Fertility Rate
GFR	General Fertility Rate
CHPS	Community Health and Planning Services

CHAPTER ONE

INTRODUCTION

1.1 Background

The increasing population growth in the globe is more pronounced in Sub-Saharan and Asian countries where hunger and poverty is high especially, for those living in the rural settings. It is also notable that the rate of depletion of resources available in African and Asian sub-regions tends to overweigh the rate of their renewal and replacements; this has posed a threat to many actors of development across the sub-regions.

Gaetano et al. (2014) stressed that one way of addressing the situation is for countries to cut down their population growth to ensure that limited resources could serve the population. The writers mentioned the use of various contraception methods as the means of achieving this goal. The use of modern contraceptives like the male and female condom not only impedes population growth, but also contributes to the reduction of HIV and other STIs.

In view of this, adolescent knowledge and patronage of available modern contraceptives is key to solving the persistent problems of unplanned pregnancy and increase in family sizes. Reports from a multinational survey conducted in four Sub-Saharan African countries namely: Ghana, Burkina Faso, Uganda and Malawi proved low uptake of modern contraceptive services and HIV test for adolescents aged 12-19 years. Shame and fear coupled with unfriendly cultural belief systems towards modern contraceptive methods was found as some of the reasons accounting for the situation (Gaetano, et al., 2014).

Developing stronger positive mindset and confidentiality among teenagers together with the availability of health services and contraception methods can avert the situation of poor use of

modern contraception services dramatically in Sub-Saharan African regions. Therefore there is the need to get the youth more informed about access to modern contraceptive methods, and also do away with societal challenges like embarrassment for people to confidently request for contraceptive and HIV test services (Biddlecom, et al., 2007).

Governments in Ghana and other African countries have designed programs to facilitate access of modern contraceptives for decades, which may lead to increased awareness of the youth on some of the modern contraceptive methods. Nevertheless, there still exists a huge gap in the uptake of these methods by the youth who are continually engaging in sexual activities (Biddlecom, et al., 2007). This study aims at identifying the major reasons for the unmet needs for adolescents aged 10-19 years on the use of modern contraceptives.

Adolescents are said to be persons between the ages of 10 and 19 years (WHO, 2016). Emefa (2015) wrote that adolescents are naturally curious and go through some physical, biological and mental transformation; the urge to have sex begins to develop at this age and teenagers may engage in sex. This therefore makes adolescent sexual behaviour and reproductive health a topmost priority of policy makers around the world (Hindin, Christiansen, & Ferguson, 2013; UNESCO & UNFPA, 2001).

It is therefore necessary to highlight the factors that contribute to the low uptake of modern contraceptives for the appropriate recommendations of reducing early parenthood, unsafe abortions, morbidity and death.

Acceptance and use of available family planning methods is evidenced to preventing unwanted pregnancies, reduce abortions and STI, and preventing maternal and child death, therefore playing a cardinal role to attaining Sustainable Development Goal 3. Ghana remains one of the

countries struggling with teenage pregnancies, unsafe abortions, low contraceptive use, early parenthood and low level of formal education among the youth (Konlan et al., 2017).

Nimo and Esinam (2013) reviewed a report compiled by the World Health Organization on the assessment of the reproductive needs of populations from different countries including Sub-Saharan countries, authors found that there were difference between awareness and uptake of modern contraception, unplanned pregnancies and abortions continued to be high among females especially those living in low income areas due to: low level of understanding of the various contraceptive methods among young females and socio-cultural rebuff to the use of modern contraceptives.

The authors confirmed unplanned pregnancy as a threat to reproductive health among adolescents and the youth in general. They however pointed out the adoption of modern contraceptive methods as a means of reducing unintended pregnancies, abortions and sexually transmitted diseases given the rise in adolescent sexual activities and the reduction of first sex age for many young girls (Nimo & Esinam, 2013).

Methods of contraception are basically kept under two categories i.e. modern and traditional methods. Male and female condoms, injectable, pill, spermicide, intrauterine device, Norplant and male and female sterilization are the modern methods. The traditional ones are calendar or rhythm method. Moreover, continual breastfeeding also have the tendency to delay pregnancy after delivery (Nimo & Esinam, 2013).

If users of common contraceptives agree to complement their uptake of contraceptives with long term modern contraceptive types like implants, IUD, hormonal methods and injections, there would be a drastic reduction in young girls and women who become vulnerable to unwanted pregnancies and abortions.

According to Nimo and Esinam (2013), suggested planning and decision to use a particular contraception as the first stage to contraceptive uptake, however converting the idea of using to using the contraceptive method is the ultimate target. The authors upon their review of series of WHO reports on reproductive health indicated that, about eleven percent of women in the United States who were not ready to give birth engaged in sexual activities without the use of any of the contraceptive methods being it modern or traditional approach. Some were unwilling to use contraceptive methods while others may have acknowledged the benefits of modern contraceptives but had not put their decisions into practice (Nimo & Esinam, 2013).

Considering the increasing fertility rate in Ghana and the limited information to barriers of modern contraceptive use mostly among adolescents, this study seeks to provide empirical data on the proportion of contraceptive use among adolescents aged 10-19 years in the Yendi Municipality, assess the knowledge of the adolescents on modern contraceptive methods and also find out the most influential factors contributing to the uptake of modern contraceptives.

The findings of the work would provide data on the prevalence of modern contraceptive use among the target population and provide evidence to the factors that affect the use of contraceptives to serve as insight for policy makers, health services and professionals together with NGOs in the design of programs to curbing teenage pregnancy, early parenthood, unsafe abortions and the spread of sexually transmitted infections.

Sexual debut for both males and females in Sub-Saharan African countries including Ghana has been tagged at fifteen years of age, with teenagers engaging in casual sex without using any contraceptive method due to their lack of knowledge about the various methods of contraception available to them.

They end up getting pregnant or affected by STIs at the early stage of their lives (Konlan et al., 2017). Idele et al. (2014) added that over 80% of the 2.1 million HIV/AIDS positive adolescents worldwide were coming from Sub-Saharan African countries where there is low adolescent education on modern contraceptives, early sex and low utilization of modern contraceptives.

Hagan & Buxton (2012) as cited in Konlan et al. (2017) underlined adolescent reproductive health and teenage pregnancy as a matter requiring immediate public health attention because it is linked to maternal and infant mortality together with other fetal birth outcomes. However, we must be specific in providing adolescent reproductive healthcare and education, since couples and unmarried adolescents tend to hold different views to pregnancy, childbearing and sexually transmitted infections (Asampong, et al., 2013).

Furthermore, Konlan and his coauthors identified school dropout as one of the major problems that early mothers face aside contracting diseases through sex; In Sub-Saharan Africa young parents are usually economically incapable to take care of themselves and their wards making life difficult. The situation of teenage parenthood within the sub-region is worsened with the decreasing age of menstruation and the early onset of sex notably among adolescent girls (Konlan et al., 2017).

The 2014 Ghana National Demographic and Health Survey showed that among adolescents aged 15-19, 73.6% of girls and 96.2% of boys had been involved in sexual activities at least once; with 19.4% still in sexually active relationships. Usage of contraceptives however among these adolescents was rather on the low side, as most of these sexually active adolescents were not on any form of contraceptives with most of these adolescents having very little information on the various modern methods.

Print, electronic and social media has been the main source of knowledge for most unmarried teenagers on contraceptives (Lynn, 2016). Misconceptions with regards to the use of contraception can lead to limitations in its use. This can lead to low patronage of available contraceptives among adolescents (Mun`o, et al., 2010).

In 2015, 64 per cent of women of reproductive age including adolescents worldwide were using some form of contraception, with developed nations reporting high patronage of contraceptives among adolescents compared to developing nations. For example, while countries from North America reported an average of 75% of contraceptive use among adolescents, most African countries on the average reported 33% contraceptive uptake among adolescents (UN, 2015).

Important regional differences exist; for example, births to adolescents as a percentage of all births range from approximately 2% in China, to 18% in Latin America and the Caribbean, to more than 50% in Sub-Saharan Africa. Pregnancy among very young mothers is a significant problem; in LMICs, almost 10% of girls become mothers by age 16, with the highest rates in Sub-Saharan Africa and South Central and Southeast Asia.

Pregnancies among unmarried adolescent mothers are more likely to be unintended and end in induced abortion with negative consequences (Morris & Rushwan, 2015). Compounding all the problems associated with the early experience of first sexual intercourse before marriage is the low level of contraceptive use amongst adolescents. Among women aged 15–24 surveyed in Latin America and the Caribbean, the levels of contraceptive use at first intercourse ranged from 4% in Quito to 43% in Jamaica. For men 15–24, the corresponding percentages ranged from 14% in Quito to 31% in Mexico City (Harper, 1988; WHO, 2004).

In Ghana, among unmarried sexually active female/adolescents, 45 percent are currently using a contraceptive method which is low (Ghana Statistical Service, 2014).

According to Yidana et al. (2015), Northern region of Ghana has the highest total fertility rate of 6.8 children per woman, and the contribution of adolescents to these rates cannot be overlooked. If young people continue to experiment with sex and yet fail to use contraceptives, the likelihood of many of them becoming pregnant is very high. Such pregnancies may end up with unsafe abortions or teenage childbearing.

Also, Anarwat in 2003 observed that, NGOs do a lot to contribute to sexual health education in Ghana; however, there is the need to treat issues of contraceptive use and prevention of STIs comprehensively, in order to highlight the low patronage of modern contraceptives in contrast to the improved numbers in the awareness of contraceptives among adolescent boys and girls.

Over the years, several studies have looked at the increasing rate of adolescents engagement in sexual activities coupled with their low level of contraception uptake in Sub-Saharan Africa and across the globe, the situation looks more threatening to the health of young ones who are believed to be nation builders and leaders of their communities and countries in the future, as teenage parenthood continue to be on the rise within low socio-economic parts of Ghana and Africa, young girls easily lose their lives through unsafe abortions, while sexually transmitted disease is also on the increase, all these problems has a link with the increased level of unmet need of adolescents to contraceptive usage (Adadow, 2015).

While knowledge and awareness about sexual and reproductive health are almost universal, Africa continues to record high rates of abortions, teenage pregnancies, sexually transmitted infections and other sexual related problems among adolescents. As a result of this, only a few young people receive adequate preparation for their sexual lives as there continue to be limited opportunities for communication about sex outside of the peer educational setting and poor adult role models of sexual relationships (Campbell & MacPhail, 2002). This research examines

factors associated with the use of contraceptives among adolescent males and females in the Yendi Municipality of Northern Region.

1.2 Problem Statement

Adolescent sexual and reproductive health is paramount to healthy living, and because adolescents' health is of much importance, it has forced many countries across the world to put in place National Adolescent Sexual and Reproductive Health policies and Programmes to give integrated and total health services for young people (10-24yrs) (UNFPA, 2016).

The report further stated that the 2030 Agenda for the Sustainable Development Goals' projected contraceptive use among women at reproductive age of which the adolescents are inclusive, and that the unmet need for family planning is still projected to remain high in 2030, above 20 per cent in all these regions, except in Eastern Africa.

Also, among married adolescents who do not intend getting pregnant, 54% currently use some form of modern contraception in Latin America and the Caribbean as compared to their counterparts whose percentage is low as 32% in South Central and South East Asia, with Sub-Saharan Africa scoring the lowest as 21% (International Planned Parenthood Federation (IPPF), 2010). It is however stressed that unintended pregnancies could be minimized if only adolescents use modern contraceptives instead of traditional or no method at all.

Morris and Rushwan, (2015) in their study showed that low uptake of modern contraceptives results in sixteen million girls aged 15–19 giving birth each year, which represents approximately 11% of all births worldwide with 95% of these births occurring in Low Middle Income Countries (LMICs). This same study further revealed that pregnancies among unmarried adolescent mothers are more likely to be unintended and end in induced abortion with its negative consequences.

In Ghana and some parts of developing countries, adolescents are noted to have special sexual and reproductive health needs. As a result many are often exposed to inaccurate or incomplete information. It has been observed that many adolescents in recent times engage in unsafe sex, leading to high rate of unplanned pregnancies. Situations of this nature call for contraceptive use among adolescence to be given special attention. Another important dimension is that adolescents between 10-19 years have been noted to be sexually active yet; they rarely use contraceptives due to negative societal attitudes. (Adadow, et al. 2015).

The Ghana Demographic and Health Survey (GDHS) report indicated that, among adolescents who become parents before age 20 years, the average age at which Ghanaian adolescent girls have their first baby is 17.2 years, while the average age at which adolescent boys first become fathers is 18.4 years (GDHS, 2014).

