SCHOOL OF PUBLIC HEALTH

COLLEGE OF HEALTH SCIENCES

UNIVERSITY OF GHANA

CONTRACEPTIVE USE AMONG FEMALE ADOLESCENTS IN TWIFO PRASO SENIOR SECONDARY SCHOOL IN THE TWIFO ATTI-MOKWA DISTRICT IN CENTRAL REGION OF GHANA

BY

CATHERINE AKU KLUTSE

(10402283)

THIS THESIS/ DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FUFILMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF PUBLIC HEALTH (MPH) DEGREE.

JANUARY, 2021

DECLARATION

I, Catherine Aku Klutse hereby declare that this dissertation is my own work done under supervision. All literature used in this dissertation have been duly referenced and to the best of my knowledge it has not been submitted for approval to any University for ethical approval or the award of any certificate.

SIGNATURE: ……. **Date:** 5th January 2021

CATHERINE AKU KLUTSE

(Student)

SIGNATURE: ……. **Date:** 5th January 2021

DR. KWABENA OPOKU- MENSAH

(Academic Supervisor)

DEDICATION

I dedicate this work to my entire family and friends and my Pastor for their Great support in making this work a reality. This work is also dedicated to my Supervisor and the Ghana Education Service in Twifo Atti Mokwa District and all Students who participated in the study.

ACKNOWLEDGEMENT

My acknowledgement goes to the Almighty for giving me the enablement to make this study a reality.

My appreciation also goes to my family for offering me with both financial and moral support for the success of this work. I am particularly grateful to my husband Erasmus Yao Klutse, mother Madam Agnes Atsuvia and my children, Erasmus junior, Myda, Rosalynd and Senam for their moral and financial support

My greatest appreciation goes to my supervisor, Dr. Kwabena Opoku-Mensah, for spending his time and sharing his knowledge to support this work.

This work couldn't have been successful without the support of my friends who were so concern about my progress. I am very much appreciative of your support for 'a friend in need is a friend indeed'.

All faculty and staff in the Department of Social and Behavioural Sciences, School of Public Health, are acknowledge for their support.

Finally, my appreciation goes to the Director of Ghana Education Service (Twifo Praso) and the Head of the Twifo Praso Secondary School for their permission and immense support towards the success of this study.

To all of you, I say THANK YOU!!!

ABSTRACT

Background: The use of contraceptives by female adolescents is still low in many low–income countries, including Ghana. There is low level of contraceptive use among adolescents resulting in high teenage pregnancy rates in the Twifo Atti Mokwadistrict of Ghana. There is the need to examine factors influencing modern contraceptive use among adolescent in the Twifo Atti Mokwa district, an area where teenage pregnancy is high.

Objective: This study aimed at determining factors influencing modern contraceptive use among female adolescents in the Twifo-Atti MokwaDistrict.

Methods: A cross sectional study design was done with the help of quantitative research methods. A structured closed ended questionnaire was adopted in collecting data from 291 female adolescents focusing on their knowledge of contraceptives, attitude towards and practices of modern contraceptives in addition to their socio-demographic characteristics. Descriptive, bivariate and logistic regression analytic techniques was also used to analyze the data after cleaning and entry into STATA version 16. At the 95% confidence interval, the significance level was agreed at $p<0.05$. Results were presented in tables, and charts.

Results: This study provided evidence on the knowledge, attitude and practice and the challenge in the use of modern contraceptives among female adolescents in the second cycle institution in the Twifo Atti-Mokwa District in the Central Region of Ghana. This served as a basis for policy formulation and reformulation on the use of modern contraceptives in controlling teenage pregnancy and sexually transmitted infections.

Conclusion and recommendations: The study found modern contraceptive knowledge among adolescents to be very high but use was not encouraging. The contraceptive prevalence rate was 36.1%. Only few of the respondents who were sexually active used contraceptives consistently.

Parents of female adolescents must be educated and encouraged to engage their children in reproductive talks.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

ANC	Ante natal care
ASRH	Adolescent Sexual and Reproductive Health
COC	Combined Oral Contraceptive
GDHS	Ghana Demographic and Health Survey
GES	Ghana Education Service
GHS	Ghana Health service
GSS	Ghana Statistical Service
HIV	Human Immunodeficiency Virus
IUD	Intrauterine Device
JHS	Junior High School
LAM	Lactational Amenorrhea Method
LARC	Long-acting reversible contraceptives
LMICS	Low- and Middle-Income Countries
PNC	Post-natal care
SHS	Senior High School
STI	Sexually Transmitted infection
UNFPA	United Nations Population Fund
UNICEF	United Nation Children's Fund
WHO	World Health Organization
TAMD	Twifo Atti-Mokwa District

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

It is anticipated that, the world population will continue to rise especially in Sub-Sahara Africa and Asia. The increasing population causes future social and economic constraints and consequently the national objectives of improving on the welfare of its citizenry. One way to reducing rapid growth rate is fertility reduction, through the use of contraceptives. Although some progress has been made especially education on unplanned pregnancies, unsafe abortions, sexual transmitted infections etc, most Ghanaian female adolescents rarely use modern contraceptives (Agyemang et. al., 2019). This has prompted governments and policy makers all over the world to implement various programs to promote contraceptive use to improve people's quality of life (Sakara, Namoog & Badu-Nyarko, 2014).

In Africa, contraceptive use (a family planning method) is very important to Millennium Development Goal five (MDG 5) of making maternal healthcare better, that intends for a fall in maternal death ratio by about ¾ and the attainment of universal access to reproductive healthcare by the end of 2015. Evidently, many studies are of the view that effective family planning programs amount to a fall in infant and maternal deaths as well as growth (Cleland *et al*., 2012). It must be noted that approximately one third maternal mortality and a marginal one-tenth of the deaths of infant generally can be avoided yearly the assistance of modern contraceptive methods. A study by Lester and Allan (2016) reported some possible explanation of high sexually transmitted infections, mostly as a result of inadequate sex education in schools, where most adolescents within the ages of 15-19 are found within the formal education system. Thus, by allowing females, with

specific reference to adolescents to postpone pregnancy and motherhood, space births and cease childbearing.

Engaging female adolescents in contraceptives promises to be a means to improving access and usage of family planning methods in South Asia as found in a study by China and Alamode (2019). An increasing number of practical examples from research discoveries show global evidence and demonstrate the benefits of young female engagement in family planning. Failure to involve young female in FP programs could seriously have socio-economic effects as mentioned earlier. Bruce (2013) revealed that indeed when ladies are taught and propelled to hone contraception, they may not do so due toresistance from their spouses. People met in urban Sudan accepted that the male accomplicechoosesin the event thata couple will utilize contraceptives and in case they do, select the strategy (Khalifa, 2018).

In the sub-Saharan Africa, **Ghana** was among the nations that implemented a clear and an all-inclusive population in 1969. In that regards, reducing the high rate of population growth was the primary goal to facilitating socio-economic growth. Since then, some factors such as societal, economic, individual and health have been observed to affect the uptake of family planning.

In a research, Arundhati (2011) stated that formal schooling, enhanced socio-economic status and easy access to family planning services provide the best ways to encourage the use of modern contraceptive methods. Also, hinderances to the use of contraceptives which comprises social restrictions and religion, low socio-economic status and lack of formal education (Adanu et al., 2009) have been identified which need further investigations and action.

Accordingly, Ijadunola *et al*. (2010), are of the view that there is an urgent need to increase female adolescent involvement in family planning decision making to improve contraceptive uptake. There is however low awareness of female adolescents' contraceptive uptake in the Ghanaian Junior High schools. Low levels of knowledge, social stigma, shyness/embarrassment and many other factors contribute to the low patronage of female adolescents in contraceptive usage. The present study will ascertain factors influencing modern contraceptive usage among female adolescent in second cycle institutions in the Twifo Atti Mokwa District.

1.2 Problem statement

Generally, the interest in the reproductive health of adolescents is on the increase in recent times (Olaleye, 2016). However, it is argued within the intellectual discourse that adolescent constitutes a significant proportion of any population with sexually transmitted diseases being common among them; and that there is the need to particularly heighten research interest in this area (Olaleye, 2016). The World Health Organization (WHO) reports that one million girls at age 15 years old or younger give birth every year (World Health Organization (WHO), 2017). The low rate of modern contraceptive usage could be attributed to factors such as adolescents' socio-demographic characteristics, knowledge, attitude and practices (see Tschann & Adler, 2001).

Some studies have attributed the problem of low contraceptives usage among female adolescents to their socio-demographic factors (Kabagenyi et al., 2016). Kabagenyi et al. (2016) stated that age at first birth, history of previous birth, present age and place of residence, education and socioeconomic status were the key indicators of the use of contraceptives among young women in Uganda.

Bjelica (2008) argued that the socio-demographic factors identified that influence the contraceptive behavior of female students should be used to develop appropriate strategies for promoting young people's use of contraception.

In Ghana, awareness of contraceptive method is common among both women and men, at least they have knowledge of one method of contraception (Ababio, 2009). But with reference to adolescents, knowledge of contraceptives seems to be low, often times due to neglect or marginalisation and limited access to sex education and information in schools (Asamoah, Agardh & Östergren, 2013). The problem resulting from the seeming lack of knowledge of contraceptives leads to unwanted pregnancies amongst these adolescents (Ababio, 2009).

There appears to be relatively poor attitude among female adolescents towards contraceptive usage (Asamoah *et al.*, 2013). This is due to low or no availability of family planning services in Upper and Junior High Schools for female adolescents (Asamoah *et al.*, 2013). The Ghana Statistical Service (GSS) report showed utilisation of family planning by females as 215 (0.3%), 247 (0.2%) and 183 (0.2%) for the years 2015, 2016 and 2017 respectively (Ghana Statistical Service, 2016). Hence, the current debate is on moving beyond mere knowledge to the use/usage of family planning methods.

Female adolescents are in a high sexually active stage of life, and teenage pregnancy continues to be persistently high in the Twifo Atti Mokwa District among these girls. Currently, the teenage pregnancy rate in the district has constantly remained at 16.5% for quite some years now, which is far above the national target of 12% (Adolescent pregnancy, 2014). As this is caused by the lack of contraceptive use or practices among these girls, which result in early and unwanted pregnancies, it is anticipated that if careful

measures are not taken, this could escalate and get compounded with some health implications both for the teenagers, the child as well as the family and the larger society.

The implications for apparent lack of knowledge, poor attitude and practices of modern contraceptives among female adolescents in second cycle institutions include school dropout, possibility of becoming pregnant again, and socio-economic and health issues like poverty leading to malnutrition for both the mother and the child (Asamoah *et al.*, 2013). The evidence of these in the Twifo Atti Mokwa District was that, the number of abortion cases were 407 in 2017; 296 cases were recorded in 2018; and 93 cases recorded as at mid-year of 2019 (TAMDHD, 2019).

1.3 Significance of the study

Kothari (2004) suggests that a study's importance applies to the way a study relates to the bigger problems and uses a convincing rationale to explain the reason for the study. This section elaborates on the rationale for this study. Abdul-Rahman, Marrone and Johansson (2011) found that due to obstacles such as restricted access, costs and misunderstandings of the effects of contraceptives in Ghana, there was a growing unmet need for modern contraception among sexually active female adolescents (15-19 years old). However, these and other factors, which may influence utilisation of modern contraceptives in the Twifo Atti-Mokwa District of the Central Region have yet to be examined. This study examined the following factors (socio-demographic characteristics, knowledge, attitude, and practices), which may account for the lack of use of modern contraceptives and associated teenage pregnancies in the district (TAMDHD, 2019).

Studies have argued that in order to understand why female adolescent utilise or not utilise modern contraceptive, it is important to examine their socio-demographic characteristics (Bjelica, 2008; Kabagenyi *et al.*, 2016). Islam and Hasan (2016) indicate that education

and mass media for women may also be seen as possible factors affecting the use of contraceptives. However, it appears that no study has examined how these socio-demographic characteristics influence female adolescents'' utilisation of modern contraceptives in the TAMD in the Central Region. This would seek to fill the gaps in literature accordingly. It is believed that this study is very important and would go a long way to providing a scholarly contribution to the literature on family planning and modern contraceptives by documenting the level of knowledge, attitude and use of contraceptives among adolescents in first cycle institutions in the district.

It is anticipated that with enhanced knowledge of the use of contraceptives, female adolescents could prevent unwanted pregnancies (Islam, & Hasan, 2016). Islam and Hasan (2016) demonstrated that the perception of contraception and acceptance of family planning had a substantial influence on the use of contraceptives in Bangladesh. A study among University students in Ghana found that students had little knowledge of contraceptives (Appiah-Agyekum, & Kayi, 2013). If this was happening among university students, then it goes without argument that the level of knowledge of modern contraceptive and use among female adolescents in second cycle institutions in the county would be low. Nonetheless, few studies have investigated how knowledge of the use of modern contraceptives could enhance acceptance and consequential use among female adolescents in Ghana (Abdul-Rahman *et al*., 2011). Therefore, this study seeks to assess the influence of the level of knowledge of the use of modern contraceptives in preventing unwanted pregnancies among second cycle students in TAMD. While this study will address some of the gaps in literature, the output will contribute to the development of targeted intervention for female adolescents in their reproductive age by the healthcare institution where the researcher is a part. This is because the full report would be a

valuable source of reference in the field for future researchers and academia, since it will act as a secondary source of more study knowledge.