The low interest to use or adopt any of the modern contraceptives makes young people susceptible to contracting infections and getting pregnant. With a descriptive approach, this study will provide some realistic reasons why adolescents aged 10-19 years in the Yendi Municipality refuse to use contraceptive methods, but yet engaged in sexual activity.

According to GDHS, 2014 analyses, 89.9% of unmarried, sexually active adolescent girls report not wanting a child in the next two years, yet only 27.5% of them are currently using any method to prevent pregnancy. The main reasons these adolescents report for not using a contraceptive method included: Not married (17.1%); Infrequent sex (22.7%); Fear of side-effects or health concerns (37.4%).

Among all unmarried, sexually active adolescent girls aged 15–19 in the country, 66.4% are not using a method of contraception. Male condoms and injectable contraceptives are the most common modern methods used i.e. 10.4% and 5.4% of these adolescent girls, respectively.

Implants and IUDs, which are considered to be among the most effective methods, are used by just 3.4% and 0.8%, respectively.

Withdrawal and abstinence, traditional methods, are used by 9.0% of these adolescent girls. This provides the evidence that the problem of misunderstanding and ignorance of adolescents concerning the use of contraceptives is serious nationwide. Additionally, the situation of contraceptive uptake isn't good enough in most countries across the Sub-Saharan Africa regions. (Ghana Demographic and Health Survey, 2014)

According to Emefa (2015) early sexual intercourse continues to increase considerably among adolescents in Ghana even before they complete Senior High School. They do this irrespective of their religion, parents' economic status and type of school they attend. In-school adolescents are found to obtain sexual information mainly from their teachers because they believe that their teachers are more knowledgeable. However, regardless of the knowledge acquired, some in-school adolescents' still engaged in an early sex as information from their friends influence their decision to engage in an early sexual intercourse.

A report from the Family Health Division of the Ghana Health Service revealed a continuous percentage increase of teenage pregnancy. The teenage pregnancy rose from 12.4 in 2009 to 13.3 in 2013. Abortions among adolescents were also observed to be high as there were 603 adolescent abortions among 10 – 14 year olds in 2012 and 574 in 2013. Adolescents of 15 – 19 years gave a record of 8,424 abortions in 2012 and 8,675 in 2013 (GHS, 2013).

This study will be conducted in five selected communities namely Kuga, Nayilifong, Balogu, Zohe and Kumlanfong all in the Yendi municipality, but adolescents within other communities in the Municipality share similar characteristics to adolescents all over the Northern region of the

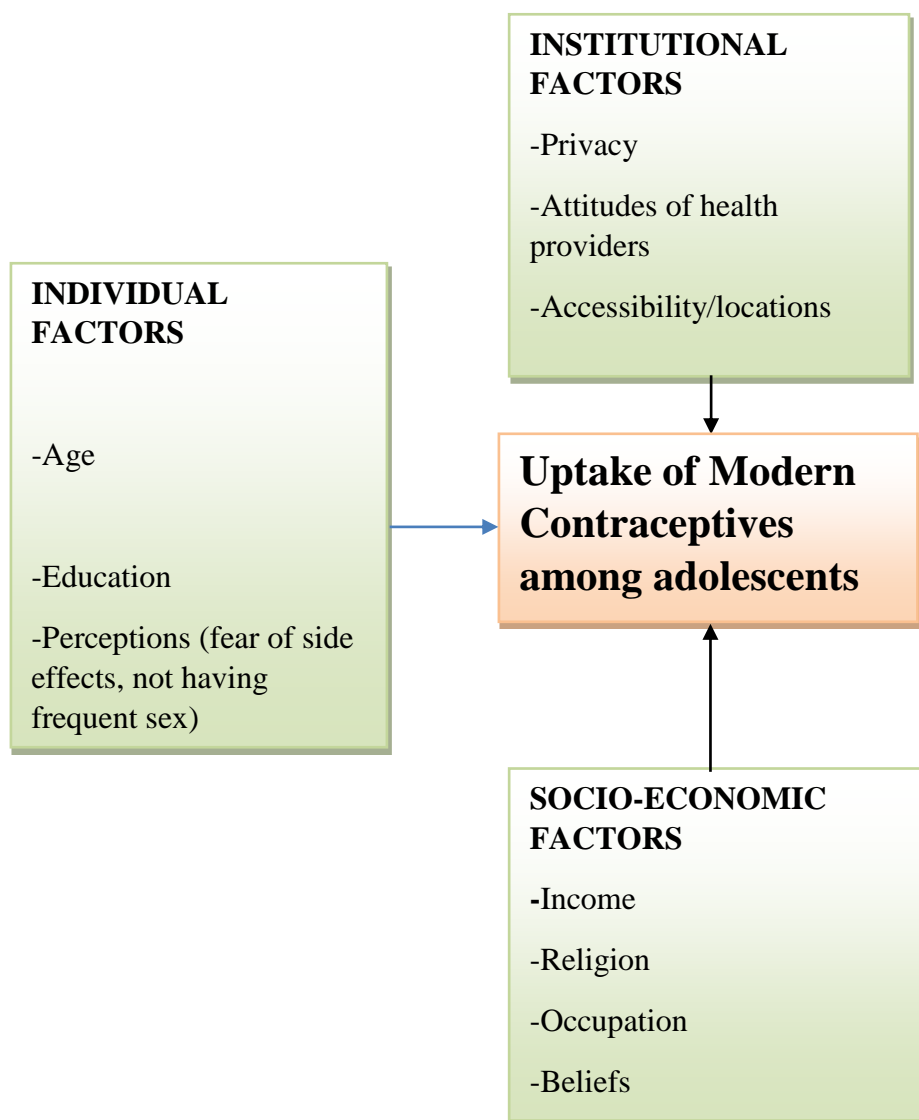
country in terms of socio demographics, level of education and exposure to sex education and contraceptive use.

There seems to be very little information about the factors contributing to the low level of use of modern contraceptives among adolescents and hence this study sought to establish that missing link as it will determine those factors influencing the use of contraceptives among adolescents in Yendi Municipality of the Northern Region.

1.3 Conceptual Framework

Figure 1: Conceptual Framework

Conceptual Framework of the Factors That Determine Modern Contraceptive Use among Adolescents, And the Associate Benefits for Addressing the Individual Influences



1.4 Interpretation of the Conceptual Framework

Contraception is the use of various devices, drugs, agents, sexual practices or surgical procedures to prevent pregnancy (WHO, 2011). They are usually referred to as birth control methods (WHO, 2011). Contraceptives can generally be grouped into two: modern contraceptive methods such as condoms, IUDs, implant, pills and traditional methods such as folklore and withdrawal. The different types of contraceptives are discussed in detail below.

Contraceptive use may be influenced by so many factors, for instance, institutional factors such as attitude of health care providers, privacy, accessibility or location of health facility can motivate adolescents to use contraceptives or scare them from using it. Secondly, individual factors such as knowledge on contraceptives, perception, and age and so on can make an adolescent use or not use contraceptive.

Thirdly, socio-economic factors, namely, Income, religion, occupation, peer pressure and many more can influence someone to either use or not use contraceptive.

1.5. Research Objectives

The general objective of this study was to determine the factors influencing low uptake of modern contraceptive among adolescents in the Yendi municipality.

Specific objectives were to:

- Assess the level of knowledge of adolescents on modern contraceptives
- To measure the proportion of adolescents using modern contraceptives
- Find out the reasons accounting for low uptake of modern contraceptives

1.6. Research Questions

- What is the proportion of adolescents using modern contraceptives?
- What is the level of knowledge of adolescents on modern contraceptives?
- What are the reasons for low uptake of modern contraceptives?

1.7. Justification

Awareness on contraceptive has been preached in Ghana for a long time since the early 2000s. The problem is that the level of awareness does not correlate with the level of use (Lynn Komey, 2016). However, the attitude of healthcare providers has been observed as one of the barriers to accessing contraceptives among adolescents and unmarried adults. A 2008 Ghana Statistical Service reported that, about 25% of service providers responded they would not provide intrauterine device and pills for unmarried adolescent (Kost & Henshaw, 2012).

Various cultural and religious beliefs continue to suppress the open discussion of sexual matters and the use of contraceptives among adolescents. Therefore, the results of this study will provide some practical approach to equipping health staff and pharmacy/drug store operators with knowledge and strategic avenues to encourage adolescents to use contraceptives instead of discouraging them.

The findings of the study will also inform policy makers in health and Non-Governmental Organizations who are into family planning and adolescent health to make sure their programs on adolescents' contraceptive use meet the target of reducing the unmet need of adolescent on contraception usage. Furthermore, findings of this study will clear the minds of young ones and the public on the misconceptions people hold on the use of modern contraceptives. Again, findings of this study will add more knowledge to existing literature on adolescents' reproductive health at the public health department in Yendi Municipality.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section contains reviewed information concerning the factors that lead to low patronage of modern contraceptives among adolescents, most especially those living in rural settlements of Sub-Saharan Africa and other parts of the world. The materials, facts and evidence gathered are arranged in sub-headings that reflect the proposed research objectives, which are:

- Assess the level of knowledge of adolescents on modern contraceptives
- To measure the proportion of adolescents using modern contraceptives
- Examine the reasons accounting for low uptake of modern contraceptives

2.2. Modern Contraceptive Methods

Hormonal methods

These include Combined Oral Contraceptive (COC) methods, transdermal combined hormonal patch, transvaginal combined hormonal injectable, and intramuscular combined hormonal injectable and progestogen-only methods. Progestogen-only method of contraceptives consists of progestogen-only pill, injectable and sub-dermal implants. They solidify the cervical mucus to avert movement to spermatozoa and also transform the endometrium to avoid implantation.

Combined Oral Contraceptive (COC) methods contain synthetic steroid hormones estrogen and progestogen in varying amounts and the mechanism of action is primarily prevention of ovulation. The benefits of COCs include effectiveness, convenience, reversibility, reduction of most menstrual cycle and no toxicity in overdose. However, Melles in 2007 found the most side

effects of combined oral contraceptive as irregular or prolonged bleeding, amenorrhea and weight gain at rare times.

Intrauterine Contraceptives Device (IUCD)

Intrauterine contraceptives device (IUCD) are inserted into the uterus at any point of the menstrual cycle ones there the person about to use the method is not pregnant, according to Melles, 2007, some health practitioners prefer to insert it towards the end of menstruation or just after. Melles identified the following as the mechanisms of action for IUCD; causes an inflammatory response with an increased number of leucocytes which destroy spermatozoa and ova, while copper intrauterine contraceptives device affects endometrial enzymes, glycogen metabolism and oestrogen uptake, thus rendering the endometrium hostile to implantation. Notable amongst the advantages of the IUCD are safety, effectiveness, high continuation rates, and reversibility (Melles, 2007).

Barrier methods

Barrier methods prevent spermatozoa from coming into contact with the ovum. It comprises of male and female condoms and diaphragms and cervical cap usually used with spermicide. Benefits include: stress-free accessibility, defense against sexually transmitted diseases, inexpensive and harmless (Melles, 2007).

Vaginal film is another barrier method which is a little two inch by two-inch thin sheet with a chemical called nonoxynol-9 that destroys sperm. It is placed on or near the cervix located at opening of the womb. It dissolves in seconds (Clottey, 2012). The vaginal sponge was also indicated as another barrier method of preventing pregnancy, according to Melles, 2007 the sponge acts as a barrier to avoid sperm from entering the cervix. The sponge is said to be more

effective with women who have on no occasion given birth than with women who have ever given birth. Other varieties like the vaginal ring, and the transdermal patch are not common in Ghana but they are used in other countries by a wide range of people.

Post-coital contraception

Post-coital contraception is also called emergency contraception. Melles (2007) describe three methods of emergency contraception as; combined oral emergency contraceptives, progestogen-only emergency contraceptives, and insertion of a copper IUD. Melles (2007) concluded that insertion of a copper IUD before implantation is extremely effective when it is done up to 5 days after the first sexual intercourse.

Natural methods

The natural methods of contraception are based on naturally observing signs and symptoms of fertile and infertile phases of menstrual cycle with refraining from sex during the fertile phase. Major advantages of this method are the absence of physical side effects of some artificial contraceptives and freedom from dependence on medical personnel. The method requires some level of discipline and daily recordings. Natural methods include; observation of cervical mucus, observation of body temperature and calendar or rhythm method (Clotey, 2012).

2.3. Legal and International Regulations on Sexual and Reproductive Health Care

In the view of the World Health Organizations (2009), “Reproductive rights rest on the recognition of the basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and to have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health also include the

right of reproduction free of discrimination, coercion and violence”, this can serve as a guideline in reviewing adolescent contraceptive use.

As at 2011, the prevalence rate of contraceptive use was estimated at 63% worldwide (Lynn, 2016). According to WHO 2013 report, sexual education within the adolescent is still a challenging issue and of great concern globally, this is due to their low level of knowledge and bias acquired from the ways and values that are personal, regional or associated with local traditions, culture and religion.

Programme of Action (1994) International Conference on Population and Development (ICPD) defines reproductive health as: “a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes”. Additionally, Programme of Action also states that the purpose of sexual health “is the enhancement of life and personal relations, and not merely counseling and care related to reproduction and sexually transmitted diseases”.

The international agreement reached at the ICPD summit strengthens the legal modalities developed during other international conferences and summits. According to the 1995 Beijing Declaration and Platform for Action reproductive rights of people embrace certain human rights that are already recognized in national laws, international human rights documents and other relevant consent documents. These human rights provide the opportunity for people to be responsible for deciding on the number of children to deliver at their desired times, and also dictate the spacing of their children, having the information and means to do so (WHO, 2016).

According to the WHO 2016 report on selected practice recommendations for contraceptive use, the Millennium Development Goals (MDGs) agreed by states in 2001, target 5b called for

universal access to reproductive health by 2015. At the end of stipulated period, it has been reported that global contraceptive prevalence is around 64% in Europe, South America and other developed parts of the world and 41% in low-income countries. In addition, global unmet need for family planning was 12% in developed nations while low-income countries recorded as high as 22%.

Now, among the new Sustainable Development Goals (SDGs), the target set for the unmet needs for universal access to sexual and reproductive health-care services is 3.7%; while the target for deficit for unmet need for sexual and reproductive health rights is proposed to reduce to 5.6%, by 2030. All member states of the United Nations are supposed to strengthen their health system to facilitate them attaining the goal (WHO, 2016).

Reproductive and sexual health care, including contraceptive services and information, is recognized not only as a key interference for improving the health of men, women and children, but also as a human right. International and regional human rights agreements, federal constitutions and laws are made to guarantee specifically relating to contraceptive information and services. These include the guarantee that countries should ensure timely and affordable access to quality sexual and reproductive health information and services, which should be delivered in a way that ensures fully informed decision-making, respects dignity, autonomy, privacy and confidentiality, and become attentive to individuals' needs and perspectives in a client-provider partnership (WHO, 2016).

Additionally, the World Health Organization document on selected practice recommendations for contraceptive use published in 2016 established that, the contraceptive service delivery should adopt an all-inclusive understanding of patrons, this includes respecting the clients'

reproductive and health needs and, considering that a suitable method of contraception is selected by all users most especially the adolescent age group.

In the same WHO, 2016 report, it could be confirmed that attainment of human rights in both documentation and practice contribute to a healthy living among a population, hence the provision of contraceptive service should do due diligence to the right of individuals, by this way, they are encouraged to continue or start using a modern contraceptive method.

2.4. Conduct of Adolescents on Sex and Reproductive Health

In Sudan, the prevalence of contraceptive use (24%) is a bit low as compared to that of other African countries and globally (Frini, et al., 2013). According to UNFPA in 2011, “reproductive health deals with the reproductive processes, functions and system at all stages of life”. Whereas Rani and Lule in way back 2004 established the fact that, adolescents from poor backgrounds are usually less informed about modern contraceptive types and usage, however both writers suggested that improved education, health and social intervention systems would promote the healthy living of adolescents.

According to Arthur (2015), adolescent is a stage of migration from childhood to adulthood and this stage of one’s life is characterized by many biological and psychological changes including the moods of thinking and feeling to have sex, while some adolescents find ways of dealing with this feelings by engaging themselves in activities like reading, listening to music, playing or ignoring their feelings of having sex, some of them go ahead to have the sex with their colleague male counterparts or partners older than them.

In fact, some adolescent boys and girls based on their sexual feelings and mood to engage in anal and oral intercourse; adolescents in Ghana are reported to indulge in several sexual behaviors for

money, pleasure or curiosity; about 30% of adolescents living in Ghana engage in sexual intercourse before marriage (WHO, 2004).

Amazigo (1997) had early identified money making and fashion as reasons for adolescent female students engaging in sexual intercourse in Nigeria, the writer found 40% of female adolescents who have ever had sex to have done so with businessmen older than their age basically for money to buy makeups and clothing they think their parents and guardians were not willing to provide for them.

In view of understanding adolescent sexual behavior very well, many writers considered first of all to look at the age of onset of sex among adolescents and students especially. Peltzer (2010) as cited by Arthur (2015) focused his study on sexual debut among adolescent students from eight Sub-Saharan African countries including Namibia, Senegal, Botswana, Swaziland, Zimbabwe, Uganda and Zambia. The writer reported 27.3% of adolescents' students who had sex before 15 years of age, among this 15.8% were females, abuse of drugs like alcohol and tobacco was identified as one of the major factors of this early sex debut among the students.

Another study conducted in Ethiopia to assess the knowledge, use and conflicting factors to contraceptive use within female preparatory students also identified the lowest age for the onset of sex to 15 years and twenty years as the maximum age for the onset of sex among the student girls (Teijineh et al., 2015).

The age of sexual debut seem common for most Sub-Saharan African countries as Morhason-Bello et al. (2008) found 28.3% of adolescent students indulging in sexual behaviors even before the age of 15 years and 34.5% for adolescents who are not in school, 40% of these adolescents confirmed to have engaged in sex with more than one partners.

The situation hasn't been different from Ghana since the early 2000s till now, Adu-Mireku (2003) in his quest to investigate into sexual behaviour of senior high school students in Accra, Ghana realized that before 11 years 25.7% of the study participants had had their first sexual intercourse and 64.7% who confirmed to have had sex before said they did so by age of 16 years, perhaps some of these adolescents were coerced to engage in a sexual activity.

Blanc, et al. (2007) engaged adolescent females in a study on first sex by coercion in four Sub-Saharan African countries. Participating girls in the study stated various ways by which they were coerced to engage in sex including: been deceived into sexual intercourse with money, threatened to be harmed, raped, pleasurable words used by partners, boyfriends attempting to have sex with other girls if they refuse to have sex with them, etc. In Ghana, Bingenheimer & Reed (2014) found an association between sexual coercion and ever having a boyfriend among female adolescents, the writers also pointed out that coerced sexual intercourse mostly go on unprotected as it puts the adolescent girl in instance she will not be able to consider protection.

Potter et al. (2014) identified effective communication on sexual health between parents or guardians and adolescents as remedy to ensuring protected sex if not coerced. The writers after investigating into the quality of sexual health communication between parents and their wards reported that, adolescents who have had conversations and advice from their parents or guardians on sexual health for the past three months were as high as 5.2 times ready to use modern contraceptives compared to their counterparts who have not had any sex education from their parents or guardians. Moreover, Mueller et al. (2008) concluded that there is a strong association between sex education, onset of sex and the use of modern contraceptives, the authors confirmed the delay of first sexual debut for adolescents who receive sex education routinely.

Women and young girls of Africa are continually lost in Sub-Saharan Africa through unsafe abortions which could be prevented by the use of contraceptives, the UNFPA (2011) reports. According to Guttmacher Institute, (2007), Sub-Saharan Africa has 24% unmet need for modern contraception; even though the regional percentage of contraceptive uptake vary from country to country; for example as about 58% of people living in South Africa including adolescents use contraceptive, only 5% of people living in Sierra Leone were using modern contraceptive method as at 2007.

Moreover, Advocate for Youth 2007, had reported that more (59%) of adolescents in France have been using birth control pills successfully, compared to 33% of adolescents in the USA. The issue of adolescent sexual behavior is a serious one; for instance in South Africa where HIV prevalence is high, one study showed that there were schools where 60% to 70% of pupils were pregnant in school. This serves as the evidence of unhealthy living or forced sex in the country (Sigsworth 2008; IRIN, 2012).

A study conducted in 2008 at the George Washington University in the US showed that one-third of all teenage girls in the US become pregnant before age 20, adolescent girls delivered up to 435,427 infants with 80% of these births are considered unintended. Furthermore, the GWU 2008 report iterated that 26% of American adolescents had suffered at least one form of sexually transmitted infection. STIs.

The significances of these teenage pregnancies are multifaceted as they make adolescent girls socially and economically disadvantaged; they proceed to face poverty and ill health and bring cost to the family and society as well. Crystal Clotey in 2012 revealed that Gonorrhoea and Syphilis was two times above national average, when he investigated into social-barriers that

affect the non-use of modern contraceptives among students of two secondary schools in the Gomoa East District of Central region, Ghana.

Family influence, parental education, and care for teenagers have always influence adolescent reproductive health. In 2002 Abu and Akerele reported in their research conducted at Ibadan in Nigeria that, teenagers who are advantaged to have good and healthy training from their families, schools and other places tend to delay their first sexual intercourse. Another study by Schuster in 2002 in Los Angeles schools, USA indicated that 65% of adolescents who have never tried heterosexual sex are those whose parents have had high school education.

Asare et al, (2006) established the median age of first sexual intercourse of adolescents in Ghana to be 16.2 and 15.5 years for females and males respectively. Asare and his co-researchers found that, in study involving 9 senior high schools in Ghana, 50% of the participants considered chastity to be a model and achievable, meanwhile a respective 42% and 15% of male and female adolescents involved in the study confirmed to have engaged in sexual intercourse before.

However Crystal Clotey in 2012 suggested some motives for sexual activities within teenagers as: pressure from peer groups, trick from partners, trial and sometimes the will to ensure the fulfillment of their sexual satisfaction. Regarding the type of partners with whom senior high school students in Ghana had sex, 67% males and 55% female had sex with their own age mates. 1% had sex with sugar daddies (an older adult who gives money and gift to the young female). Two percent (2%) of males and 12% of females said their first sex was a forced sex with 0.6% for females, 0.5% males having sex with family member. 8% male and 25% of female also had coerced sex (Asare et al., 2006).

Towett (2007) had also documented that in some three (3) decades ago teaching on sexual reproductive health was done in a culturally sensitive way for some activities due to some taboos, but now urbanization and technology seem to slack the cultural practices and in return has exposed teenagers to sexual and pornographic information via electronic and print media. Adolescents, out of curiosity and peer influence tend to practice what they see and read about sexual activities in movies, online and print media making them more prone to engaging in sexual activities and eventually teenage pregnancy.

Adolescent males and females at certain point tend to be attracted by each other and at certain times may dislike one another. When adolescent high school males and females were engaged in a multiple choice questioning, 58.7% males compared to 47.9% females indicated a positive personal interaction with their opposite sex, with 34.2% males versus 19.3% females agreeing to feel attracted to their opposite sex even though they may not respect each other (Rondini & Krugu, 2009).

Rondini and Krugu (2009) after studying the sexual behavior of adolescents in Bolgatanga, Upper East of Ghana found that, while some adolescents see sex as irrelevant others consider it an obligation and others seeing sex as a right of the individual that he or she has to enjoy. The authors further reported that adolescents who saw sex as an obligation did so with the belief that a teenage boy who does not have sex could go blind and teenage girls who live chaste lifestyles are usually stupid and fools.

These young people will mostly attempt sex without any protection and seem not to be comfortable discussing their sexual health with their parents and opposite sex mates. The study by Rondini & Krugu (2009) recorded 39.2% for males who are not willing to discuss their sexual

health with their colleagues against 20.7% of their female counterparts. Meanwhile both sex groups acknowledged the importance of sex education except that they were not comfortable holding such conversations. This point out to the approach and privacy of health information and contraceptive access which is a gap this research seeks to provide evidence to address.

While some adolescents are glad with their sexual life, others are not comfortable and will like to change. When asked of strategies to improving sexual life, both male and female adolescents stated engagement of their partners in conversations on phones or one-on-one or receiving advise from friends, 25.3% males against 12.8% females cited contraceptive use while the use of modern contraceptive also pose a threat to others sexual life i.e. 6.3% males compared to 15% females (Rondini & Krugu, 2009).

2.5 Knowledge of Adolescents on Modern Contraceptive Methods

The level of understanding about contraceptive couples with the easy access to modern contraceptives facilitate the uptake of a particular method, as confirmed by Sacci and others in 2008 who indicated that the main facilitators to the use of contraceptives among adolescents are issues of availability and knowledge level of the teenager on a contraceptive method.