A study showed that participants at a University in Ghana had bad attitudes towards unmarried contraceptive users (Appiah-Agyekum, & Kayi, 2013). It could be opined that if students in tertiary institutions had bad attitudes towards contraceptives, then this could be worse for students of second cycle institutions in the country, especially in remote areas like the TAMD. This notwithstanding, it seemed that few studies have assessed the attitude towards contraceptives in Ghana with none been reported of the TAMD (Abdul-Rahman *et al*., 2011; Appiah-Agyekum, & Kayi, 2013). Whilst this study will add to the existing store of knowledge and literature on the attitude of second cycle female adolescents in the TAMD, it would also serve as a baseline for subsequent studies in related fields.

1.4 Rational for the Study

The study will be beneficial at the national level, as the findings could aid policies at the Ghana Health Service to ensure increased education and effective utilization of modern contraceptives amongst adolescents at second cycle institutions in Ghana. It is believed that when female adolescents practice modern contraceptives, chances are that, unwanted pregnancies would be reduced, which could be attributed to awareness among the population (Ajah *et al*., 2015).A study showed that the level of awareness and use of family planning services among women students at the University of Lesothoo was strong (Akintade, Pengpid, & Peltzer, 2011).Akintade *et al*. (2011) recommended that there was a need to introduce family planning teaching based on accurate facts into the school curriculum with the view to improving practices of modern contraceptive. Nevertheless, this suggestion seems to have been adhered to by few researchers in the conduct of studies on the use of modern contraceptive among female adolescents in second cycle institutions

in the Central Region, but none yet reported on same in the TAMD (see Hagan, & Buxton, 2012). This means that the conduct of this study will seek to bridge the gap in dearth of literature on the subject matter related to the TAMD. The findings of this study would provide stakeholders in the healthcare environment with insights into female adolescents' sexuality, which could be used to inform the design of appropriate programmes aimed at reducing unwanted pregnancies and sexually transmitted infections (STI) prevention among females, especially those in second cycle institutions.

In general terms, this study seeks to fill that gaps in literature by determining female adolescents' utilization of modern contraceptive, so as to increase their knowledge, use, and thereby in preventing the increasing rate of teenage pregnancies in the Twifo Atti-Mokwa District. Much work done on contraceptives seem to limit the study to young adults in the tertiary institutions, whilst forgetting to involve the sexually active students in Senior High Schools (see Appiah-Agyekum, & Kayi, 2013). Thus, it is important to examine the influence of knowledge, attitude and practices on the use of modern contraceptives among female adolescents in the second cycle educational establishments, especially in the TAMD.

1.5 Objectives of the study

As shown below, the goals of the analysis have been classified into general and specific.

1.5.1 General Objective

The general objective was to assess the influence of knowledge, attitude and practices on the use of modern contraceptive among female adolescents in the second cycle schools in the Twifo Atti-Mokwa District.

1.5.2 Specific Objectives

The specific objectives were to;

1. Determine the level of utilization of modern contraceptives among female adolescents in second cycle schools in TAMD.
2. Examine the association between socio-demographic characteristics of female adolescents and utilization of modern contraceptives in second cycle schools in TAMD.
3. Determine the level of knowledge of female adolescents of contraceptive use in Twifo Atti-Mokwa District.
4. Examine the attitudes of female adolescents in second cycle schools towards the use of modern contraceptives in Twifo Atti-Mokwa District.
5. Assess the practices (use) of modern contraceptives among female adolescents in second cycle schools in in Twifo Atti-Mokwa District

1.6 Research Questions

The following research questions helped find answers to address the specific objectives.

1. What is the level of utilization of modern contraceptives among female adolescents in second cycle schools?
2. What is the association between socio-demographic characteristics of female adolescents and utilization of modern contraceptives in second cycle schools in TAMD?
3. What is the level of knowledge of female adolescents of contraceptive use in TAMD?
4. What are the attitudes of female adolescents in second cycle schools towards the use of modern contraceptives in Twifo Atti-Mokwa District?

5. What are the practices (use) of modern contraceptives among female adolescents in second cycle schools in in Twifo Atti-Mokwa District?

1.7 Conceptual framework on Contraceptive use among female Adolescents

Other studies in Sub-Saharan Africa have proved that there are several factors that influence the use of contraceptives by adolescents. These include knowledge of contraceptives, fear about side effect, family related factors, religion, sex education, poor access to services, low socio-economic status, attitude of service providers, and perceptions of service providers (Koyongo, 2013). As shown below, the goals of the analysis have been classified into general and specific (Williamson, et al, 2009; Yoder et al, 2011). In Ghana, talking about sexual problems is a taboo for adolescents, the worst aspect is for adolescents to make attempts to use some kind of contraceptives (Yoder et al., 2011).

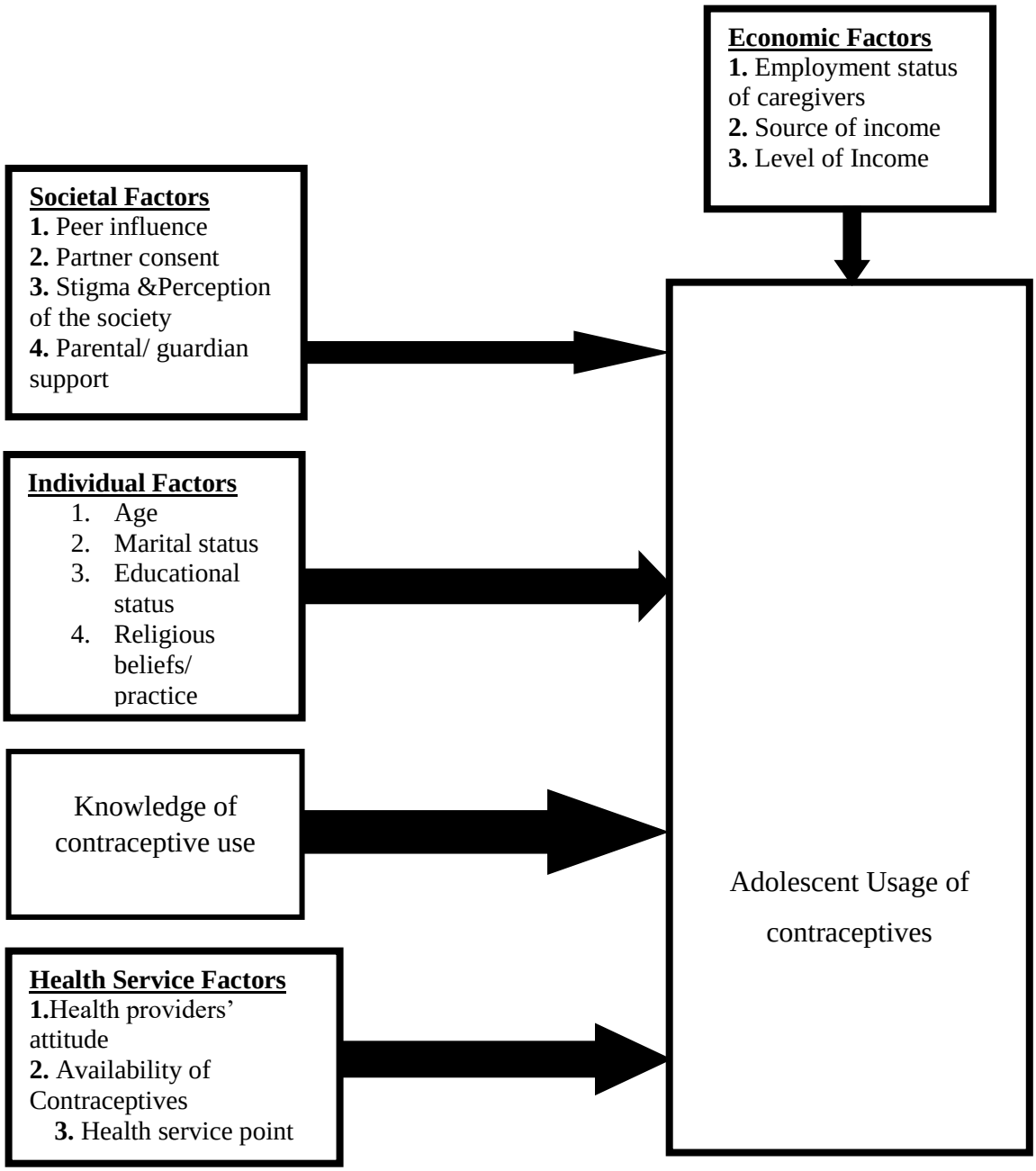

Figure 1.1: Conceptual framework on Contraceptive use among female Adolescents (authors construct)

The above diagram shows the conceptual framework for the study which was self-developed. The framework illustrates the relationship between the outcome variable (contraceptive use) and the independent variables. Accessibility is affected by contraceptive use depending on the degree to which workers behaviour, education and

age, and distribution of service points are designed to support the needs of adolescent sexual reproductive health.

Inaccessibility might contribute to a low use of contraceptives, while the reverse might lead to an increase in the use of contraceptives. Predictive variables such as sex education, peer influence, knowledge and use of contraceptives, societal factors and socio-demographic factors including age, marital status and religion are all factors that influence adolescent use of contraceptives. Societal factors include, parent or guardian, partner consent to modern contraceptive use, perceptions of the public all influence adolescent usage of modern contraceptives. In addition, adolescents' socio-economic status may empower their decision-making processes and further suppress adverse social perspectives on contraceptives.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section reviews literature in line with the objectives of this study. It also presents the concept, contraceptive use among female adolescents in Ghana: a case study of Twifo Atti Mokwa district, Central region.

2.2 Theoretical Framework

The Ghana Demographic and Health Survey (2014) reports female adolescents age at first marriage and first sex to be 19.3 and 18.4 years correspondingly and female adolescents with no education start sexual action 3.1 years earlier than adolescents with auxiliary education (GDHS, 2014). This indicates that most teenagers engage in sexual action before marriage which unplanned and undesirable pregnancy may subsequently be a major concern. In Ghana, 80% of teenagers know one or more types of contraception however, 80% don't utilize contraception at first sex (GHS, 2004).

Adolescent contraception is one of the main components of the curriculum for adolescent health and development. The basic policy here is to advise and represent sexually active teenagers who pursue contraceptive services, where applicable. For teenagers who are not sexually active, information and therapy should be given. In general, for teenagers, the emphasis must be on abstinence.

In Ghana, one in eight pregnancies occurred in teenagers and adolescent pregnancies increased in actual figures from 2002 until a decrease occurred in 2006. In particular, the increase occurred among early adolescents (10-14 years) (GHS, 2005). Over the last decade, it has been shown to increase exponentially with age, from 1 percent at age 15 to 31 percent at age 19 (DHS, 2014).

2.3 Empirical literature review

Adolescence is a life cycle during which people achieve sexual maturity. It is the time of transformation from childhood to adulthood, and biological and psychosocial changes as well as sexual experimentation. Adolescence is a life period during which sexual maturity is reached by individuals. It is the moment of transition from childhood to adulthood, and it is also characterized by biological and psychosocial changes and sexual experimentation. Around one billion of the world's population are teenagers worldwide, with 70 percent residing in developing nations. Young people constitute about 33 percent of the 973.4 million population in sub-Saharan Africa (Kyilleh et. al., 2018). Over the next 35 years, the population of teenagers and young adults is projected to continue to grow. Sexual and reproductive health education is commonly reported to be poor in sub-Saharan Africa, where a fourth of all adolescents have sexual experience (Kyilleh et. al., 2018).

Different studies on adolescent reproductive health have recently been published in Africa especially on the issue of contraceptives. A study conducted in Kenya on contraceptive use attitudes and challenges found that adolescents had high levels of knowledge of contraception, but only 43.0 percent were aware of the use of a contraceptive type (Kinaro et al, 2015). It also found that health care providers were age-based bias in prescribing contraceptives and also established awareness of where contraceptives should be obtained as the key obstacle to adolescent contraceptive usage. A cross-sectional study conducted at girls' secondary schools in Tanzania found that in Dares Salaam, 40 percent of female adolescents who knew at least one type of contraception actually used all contraception techniques (Kagashe and Honest, 2013). Among school girls, most girls were aware of the problems associated with unwanted pregnancies, it showed. The primary source of contraceptive knowledge was from schools and the newspapers. In order to increase contraceptive use by teenage school girls, the author recommended the need for

educational interventions. A survey on contraceptive awareness and use among female secondary school students was conducted by Tayo et al., (2011) in Lagos, Nigeria, and found that 5% of female students with contraceptive knowledge were users. It showed that non-users were the majority of those who were sexually active. In addition, it revealed that 45% of this female adolescent gained knowledge from their parents about contraceptives. Therefore, the study indicated that advocacy for adolescent reproductive health be strengthened before sexual activity is initiated and the need to disseminate information among adolescents in the area on family planning methods.

2.4 Definition of Contraceptives

Contraceptive, according to Trussell (2011), is a substance or medical procedure that interferes with the reproduction of acts of sexual intercourse. It also refers to the percentage of women currently using or whose sexual partner, irrespective of the procedure used, is currently using at least one form of contraception. It is usually suggested for married or in-union women aged 15 to 49 (WHO, 2015). Contraception can be categorised into two forms: modern and traditional methods. Modern techniques include the barrier system (female and male condoms as well as the diaphragm), the hormonal method (pill, injectable and implant), the intrauterine device (IUD), the male and female sterilization (DHHS, 2011; PPFA, 2012). On the other hand, conventional approaches include the method of intermittent abstinence and the method of withdrawal (coitus interruptus) (Stewart, McNamee and Harvey, 2013).

2.5. Knowledge and Use of Contraceptives

2.5.1. Birth Control Methods

Contraceptives are in many types. The barrier methods, this actually stops sperms from entering a woman's uterus and fertilizing her ovum (Tschann & Adler, 2001). The hormonal methods consist of pills, patches and implant, injections, the Intrauterine System

and rings. They make conception difficult by changing levels of reproductive hormones in women. Others are intended to kill the sperms inside the vagina like the spermicides and they can be gels and foams inserted in to the vagina. They are contained in a unique sponge that covers the cervix. The best method of contraception that is hundred percent secure against venereal diseases and unexpected pregnancies is complete abstinence. The most common side effects of contraceptives are weight gain, breast tenderness, mood swings and headaches but vary from one woman to another.

Since women have to do something to manage birth, the best thing to do is to see their doctors for advice on their particular case (American Academy Pediatrics, 2014). Among the reversible birth control strategies, intrauterine contraception and the contraceptive implant remain extremely effective for years, once properly in service. The effectiveness of the contraceptive shot methods, capsules, patch and ring, and knowledge of barrier and fertility depends on correct and consistent usage-so that these methods have lower efficacy with regular use. For each type of birth control, the effectiveness of standard use is given below. The percentage of women in the first year of regular use who experience an unwanted pregnancy is defined as (WHO, 2014).

2.5.2. Condoms

In the 1980s, the use of condoms tripled among teenagers, motivated primarily by the fear of AIDS. However, many teenagers find condoms humiliating to purchase or obtain from clinics and do not use one for each coitus act (Academy of American Pediatrics, 2014). The male condom is barrier method contraception. It is a thin sheath covering the penis to absorb sperm and prevent it from entering the woman's body. Male condoms usually consist of latex or polyurethane, but lambskin is a natural option (Academy of American Pediatrics, 2014). Condoms made from lambskin do not avoid STIs. After a single usage, male condoms are disposable and their efficacy is improved by using spermicidal

condoms. Latex condoms significantly minimize the transmission of STIs and should thus be used by all sexually active teenagers regardless of whether an alternative contraceptive type is used.

In an era of HIV infection, in addition to its use as a family planning tool, the use of the condom as defense against sexually transmitted infection (STI) has become significant. As with other contraceptive methods, the perception of male condoms by adolescents is strong, and despite the fact that it is one of the most widely used methods, condom usage rates are still poor (Weller & Davis, 2002). Male and female preservatives are examples of condoms (femidom).

There are also other benefits of male condoms. They encourage males to share the contraceptive burden. They are available and easily accessible. They can be purchased without a prescription, are affordable and can be bought by minors legally. As a contraceptive tool, the major benefit of condoms is that they protect against sexually transmitted diseases and indirectly protect against infertility and cervical cancer (WHO, 2013). On the other hand, the female condom (Femidom) is also a contraceptive barrier strategy. These are small pouches of plastic which are flexible. A section of the condom is inserted into the vagina of a woman before sex to prevent sperm from entering the uterus. The female condom, however, reduces the risk of STIs. Female condoms are disposed of after one single use. According to the WHO (2013), the average usage failure rate is 18%.

2.5.3. Medroxyprogeterone Acetate Injection (Depo-Provera)

Medroxyprogeterone acetate is a long-acting progestin administered at a single dose every 12 weeks, according to the American Academy of Pediatrics (2014). This contraceptive technique has several advantages for teenagers, including effective prevention of pregnancy, convenience (no regular drug regiment needed, no need to prepare before

intercourse), lack of side effects related to estrogen, and protection against endometrial cancer and anaemia of iron deficiency. Menstrual cycle disturbances, weight gain, headaches, bloating, and depression and mood shifts are the main drawbacks to these contraceptive strategies for teenagers. This form of ontraception can be safely prescribed for adolescents with chronic diseases (i.e. seizures, sickle cell disease). For protection against STIs, condoms must be used in combination with medroxyprogesterone acetate (American Academy of Pediatrics, 2014).

An effective long-term contraceptive is an intrauterine product, although it is not appropriate for teenagers since they are at high risk of sexually transmitted diseases. Older teens could be ideal candidates, maybe those with children or in monogamous relationships. Many adolescents are worried that fertility is minimized by intrauterine machines. Nulliparity is not a contraindication to the use of an intrauterine system and fertility is retained after discontinuation of its use, they need to know.

IUDs are effective, reliable contraceptive methods when used properly. Adolescent females who are unable to use other methods of contraception and whose sexual activity does not place them at risk of STIs should be reserved for IUDs. Condoms must be used to defend against STIs in combination with IUDs (American College of Obstetricians and Gynaecologists, 2014).

2.5.4. Diaphragm and Cervical Cap

The diaphragm and cervical cap are efficient contraceptive barrier strategies requiring spermicidal and condom use. In teenagers, these contraceptive approaches have limited utility as they require a prescription. You insert them with spermicide to obstruct or destroy the sperm prior to sexual intercourse. As diaphragms and cervical caps come in various sizes, visit your doctor for a proper fit.

Consistent and correct use of diaphragm and cervical cap are critical. Typical use failure rate is 12% (Tschann & Adle, 2001).

2.5.5. Oral Contraception (The Combine Pill)

Estrogen and progesterone, the two female sex hormones that regulate the menstrual cycle, are used in the combination pill. Rarely recommended for teenagers, the progestin-only pill contains only progesterone. If she misses a dose, the doctor will explain what the teen can do. The pill does not provide protection against STIs, so using condoms is still necessary. The benefits may include lighter cycles, fewer cramps and acne, decreased risk of ovarian and endometrial cancers, and anemia with iron deficiency. Severe, but uncommon, side effects include blood clots, stroke, high blood pressure, migraine, but many have headaches, nausea, or tenderness of the breast. (American College of Obstetricians and Gynecologists, 2014).

According to the American Academy of Pediatrics (2014), combined oral contraceptives prevent ovulation by inhibiting the gonadotropin-releasing hormone that results in follicle-stimulating hormone and luteinizing hormone (LH) inhibition. Other secondary mechanisms by which OCPs give contraception include changes induced by progestin. (e.g. thickening in cervical mucus viscosity, endometrial atrophy, and changes in the tubal transport mechanism).

2.5.6. Vaginal Spermicides

Vaginal spermicides include creams, jellies, foams, videos and suppositories used for other barrier approaches in an indication from the AIan Guttrnacher Institute (2014) (condom, diaphragm, cervical cap, sponge, female condom). Levels of failure are higher if used alone. The risk of cervical gonorrhea and chlamydia can be decreased by vaginal

spermicides that are used without condoms. Defense against HIV infection, however, has not been shown if vaginal sperrnicides are used alone.

Vaginal odor, local irritation, allergic reactions and a possible increase in urinary tract infections are the side effects of this procedure. There was no connection to birth defects (AIan Guttrnacher Institute, 2014). Nonoxynol-9, a chemical surfactant that kills the cell wall of sperm, is the principal spermicide used in these products, octoxynol is another. Another possible spermicide is under review that can inhibit HIV replication. Chlorhexidine, benzalkonium chloride (found in contraceptive sponges), propanol, and acrosine inhibitors are additional spermicides (e.g., nifedipine). Nifedipine inhibits ovum sperm identification and the penetration of sperm into zonapellucida.

Seminal liquefaction inhibitors, chemicals that prevent semen from releasing sperm, are also being researched. Typical use failure rate: 28% (Alan Guttrnacher Institute, 2014).

2.5.7. Implant Contraceptive (Norplant, Jadelle and Implanon)

As a contraceptive procedure, Norplant was introduced in 1990, in which six elongated silastic capsules are subcutaneously injected into the upper arm. The Implanon is another implant launched in the United States; it is a l-rod implant device that slowly releases progesterone to decrease pregnancy rates and side effects equivalent to the 6-rod system. Norplant enables levonorgestrel to be released steadily (85 ug/d for 8 months and 30 ug/d thereafter and offers 5 years of successful contraception.Depo Medroxyl Progesterone Acetate (DMPA) is close to the mechanism of action, and the failure rate is just around 1%. Increased viscosity of cervical mucus, reduced oocyte maturation, and atrophic endometrial effects are present (Alan Guttrnacher Institute, 2014).

At the time of insertion, unrecognized pregnancy is the cause of most births in the first year of use. In a sample of adolescent mothers, 2% of Norplant users were pregnant in the first year of use, compared with 38% of oral contraceptive users. In this same report, as compared to 33 percent of 50 adolescents on oral contraceptives, 95 percent of 48 adolescents who did not use either form had a pregnancy within 1 year. The rates of continuation differ. In comparison to 83 percent for DMPA and 49 for oral contraceptives, one study reported a continuation rate of 96 percent after one year. In another report, within six months of insertion, 14 percent of teens demanded removal of their Norplant due to some of its side effects which include irregular menstruation (more than 40% in the first year), amenorrhea, moderate headaches, and weight gain; despite irregular bleeding, anaemia typically does not occur. Failure rate at typical use is 0.05% (Alan Guttmacher Institute, 2014).

2.5.8. The Patch

The skin patch is worn on the lower belly, the upper body or the buttocks (but not on the breasts). A doctor prescribes this form. It releases progestin and estrogen hormones into the bloodstream. Once a week for three weeks, you put a new patch on. You should not wear a patch during the fourth week, so you will have a menstrual cycle. Typical failure rate for use: 9%, but in women weighing more than 198 pounds, it may be greater.

Users may experience lighter periods; fewer cramps and acne will contribute to improvement. Every week, some teens have difficulty remembering to adjust the patch. Unless concealed under Emergency contraception (Plan B One-Step or Next Step), it can raise the risk of blood clots and noticeable to other individuals. It is also called the 'morning after pill' Emergency contraception prevents a woman from being pregnant when she has had unprotected sexual intercourse.

She may have been exploited or coerced into having sex as well. These are just some of the reasons why emergency contraception might be appropriate for teenage girls. Emergency contraception can be administered in two doses or as a single pill injection. Therapy with a single dose works as well as with two doses and has no additional side effects. It functions by preventing the ovaries from being released by an egg or retaining the sperm, which may annoy some adolescents. Headache, nausea, inflammation of the skin, or tenderness of the breast may accompany its use (American Academy of Pediatrics, 2014).

2.5.9. Hormonal vaginal contraceptive ring

This activates the hormones progestine and estrogen when put within the vagina. You're going to wear the ring for three weeks, you're going to take it out for the week you have your period, and then you're going to put it in a new ring. The ring is small, flexible and two inches or so. The ring is inserted into the vagina, where it continuously releases hormones for three weeks. The female removes it for the fourth week and reinserts a fresh ring seven days later. Risks for this method of contraception are close to those of combined oral contraceptive pills, and a vaginal ring is not recommended for any woman with a history of blot clots, heart attack or stroke, or some types of cancer. The only FDA-approved vaginal ring at present is the NuvaRing. Clinical research is underway to create a new vaginal contraceptive ring that can be used for 13 cycles. The average failure rate for usage is 9% (WHO, 2013).

2.5.10. Emergency Contraception

Contraception for emergencies (Plan B One-Phase or Next Step. The 'morning after pill' is often called). If she has had unprotected vaginal sex, emergency contraception prevents a woman from becoming pregnant. Unprotected sex may indicate that no birth control procedure has been used.

It can also indicate that a form of birth control was used, but it was improperly used or failed to succeed (like a condom breaking). Or an adolescent may have forgotten to take her birth control pills. Emergency contraception can be administered in two doses or as a single pill injection. Therapy with a single dose works as well as with two doses and has no additional side effects. It works by preventing the ovaries from being released by an egg or by retaining the sperm clothing, which may concern some teenagers. Headache, nausea, inflammation of the skin, or tenderness of the breast may be (American Academy of Pediatrics, 2014).

2.5.11. Female Sterilization

A woman may have her fallopian tubes bound (or closed) to avoid fertilization of sperm and eggs. In a hospital or in an outpatient surgical facility, the operation may be performed. Within a few days, you will go home on the same day of the procedure and resume your usual activities. This method is immediately successful (Tschann & Adler, 2001).

2.5.12. Trans-cervical Sterilization

A thin tube is used to thread a tiny device into each Fallopian tube. This irritates the fallopian tubes and causes the tubes to widen and plug into scar tissue permanently. It can take about three months for the scar tissue to grow, so use some sort of birth control during this time. To see if your fallopian tubes have been completely blocked by scar tissue, return to your doctor for a test (Tschann & Adler, 2001).

2.5.13. Male Sterilization-Vasectomy

This operation is carried out to prevent a man's sperm from going to his penis, so that his ejaculate never has any sperm in it that can fertilize an egg. In an outpatient surgical facility, the operation is completed. On the same day a man will go home. The recovery

time is less than one week. After the procedure, a man visits his doctor for tests to count his sperm and to ensure that the sperm count has dropped to zero; this takes about 12 weeks. Before the human sperm count has dropped to zero, another type of birth control should be used (Tschann & Adler, 2001).

2.6. Improving Contraceptive Use

Modern contraceptive usage is increasingly growing globally (63 percent) but remains poor in Sub-Saharan Africa (Fiato, 2016). In Ghana, the most recent Demographic and Housing Survey (DHS) of 2014 estimates that the prevalence of modern contraceptive use among reproductive-age women is 22%. Family planning has been described as the primary measure to help nations achieve Sustainable Development Goal 5 (SDG-5), which aims to achieve gender equality and empower both women and girls (Dockalova et. al., 2016).

The use of modern contraceptives among women aged 15-19 (19%) and women aged 45-49 (18%) is poor, according to GDHS 2014 (Ghana statistical service, 2014). The researcher defines the relationship between the age of teenagers and modern contraceptive methods as an inverted U-shape' in a study done in Vietnam. While the likelihood of contraceptive use was low among women aged 15-24 years, it was lower among women aged 35 and over and higher among women aged 25-35 years (Vu LTH, 2016).