In the same view, Kumar (2007) established that one of the reasons for the rising percentage for the unmet need of contraception and reproductive health mostly in Sub-Saharan nations is the lack of knowledge about contraceptive, the researchers continued to clarify that some adolescents even get confused about the type of method to use.

Knowing some information about a particular contraceptive method is a step to accepting to use the method. According to the Ghana Demographic Health Survey (GSS, 2014) an adolescent ability to recognize a particular modern contraceptive where the name is mentioned is an

indication of the knowledge of the person about the method, though it does not tell the level of the individuals' knowledge about the contraceptive method.

The survey continued to explain that the awareness of various modern contraceptive methods have positive signal along the years, the good news is that female adolescents in Ghana show tremendous knowledge or awareness of at least one type of modern contraceptive such as: male and female condoms, natural methods, injectables , implants, pills lactational amenorrhoea method (LAM), etc., as at 2014 about 99% of females involving adolescents in Ghana had some knowledge about a particular modern contraceptive method (GSS, 2014). Adam-Razak et al, (2016) also added that most adolescents in the Sunyani Metropolis of Brong Ahafo Region, Ghana have knowledge about the various modern contraceptives available at the health facilities and market.

Just as the common remedy to avoiding STIs, Rondini & Krugu (2009) found 78.5% adolescent males and 87.1% females who endorsed abstinence from sex as the best way to prevent teenage pregnancy. On the awareness of modern contraceptives, many of male and female adolescents mention condom, oral pills and injectable, withdrawal methods and sticking to the safe periods of a lady's menstrual cycle, but the challenge is that most adolescents have irregular menstrual cycles and find it difficult to identify their grace or safe periods for sexual intercourse.

Furthermore, Rondini & Krugu (2009) in their study reported that 15.2% males compared to only 4.3% of their female counterparts find sexual education as a good approach to reducing unintended pregnancies. Moreover, many of the adolescent participant (80%) reported they have never sought for advice or counselling from any family planning center with 74.7% males and 82.1% of females reporting to have never tried using any modern contraceptive method.

2.6 Uptake of Modern Contraceptive among Adolescents

Many writers have stated several reasons why adolescents, most especially those living in developing countries refuse to use modern contraceptives to prevent unwanted pregnancies. Mbizvo and Zaidi, (2010) confirmed that two out of every three unintended pregnancies in Sub-Saharan Africa countries are as a result of having sexual intercourse without using any form of contraceptives. Furthermore, Abdul-Razak et al. (2016) identified the following reasons for the inconsistent use of modern contraceptive among teenagers: fear of side effects, inconvenience associated with the use, individual need and choice, and switching from one method to the other. The prevalence of contraceptive uptake among adolescents living in the Europe and America is relatively high compared to that of most African countries considered to be developing nations, Guttmacher Institute reported in 2014 that, a respective 78% and 85% female and male teenagers in United States used one of the following modern contraceptive methods in their first sexual intercourse; condom (78% females against 85% males), pills IUD and implants.

However, Odu and Ayodele (2007) also identified that, adolescents at sometimes also get worried about the type of contraceptive to use and thereby need to be educated on the application of the various contraceptive methods. Moreover, Hindin and Fatusi, (2009) reported that adolescent who are not married and living in Sub-Saharan Africa countries are less likely to start using contraceptives in their teen ages before they get married, they clarified their findings with the fact that the use of contraceptives among teenagers vary from country to country, for example in Rwanda 3% of unmarried adolescents reported to have ever used a contraceptive method in their sexual encounter, while those from Burkina Faso represented 56%.

In Nigeria, one research finding reported that 19% of adolescents in their adolescent ages when in school used condom and 77% said they think the male and female condoms are more reliable,

safe and easy to use compared to the other methods (Ojikutu & Adeleke, 2009). The same study indicated that it is less likely for adolescent girls in Nigeria to use a contraceptive method in their first sexual debut. (Ojikutu and Adeleke, 2009).

In Ghana, current use of any method of contraception is 23% among all women; and 45% among sexually active unmarried women including adolescents (GSS, 2014). The GSS (2014) report also stated that age of females determines their uptake of modern contraceptive; it is usually lowest among adolescent teenagers between 15 and 19 years of age.

Even though the awareness of Ghanaians on modern contraceptives is high, it has not contributed to the use since the 1990s. The GDHS (1998) highlighted this by reporting only 13% uptake of modern contraceptives among female teenagers compared to 35% among married females, the serious challenge at hand is that even among those at high risk of unwanted pregnancy contraceptive use highly limited. The report further clarified that 20% adolescent females had ever used a particular modern contraceptive method compared to 37% of their male counterparts. The finding of Agyei (2000) was not far different from what is reported early concerning the high awareness of contraceptive and the low patronage of the various contraception methods. The author indicated as at the year 2000, there was 96% awareness of unmarried females on contraceptive methods and 98% among their counterpart males aged between 15-19 years of age, most of them are usually aware of pills and condoms.

For the past two decades, the level of awareness on modern contraceptives have been high for adolescents and young adults but level of use had continue to be low even for adolescent students who are usually afraid to get pregnant, but it should be realized that awareness does not imply in-depth knowledge and confidence.

For some adolescents aged 15-19 years interviewed by Asare et al. (2006), only 21% males as against 28% females displayed in-depth knowledge on how to prevent an unwanted pregnancy; they were able to explain how to use the calendar or rhythm method of contraception very well, perceived the use of contraception as positive with no cultural, religious and privacy challenges, and they also aware and willing to use one of the modern contraceptive methods they know.

On the other hand, only 12% females and 6% males displayed this level of knowledge and acceptance of modern contraceptives. Even for the most common contraceptive which is the male condom, adolescents express very little knowledge on its right use.

Cobb (2001) and other authors have realized that adolescents could be misled with the information on contraception and pregnancy.

Some findings indicate that about two out of every three adolescent females may refuse contraception and health education with reason that they are meant to know that they are too young to be pregnant. Cobb (2001) stressed on ignorance and insufficient sex education as reasons for low patronage of modern contraceptives. Solving this problem will require a holistic approach, ranging from the provision of transparency and openness in discussion of adolescent sexual health topics in homes, schools and societies; provision of health education via well trained counselors and health professions; provision of health facilities well equipped to cater for reproductive health needs and ensuring clients privacy in their quest to access reproductive healthcare and advise (Hagan & Buxton, 2012).

Condom was again the most common contraceptive patronized by adolescents in Ghana, 7% of Ghanaian teenagers have ever used condom, followed by injectable and rhythm representing 7% each and 5% recorded for long lasting methods like implant, (GDHS, 2014); the traditional methods of contraception was paramount among unmarried young girls living in Ghana, about

13% of these adolescent girls were reported to have tried a traditional method of contraception before (GSS, 2014).

Also, literature reviewed by Cleland, Ali and Shah in 2006 suggested that adolescents normally want to delay their first pregnancy, so they can continue to be young girls and not look old when they get pregnant and become mothers. Moreover, unmarried young girls who give birth tend to be wise enough and think of delaying their second pregnancy until possibly their marriage time.

2.7. Factors Influencing Low Use of Modern Contraceptives

Numerous reasons have been found by many researchers to be responsible for the low uptake of contraceptives most especially among adolescents, who live in Sub-Saharan countries.

Williamson et al, as at 2009 established the following factors:

- Poor knowledge about the methods
- Fears and tales about side effects of some methods of contraception
- Lack of support and bad influence from family members and sexual partners
- Religion
- Traditional beliefs

Kanku and Mash, (2010) added that socio-economic and demographic characteristics of adolescents, in particular, have an influence on their decision to use or refuse a particular contraceptive method. They state, noncooperation on the part of individuals when issues about contraceptives are discussed and attitude of the contraceptive producer to be the main reasons why some adolescents reject contraceptives, but continue to engage in unprotected sexual behaviors.

Moreover, Bankole (2007) investigated the knowledge of some adolescents living in three Sub-Saharan countries on the consistency of the correct and wrong use of condoms, and came out

with the fact that the young boys and girls knew less about the appropriate use of the male and female condoms even though they continue to have sex with their age mates.

Bankole, in 2007 report attributed the poor knowledge of the adolescents on the appropriate use of condoms and other modern contraceptives on the refusal of parents and guidance to discuss issues of contraception and sexual health at homes, usually some taboos and cultural practices regard talking about sexual matters and materials as impolite and against the norms and manners of training a young child, forgetting that teenagers become prone to listening to their peers most especially when they do not get any in advice from guidance and parents at home. They tend to listen to their friends more and engage in unprotected sexual intercourse.

Williamson et al, (2009) added that between twenty and thirty percent of parents in Sub-Saharan Africa will oppose to encourage their adolescent children about contraceptive use, and refuse to use it either. Gipson et al., (2011) presented financial difficulties and lack of knowledge about modern contraceptive methods as the factors that prevent adolescents in the Philippines from using any method of contraception. Gipson and the co-authors confirmed religion as a reason for one to refuse a contraceptive method for decades. In their explanation, Catholics and Muslims perceive the use of contraceptive as a permit to illegitimate sex before and during marriage.

Gipson et al. (2011) further explained that the prestige attached to giving birth to many children, together with the idea that using contraceptives will lead to family or racial extinction is misconceptions about modern contraceptives held by some adolescents. Ahanonu in 2013 also found out that the behavior of health care professionals who deliver contraceptive services to adolescents who are not married could be a reason for nonuse of modern contraceptives.

Earlier, Williamson et al, (2009) had studied the attitude of some nurses in South Africa to contraceptive service delivery. They realized that most of the nurses will note and stigmatize

adolescents who come for contraception; they rather advise them to stop having sexual intercourse because they are minors.

Aside this, the nurses would always asked of the consent of the adolescent's parents and guidance before issuing a contraceptive service to the minor. Literature reviewed by Abdul-Razak, (2016) on factors facilitating the non-use of modern contraceptives among adolescents established that midwives in Kenya and Zambia are most likely to choose to encourage adolescents to desist from sexual intercourse than to serve them contraceptives when they ask of it.

The GDHS (2008) report reviewed by Adjei et al. (2014) indicate an influence of religion and other socio-demographic like culture, education, rural and urban settlements on the use of modern contraceptives. According to the report, Muslim females scarcely use modern contraceptive methods due to the stand of their faith on the various methods of contraception and child bearing compared to other people of different religious folks where faith of worship might not place so much restrictions to the use of modern contraceptive methods.

Moreover, Mbizvo and Zaidi (2010) established a link between health staff attitude and exposure of adolescents to various modern contraceptive methods, some health workers at certain times place restrictions on providing contraceptives to clients considering age of clients to make sure unmarried adolescents are prevented from accessing reproductive health considering that young boys and girls may feel that they are grown enough if allowed to have similar reproductive health services with adults and couples.

Besides some health workers have the thinking that exposing adolescents to modern contraceptive methods could make them promiscuous and allow them engage in unnecessary sexual behaviors, others were of the view that some modern contraceptives had adverse

complications such as infertility of which they wish adolescent females were not supposed to be exposed.

Next to health worker attitude is education of adolescents especially the females. In a descriptive study conducted by Okezie et al. (2010) in Abia State, Nigeria, a likelihood regression analysis of data collected from 200 females randomly selected from four different clans in the same state showed that educated females needed to spend more time in developing their academic careers thereby delaying their first sexual debut and pregnancy as well. Besides such females usually would like to have few and well educated children and therefore were more likely to depend on modern contraceptives to achieve their aim. Together with education, the authors also established that media advertisement on radio about STIs prevention and contraception methods could improve the interest of females to use modern contraceptive (Okezie et al., 2010).

Asiimwe (2014) also conducted a study to find out the relationship between socio-demographic characteristics and both young women aged 15-24 years and older women aged 25-34 years in Uganda, with age as the interactive term to model factor for the association between selected independent variables and use of modern contraception methods for each of the age groups under study. Logistic regression analysis run on the data showed that geographical location of women could either facilitate or restrict them to use available modern contraceptives.

It was observed that the shorter one's distance to a health facility facilitated their access to reproductive health in general unlike women from long distance to health facilities who might sought for reproductive health services only on emergency cases; transport availability and nature of road network to reproductive health access points all contribute to location of residence and contraception use. The study findings added cultural adage placed on child bearing as a conflict to contraceptive use among the age groups used for the study (Asiimwe et al., 2014).