In developed countries, sexual activity among adolescents is generally reported to be high, although there is considerable variation between countries (Bearinger et al., 2007). Every year in sub-Saharan Africa, as many as 14 million unintended pregnancies occur and about half are attributed to women aged 15 to 24 years. (Hubacher et al., 2008). As the distance between sexual debut and marital age increases, premarital sexual activity has also

increased, leading to increased premarital exposure to the risk of pregnancy (Bearinger et al, 2007; Mensch et al., 2006).

2.7. Sources of Information on Contraceptives

Various researches on the sources of sexual and reproductive health information for young people indicate that multiple sources are used for information. Centered on the radio and television results of family planning. Of the individuals who were subjected to a family planning radio broadcast, 75% accepted the message. GDHS (2008) findings show that less than half of adolescent males and females have heard or seen something in the mass media about family planning through community forums. The findings show that the primary source of knowledge for young people appears to be the news media. The dependency on interpersonal contact with parents or family members for information on sexual and reproductive health is also relatively poor. This is because older people, especially parents, do not know the answers to questions about sexual health problems.

In the view of Kiragu and Zabins (1995), many adolescents believe that they are too young to even be asking questions about contraceptive use. In particular, boys were uncomfortable talking about sexual matters with a mother or father, unlike girls. Fathers in general were perceived as being inaccessible/unapproachable and impatient like mothers. Data from GDHS (2008), shows that, relatively, there is low level of communication between adolescents and their parents. However, the most popular type of people with whom Ghanaian adolescents spoke about contraception and other sexual issues were romantic partners and best friends.

2.8. Access to Contraceptives

In adolescent feelings and social interactions, sex plays an important part. As a consequence of insufficient or no contraception, many teenage pregnancies are Many

teenagers do not use contraceptives the first time they have sex, according to Hofferth and Hayes (1987), and many younger teens, in particular, wait for a year or more after first intercourse before using contraceptives.

Better communication with teenagers may help them overcome these obstacles within communities, in school and within the medical system (Chandra-Mouli et al., 2014).The concerns of sexually transmitted infections and abortion are typically not discussed by physicians, although these are topics that most teenagers would like to explore with their providers. Teenagers can speak with their doctor about their sexuality and contraceptive needs if they understand that these conversations are private. Early pregnancy prevention and poor reproductive outcomes for teenagers in developing countries are the secret to improving reproductive health and access to and use of contraceptives.

These results discouraged marriage before the age of 18, increased understanding and appreciation of the importance of preventing pregnancy, and avoided coercive sex (Chandra-Mouli et al., 2014). Studies were performed in a variety of low- and middle-income countries that met the inclusion criteria for this outcome.

Some focused solely on condom use, while others spoke about oral contraceptives and emergency contraception (EC). The primary outcome of contraceptive use was studied by others, while others examined it as secondary to outcomes such as HIV prevention or changing knowledge and attitudes. Focused on health sector practices such as the distribution of contraception by over-the-counter or hospitals, while others focused on actions directed at leaders and members of the group.

Collectively, 111 rises in contraceptive use, including condoms, oral contraceptives and emergency contraceptives, were seen as a result of multi-level actions, such as legislation

and policies; individuals, families and communities; and the health systems through which the interventions were performed (Chandra-Mouli et al., 2014).

A crucial component is addressing restrictive laws and policies on early pregnancy prevention and poor reproductive outcomes for teenagers in developed countries. Laws and regulations limit the availability of contraceptives to pregnant adolescents or those under a certain age in many countries (Chandra-Mouli et al., 2014). In order to ensure that teenagers are able to access contraceptive information, therapy and services, policy makers must act to change these laws and policies. Policy makers should also consider offering condoms to teens at no or reduced cost.

Premarital sexual activity is considered immoral in many cultures, and there is significant opposition to the provision of contraceptive information and services to unmarried teenagers. In order to address this obstacle, it is necessary to increase the degree of awareness of the knowledge and contraceptive requirements of adolescents by prominent community leaders and the community at large, and the risks to their well-being if these needs are not met (Chandra-Mouli et al., 2014).

Social and group norms in many places impede conversation regarding contraception between couples. Furthermore, the use or proper use of contraceptive procedures is discouraged by knowledge gaps and misconceptions. Mass media (radio and television programs), peer education, and communication materials (such as posters and leaflets) for interpersonal communication and awareness education have been used successfully to convey health information to youth and to affect their standards. In addition, mobile phone technology, the internet and social media are rapidly being used in LMIC. These technologies can be useful for the quick and discreet transfer of contraceptive information and alternatives to teenagers (Chandra-Mouli et al., 2014).

The proof of the benefits of rigorous curricula-focused sexuality education is strong. The most productive sexuality education programs provide relevant and age-appropriate information and also improve life skills and encourage ideas, emotions and experiences that accompany sexual maturity **(e.g. falling in love and refusing sex).** They are also related to the provision and services of contraceptives (Chandra-Mouli et al., 2014). Although in many nations, laws requiring sexuality education for teenagers are in place, there is insufficient implementation, if any. Policy makers and administrators of health and education must ensure that curriculum-based sexuality education is successfully enforced. To reach the many teens who do not attend school, complementary efforts are required. Since many teenagers have knowledge gaps and misconceptions about contraception and its side effects, it is important to provide them with accurate information and opportunities to ask questions and answer their concerns (Chandra-Mouli et al., 2014).

2.8.1. Improving access to contraception

A broad variety of contraceptive options should be available and accessible to teenagers in order to achieve increased access and use of contraception, and to assist them in selecting methods that suit their special needs through therapy. A number of methods are suitable for adolescents in compliance with the WHO eligibility requirements for contraceptive provision, because age alone is not a contraindication for any form (aside sterilization).Depending on their specifications and desires, long-acting reversible strategies such as intrauterine devices or implants may also be good choices for teenagers (WHO, 2014).

In certain areas, teenagers are hesitant to visit contraceptive facilities because they regard them as unfriendly. The importance of making health facilities adolescent-friendly is increasingly being proved (WHO, 2014).

Since many teenagers have knowledge gaps and misconceptions about contraception and its side effects, it is important to provide them with accurate information and opportunities to ask questions and answer their concerns (Chandra-Mouli et al., 2014).

Health facilities need to be made readily available and accommodating in order to increase access to contraceptives, they need to provide sufficient supplies of a variety of contraceptive methods, and teenagers need to be encouraged by empathic and knowledgeable health professionals to select the ones that suit their needs and desires. Adolescents could incorporate contraceptive education, counseling and provision into other health services, including STI management, HIV counseling and testing, extensive abortion care services and postpartum care.

2.9. Barriers to contraceptive use

According to McCauley and Salter (1995), barriers to contraceptives use by the adolescent include lack of information about methods, difficulties in obtaining services from providers, and inability to negotiate with partners. Another barrier that serves as disincentive to adolescent use of contraceptive is lack of knowledge about sexual and reproductive health issues, especially family planning (GDHS, 2008). In some countries, unmarried teens are denied access to contraceptive services and information, leaving them without support when making reproductive health decisions. A report from Ghana Demographic and Health Survey (2008), indicated that irregular use of contraceptives is common with adolescents because of poor communication with parents, lack of knowledge of parental contraceptive experience, experience of friends who become parents, low educational achievement and aspirations, low self-esteem and feelings of fatalism and alienation. The traditional and cultural stereotyped idea that sex is for the adult makes it practically difficult for adolescents to freely communicate and discuss with parents issues concerning sex and contraception use. Similarly, because of the stereotyped

idea that family planning clinics are the domain of women, counsellors lack experience in conveying information on sexuality and contraception to men.

Research indicates that while most teenagers are aware of and where to obtain the various contraceptive methods, many challenges, both perceived and real (logistical), restrict the access of teenagers to reproductive health services.

2.9.1. Logistic Barriers

The drivers of the adoption of family planning are a collection of multiple factors that can be complicated and difficult to address in real-world environments, especially in conflict-afflicted areas where things happen in an emergency situation (Olaitan, 2011; Wulifan et. al., 2016). These factors range from individual and social factors, cultural variables, availability and access factors, to factors such as fear of side effects associated with contraceptive method characteristics (Elmusharaf et. al., 2017; Kane et. al., 2016; Olaitan, 2011). In the conflict zones in sub-Saharan Africa, such as South Sudan, there is insufficient evidence to understand how these factors combine to influence the use of contraceptives. Taking into account the relatively low usage of contraceptives in South Sudan and the inadequate evidence of the determinants of use, the assessment of the current levels of use of contraceptives and of the variables that determine to agree family planning is timely and essential, inaccessible areas, unequal distribution of health facilities, lack of motorways.

2.9.2. Perceived Barriers

Fear that confidentiality would not be respected, fear of parental discovery, embarrassment, misinformation about the risks of pregnancy and STIs, fear of procedures such as blood tests or pelvic examinations, fear of side effects, lack of awareness of the

need for contraception (especially among younger adolescents), dissatisfaction with clinical staff, and poor cognizance of family planning legal rights (Stover et al., 2011).

Although effective planning can easily solve practical hurdles, perceived barriers - fear and disinformation - are pervasive and harder to alter. Studies indicate that many teenagers today, as in the past, lack precise awareness of contraceptive procedures and have exaggerated assumptions about side effects (Institute of Medicine, 2015; Zhang and Hayward, 2006). It is also humiliating for teenagers to inquire for non-prescription contraception.

A 1996 study by Advocates for Youth Peer Educators of drug and convenience stores in Washington DC found that 83 percent of convenience stores and 15 percent of all drug stores kept condoms behind the counter, prompting customers to ask for them. Just 33% of stores clearly labelled the location with signs that were easily recognizable.

Adolescent women seeking assistance in buying contraceptives faced opposition or condemnation 26 percent of the time from the clerk.

Most adolescents are unfamiliar with blood tests and pelvic exams normally needed for contraceptive prescriptions, and are afraid of them (Stover et al., 2011). Moreover, adolescent sexual activity is often sporadic, which can affect their willingness or ability to prepare for healthy, stable intercourse (Alan Guttmacher Institute., 2012; Benson & Foreman, 2002).

Also, to understand the ties between behavior and long-term effects, many adolescents, especially younger ones, lack cognitive maturity. Inability to recognize the effects of early pregnancy, inadequate implementation of contraceptive procedures, and inconsistent usage of contraception are adolescent developmental problems that pose obstacles to contraceptive access and use. Adolescents also fear the reaction of parents to their use of

contraceptives. Yet certain health care providers request parental consent for their teen's use of a prescription contraceptive.

Gender roles among men and women often historically act as a barrier to contraceptive use. Men also play a major role in the option of contraceptives for their spouse, but men are also removed from the realms of family planning, reproductive decision-making, and parenting education. This gender role distinction is further supported by media representations of heterosexual relationships.

The story lines and images of sexual gratification and fantasy saturate the media, but sexuality laden shows seldom send strong messages regarding sexual responsibility, healthy contact, and use of contraceptives (UNFPA, 2010).

Changes in health care delivery and payment processes are coupled with additional obstacles. With the transition to managed care, teens are frequently unable to access providers of youth-friendly family planning. The scheduling processes, billing agreements and specialist referral systems within managed care organizations can pose threats to the confidential relationship between client and provider.

Among teens seeking contraceptive treatment, the sense of privacy is important. Blanc et al, (2009) reported that, contraception is often inaccessible to teens due to social taboos, financial or geographical barriers, a lack of confidential services and inadequate knowledge about contraceptives and where to obtain them. Other factors such as cultural gender roles that enhance male influence over sexual and effective decision-making, may contribute significantly to the inability of young girls to make condom and contraceptive usage decisions and also their vulnerability to the risk of manifested pregnancy and sexually transmitted disease (including AIDS).

Economic and social inequality and age difference between partners can establish a situation of unequal power in relationships in a study carried out by Mensah and Lloyd

(1998), which can in turn decrease the capacity of girls to negotiate whether intercourse should take place and whether condoms or contraception should be used. The threat of male abuse often puts pressure on teenage girls to consent to inappropriate sexual practice in many instances.

Baker et al., (2005) have postulated that teenagers find it difficult or impossible to speak about sex with parents and adult family members, so peers often constitute the reference community for transmitting sexual activity and birth control information. Teens may not feel comfortable with female providers addressing their reproductive health needs. There is also the fear of lack of confidential services.

Lack of sexual and reproductive health awareness issues and especially family planning, has contributed to an increase in adolescent pregnancies. According to the 1998 Ghana Demographic and Health Survey (GDHS), current use of modern contraceptive was only 4.8% among all adolescent females age 15 - 19 years. However, a large segment of adolescents still uses traditional method rather than modern family method (3.8% in 1998). A large proportion of adolescent males than females in Tanzania and Ghana were found to have contraceptive awareness. The percentage of adolescent males with knowledge of modern methods ranges from 76.3 percent in Tanzania to 94.6 percent in Ghana, while it ranges from 65 in Tanzania to 91 in Ghana for females (GDHS, 2008).

Contraceptive usage is higher among sexually active unmarried adolescent females than among married teenagers. Similar results based on the Demographic Health Survey (DHS) were reported by Blanc et al. (2009) for 19 sub-Saharan African countries in the early 1990s. In Ghana, compared to a contraceptive rate of 25 percent for currently married adolescent women, 44 percent of sexually active unmarried adolescent females actually use a family planning method.

However, there is little evidence of continuity and proper use of condoms among teenagers in Ghana. New strategies are therefore required to increase the acceptability and efficiency of condom use, especially in high-risk sexual encounters. The vast majority of sexually active adolescents do not use condoms, despite the fact that the use of condoms is an effective protective mechanism for sexually active people (CDC, STIs in Adolescents and Young Adults, 2016).

2.10. Risk factors

Overall, adverse health effects, including high risks of complications related to pregnancy and unsafe abortion, maternal mortality, and adverse educational and economic implications, cannot be overlooked (Meekers et al., 2005). Adolescents are vulnerable to the possibility of premarital pregnancy. This is associated with negative consequences such as having to leave school or resort to illegal abortions. The physical or health consequences are more universally recognized as problematic for the adolescent mother and her child, particularly in communities where anaemia and malnutrition are prevalent and access to health care is poor (Meekers et al., 2005).

2.11 Conclusion

Available evidence shows the impact of teenage pregnancy on education of individuals, employment and financial opportunities, adolescent pregnancy can also have long-lasting socio-economic consequences that can contribute to poorer outcomes for adolescent mothers, their families and communities in terms of health, gender inequality and poverty. Preventing adolescent pregnancy is a vital component of an inclusive move to improve sexual and reproductive health for adolescents, which should also include efforts to address the susceptibility of adolescents to sexually transmitted infections, HIV and violence depending on gender (Kennedy et al., 2014).

CHAPTER THREE

METHODS

3.1 Introduction

This chapter discusses the methods and techniques that were used to collect and analyze data. It also describes the study area, research design, the study population, sample size, sampling method, data collection methods, quality control, the variables, data processing and analysis as well as ethical concerns.

3.2 Study Area

The Twifo Atti Mokwa District is in the Central Region of Ghana with Twifo Praso as its capital. It is one of Ghana's 260 Metropolitan Municipal and District Assemblies (MMDAs) and forms part of the Central Region's 22 MMDAs. It has a total land area of approximately 1199 km2 and is situated between 5'50' N and 5'51' N latitudes and 1'50W and 1'10W longitudes. It is bordered on the north by the Municipality of Upper Denkyira East, on the south by the District of Abura Asebu Kwamankese, the Metropolitan District of Cape Coast and the Municipality of Komenda-Edina-Eguafo-Abirem, on the west by the District of Mpohor and on the east by the District of Assin Central and the District of Assin South, respectively. Twifo Praso Secondary and Mokwa Secondary school is chosen because of the adequacy of students and the proximity of it to the researcher.

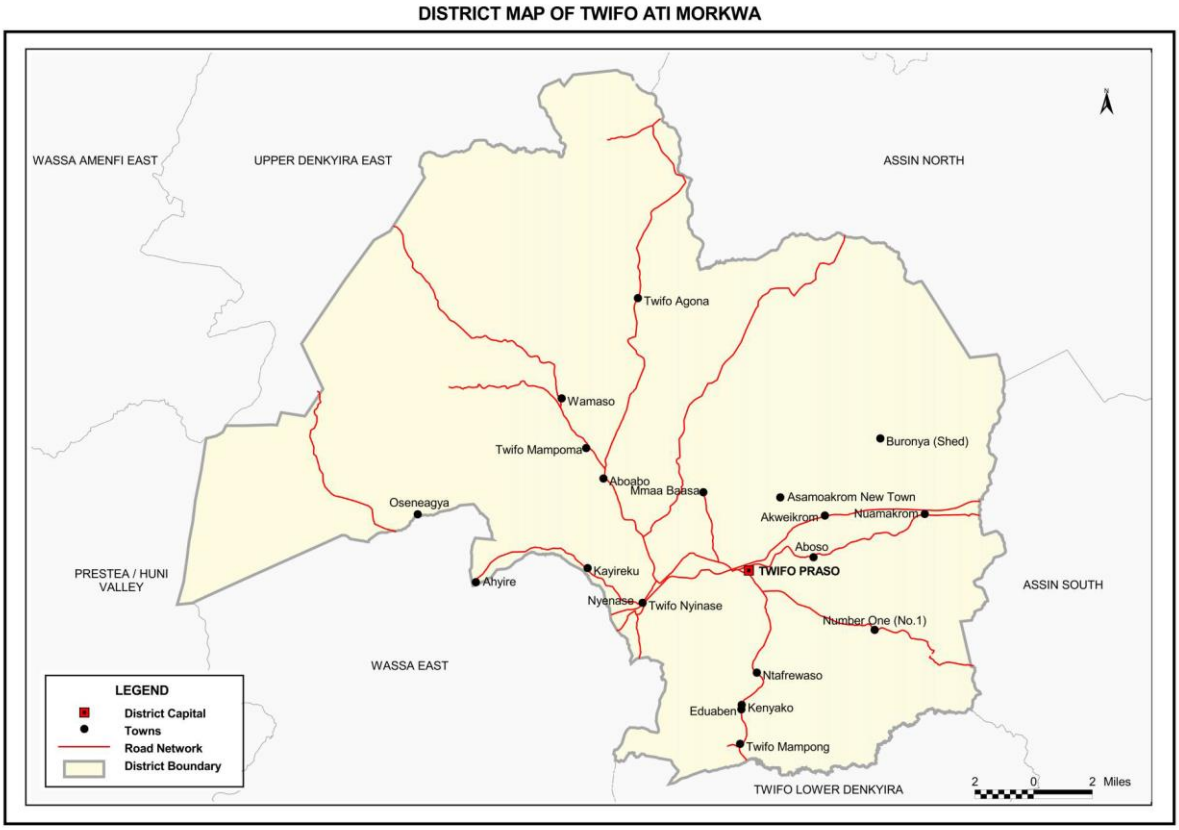

Figure 3.1: A map of the Twifo Atti- Mokwa District showing study community
Source: Ghana Statistical Service, GIS, 2010.

3.3 Study design

This research is a cross-sectional one. It focuses on analyzing contraceptive use in Ghana among female teenagers. This design was appropriate as it enabled the collection of data on individual characteristics during the time of the study regarding information about the independent variable as well as the association of individual characteristics and the outcome (dependent) variable. This involved the collection of quantitative data from female adolescents aged 15 – 19 years in the Twifo Atti Mokwa district of Central region of Ghana.

3.4 Study Population

The study focused on adolescent girls aged 15 -19 years. It focused on this age because it is the age most adolescents become sexually active and as well experience challenges such as adolescent pregnancy and its consequences.

3.5. Criteria for Selection

The following was used to select or reject the study participants.

3.5. Inclusion Criteria

This included all adolescent girls who ranging from 15 years to 19 years and adolescents in school who were married and unmarried or those who had given birth or not were included in this study.

3.5.2 Exclusion Criteria

Those female adolescents' students who were not within the selected school in the district were excluded in the study. Any female adolescent who was not mentally sound was not considered. Those who were unwilling to take part were not included and male adolescents were excluded since the target was only female.

3.6 Variables

Two main variables were considered; these were the independent and dependent or outcome variables.

3.6.1 Dependent variable

Contraceptive use was the outcome in this study. Contraceptive use refers to the use of any of the following methods, female condoms, pills, injectable, implants, female sterilization, lactational amenorrhea method (LAM) and intra uterine device (IUD).

3.6.2 Independent variable

The independent variables were grouped into; Individual factors, which included age, educational level, religious affiliation, marital status etc.

Health service factors such as attitude of service providers, available service points (adolescent health corners), and available varied modern contraceptives. Societal factors such as parent and or peer influence, religious beliefs and practices, partners consent and public perception of adolescent users of contraceptive was also investigated.

3.7 Sample Size Determination

The estimated female adolescent population of Twifo Praso Secondary School was **773** representing more than 50% of the adolescent population. Considering the large female adolescent population size, a sample was drawn from the population to make an inference about the female adolescent population. To determine an appropriate sample size for the study, Cochran (1977) formula was used and the formula is presented and explained as follows:

$$\mathbf{n = z^2pq / d^2}$$

Where; n = sample size required

z = the value for the given confidence interval

d= margin of error

p = population proportion (prevalence of the outcome of interest)

q = 1 – p

In determining this, 95% confidence interval and 5% margin of error were used. The prevalence of contraceptive use among adolescents aged 15 – 19 years in Twifo Atti Mokwa District is 21% (GSS et al., 2015). Hence, the sample size is determined as;

n =?

z = 1.96

d = 0.05 (5%)

p = 0.21 (21%)

q = 1 – p, (1- 0.21 = 0.79)

n = (1.96^2) (0.21) * (0.79) / (0.05^2)

n = 254.5

n = 255

To account for non-response, a 10% upward adjustment was used. Therefore, **10%** of 255; **255*(0.10) = 36**, the final total sample size therefore was 255 + 36= **291** adolescents.

3.8 Sampling Methods and Procedure

The District is made up of four sub-districts: Praso, Mokwa, Wamaso and Nyinase. Two of the sub-districts (Mokwa and Praso) were initially selected for the study because they are the only sub-districts with SHS. As part of the initial selection, one school was selected from Mokwa (Private) and the other school (Public) was selected from Praso sub-District. However, because of the outbreak of COVID-19 pandemic, the study could not be done in the private school before the government ordered for the closure of schools. This made the researcher concentrated on students from Praso Senior High School, which had enough student population to cover the sample size.

The respondents in the study were drawn from form two and three students because form one students were not in school during the period of the survey. The female adolescents' population for the two classes was 596. The respondents were proportionately sampled from form two (112) and form three (179) to have the sample size of 291.

Form 2 229 /596 *291 = 112

Form 3 367 /596 *291 = 179

Total **291**

A simple random sampling method was employed to select the students from each class. A total female adolescents of one hundred and twelve were drowned from form **two** by filling a bowl with one hundred and twelve 'Yes' and the remaining with 'No' on pieces of papers .The same procedure was done to select one hundred and seventy nine student from form three class. The random sampling procedure gave all the female students an equal opportunity to be part of the study. Giving the procedure, those who chose 'Yes' were selected to be part of the study but those who chose 'No' were not selected to be part.

All Covid-19 protocols were observed in the process of sampling and data collection to prevent the spread of the disease among both the students and the researcher. All students were encouraged to wear their nose/face mask. Some nose/face masks and hand sanitizers were provided by the researcher whilst social distancing was also strictly observed.

3.9 Data Collection Methods

Data was collected using structured questionnaire which was self-administered with all COVID 19 protocols observed during the data collection process

As at the time of data collection only form three and form two students were in school due to the Covid- 19 Pandemic so data was collected from the two forms using the same sample size.

3.10 Data collection Tools

The data collection tools used in this study was both structured and open ended questionnaires. The questionnaires were developed and used to collect data from the adolescents on contraceptive usage. The questionnaires were made up of both closed and open-ended questions. Structuring and questioning of the questionnaire were informed by findings from reviewed literature.

The questionnaire was designed in English and administered in English as well for purposes of clearer understanding by the selected participants.

3.10.1 Pretest of the Study Instrument

Pretesting was done in Jukwa Senior Secondary School in Hemang Lower Denkyira District, a neighbour district in the central Region prior to actual data collection. The adolescents in this district were likely to exhibit similar characteristics as the adolescents in the study area. This helped to make the necessary corrections before the actual data collection in the study area.

3.11 Data Management and Analysis

Administered questionnaires were cleaned, coded and entered using SPSS. The data **were** then exported to STATA Version 16. To first define the characteristics of study participants and other variables, descriptive statistical analysis (mean, median and standard deviation) was conducted. Also, to explore potential correlations between outcome variables and independent variables, bivariate and logistic regression tests were used. Odds ratio (OR) and their 95% confidence interval was also estimated to determine strength of possible association between the outcome variable and relevant independent variables. Statistical significance were held at $p<0.05$.

3.12 Quality Control

Standardization of the data was observed in order to ensure that data was in a uniform and quality manner.

Research assistants were trained to understand the objectives of the study and the variables the study sought to measure. Questionnaires were checked for completeness before data entry. Questionnaires were also numbered before entry in order to avoid duplication of entry.

3.13 Ethical Considerations

Ethical Clearance:

Ethical clearance was received from the Ethical Review Committee of the Ghana Health Service.

Informed Consent*:*

Informed written permission was requested from all participants. Informed consent was sought at different levels of the study. Consent was sought from the head teachers of the schools. Since they served as parents or guardians for the students. Also thumb printing or signing was requested from students as a sign of approval in the study.

Voluntary nature of participation:

Participants were made to understand that, participating in this research was entirely voluntary and that they were at liberty to discontinue to be participants of the research with no penalty. Moreover, participants were made aware that if they decided to participate in the study, answering of questions was a choice. They were at liberty to answer or not to answer the questions, if they did not feel comfortable.

Confidentiality:

There was strict anonymity and confidentiality on any detail on participants of the study were given during the research. Only the research team had access to the questionnaires answered.

By keeping all materials under lock and key, confidentiality and privacy were protected. The names of the participants were not taken, nor were they registered. Instead all data files were encoded and stored in identification numbers that were randomly chosen, rendering it difficult to recognize any respondent.

Data Storage and Usage: Data files would be kept for six months after which they would be destroyed or discarded. Clearance was sought from the Ethical Review Committee (ERC) before it would be used for any other purpose.

Costs/Compensation: Participation in this study did not cost any money. No money was given to participants as incentives for participating in this research.

Protocol Funding: The principal investigator funded this study.

Risks and benefits:

The research came with no risk that bordered on physical damage to the participant except the risk of sharing information on contraceptive usage which seemed personal. However, participants were made to understand that the information they were providing indirectly benefited them (especially those below 19 years). Findings of the research would be adopted and through policy formulation and or restructuring of adolescent's sexual and reproductive health services at the national level, challenges related to adolescent sexual reproductive health needs would be addressed through health services delivery and in schools through the school health programs and the educational syllabus. This may create avenues (e.g. adolescent corners) for them (adolescents) to freely and confidentially address their sexual and reproductive health challenges or needs.

Conflict of Interest: The researcher had no conflict of interest in this study.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter presents the result of the study among female adolescent students in Twifo-Atti Mokwa district on their knowledge and use of contraceptives. There are four sections in this chapter. Section one looks at the socio-demographic characteristics of the respondents, Section two presents knowledge of contraceptives of respondents, Section three presents contraceptive use among respondents and the last section presents respondents access to contraceptive use.