In Malawi, Palamuleni (2014) relied on information from the Malawi Demographic and Health Surveys conducted in 2000 and 2004 to conclude that female Malawians aged 15-19 years were more likely married or be preparing to get married, these young females usually have in mind that marriage is a factory for child production and therefore will not like to interfere their fertility with any sought of contraception, this idea continue as they grow old thinking their fertility is tied to their age and could go extinct in their old age.

Additionally, females in their reproductive age in Northern Ghana were found to use modern contraceptive if they held open discussions on the available contraception methods with their partners. These partners were found to be three times more likely to use modern contraceptive methods compared to partners who do not discuss modern contraceptive methods together (Baidoo, 2005) as cited in Asiedu (2016).

2.8 Perceived Risks of Contraceptive Use, Benefits and New Developments

There are many modern contraceptive methods available at the market, all of them are generally safe when right applied or used, except that not all modern contraceptive methods are suitable for everyone; for instance, the use of multiple hormonal methods of modern contraception could lead to complications for females diagnosed with certain medical conditions. This is why manufacturers of modern contraceptives provide details of their products on leaflets that come with the product with regards to federal and international rules on reproduction and health in general (Donahoe, 1996).

Despite the relative risk of breast and cardiovascular conditions associated with some hormonal methods of contraception, Cates (2005) established that the risk is barely minimal and non-existence in many cases. However, oral contraceptive users who complain of cardiovascular complications are mostly found to be engaged in recognized lifestyle factors such as smoking,

overweight or obesity and high lipid profiles; therefore the recommended strategy to removing the complication is to reduce the lifestyle risks of developing cardiovascular conditions (Bhana, 2006).

With the exception of condoms, the rest of the common modern contraceptives i.e. oral pills, hormonal methods, IUD, etc. does not play any other non-contraception role notably the prevention of STIs. Moreover, issues of menstrual cycle and ovarian health still require public health clarifications for users to appreciate modern contraceptive methods better (Arowajolu et al., 2002).

Finally, the perceived association of steroid actions to that of hormonal contraception methods requires more declaration from producers and modern contraceptive methods providers, even though the relationship remains very distant. Also there still exists a controversy with antiprogestogens associated with abortion and obstruction of menstrual cycle which needs public health attention and clarification (Kjellberg et al, 2000).

CHAPTER THREE

METHODS

3.1. Introduction

This section of the report presents the methodology used to conduct the study. It is arranged into separate headings namely: type of study, setting, variables, study population, sample size and procedure, data collection method and tools, data processing and analysis, ethical consideration issues and pretest or pilot study.

3.2. Type of Study

This research adopted a cross-sectional study design. According to John W. Creswell, 2009, research design refers to the plans and structure of the study. Therefore, the study type or design spanned the data collection procedure and data analysis afterwards. The descriptive survey approach was considered for this study.

3.3. Study Location Area

3.3.1 Location and Size

The Municipality is located in the eastern corridor of the Northern Region and lies between Latitude 9°–35° North and 0°–30° West and 0°–15° East. The Greenwich Meridian passes through a number of settlements in the Municipality– Yendi, Bago, Laatam, Lumpua, Gbetobu, Gbungbaliga and Nakpachei. The Municipality shares boundaries with six other District Assemblies. These are; Saboba District to the east , Chereponi and Zabzugu Districts to the south, Nanumba North District to the north, Gushegu and Mion Districts to the west. (GSS, 2014)

The Municipality is strategically located at the center of the eastern corridor of the Northern Region and has a landmass of 1,446.3 sq. km. (Source: Ghana Statistical Service, 2010 Population and Housing Census) Yendi, the capital of the Municipality is about 90 km from the Northern Regional capital, Tamale. (GSS, 2014)

3.3.2 Population Size, Structure and Composition

The population of Yendi Municipality, according to the 2010 Population and Housing Census, is 117,780 representing 4.8 percent of the Northern region population of 2,479,461. Males constitute 50.0 percent and females also 50.0 percent. More than half (56.1%) of the population in the Municipality live in rural areas. The age dependency ratio in the Municipality is 93.3. Males have a higher age dependency ratio (104.2) than females (96). (GSS, 2014)

3.3.3 Fertility, Mortality and Migration

The Total Fertility Rate (TFR) for the municipality is 3.0 which is slightly lower than the Regional average of 3.6. The General Fertility Rate (GFR) is 85.1 births per 1000 women aged 15-49 years which is one of the lowest in the region. The Crude Birth Rate (CBR) is 20.0 per 1000 population.

The crude death rate for the Municipality is 6.3 per 1000. Close to three quarters (74.7) of migrants in the municipality were born in elsewhere in the Northern region. About 18 percent of the migrants in the municipality were born in other regions in Ghana with less than eight percent born outside Ghana. Of the migrants born in another region, those born in the Volta region form the highest followed by those born in the Ashanti region (GSS, 2014).

3.3.4 Household Size, Composition and Structure

The municipality has a household population of 116,602 with a total number of 12,721 households. The average household size in the municipality is 9.3 persons. Children (48.3%) of head of household constitute the largest proportion of household members. (GSS, 2014)

3.3.5 Marital Status

More than half (54.6%) of the population aged 12 years and older in the Municipality are married. Close to 39 percent of the population 12 years and older have never been married. Very small proportions indicated they were divorced (1.1%), separated (0.7%) or widowed (3.9%). The observed trend could be due to the fact that the majority of the population in the Municipality are Moslems. (GSS, 2014)

3.3.6 Religious Affiliation and Nationality

The predominant religion in the Yendi Municipality is Islam, with more than two thirds of the population professing the Islamic faith. Traditionalists (13.2%) form the second highest, followed by Catholics (7.2%). More than 90 percent of the populations in the municipality are Ghanaians by birth, with less than three percent of the population having dual nationality. Less than one percent (0.8%) of the population are Ghanaians by naturalization while non- Ghanaians constitute less than three percent (2.5%). (GSS, 2014)

3.3.7 Literacy and Education

Close to two thirds (62.9%) of the population aged 11 years and older in the Yendi Municipality are not literate. Of the literate population, 73.2 percent are literate in English and Ghanaian language, 21.3 percent in English language only. Those literate in Ghanaian language only, form

five percent of the literate population. The remaining literacy groups form less than one percent each of the literate population. (GSS, 2014)

3.3.8 Current School Attendance

About half (49.3%) of the population currently in school are in primary school. About 18 percent are in JHS. The population currently in kindergarten and nursery altogether constitute 21 percent of the population currently in school. The population currently in SHS and the population in tertiary institutions form 10.2 percent and 1.2 percent respectively. (GSS, 2014)

3.3.9 Economic Activity, Status and Employment

More than two thirds (70.9) of the population aged 15 years and older are economically active. Males (73.3%) are more likely to be economically active than females (68.6%). Of the economically active population, 95.8 percent are employed. More than half (55.1) of the unemployed population have worked before, seeking for work and available for work. Those seeking for work for the first time form 44.9 percent of the unemployed population. (GSS, 2014)

The majority (42.9%) of the population not economically active are pursuing full time education. Close one quarter of the population not economically active are house-helps performing domestic duties, with 21.3 percent being too old or young to work. (GSS, 2014)

3.4 Occupation and Industry of Employment

In terms of occupation of the employed population, majority (65.4) are engaged as skilled agricultural, forestry and fishery workers. The second commonest (14.8%) occupation of the employed is service and sales. The major (65.3%) industry engaging majority of the workers in the municipality are agriculture, forestry and fishing. This is followed by wholesale and retail trade (13.2%) and manufacturing (8.9%) (GSS, 2014).

3.4.1 Employment Status and Sector

Majority (63.7%) of the employed population in the municipality are self-employed without employees with only about eight percent being employees. Close to one fifth (18.8%) of the employed population are contributing family workers, with higher percentage (22.1%) of females as contributing family workers than males (15.7%). With regards to sector of employment, the private informal sector is the largest employer in the Municipality, employing over 91 percent of the population followed by the public sector with 4.3 percent. Only 1.3 percent of the working population are in the private formal sector. (GSS, 2014)

3.4.2 Information Communication Technology

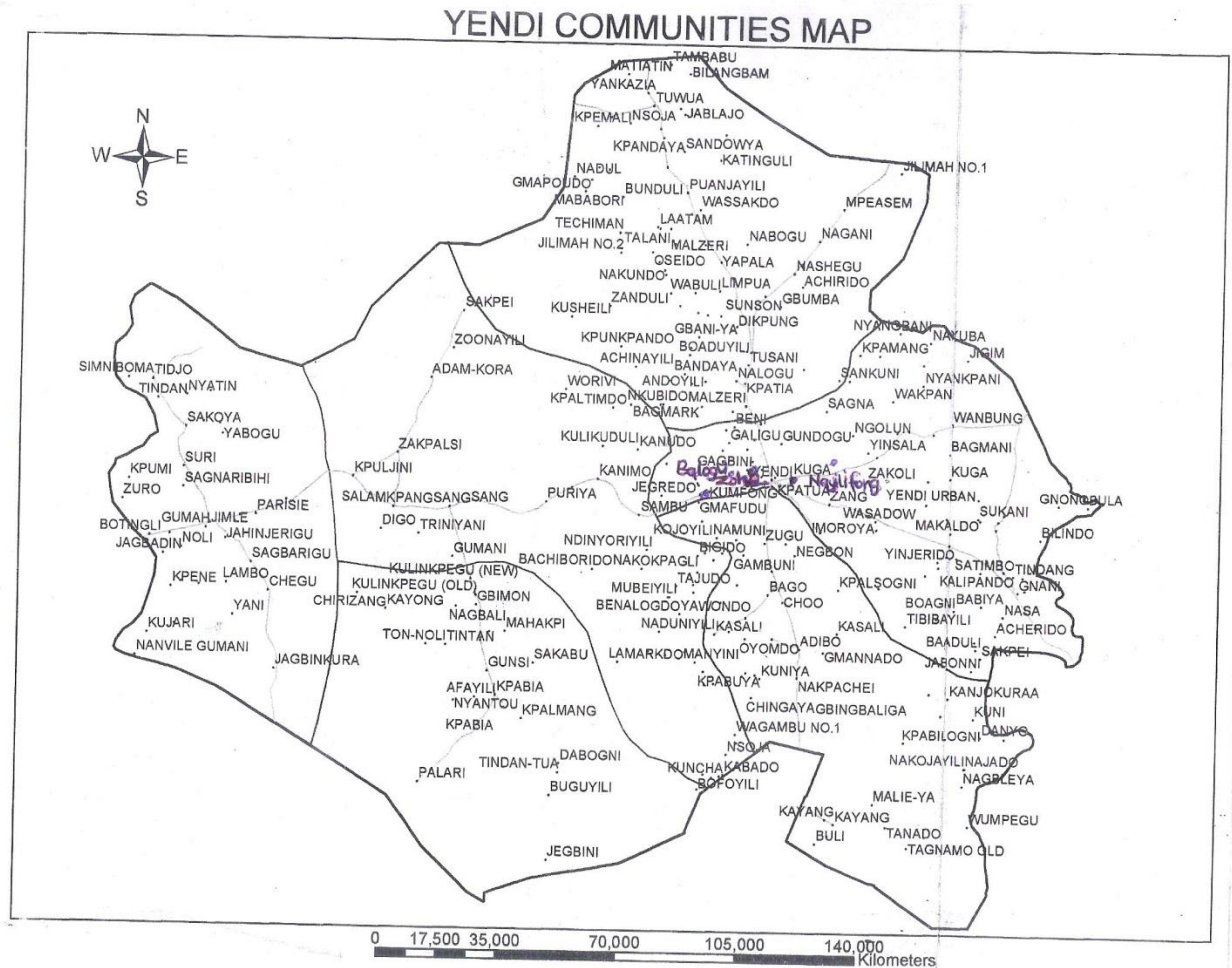
Of the population 12 years and older, 22.0 percent have mobile phones. Males who own mobile phones constitute 34.3 percent as compared to 22.4 percent of females. With respect to the use of internet, only 2.2 percent of the population aged 12 years and older use the facility with more males again using the facility than their female counterparts. Less than three percent (2.3%) of households in the Municipality own computers (desktop/laptop). Of the households owning computers, male-headed household form the majority (84.3%) (GSS, 2014).

3.4.3 Health Facilities

The municipality has a Government Hospital located in Yendi and four health centers located at Yendi, Bunbonayili, Ngani, and Adibo. The Municipality also has four Community Health and Planning Services (CHPS) at Sunson, Kuni, Kamshegu and Oseido. There is also a clinic at Malzeri and a private clinic at the Church of Christ premises in Yendi. The Municipality has a Health Assistant's Training School (HATS). (GSS, 2014).