4.2 Socio-Demographic Characteristics of Respondent

A total of 291 questionnaires were administered and were appropriately completed representing 100% response rate. The socio-demographic characteristics provide a clear understanding of the background of respondents. Data were collected on sex, age, educational level, religion, marital status, educational level of father and mother and occupation of mother and father. Details on the study participants' context characteristics are shown in table 4.1.

Table 4.1: Socio-Demographic Characteristics of Respondents Variable

Variable	Frequency (N=291)	Percent %
Sex		
Female	291	100
Age (Mean, SD±)	(3.9,1.018)	
15	6	2.1
16	20	6.9
17	74	25.4
18	94	32.3
19	97	33.3
Class		
SHS 2	76	26.1
SHS 3	215	73.9
Religion		
Christian	280	96.2
Muslim	9	3.1
Traditionalist	2	0.7
Marital status		
Married	14	4.8
Not married	195	67
Co-habiting	14	4.8
In a relationship	68	23.4
Stay with		
Parent	247	84.9
Partner	2	0.7
Guardian	41	14.1
Self	1	0.3
Educational level of father		
No education	23	7.9
Primary education	25	8.6
JHS	96	33
SHS	64	22
Tertiary	56	19.2
Don't know	27	9.3
Educational level of mother		
No education	53	18.2
Primary education	45	15.5
JHS	124	42.6
SHS	31	10.7
Tertiary	22	7.6
Don't know	16	5.5
Occupation of father		
Agricultural, forestry and fishery	123	42.3
Trader/business	106	36.4

Teacher	32	11
Clergy/Pastor	12	4.1
Police/Army	9	3.1
Manager	8	2.7
Health worker	1	3
Occupation of mother		
Agricultural, forestry and fishery	60	20.6
Trader/business	194	66.7
Teacher	6	2.1
Clergy/Pastor	5	1.7
Police/Army	1	0.3
Manager	1	0.3
Health worker	4	1.4
Others	11	3.7

The respondents were all 291 (100.0%), the mean age of the respondent was 3.88 (SD±1.018), with a minimum age of 15 and a median age of 19. Twenty-Six percent (26.1%) of respondents were in form two and seventy-four percent (73.9%) in Senior High School. Majority of the respondents were Christians (96.2%), followed by Islam (3.1%) and African traditional religion (0.7%). Also, a higher proportion of respondents were not married (67.0%), 4.8% married, 4.8% cohabiting and 23.4% in relationships. With respect to whom the respondents live with, 84.9% lived with parents, 0.7% lived with partners, and 14.1% lived with guardian, whiles 0.3% lived alone.

4.3 Contraceptive Knowledge of Respondents

Knowledge of contraceptives was found to be high among respondents. Of the 291 respondents, 82.5% know something about contraceptives whiles the remaining 17.5% have never heard anything with regards to contraceptives. With regards to which modern contraceptives respondents were aware of, the study found that condom was the most known method 66%, followed by IUD 7.6%, injectable contraceptives 7.2%, oral contraceptives 5.9%, lactational amenorrhea 4.8%, implants 3.4%, femidom 2.7% and vaginal spermicidal 2.4%as indicated in Table 4.2.

Table 4.2: Knowledge of Respondents on Contraceptives

Variable	Frequency N=291	Percent (%)
Knowledge of respondents		
Yes	227	78
No	64	22
Method Known		
Condom	193	66
Femidom	8	2.7
Intrauterine device (IUD)	22	7.6
Implants	10	3.4
Oral contraceptives	16	5.9
Vaginal Spermicidal	7	2.4
Injectable contraceptives	21	7.2
Lactational amenorrhea	14	4.8
Can a girl become pregnant the first time after having unprotected sex		
Yes	243	83.5
No	48	16.5
Do you think the use of modern contraceptives during sexual intercourse provides 100% protection from becoming pregnant		
Yes	67	23
No	128	44
Do you think the use of modern contraceptives is the decision of the woman and therefore the man should not worry about it		
Yes	95	32.6
No	196	67.4
A woman who uses contraceptives may become promiscuous (unfaithful)		
Yes	204	70.1
No	87	29.9
Contraceptives are devices used by women to prevent pregnancy		
Yes	271	93.1
No	20	6.9
Contraceptives are devices used by sexually active people		
Yes	193	66.3
No	98	33.7
Do you think the user of modern contraceptives can make a woman to become infertile		
Yes	204	70.1
No	87	29.9

4.4 Knowledge of Contraceptives and Socio-Demographic Characteristics

The study found a A statistically significant correlation between age and contraceptive awareness ($p<0.006$), but religion was not statistically significant (Table 4.3).

Table 4.3: Knowledge of contraceptives and Socio-Demographic Characteristics

Variables	Frequency (N=291)	Have knowledge of contraceptives (%) N=227	Have no knowledge of contraceptives (%) N=64	P-Value
Age				
15	6	4 (2.6)	2 (33.3)	0.006*
16	20	16(7.1)	4 (20.0)	
17	74	65(28.6)	9 (12.2)	
18	94	59 (26.0)	14 (14.4)	
19	97	83(36.6)	35 (54.7)	
Class				0.028*
Form 2	20	15(15.5)	5(25.0)	
Form 3	88	82(84.5)	6(30.)	
Religion				0.936
Christian	280	216(89)	30(12.4)	
Muslim	9	9(6.8)	2(11.1)	
Traditional	2	2(4.2)	1(9.1)	

***Statistically significant at P<0.05**

4.5 Use of Modern Contraceptives

A series of questions were asked on contraceptive use. Out of the 291 respondents, 36.5% reported they had ever used contraceptive whiles the remaining 63.5% admitted to not having used one before. Likewise, with the age categorization of how old one was when she first had sex, 4 (1.4%) were below 10 years, 10-14 years 10 (2.7%), 15-18 years 52 (17.8%), and those who had it 19 years and above were 7 (2.4%). Also, majority of the respondents, 186 (63.9%) had never used modern contraceptives before whiles the remaining 105 (36.1%) had ever used modern contraceptives before. When it came to the kind of modern contraceptive respondents used, condom use (55.5%) was number one, followed by oral contraceptives (30.5%), Femidom (4.0%), IUD (4.0%), vaginal spermicidal 3 (3.0%), and injectable contraceptives 2 (2.0%) were the least patronized contraceptives.

On the reasons why respondents were not using modern contraceptives, majority said it had side effects, 113 (39.%) followed by religious reasons 79 (27.1%), societal norms 15 (5.2%), cost accessibility 4 (1.4%) and distance from home to chemical shop 10 (3.4%) (Table 4.4).

Table 4.4: Use of Modern Contraceptives by Respondents

Variables	Total n(%)	Female n(%)	P-Value
Have you ever had sex before(n=291)		**291**	**0.548**
Yes	102(35)		
No	189(65)		
How old were you when you first had sex			**0.256**
<10years	4 (3.2)		
10-14	10(8.1)		
15-18	103(83.1)		
19 and above	7 (5.7)		
Have you ever used modern contraceptive before (n=291)			**0.2820**
Yes	105 (36.1)		
No	186(63.9)		
Which one are you using			**0.023**
Condom	56 (55.5%)		
Femidom	4 (4.0%)		
Intrauterine device (IUD)	4 (4.0%)		
Implants	1 (1.0%)		
Oral contraceptives	31 (30.5%)		
Vaginal Spermicidal	3 (3.0%)		
Injectable contraceptives	2 (2.0%)		
Lactational amenorrhea	0 (0.0%)		
Why are you not using contraceptives			**0.021**
Side effects	113 (51.1%)		
Religious reasons	79 (35.8%)		
Societal Norms	15 (6.8%)		
Cost accessibility	4 (1.8%)		
Distance from home	10 (4.5%)		
Which of these contraceptives have you used before			**0.038**
Condom	59 (20.3%)		
Femidom	3 (1.0%)		
Intrauterine device (IUD)	3 (1.0%)		
Implants	2 (0.7%)		
Oral contraceptives	26 (8.9%)		
Vaginal Spermicidal	4 (1.4%)		
Injectable contraceptives	2 (0.7%)		
Lactational amenorrhea	2 (0.7%)		
None	166 (57.0%)		
Which of them do you prefer most			
Condom	58 (19.9%)		
Femidom	9 (3.1%)		
Intrauterine device (IUD)	6 (2.1%)		
Implants	4 (1.4%)		
Oral contraceptives	24 (8.2%)		
Vaginal Spermicidal	5 (1.7%)		
Injectable contraceptives	1 (0.3%)		
None	184 (63.2%)		

What are the reasons for your preference	
They are easily accessible	23 (14.2%)
They are affordable	22 (13.6%)
They are safe	55 (34%)
They are easy to use	32 (19.1%)
No side effects	30 (18.5%)
Do you know where you can get any of the contraceptives above within the community to buy	
Yes	209 (71.8%)
No	82 (28.1%)
If you were to use contraceptives, will you like your parents to know that you are using them	
Yes	117 (40.2%)
No	174 (59.8%)
Will your parents approve of your use of contraceptives	
Yes	27 (9.3%)
No	160 (55.0%)
Don't Know	104 (35.7%)
Why do you think it is necessary for your parents to know of your usage of contraceptives	
To get their support	30 (10.3%)
To receive counselling and education from them	108 (37.1%)
To let them know of my choice	27 (9.3%)
Why don't you want them to know of your usage of contraceptives	
Fear of parental judgement	59 (20.3%)
Fear of being questioned	81 (27.8%)
Peer influence	18 (6.2%)
My parent won't like it	39 (13.4%)

****Significant at P< 0.05.**

Below is a pie chart showing an overall contraceptive use among adolescents in the Twifo Atti Mokwa district (Figure 4.1).

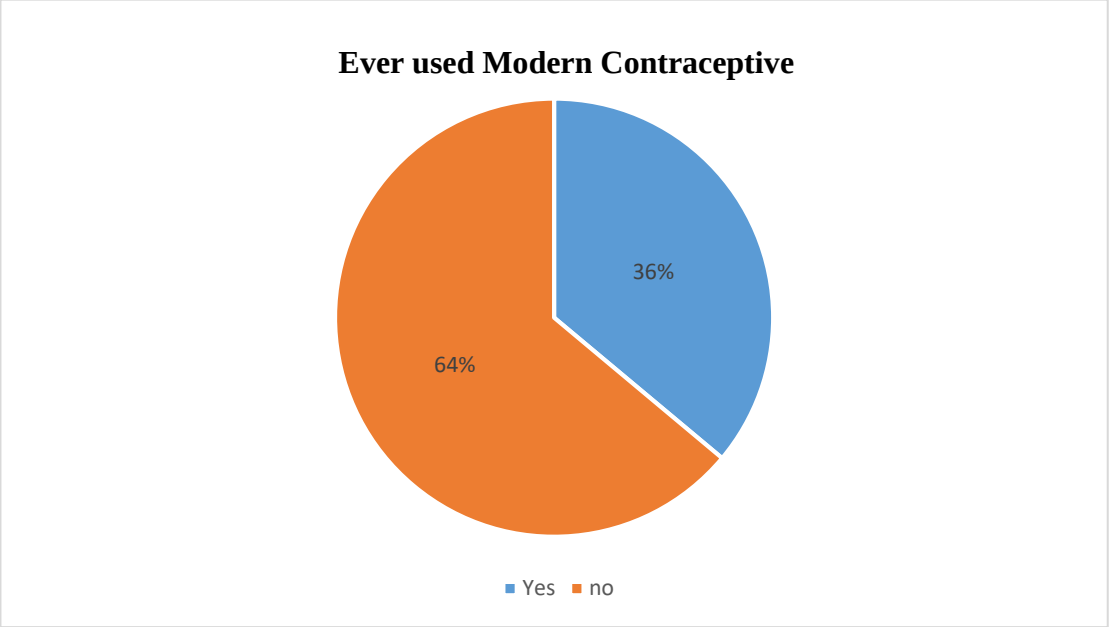

Figure 4.1: Ever used modern contraceptive

One objective of this research was to determine contraceptive use among female adolescents in second cycle institutions. When respondents were asked whether they have ever used any modern contraceptive method, 36% responded "yes" and 64% said "no".

4.6 Access to modern contraceptive

Accessibility to modern contraceptives by female adolescent is key to determining its use. When it came to age at which adolescents should use contraceptives 72.9% were of the view that it should be from age 17-19, whiles 14.8% were of the view it should be from ages 14-16 followed by ages 10-13 years representing 4.5%. Also, when it came to adolescents' access to contraceptives, 65.5% reported "yes" whiles 34.5% reported "no". On the question of use of contraceptives being necessary for adolescents, 56.8% reported "yes" and the remaining 43.2% reported "no". With regards to sex related problems, 19% have ever had sex related problems before while the remaining 81% had never had sex

related problems before. On the awareness of sex related problems, 46% were aware of STIs, 35% pregnancy, 10.3% abortion, 5.2% rape and 3.4% defilement. Lastly, when it came to access to contraceptives from service providers in the community, 18.4% got their supplies from chemical shops, 12.2% clinics, 10.2% hospitals, 22.5% pharmacy shops and 36.7% adolescentcorner (Table 4.5).

Table 4.5: Access to Contraceptives

Variables	Frequency (n)	Percent (%)
Age at which adolescents should use contraceptives (n=268)		
10-13	13	4.5
14-16	43	14.8
17-19	212	72.9
Should Adolescents have access to contraceptives (n=264)		
Yes	173	65.5
No	91	34.5
Use of contraceptives necessary for adolescents	21	56.8
Yes	16	43.2
No		
Ever had any sex related problems		
Yes	52	19
No	222	81
Sex problems you are aware of		
STDs	134	46
Pregnancy	102	35.1
Abortion	30	10.3
Rape	15	5.2
Defilement	10	3.4
Contraceptive providers in the community		
Chemical shops	9	18.4
Clinics	6	12.2
Hospitals	5	10.2
Pharmacy	11	22.5
Adolescent corner	18	36.7

4.7 Reasons for Non-use of Contraceptives

Table 4.6 shows the multiple response answers to the question on what prevents adolescents from using contraceptives. Out of the 291 responses, side effects were the most cited reason for non-use with 113 (38.8%) followed by religious reasons, 92 (31.6%), with the least mentioned reason being cost accessibility (1.4%).

Table 4.6: What prevents adolescents from using contraceptives?

Reasons*	n (%)
Side effects	113 (38.8)
Religious reasons	92 (31.6)
Social norms	37 (12.7)
Cost accessibility	45 (15.5)
Distance from home	4 (1.4)

*Multiple response

4.8 Association between socio-demographics and use of contraceptives

This section examines the association between the socio-demographics and contraceptive use. As shown in Table 4.7 below, there is no association between almost all the socio-demographic characteristics and current use of contraceptives. Only 20.0% of respondents whose mothers have no formal education were currently using a contraceptive, whiles more than half (56.3%) of respondents whose mothers had secondary level and above were currently using contraceptives.

Table 4.7: Association between Socio-demographic Characteristics and Contraceptive Use

	Contraceptives Use			
Variable (n = 155)	**Yes (%)**	**No (%)**	**Chi-square Value**	**P-value**
Age				
12 -14	8 (50.0)	8 (50.0)	0.090	0.764
15 -19	64 (46.0)	75 (54.0)		
Sex			0.015	0.904
Male	38 (46.9)	43 (53.1)		
Female	34 (45.9)	40 (54.1)		
Level of education			0.775	0.462
Form 2	32 (43.8)	41 (56.2)		
Form 3	55 (45.8)	68 (54.2)		
Religion			3.470	0.325
Christianity	62(45.3)	75(54.7)		
Islam	10(62.5)	6(37.5)		
African traditional	0(0.0)	1(100)		
Others	0(0.0)	0 (0.0)		
Marital status			1.792	0.774
Married	26(43.3)	34(56.7)		
Not married	22(47.8)	24(52.2)		
Co-habiting	13(46.4)	15(53.6)		
In a relationship	2(33.3)	4(66.7)		
Living arrangements			6.744	0.150
Parents	28 (55.9)	30 (44.1)		
Partner	16 (40.0)	24 (60.6)		
Guardian	7 (46.7)	8 (53.3)		
Self	9 (42.9)	12 (57.1)		
Fathers educational level			3.6392	0.07918
No education	3(30.0)	7(70.0)		
Primary education	16(38.1)	26(61.9)		
JHS	53(51.5)	50(48.5)		
SHS	48(57.6)	31(42.4)		
Tertiary	19(21.4)	70(78.6)		
Don't know	27(90.0)	3(10.0)		
Mothers Educational level			2.9038	0.07829
No education	22(26.5)	61(73.5)		
Primary education	18(56.3)	14(43.8)		
JHS	48(70.6)	20(29.4)		
SHS	8(42.1)	11(57.9)		
Tertiary	5(13.9)	31(86.1)		
Don't know	2(100.0)	0 (0.0)		

%= row total

4.9 Association between Selected variables and Current Contraceptive Use

Table 4.8 shows the association between the independent variables and contraceptive use.

Age at first sex was not significantly correlated with the use of contraception (p>0.05).

Table 4.8: Association between selected variables and Contraceptive Use

Variable	Contraceptives Use		Chi-square Value	P-value
Age at first sex			0.647	0.724
<10	10(40.0)	15(60.0)		
11-15	34(49.3)	35(50.7)		
16-19	28(45.9)	33(54.1)		
Parents approval			13.006	0.000
Yes	2 (4.7)	41 (95.3)		
No	42(37.5)	70(62.5)		
Side effects			25.640	0.000
Yes	39(75.0)	13(25.0)		
No	33(32)	70(68.0)		
Sex related problems			10.339	0.016
Yes	19(31.1.)	42(68.9)		
No	22(52.4)	20(47.6)		
Knowledge on unprotected sex	5.119	0.024		
Yes	14(70.0)	6(30.0)		
No	58(43.0)	77(57.0)		
Sexual intercourse provides 100% protection from pregnancy			7.610	0.022
Yes	28 (40.0)	42(60.0)		
No	43(55.8)	34(44.2)		
Knowledge on unprotected sex	5.119	0.024		
Yes	14(70.0)	6(30.0)		
No	58(43.0)	77(57.0)		
Modern contraceptives is the decision of the woman			11.120	0.011
Yes	18(42.9)	24(57.1)		
No	21(63.6)	12(36.4)		

4.10 Logistic regression analysis on selected variables and Contraceptive Use

This session uses logistic regression to examine the strength of association of socio-demographics and other variables with contraceptive use. The odds ratio (OR) and the p-values for both crude and adjusted estimates as well as confidence intervals are presented.

According to the multivariate analysis, four variables were significant for the use of contraceptive; mothers' educational level ($p<0.05$), side effects ($p<0.01$), age at first use of contraceptive ($p<0.03$) and parent's approval ($p<0.05$).

The results indicate that mothers' educational level has significant association with current use of contraceptives. Respondents whose mothers had at least tertiary education were more than five times likely to be using contraceptives compared with those whose mothers had junior high and/or no formal education (AOR=5.70, $p<0.03$, $p<0.01$, $p<0.05$).

Table 4.9: Logistic regression analysis of selected predictor variables and contraceptive use

Variables	OR	95% Cl		AOR	95% Cl	
		Lower	Upper		Lower	Upper
Mothers educational level						
No formal education (r)	1			1		
Primary	2.900	0.750	11.214	2.955	0.570	15.332
Secondary	5.161*	1.339	19.895	5.692*	1.097	29.532
Tertiary education	2.101	0.630	10.201	2.084	0.438	14.009
Side effects						
Yes (r)	1			1		
No	0.260**	0.122	0.553	0.360*	0.137	0.942
Age of use of Contraceptive						
Yes (r)	1			1		
No	0.157**	0.074	0.333	0.188**	0.075	0.470
Parents approval on contraceptive use						
Yes	1			1		
No	2.432*	1.079	5.480	2.062	0.769	5.525

Note: * $p < 0.05$, ** $p < 0.01$, OR = Crude odds ratio, AOR = Adjusted odds ratio, r = Reference category

4.11 Prevalence of modern contraceptive use among female adolescent students

The prevalence rate is the proportion of female adolescent students who were using or have ever used modern contraceptive method at the time of the interview. The prevalence rate among all the respondents was 36.1%.

CHAPTER FIVE

DISCUSSION

5.1 Introduction

The discussions in this study create linkages between the study results and previous literature in order to be able to draw the relationship and distinction between the current findings and previous works done by other scholars.

5.2 Knowledge, Attitude and Practices on Contraceptives

The goal of this study was to examine the effect of awareness, attitudes and behaviors on young female adolescents of modern contraceptives in the second cycle schools in the Twifo Atti-Mokwa District. The findings of this study revealed that though knowledge on modern contraceptives according to age categories was high, contraceptive use was low (36%). Among adolescents' who had heard about modern contraceptives, the modern contraceptive methods that were largely known were condoms (55.5%) and oral contraceptives (30.5%). As a result, the preferable contraceptive methods were condoms (19.9%) and oral contraceptives (8.2%). The findings of the study showed that 35% of the respondents had had sex before. Among adolescents who have had sex before, the age at first sex ranged from <10 – 19 years. Also, 63.9% of the respondents who were sexually active have never used any modern contraceptive method while 36.1% had ever used a modern contraceptive method. The use of modern contraceptives was significantly associated with many factors including age, parental support and religious beliefs and practices.

The study found that modern contraceptive knowledge among study participants is almost universal, with condom as the most well-known contraceptive method. This is in line with previous studies conducted in Ghana (Hagan & Buxton, 2012; Awusabo-Asare et al., 2006; Karim et al., 2003).

5.3 Consistency of findings with previous studies

Many of the findings from this study are consistent with findings from previous studies. Previous research has shown that many adolescents have had sex before their 20th birthday and one of such can be found in a study by Ramjee and Daniels (2013), which suggest that majority of adolescents in **sub**-Saharan Africa have had sex by age twenty. Similarly, findings of this study demonstrate that majority of respondents had had sex before age 20 and the minimum age at first sex was less than 10 years.

The study revealed that a higher proportion of respondents had heard of modern contraceptives. This finding aligns well with the GDHS (2014), which states that, knowledge of contraceptive is universal in Ghana and that majority of married adolescents aged 15-19 years have some knowledge about a method of modern contraceptive. Another study by Sweya et al., (2016) also showed that, contraceptive knowledge among female adolescents' undergraduates in Kilimanjaro, Kenya was high with 78% familiar with condoms while 60.4% reported to have heard about the oral contraceptives.

Regardless of the high level of knowledge of modern contraceptive among adolescents in this study, 63.9% of respondents have never used a contraceptive method. This is consistent with a study by Nyongesa and Odunga (2015) who argue that there is abundant information that contraceptive knowledge and awareness is high among young people in Sub-Saharan Africa population but that this awareness has not translated into increased contraceptive use, with the result being very low contraceptive prevalence. Age of respondents was significantly associated with modern contraceptive use.

Findings from the study also showed that, adolescents with sex partners were more likely to use modern contraceptives compared to those who had no sex partners. This finding is similar to the study by Obare et al., (2011), who observed that adolescents who had recent

sex (sexual partners) were more likely to use modern contraceptives compared to those who had no sex partners (had not had sex before). The current study equally reported that the religion of respondents influenced adolescents use of modern contraceptives and this can also be found in a study by Okech et al., (2011), who identified religious affiliation and the friendliness of service providers to significantly influence modern contraceptive use.

5.4 Contraceptive use and prevalence

Prevalence of contraceptives was found to be low. The prevalence rate for contraceptive use was 36%. This reflects a general low prevalence of modern contraceptives among female adolescents which has also been reported by other studies (GSS et al., 2014; GSS et al., 2008; Somba et al., 2014). This shows a wide gap between knowledge and use indicating that knowledge does not necessarily translate into use.

This study also indicated that lesser number of female adolescents who are sexually active had ever used a modern contraceptive method with condom as the most used method. This finding is comparable with what was found in previous adolescent studies in Ghana (Awusabo –Asare et al., 2006; Boamah et al., 2014).

5.5 Source of Contraceptives

Most of the female adolescents in this study reported the pharmacy as the major source of contraceptives with only a few accessing contraceptives from the hospitals and clinics. An adolescent study in Ghana by Boamah et al. (2014) also had similar findings. This could be due to the fact that adolescents can easily accesses from the pharmacy or drug store and also because adolescents are less likely to face any criticism, scolding and reprimands from the shop attendants than health professionals in the health facilities (Nyalali et al., 2013).

5.6 Determinants of contraceptive use

Unlike some other studies, this study did not find significant association between the socio-demographic characteristics and contraceptive use with the exception of respondent's mother's educational level. Previous studies have reported association between age and contraceptive use. On the other hand, other studies such as Karim et al., (2003), Ngome and Odimegwu (2014) found no association between age and contraceptive use which-h is similar to that found in this study (Karim et al., 2003; Ngome & Odimegwu, 2014).

Although some studies (Obasohan, 2015 and Agadjanian, 2013) found some association between religion and contraceptive use, this study found no association between religion and contraceptive use. This finding is similar to that of Ngome and Odimegwu, 2014. On the other hand, Williamson et al., 2009 found that religion plays a role in the access to and use of contraceptives; that is adolescents who are either religious or come from religious homes or communities tend not to use contraceptives. This finding may be a reflection of the decreasing role of religion in recent times. Also, more religious adolescents are more likely not to engage in sexual activity and may not be represented in the study.

5.7 Explanation of findings and implications

The perception that having knowledge and attitude of contraceptives will automatically result into contraceptive usage does not apply to all situations. One of such situations can be related to this study. This study reported that majority of respondents had heard about modern contraceptive.

The low rate of modern contraceptive use among adolescent was found to be influenced by factors such as age, marital status and religion among others. This could be linked to the fact that the more an individual advances in age, the better his/her ability to make

decisions concerning his/her life. This could have accounted for adolescents aged 15 -18 years to be more likely to use modern contraceptives compared to those aged 10 – 14 years. Also, in most African culture, premarital sex is not permitted or allowed and this could have contributed to the relatively low contraceptive use among female adolescents surveyed.

5.8 Strength and Limitation

This study has added new knowledge to the already existing knowledge about modern contraceptives use among adolescents in the Twifo Atti-mokwa district. This knowledge could help in the development of health policies and interventions that could address the sexual and reproductive health needs of female adolescents. Despite this, the study had some limitations.

First, two of the sub-districts (Mokwa and Praso) were initially selected for the study because they were the only sub-districts with SHS. As part of the initial selection, one school was selected from Mokwa (Private) and the other school (Public) was selected from Praso sub-District. However, because of the outbreak of COVID-19 pandemic, the study could not be done in the private school before the government ordered for the closure of schools. This made the researcher concentrate on students from Twifo Praso Senior High School, which had enough student population to cover the sample size. In addition, only a sample of 295 female adolescent students were interviewed. Therefore, the limitation of generalizing the results is acknowledged.

Finally, the research design that was used in this study was not possible to directly identify cause and effect of the independent variables that were considered to affect the outcome variable as the study design only looks at events at a specific time.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1 Conclusion

The study found modern contraceptive knowledge among adolescents to be very high but use was not encouraging. The contraceptive prevalence rate was 36.1%. Only few of the respondents who were sexually active used contraceptives consistently. The method mostly used was the condom with the pharmacy store as the major source of contraceptives.