3.4.4 Yendi Communities Map

Figure 2.0: Yendi Communities Map



Foot note: Bolugu, Zohe and Nayilifong are part of the study areas which were not found in the map of Yendi, by taking a transient walk through Yendi Township, the researcher identified these settings and has indicated the areas on the map above.

Source: (Planning Department of Yendi Municipal Assembly, 2018).

3.5 Variables

The study made use of both dependent and independent variables. The dependent variable was the uptake of modern contraceptive by adolescents. The independent variables determine the outcome of the dependent variables. Therefore, variation and changes of the independent variables among individual sample units will reflect the outcome of the dependent outcome. The independent variables include; educational status of respondents, religion and culture, economic status, access to contraceptive and reasons for refusal to use contraceptives.

3.6 Study Population

The study recruited adolescents aged 10 – 19 years old who live in the Yendi Municipality, involving both males and females. These samples were drawn from the following five communities in the Yendi Municipality: Kuga, Nayilifong, Balogu, Zohe and Kumlanfong.

3.7 Inclusion and Exclusion Criteria

Both male and female adolescents were given equal chances of taking part in the study whether they have had sex before or not; an age range from 10-19 years was used as the basis of selection.

3.8 Sampling

This is the process by which sample units were recruited to represent the study population. It included sample size and sampling method used.

3.9 Sample Size

With the use of the Cochran formula for sample size determination, 300 participants were employed for the study, involving 150 girls and 150 boys.

This is shown in the calculation below;

$$\text{Sample size} = \frac{Z^2 \times P(1-P)}{T^2}$$

P = contraceptive usage prevalence among adolescents in Yendi Municipality = 0.2

Z = Confidence level = 1.96 (corresponding to a 95% confidence level)

T = Margin of error = 0.05

By substituting these values into the formula;

$$\text{Sample size (N)} = \frac{(1.96^2 \times 0.2(1-0.2))}{(0.05)^2}$$

$$N = \frac{3.8416 \times 0.16}{0.0025}$$

$$N = \frac{0.614656}{0.0025}$$

$$N = 245.864$$

The study involved 300 sample study units, for similar adolescents' populations in all the five selected communities within the Yendi Municipality. Equal number (150 each) of males and females were used for the study. All the three hundred adolescents selected completed their questionnaire for the study, the expected non-response rate was 54 participants.

3.10 Sampling Method

The study used multi-stage convenient sampling technique, where in the first stage, five communities were selected from the eighteen communities and equally represented among the various communities. Secondly, during a transient walk through the communities, any adolescent who was found was contacted, and if he or she agreed to take part in the study was conveniently recruited, the process continued until the target of sixty participants was obtained for each of the selected communities.

3.11 Data Collection Techniques and Tools

Information from participating adolescents were gathered with the aid of one-on-one interview. The tools used for data collection included: open and closed ended researcher guided questionnaire, and pen. Also secondary data concerning contraceptive use among adolescents in the Yendi Municipal was obtained from the Yendi Municipal Assembly.

3.12 Data Processes and Analysis

Data entry and analysis was done using Stata version 15. Descriptive statistics was used to describe the factors that influence low uptake of modern contraceptives by summarizing them into percentages, proportions and frequencies. Chi-square and Fisher exact was used to measure the association or relationship between the dependent variable (modern contraceptive use) and the independent variables.

3.13 Ethical Consideration Issues

Respecting the right and choice of the target population is key to the feasibility of the research work. The researcher made sure that the interest of the participant were kept in high esteem in the process so that, they would provide accurate information to aid the quality of work done. Ethical issues included ethical clearance, seeking participants consent, indicating risk/benefit, anonymity and confidentiality of data collected.

Ethical clearance

Permission was granted by Yendi Municipal Health Directorate and Municipal Assembly. Ethical clearance was obtained from Ghana Health Service Ethical Review Committee. Adolescents who were 18 and 19 years consented for themselves whiles parents/guardians of those below 18 years consented for them.

Seeking participants consent

The purpose of the research and utilization of the findings was well explained to the understanding of the participants in a simple language that the respondents understood. Interviewees were asked to read and sign or thumbprint a consent form willingly to be part of the study, no participant was forced or wrongfully recruited into the study.

Respondents were given the opportunity to refuse answering question(s) they see complicated or uncomfortable to answer, they could also decide to drop out of the data collection process at any point in time of their choice. The researcher held the right to drop out a participant(s) who may not be willing to cooperate or distract data collection processes, but then, the participant(s) was made aware.

Since the study involved participants within ages of ten and nineteen, parents/guardians was contacted to consent for the participants who were minors (participants who were less than 18 years). Those participants who were 18 and 19 years old were allowed to read and sign a consent form to agree in taking part in the study. A maximum of 20 minutes of a participants' time was required for one-one interview. Also, the investigator made sure the outcome of the research was communicated to the respondents after data analysis or compiling of the report.

Risks

Collection of information on sexual and reproductive health is a sensitive issue and participants were not willing to disclose information. A pilot test of the data collection instrument (research questionnaire) using at least 5% (15) of the sample size to be used for the study was done, so questions that was mistakenly constructed or uncomfortable for participants was modified before data collection.

During data collection, questionnaire was left with participants who were able to read and understand the questions, and collected by the close of the day to prevent direct encounter. For interviewees who couldn't read nor write, sensitive information was asked in a less sensitive manner in a language understandable by the interviewee in a face to face interaction.

However, a neutral person was employed to help a participant understand the questions when there was a language barrier. Any other person aside the investigator who assisted in data collection was made to understand the questions in the research questionnaire before administering. At last, the importance of participants giving honest information was emphasized to facilitate data collection and ensure validity of information obtained.

Benefits

The study broadened the knowledge of the researcher on the subject area (factors that influence modern contraceptives use). It could also inform policy makers in decision making with regards to adolescent reproductive health. Aside these, it could serve as a guide to other researchers who seek to conduct study in the area of contraceptive use and reproductive health among adolescents in general, by providing primary data on the prevalence of modern contraceptive usage and the reasons for the low uptake among adolescents. Additionally, the interactions during data collection (one-on-one communication with participants/focus group discussions) enlightened participants on modern contraceptives available and their usage.

Compensation

No compensation was given to participants.

Data storage

Issues of stigmatization and promiscuity were anticipated for those who used modern contraceptives. Therefore, respondents information was kept safe and made available to only

either the researcher, Ghana Health Service or the Public Health Department of the University of Ghana. Moreover, data obtained from the field was saved on a hard drive and email with password as a backup. Hard copies were stored in a cabinet with locks and keys.

Data usage

Data collected from respondents shall be used for purely academic work (submitted to the School of Public Health), and if possible published in the future.

Confidentiality and anonymity

Names of respondents was not required, besides they were allowed to be part of the study by choice and not forcefully or wrongfully convinced by the researcher or anyone, participants had the right to withdraw or request for withdrawal of information any time they wished.

3.14 Pretest or Pilot Study

In order to be sure of the validity of the data collection tools and procedures, the researcher conducted a pretest or pilot study on at least 15 adolescents whose age fell within 10 – 19 years in a community that have similar characteristics as the study participants. This procedure is very necessary in research because it bring to the attention of the researcher about some errors or inaccuracies in the research questionnaire.

CHAPTER FOUR

RESULTS

4.1. Introduction

Data analysis was carried out on all the 300 participants sampled comprising 50% males and 50% females. All eligible participants recruited took part in the study.

4.2. Characteristics of Study Participants

Of the 300 adolescents studied, 216(72.0%) were aged 16-19 years with 54.3% having secondary education followed by 26.7% in tertiary school (Table 4.1). The participants were either Muslims (75.3%) or Christians (24.7%). Participants from Zohe, Kumlanfong, Nayilifong, Balogu and Kuga were mostly Dagombas (71.0%), 18.3% Basaris/Konkomba and a few other tribes (10.7%) like Ashanti, Ewe, Ga, Frafra etc.

Table 4.1 Characteristics of Study Participants

	Frequency (%)	Currently using modern contraceptive		Chi-square statistic/F-exact	p-value
		Yes (%)	No (%)		
Sex				0.027	0.041
Male	150 (50.0)	46(42.2)	104 (54.5)		
Female	150 (50.0)	63(57.8)	87 (45.5)		
Age				-	0.912
10-12	15(5.0)	6(5.5)	9(5.0)		
13-15	69(23.0)	26(23.9)	43(22.5)		
16-19	216(72.0)	77(70.6)	139(72.8)		
Level of education				-	0.712
Primary	31(10.3)	14(12.8)	17(8.9)		
Secondary	163(54.3)	56(51.4)	107(56.0)		
Tertiary	80(26.7)	29(26.6)	51(26.7)		
Other (No formal education)	26(8.7)	10(9.2)	16(8.4)		

Religion				0.096	0.089
Christianity	74 (24.7)	33(30.3)	41(21.5)		
Islam	226 (75.3)	76(69.7)	150(78.5)		
Ethnicity				0.159	0.158
Dagomba	213(71.0)	71(65.1)	142(74.3)		
Konkomba/Basari	55(18.3)	26(23.9)	29(15.2)		
Other	32(10.7)	12(11.0)	20(10.5)		
Location				0.142	0.145
Kuga	60(20.0)	16(14.7)	44(23.0)		
Nayilifong	60(20.0)	26(23.9)	34(17.8)		
Balogu	60(20.0)	17(15.6)	43(22.5)		
Zohe	60(20.0)	25(22.9)	35(18.3)		
Kumlafong	60(20.0)	25(22.9)	35(18.3)		

(Source: Field survey, 2018)

4.3. Proportion of Adolescents Using Modern Contraceptives

Overall, 63.7% of the participants were not using modern contraceptives. Adolescents in Zohe community were the majority in modern contraceptive use followed by Nayilifong and the least was observed among adolescents of Kumlafong. With regards to gender, males who were not using modern contraceptives, 54.5% outnumbered their female counterparts, 45.5%. Modern contraceptive use among adolescents was highest among late adolescents, 16-19 years of age, (70.6%) and least among the young adolescents, 10-12 years of age, (5.5%), however late adolescents could be sexually more active, (Table 4.1).

Adolescents with high school education (junior and senior high school) use modern contraceptives the most (51.4%) and the least among those with no formal education (9.2%). In terms of religious practice, 30.3% of Christian adolescents used modern contraceptives whereas 69.7% of Islam adolescents use modern contraceptives (Table 4). Respondents of the Dagomba

descent were majority in the use of modern contraceptives 65.1% as against 23.9% usage among the Konkomba/Basari ethnic group; these ethnic groups are predominant in the study settings. However, statistically, the variables age, sex, level of education, religion ethnicity and location of respondents had no significant association with modern contraceptive use among adolescents (Table 4.1).

Modern contraceptive methods used by adolescents studied include condoms, pills, injectable, implants and natural methods. Most of them preferred the condoms (71.6%) followed by injectable depo provera (14.7%) and implants being the least preferred (1.8%). Some participants (32%) of the 300 adolescents studied had ever used modern contraceptives. The modern contraceptive methods were mostly accessed from pharmacy/drugs stores (50.7%), friends and family members 22.3%, and health facility 21.3% and scarcely from the internet/media 5.7%.

36.3% of the adolescents confirmed to be currently using modern contraceptives, meaning they ensure a contraceptive is available and put to use during any of their sexual intercourse irrespective of the year they started having sex, either early, mid or late adolescent ages, whereas some 32.0% of them would use modern contraceptives sometimes.

However, attention need to be drawn on the correct use or application of these modern contraceptive because, the right use of a modern contraceptive is what will lead to the realization of its benefit and not just having the contraceptive at hand or wrongly using it.

4.4. Level of Knowledge of Adolescents on Modern Contraceptive Methods

With regards to adolescents' knowledge on modern contraceptives in relation to their use and non-use, 93.3% of the adolescents in this study had heard about modern contraceptives (Table 4.2). Virtually all participants who used modern contraceptives had heard of it before (94.5%)

than those who did not (5.5%). Most of those who heard of modern contraceptives was through health workers (48.6%), followed by print and electronic media (20.7%), and with sex partners as the least of the source of information on contraceptives recorded (7.1%).

However, among all channels, majority of those whose source of information about modern contraceptives was from health workers used it (48.6%) compared to those whose source of information on modern contraceptive was relative (7.4%). Among the modern contraceptive methods heard of, condom was the most (73.2%) followed by injectable (12.9%) and the pills (11.1%). However, majority of those who heard of condom used it (70.9%) followed by those who heard of injectable (17.5%) and those who heard of pills (10.7%).

Respondents who agreed that using modern contraceptives is good were the majority and were also the majority in using contraceptives (54.1%). Thus understanding the purpose of modern contraceptive contributes to its usage. The most reason why adolescents would use modern contraceptives is birth spacing (39.0%) and for health purposes such as preventing of STDs and unsafe abortions (37.7%).

Most of the adolescents (78.7%) would encourage others to use modern contraceptives. Moreover, significant proportion (86.2%) of adolescents who agreed to encourage their colleagues to use modern contraceptive methods were using at least one of the modern contraceptive methods ($p=0.016$).

Also adolescents who agreed using contraceptive is good were indeed currently using it ($p=0.03$), this study findings are shown in table 4.2 below. There are higher chances that adolescent who had tried a modern contraceptive method before will continue to use modern contraceptives in a sexual intercourse compared to those who have never used any modern method of contraception before.

Table 4.2 Adolescents' Knowledge on Modern Contraceptives

	Knowledge score (%)	Using modern contraceptive N (%)	Not using modern contraceptive N (%)	p-value
Ever heard of contraceptive				0.542
Yes	280(93.3)	103(36.8)	177(63.2)	
No	20(6.7)	6(5.5)	14(7.3)	
Source of information about contraceptives				0.003*
Health worker	136(48.6)	60(67.4)	76(42.9)	
Media	58(20.7)	13(12.6)	45(25.4)	
Partner	20(7.1)	11(10.7)	9(5.1)	
Relative	25(8.9)	4(3.9)	21(11.9)	
Others	41(14.6)	15(14.6)	26(14.7)	
Type of contraceptive method heard of				0.124
Condoms	205(73.2)	73(70.9)	132(74.6)	
Pills	31(11.1)	11(10.7)	20(11.3)	
Injectable	36(12.9)	18(17.5)	18(10.2)	
Implants	5(1.8)	0(0)	5(2.8)	
Natural method	2(0.7)	0(0)	2(1.1)	
Other	1(0.3)	1(0.9)	0(0)	
It's good to use contraceptive				0.03
Strongly agree	142(47.3)	59(54.1)	83(43.5)	
Agree	95(31.7)	35(32.1)	60(31.4)	
Neutral	30(10.0)	7(6.4)	23(12.0)	
Disagree	21(7.0)	8(7.3)	13(6.8)	
Strongly disagree	12(4.0)	0(0)	12(6.3)	
Reasons for contraceptive use				0.357

Birth spacing	117(49.2)	50(45.9)	67(35.1)
Health purpose	113(29.0)	39(35.8)	74(38.7)
Economic benefits	28(10.9)	7(6.4)	21(11.0)
Properly take care of children	38(9.3)	12(11.0)	26(13.6)
Other	4(1.6)	1(0.9)	3(1.6)
Will you encourage someone to use contraceptives			0.016
Yes	236(78.7)	94(86.2)	142(74.3)
No	64(21.3)	15(13.8)	49(25.7)

(Source: Field survey, 2018)

4.5. Factors Accounting For Low Uptake of Modern Contraceptives among Adolescents

In terms of proportions, some 48% of the respondents agreed their culture discouraged them from using modern contraceptives. Majority, 56.7% of the respondents were in support that their religion discourage them from using modern contraceptives (Table 4.3). Several factors including; health staff attitude, non-supporting partner and peer influences had influence on the decision of adolescents to use a particular modern contraceptive.

In further analysis, the logistics regression model indicated 1.79 odds of using modern contraceptive for adolescents who disagreed their religion discouraged them from using a contraceptive method (95% CI: 0.48, 1.32).

Statistically, source of client access to contraceptive information was significantly associated with adolescent modern contraceptive uptake for p-value of 0.003 recorded (Table, 4.2). A logistic regression model assessment was carried out on demographic characteristics age, sex, level of education, ethnicity and location at p=0.05 level of significance.

All the bivariate logistics regression assessment results showed no significant association for these variables with respect to adolescents' uptake of modern contraceptives, where all $p > 0.05$ (similar to chi-square assessment in Table 4.1). With regards to the multiple logistics regression

model, the backward and forward elimination methods was employed, using the best fit factors including religion, culture, staff attitude, privacy and confidentiality, access and adverse effects of modern contraceptives.

Table 4.3. Measures of Association between Possible Predictors and Modern Contraceptives Uptake Using the Logistic Regression Model

	Frequency (%)	cOR (95% CI)	p-value	aOR (95% CI)	p-value
Religion			7.43		4.98
Agree	170(56.7%)	1.00	0.0243	1.00	0.0831
Disagree	104(34.7%)	1.79(0.48, 1.32)		0.98(0.51, 1.89)	
Unsure	26(8.7%)	0.53(0.26, 1.11)		0.53(0.18, 1.56)	
Culture			3.03		0.08
Agree	144(48.0%)	1.00	0.2195	1.00	0.9599
Disagree	122(40.7%)	0.97(0.59, 1.60)		0.99(0.53, 1.85)	
Unsure	34(11.3%)	0.69(0.31, 1.56)		1.08(0.43, 2.71)	
Cost			1.19		
Agree	113(37.7%)	1.00	0.5520	-	
Disagree	143(47.7%)	1.11(0.66, 1.85)			
Unsure	44(14.7%)	0.94(0.45, 1.96)			
Staff attitude & Confidentiality			3.88		4.17
Agree	117(39.0%)	1.00	0.1438	1.00	0.1246
Disagree	135(45.0%)	0.79(0.47, 1.32)		0.76(0.42, 1.36)	
Unsure	48(16.0%)	0.53(0.26, 1.11)		0.63(0.27, 0.49)	
Structural arrangement & Privacy			9.64		9.91
Agree	149(49.7%)	1.00	0.0081	1.00	0.0070
Disagree	96(32.0%)	0.77(0.45, 1.31)		0.86(0.47, 1.56)	
Unsure	55(18.3%)	0.43(0.22, 0.88)		0.46(0.20, 1.08)	

Access			2.08		4.17
Agree	120(40.0%)	1.00	0.3536	1.00	0.1244
Disagree	142(47.3%)	0.59(0.35, 0.97)		0.59(0.34, 1.03)	
Unsure	38(12.7%)	0.68(0.53, 1.10)		1.02(0.41, 2.55)	
Peer influence			3.04		
Agree	111(37.0%)	1.00	0.2184		
Disagree	153(51.0%)	0.97(0.59, 1.62)		-	
Unsure	36(12.0%)	0.63(0.41, 0.89)			
Non-supporting Partner			2.60		
Agree	114(38.0)	1.00	0.2731	-	
Disagree	134(44.7%)	1.05(0.63, 1.78)			
Unsure	52(17.3%)	0.94(0.47, 1.87)			
Non-supporting family			2.18		
Agree	138(46.0%)	1.00	0.3354	-	
Disagree	132(44.0%)	1.21(0.74, 1.10)			
Unsure	30(30.0%)	0.80(0.34, 1.89)			
Adverse effects of modern contraceptives			1.38		1.15
Agree	142(47.3%)	1.00	0.5007	1.00	0.5615
Disagree	108(36.0%)	0.94(0.56, 1.60)		0.87(0.47, 1.58)	
Unsure	50(16.7%)	0.87(0.45, 1.70)		0.97(0.46, 2.06)	

(Source: Field survey, 2018)

CHAPTER FIVE

DISCUSSIONS

5.1. Introduction

This section of the report presents discussion of the study findings. Data were collected base on three main objectives:

- Level of knowledge of adolescents on modern contraceptives
- Proportion of adolescents using modern contraceptives
- Factors accounting for low uptake of modern contraceptives

This research sought to provide insight on the knowledge, perceptions and attitudes of contraceptive use among adolescents in five communities (Kuga, Nayilifong, Balogu, Kumlanfong and Zohe) in the Yendi Municipality. Several relevant issues were raised by the findings of this study. A lot has been researched concerning the rising number of adolescents who engage in sexual activities at an early stage; this activity is combined with inadequate knowledge on how to use and access contraceptives as well as reproductive health (Bie, Diogenes & Moura, 2006).

The implications and impact of such early onset of sex is worsened by limited knowledge, poor attitude and misperceptions of behaviour related to sex and contraceptives use (Alves & Lopes., 2008). Reproductive and sexual health care, including modern contraceptive services and information, is recognized not only as a key intervention for improving the health of men, women and children, but also as a human right (WHO, 2016), however, the recognition of this

right is been underpinned by religious, cultural reasons, health staff attitude and structural arrangement of contraceptive access points like health facilities and pharmacies/drug stores.

5.2. Knowledge of Contraceptive Use

Findings from this study indicate that, adolescents generally are aware of modern contraceptives, 93.3% out of the 300 participants involved in the data collection. This knowledge is mainly due to health education by health workers, media advertisement, conversations with friends, from school, etc.

This however do not correspond with the knowledge on the actual or correct use of modern contraceptives. As evidenced in the data collected, there was no statistical significance between demographic characteristics of respondents and modern contraceptive use. The male condom was found to be the most known modern contraceptive followed by pills. The adolescents displayed more knowledge concerning the male condom. This finding affirms the finding of Buxton and Hagan in 2012 who reported that adolescents are more familiar with condoms and oral pills, which may be due to lack of knowledge about other methods (Buxton & Hagan, 2012).

Moreover, evidence has proved that once the adolescent knows how to correctly use modern contraceptives, it increases the chances as well as confidence of it being used (Kinaro, et al., 2015). There was high rate of contraceptive use among adolescents who heard of it (94.5%) than those who did not (5.5%). Some of the adolescents heard of modern contraceptives through health workers (48.6%), partners (7.1%), friends and relatives (8.9%) and media (20.7%). Therefore encouraging and teaching adolescents to use modern contraceptives will be a good strategy to ensuring that adolescents become familiar with the available methods.

Generally, almost all the 300 participants (93.3%) involved in the study were aware of at least one method of modern contraception i.e. condom, injectable, pills, etc. but more need to be done to convert the awareness into usage, as few (36.3%) adolescents endorsed to be currently using modern contraceptives in sexual intercourse. This finding of the study correspond to the report of Ghana Statistical Survey (2014) which indicated that the proportion of all women including adolescents who know any method of contraception has risen from 76% in 1988 to 98% in 2003 and 2008 and to 99% in 2014. The same report indicated less than 38% use modern contraceptive methods.

Many of the adolescents interviewed said they were willing to encourage their friends to use modern contraceptives. This study assessed the reasons for the poor patronage of modern contraceptive among the same adolescents who agreed to encourage their peers to use modern contraceptive methods.

5.3. Proportion of Adolescents Using Modern Contraceptives

The quantitative analysis as presented in the preceding chapter indicated high level of awareness of adolescents (aged 10-19 years) on modern contraceptive method, with low level of patronage, about 36% of the 300 adolescents interviewed. This finding is not much different from a WHO, 2016 report which indicated 41% of modern contraceptive use among adolescents living in low-income countries of which Ghana is not an exception, compared to high patronage in Europe i.e. 64%.

Moreover, Sub-Sahara Africa women and adolescent girls continue to die due to lack of access to contraceptives; the lack leads to unwanted pregnancies and unsafe abortions. The study estimated that most of these pregnancies could be averted by the use of contraceptives (UNFPA,

2011). Although Sub-Saharan Africa has 24% unmet need for contraception, the unmet needs vary per region and by countries. For example in South Africa 58% of women and adolescents (15-45 years) use contraceptives, but in Sierra Leone only 5% use contraceptives (Guttmacher Institute, 2007).

Adolescent females are the most affected when modern contraceptives are misused or not used during sexual intercourse; in the sense that teenage pregnancy has many undesired consequences such as truncation of education, poor maternal and fetal health and social stigma. Adolescent males are not as severely affected (Baidoo, 2013). It was proposed that females would have a more embracing attitude towards contraceptive use due to its impact on their well-being.

This reflects the study finding that 57.8% of females are currently using modern contraceptives compared to 42.2% of their male counterparts, even though there was a weak statistical significance of association between sex and modern contraceptive usage with a p-value of 0.041. Despite the fact that late adolescents (16-19 years) were confirmed to be more sexually active compared to early adolescents (10-14 years), for participants of the study who currently use modern contraceptives, 70.9% were comfortable with the male condom.

5.4. Factors Accounting For Low Uptake of Modern Contraceptives

Numerous reasons account for the low patronage of modern contraceptives among adolescents, ranging from religion, culture, access to contraceptive and negative behaviour of some health staff that deters adolescents from accessing modern contraceptives.

However adolescents through diverse reasons turn to engage in sexual intercourse before the age of twenty. One study confirmed the median age of sexual debut of adolescents in Ghana at 15.5 years for males and 16.2 years for females. In the same study conducted in 9 senior

secondary schools, 50% of the high school students considered chastity to be ideal and attainable, but 42% of males and 15% of female had had sex before (Asare et al, 2006). Most adolescents will engage in sexual activities with the reasons of peer pressure, deception from partners, experimental and sexual desire satisfaction (Crystal Clotney, 2012).

Adolescents should have access to convenient, confidential, and affordable modern contraception and reproductive health services, such as gynecological exams, counseling, STD tests, and other tests (Kirby, 1994; ICPD, 1994). But this is not so in many Sub –Sahara Africa countries. Ikamari and Towett, 2007 recorded that, in some three decades ago teaching on sexual reproductive health was done in a gender sensitive way for some activities due to some taboos, but now, urbanization has loosened the social practices and in return has made teenage pregnancy and sexual activity of the adolescents more prevalent (Ikamari and Towett, 2007).

In terms of proportions, more than half of the respondents believed religion affects their use of modern contraceptives (56.7%), and in majority, 48.0% were in support that culture also affects the use of modern contraceptives, Adam Abdul-Razak (2016) also found the following reasons given for adolescents to refuse a contraceptive method: fear of side effects, convenience of use, change of needs, and switch to other methods.

A study in the Niger Delta of Nigeria also revealed that lack of resources reduces accessibility to contraceptive and reproductive advice in developing countries (Isa & Gani, 2012). On the contrary, participants who took part in this study confirmed that cost of modern contraceptives wouldn't be their challenge to use a particular modern contraceptive method.

The quantitative analysis of data collected provided evidence with high odds of 1.11 (CI: 0.66 – 1.85; $p=0.5520$), even though there still exist the gap of low level of awareness and insight of

adolescents about the other modern contraceptive methods. Again, the study findings points out the fact that more emphasis be placed on culture, religion, privacy and health provider attitude as factors that could restrict adolescents from using modern contraception methods instead of their prices.

In a similar view, Gipson et al. (2011) reported that Catholics and Muslims see contraceptive use as a license for illicit or extra marital sexual behaviour or indiscriminate sexual behaviour. Moreover, further analysis of religion as an influential factor to contraceptive use proved that, adolescents who disagreed religion discouraged them from using modern contraceptive methods were 1.79 the odds of using the methods with 95% CI of (0.48, 1.32) compared to those who agreed ($p= 0.0243$).

Furthermore, most African cultures like that of Northern Ghana place premium on giving birth to many children, besides, early marriage is still a practice in these settings contributing to a kick against the use of contraception, despite the high level of awareness on the various birth control methods.

Many adolescents agreed to the fact that health professional attitude prevented them from accessing modern contraceptives, this affirms the findings of two separate studies conducted in Uganda and South Africa by Ahanonu (2013) and Williamson et al (2009) respectively. The Ugandan study reported that most of healthcare providers had negative attitudes towards the provision of contraceptives for young people and were not prepared or were hesitant to give young people contraceptives, as such; they go ahead to impose non-evidence based age restrictions and consent requirements.

In the South African study conducted among nurses, it was reported that the nurses generally stigmatized adolescent sex and felt very uncomfortable giving contraception to adolescent girls; they often tried to influence the adolescents who came for contraception not to have sex. Parental permission was also sought from adolescents before contraceptive services were provided even though legally, parental permission is not needed for minors to be given contraception in South Africa.

The situation is not different from what adolescents experience in Northern Ghana in their quest to access contraceptive methods, some of the study participants shared their experience of been lambasted by pharmacy/drug store operators as they walked into their shop to buy condom or pills. They are either seen as minors or needed to answer a lot of questions before they can buy what they want. Moreover, males were found to gather much courage to buy a contraceptive for either themselves or their partners compared to females who will scarcely buy modern contraceptives themselves. Even in African settings like Kenya and Zambia where majority of health professionals endorsed contraceptive use among adolescents, Abdul-Razak (2016) indicated that the health workers first line of action on adolescent sex education is to advise adolescents to stay away from sex. In Ghana for instance, some healthcare providers intentionally place restrictions such as age and parity to stop unmarried people from using modern contraceptive methods, claiming that a contraceptive like injectables could lead to infertility (Mbizvo & Zaidi, 2010).

Reasons for low uptake of contraceptives among adolescents is multi-faceted according to Kanku and Mash (2010) ranging from socio-economic status, knowledge about contraceptives, attitudes about issues related to modern contraceptives, residential area, educational status, counseling

received about contraceptives, attitudes of the contraceptive providers, and cultural values, beliefs and norms.

Bankole et al, 2007 also reasoned that cultural taboos does aggravate the ignorance of people on contraceptives, the writers confirmed the study finding that religion and culture are part of the factors accounting for low usage of contraceptive among the 300 interviewees involved in the study. Adolescents who agreed religion had any influence on their use of modern contraceptives were 1.79 the odds of using the methods with 95% CI of 0.51- 1.89 compared to those who disagreed, controlling for culture, staff attitude, access, privacy and confidentiality and adverse effects.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1. Conclusions

This was a descriptive study that applied a multi-stage approach to recruit 300 adolescents from five communities (Kuga, Nayilifong, Zohe, Balogu and Kumlanfong) in the Yendi Municipality to find out; their knowledge on contraceptive use, the prevalence of contraceptive use and the factors leading to the seldom use of modern contraceptives among the adolescents with about 36.3% usage against 63.7% non-usage.

The observations made in the study indicated that adolescents in Yendi Municipality have low patronage of contraceptives, despite their high level (93%) of awareness of the various methods. They got to know about modern contraceptive methods mostly through health workers, media and friends.

Personal reasons, coupled with socio-cultural factors as well as attitude of health service providers was realized to influence adolescent use of modern contraceptives; religion presented no different results even though demographic characters did not show significant correlation with current use of contraceptive, additionally, privacy was another challenge adolescents faced when they wanted to acquire modern contraceptives and not necessary the cost of modern contraceptive methods.

There is the need to improve service provider skills on quality adolescent sexual and reproductive health services that are youth-friendly and protect the privacy of adolescents who seek for reproductive health in general. Furthermore, adolescents should be better equipped to

make better decisions concerning their sexuality as well as intensive education on their vulnerability to sexually transmitted diseases and infections. Socio-cultural restriction like religion and culture to modern contraceptive use need to be further explained to clarify the minds of adolescents on the availability and use of contraceptives as well as sex education. All these together with the help of the government and supporting NGOs who are into health could span the agenda to improving modern contraceptive use among adolescents, unmarried adults and couples as well.

6.2. Recommendations

The findings of this study have important implications on the sexual and reproductive health of adolescents. Sex education is vital in providing information and knowledge to enable the adolescent be better equipped for the decisions they have to take with regards to sexual activities and their outcomes.

Government and Ghana Education Service and Schools

Ministry of Education should review their reproductive health curriculum to get adolescents become knowledgeable about their menstrual cycle since there is an association between knowing ones menstrual cycle and contraceptives use among young adults. Several policies concerning the introduction of sex education into Senior High School curriculum exists in the National Youth Policy document.

However, there is the need for policies and laws concerning the sexual health of adolescents to be implemented and fully enforced. Ghana has had an adolescent health policy for more than a decade and it has undergone ratification under the ICPD since 1994; nonetheless, further

attempts have not been made to make sure the directives of the policy which includes sex education is being fully enforced.

Policy makers together with Non-Governmental Organizations who are into family planning and adolescent health could rely on findings of this study to make sure their programmes on adolescents' contraceptive use meet the target of reducing the unmet need of adolescent contraception use leading to early parenthood, unsafe abortions and deaths among our future leaders. Additionally, school authorities could include health education in their extra-curricular activities; again they can also develop a counseling unit in the school where adolescent could seek for advice on more private issues such as sex and reproductive health.

Ghana Health Service, the family and Community

The results of this study highlights the need for further investigations by the Ghana Health Service that would make it easier in obtaining a greater understanding to improve the role of the family and community in sexual and reproductive behaviour of adolescents. Observations in this study showed that negative behaviour of healthcare providers scare adolescents from accessing modern contraceptive methods, ensuring a positive behavior of health workers towards adolescent reproductive health could reverse the situation.

Also, the family is the first unit of socialization where values, norms and beliefs are learnt, there is the need for the family to socialize the adolescents effectively. Parents should discuss issues that concern sex and reproductive health with their children often to enable them form the right values and norms concerning sexual activities. This will assist them in making appropriate choices, the timing and initiation of parental communication is also key in adolescent sexual reproductive health.

Organizers of programs in the community like a durbar should not hesitate to include reproductive health education to help enlighten adolescents on the need to rely on modern contraceptives to prevent unwanted pregnancies, congruent to societal norms and values.

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APPENDICES

Appendix I: Research Questionnaire

QUESTIONNAIRE FOR THE RESEARCH TOPIC: FACTORS INFLUENCING LOW UPTAKE OF MODERN CONTRACEPTIVES AMONG ADOLESCENTS IN YENDI MUNICIPALITY

INSTRUCTION TO PARTICIPANT:

Please tick your desired choice for the options provided for each question. Write in the spaces provided when applicable; 15-20 minutes of your time will be required for this exercise. Please do well to be sincere in your response. Your name is not required; and information collected from you will be kept confidential and for the purpose of this work only. Thank you for agreeing to take part in this exercise.

QUESTIONNAIRE NUMBER.....

SECTION A: BIOGRAPHICAL DATA

1. Age range

10-12 () 13-15 () 16-19 ()

2. Sex

Male () Female ()

3. Educational background

Primary () secondary () tertiary () other

4. Religion

Christian () Islam () traditional () if other specify.....

5. Ethnicity

a. Dagomba () b. Konkomba/Basari () c. other (specify)

6. Occupation (specify).....

7. Location

Kuga () Nayilifong () Balogu () Zohe () Kumlanfong ()

**LEVEL OF KNOWLEDGE OF ADOLESCENTS ON MODERN
CONTRACEPTIVES**

8. Have you ever heard of contraceptive before?

Yes () No ()

9. Where did you hear about it?

Health worker () media () partner () relative () other(s).....

10. Which of the contraceptive methods have you heard about?

Condoms () pills () injectable () implants () natural method () if other
specify.....

11. Using contraceptives is good.

Strongly agree () agree () neutral () disagree () strongly disagree ()

12. What makes contraceptive use good?

Birth spacing/family planning () health purpose () safes money () more time to
take care of children () if other specify.....

13. Will you encourage someone to use contraceptives? Yes () No ()

14. Give your reason(s) for your answer in question 13

.....
.....

15. What else do you know about contraceptives?

.....
.....

PROPORTION OF ADOLESCENTS USING MODERN CONTRACEPTIVES

16. Have you ever had sexual intercourse before? Yes () No ()

17. Have you ever used modern contraceptive before? Yes () No ()

18. At what age did you start using contraceptive? 10 -12 yrs () 13 – 15 yrs () 16 – 18 yrs ()

19. How often do you use modern contraceptive(s)?

Once a section of sex () every section of sex () at certain times () not at all ()

20. Are you currently using any of the contraceptive methods? Yes () No ()

21. If yes which method? Condoms () pills () injectable () implants () natural method ()

if other specify.....

22. Where do you get contraceptive from?

Health facility () drug store/pharmacy () media/internet () family () friends () if

other specify.....

FACTORS ACCOUNTING FOR LOW UPTAKE OF MODERN CONTRACEPTIVES AMONG ADOLESCENTS

Note: please indicate the degree to which you agree or disagree by rating the following statement/responses. Where SA – strongly agree; A – agree; N – neutral; D – disagree; SD – strongly disagree.

ITEM	RESPONSES				
23. My religion/faith inhibits or possess a challenge in the use of modern contraceptive(s).					
24. My culture/society inhibits or possess a challenge in the use of modern contraceptive(s).					
25. Modern contraceptives are expensive and I can't easily afford them					
26. Attitude of health workers discourage me from using modern contraceptives.					
27. Structural arrangement of delivery outlet pose a challenge to confidentiality and privacy.					
28. Getting access to modern contraceptives is sometime difficult and discourage me from using it.					
29. My friends discouraged me from using a modern					

contraceptive.					
30. My partner is not usually in support of me using modern contraceptives`					
31. My family does not support the use of contraceptive					
32. Adverse effect of modern contraceptives scare me from using modern contraceptives.					

ETHICAL APPROVAL