Age at which adolescent had sex according to the study results ranged between 10–19 years. This means that reproductive health Knowledge including contraceptive information must be provided early at the primary schools to equip adolescents with enough information before initiation of sex.

According to the study results, variables that were significant for current use of contraceptive were mothers' educational level. A more in-depth study is needed to provide a better understanding of factors that influence contraceptive use among female adolescent students to provide needed information for effective reproductive health programme for adolescents.

6.2 Recommendation

Based on the findings, the following recommendations were made.

1. The Ghana Health Service and Ghana Education service need to empower adolescents with age appropriate reproductive health information including family planning for in- schools adolescents.
2. Stigma reduction advocacy should be embarked on to encourage and increase use of contraceptives by sexually active adolescents.

3. Ghana Health Service should ensure vibrant adolescent health corners are created in all health facilities that do not have, and existing ones strengthened to provide adolescent friendly reproductive health services.
4. Parents of female adolescents must be educated and encouraged to engage their children in reproductive talks. This will encourage adolescents to open up to their guardians or parents on reproductive issues. Increase in the creation of adolescent centers or health services of their needs
5. Parents need to be encouraged to value the importance of sex education and the need to have good relationship with the adolescents
6. Formation of youth clubs in schools and using sports and music as attractor or vehicle to keep the adolescents
7. Training of peer educators as leaders by Ghana Health services to Intensify adolescent education in schools, churches and camps
8. The Ghana Health Service should reorient all School Health Nurses in the provision of adolescents' friendly services.
9. Ghana Health Service in collaboration with Ghana Education Service to advocate on adolescent reproductive health education before initiation of sexual activity. The need to spread information on family planning methods among teenagers in the region is also very paramount.
10. There will be the need for future studies because the outbreak of covid-19 was one of the limitation of the study which limited the study participants to only one school

REFERENCES

Abdul-Rahman, L., Marrone, G., & Johansson, A. (2011). Trends in contraceptive use among female adolescents in Ghana. *African Journal of Reproductive Health*

Adanu, R.M., Seffah, J.D., Hill, A.G., Darko, R., Duda R.B., & Anarfi J.K. (2009). Contraceptive use by women in Accra, Ghana: results from the 2003 Accra Women's Health Survey. *Afr J Reprod Health, 13*, 123±33.

Adolescent pregnancy. Fact sheet No. 364. Updated September 2014. [http://www.who.int/mediacentre/factsheets/fs364/en/]. Accessed 9 May 2017

Adolescent Sexual and Reproductive Health (2004) Ghana Health Service.

Adolescent Sleep Working Group, Committee on Adolescence and Council on School Health. Pediatrics September 2014, 134 (3) 642-649; doi: https://doi.org/10.1542/peds.2014-1697

Ajah, L. O., Onubogu, E. S., Anozie, O. B., Lawani, L. O., Iyoke, C. A., Onwe, E. O., & Ajah, M. I. (2015). Adolescent reproductive health challenges among schoolgirls in southeast Nigeria: role of knowledge of menstrual pattern and contraceptive adherence. *Patient Preference and Adherence*, 9, 1219.

Akintade, O. L., Pengpid, S., & Peltzer, K. (2011). Awareness and use of and barriers to family planning services among female university students in Lesotho. *South African Journal of Obstetrics and Gynaecology*, *17*(3), 72-78.

Allan Guttrnacher Institute, (2014) 'Sex education: Politicians, parents, teachers and teens. *The Guttamacher Report on Public Policy*, *4*(1), 1-25.

Annual Report (2005) Reproductive and Child Health Unit; Public Health Division. Ghana Health Service.

Appiah-Agyekum, N. N., & Kayi, E. A. (2013). Students' perceptions of contraceptives in University of Ghana. *Journal of Family & Reproductive Health*, 7(1), 39-44.

Arundhati, C. (2011). Male involvement in Family Planning and Reproductive Health in rural central India. Academic Dissertation University of Tampere, School of Health Sciences International Postgraduate Programme in Epidemiology Finland, *15*(2), 45-55.

Asamoah, B.O., Agardh, A., & Ostergren, P.Ö. (2013). Inequality in fertility rate and modern contraceptive use among Ghanaian women from 1988-2008. Department of Clinical Sciences, Social Medicine and Global Health, Lund University, Malmö, Sweden. *Int J Equity Health. 12*, 37. doi: 10.1186/1475-9276-12-37.

Baker, E., Metzler, M., & Galea, S. (2005). Addressing Social Determinants of Health Inequities: Learning From Doing. *Am J Public Health*, 95(4), 553-555. doi: I0.21 05/ajph.2005.061812

Bearinger L. H., Sieving, R.E, Ferguson, J., & Sharma, V. (2007). Global perspectives on the sexual and reproductive health of adolescents: patterns, prevention, and potential. *Lancet, 369*, 1220-1231.

Benson, J.G and Foreman, W. (2002). The relationship of childhood sexual abuse to teenage pregnancy. *Journal of Marriage &the Family. 59* (I), 119-130.

Bjelica, A. (2008). Socio-demographic factors influence contraception use among female students of the University of Novi Sad (Serbia). *The European Journal of Contraception & Reproductive Health Care, 13*(4), 422-430. Doi: https://doi.org/10.1080/13625180802296747.

Blanc, A., Tsui, A., Croft, *T.*, & Trevitt, J. (2009). Patterns and Trends in Adolescents' Contraceptive Use and Discontinuation in Developing Countries and Comparisons with Adult Women. *JPSRH, 35*(02), 063-071. doi: I*0.1363/3506309*

Boamah, E.A., Asante, K.P., Mahama, E., Manu, G., Ayipah, E., Adeniji, E., & Owusu-Agyei, S. (2014). Use of contraceptives among adolescents in Kintampo, Ghana: a cross-sectional study. *5*, 7-15. DOI https://doi.org/10.2147/OAJC.S56485

Brown, H., Coulson, J., Gordon-Maclean, C., Nyalali, K., Maternowska, C., & Testa A. (2013). Unintended pregnancy among teenagers in Arusha and Zanzibar, Tanzania: A situational analysis. London: Marie Stopes International.

C., Trussell, Killick, S. R., Leary, J. and Guthrie, K. A. (2011), Sperm Content of Pre-ejaculatory Fluid, Hum Fertil (Camb) 2011, 14, 48-52.

CDC, STDs in adolescents and young adults, 2016 Sexually Transmit-ted Diseases Surveillance, 2017, https://www.cdc.gov/std/stats16/adolescents.htm2014) Demographic and Health Survey, Ghana.

Cleland J, Conde-Agudelo A, Peterson H, Ross J, Tsui A (2012). Contraception and health. 14;380(9837):149-56. doi: 10.1016/S0140-6736(12)60609-6. Epub 2012 Jul 10.

Department of Health and Human Services (DHSS), Office on Women's Health. (2011), Birth control methods fact sheet, Retrieved December 20, 2015, from http://www.womenshealth.gov/publications/our-publications/fact-sheet/birth-control-methods.html [top]

Dockalova B, Lau K, Barclay H, Marshall A: Sustainable development goals and family planning 2020, 2016.

Fiato N. Family planning in Sub-Saharan Africa: a review of interventions in promotion of long-acting reversible contraception (Doctoral dissertation, University of Pittsburgh); 2016.

Ghana Statistical Service (2014). Ghana Demographic and Health Survey Report, 2014. Accra, Ghana.

Ghana Statistical Service (GSS), Ghana Health Service (GHS) & ICF Macro. (2016). Ghana Demographic and Health Survey. Accra. Ghana: GSS, GHS, & ICF Macro.

GSS G. Ghana statistical service (GSS), Ghana health service (GHS), and ICF macro. Accra: Ghana Demogr Health Surv. 2009; 2008:79–96.

Hagan, J. E., & Buxton, C. (2012). Contraceptive knowledge, perceptions and use among adolescents in selected senior high schools in the central region of Ghana. J Sociol Res, 3(2), 170-180.

Hubacher, D, Mavranezouli, L. and McGinn, E. (2008). Unintended pregnancy In sub-Saharan Africa: magnitude of the problem and potential role of contraceptive implants to alleviate *it.Contraception,* 78,73-78.

Ijadunola, M. Y., Abiona, T. C., Kay, T., Tafolabf, O., Esimai, O. a, & Olaolorun, F. M. (2010). Male Involvement in Family Planning Decision Making in lle-lfe , Osun State , Nigeria, 14(December), 43–51.

Institute of Medicine; Committee on the Diagnostic Criteria for *Myalgic Encephalomyelitis*/Chronic Fatigue Syndrome (Feb 10, 2015), *Beyond Myalgic Encephalomyelitis/Chronic Fatigue Syndrome:Redefining an Illness*, Washington, DC: The National Academies Press, *doi*:*10.17226/19012*

Islam, S., & Hasan, M. (2016). Women knowledge, attitude, approval of family planning and contraceptive use in Bangladesh. *Asia Pacific Journal of Multidisciplinary Research*,4(2), 76-82.

J. K. Wulifan, S. Brenner, A. Jahn, and M. De Allegri, “A scopingreview on determinants of unmet need for family planningamong women of reproductive age in low- and middle-incomecountries,” BMC Women’s Health, vol.16, no.1, articleno.2, 2016.[18]

Joseph K. Wulifan, Stephan Brenner, Albrecht Jahn, Manuela De Allegri (2016). A Scoping Review on Determinants of Unmet Need for Family Planning Among

Women of Reproductive Age in Low- and Middle-Income Countries. BMC Women's Health 16(1):2 · January 2016 *with* 373 Reads DOI: 10.1186/s12905-015-0281-3

Joseph Maaminu Kyilleh, Philip Teg-Nefaah Tabong & Benson Boinkum Konlaan (2018). Adolescents' reproductive health knowledge, choices and factors affecting reproductive health choices: a qualitative study in the West Gonja District in Northern region, Ghana. *BMC International Health and Human Rights*volume 18, Article number: 6 (2018)

Joyce Agyemang1, Sam Newton1, Isaac Nkrumah2, Joyce Mahlako Tsoka-Gwegweni3,4, Samuel Nambile Cumber (2019) Contraceptive use and associated factors among sexually active female adolescents in Atwima Kwanwoma District, Ashanti region-Ghana. Article *in* Pan African Medical Journal · April 2019 DOI: 10.11604/pamj.2019.32.182.15344

K. Elmusharaf, E. Byrne, and D. O'Donovan, "Social andtraditional practices and their implications for family planning:A participatory ethnographic study in Renk, South Sudan,"Reproductive Health,vol.14,no.1,articleno.10,2017.

Kabagenyi, A., Habaasa, G., & Rutaremwa, G. (2016). Low contraceptive use among young females in Uganda: does birth history and age at birth have an influence? Analysis of 2011 Demographic and Health Survey. *Journal of Contraceptive Studies*, *1*(1),1-12.: PMID: 28317036.

Kagashe, G. A. B. and Honest, G. (2013), Knowledge and Use of Contraceptives among Secondary School Girls in Dar es Salaam Tanzania, Journal of Applied Pharmaceutical Science, 2013, 3 (01): 066-068.

Karim, Ali Mehryar, Robert Magnani, Gwendolyn Morgan, and Katherine Bond. 2003. "Reproductive health risk and protective factors among unmarried youth in Ghana," International Family Planning Perspectives 29(1): 14–24.

Kennedy, E., Gray, N., Azzopardi, P., &Creati, M. (2014). Adolescent fertility and family planning in East Asia and the Pacific: a review of DHS reports. *Reproductive Health,*8(1), 11.

Khalifa Elmusharaf, Elaine Byrne and Diarmuid O'Donovan (2017). Social and traditional practices and their implications for family planning: a participatory ethnographic study in Renk,South Sudan. Reproductive Health (2017) 14:10 DOI 10.1186/s12978-016-0273-2

Kinaro, J., Kimani, M., Ikamari, L. and Ayiemba, E. H. O. (2015), Perceptions and Barriers to Contraceptive Use among Adolescents Aged 15 - 19 Years in Kenya: A Case Study of Nairobi. Health, 7, 85-97.

Kothari, C. R. (2004). Research methodology: Methods and techniques. New-Delhi: New Age International Publishers.

Koyongo, B.S (2013). Uptake of Modern Contraception among Youth (15 24) at Community Level in Busia District, Uganda.

Kyilleh, Joseph Maaminu, et al. "Adolescents' reproductive health knowledge, choices and factors affecting reproductive health choices: a qualitative study in the West Gonja District in Northern region, Ghana." *BMC International Health and Human Rights*, vol. 18, no. 1, 2018. *Gale Academic Onefile*, Accessed 1 Oct. 2019.

Meeker M, Du R, Bacchetti P, Privitera CM, Larson MD, Holland MC, Manley G (2005). Pupil examination: validity and clinical utility of an automated pupillometer. J Neurosci Nurs. 2005 Feb;37(1):34-40.

Mensch, B. S., Grant, M. and Blanc, A. K. (2006). The changing context of sexual initiation

Ngome, E. and Odimegwu, C. (2014). The Social Context of Adolescent women use of Modern Contraceptives in Zimbabwe: A Multilevel Analysis. Reproductive Health Journal. Vol.11 No.64

O. L. Olaitan, "Factors influencing the choice of family planningamong couples in South West Nigeria,"International Journal ofMedicine and Medical Sciences, vol. 3, pp. 227– 232, 2011

Olukunmi Lanre Olaitan (2011). Attitudes of University Students Towards Abortion in Nigeria. International Journal of Tropical Medicine. Year: 2011 | Volume: 6 | Issue: 3 | Page No.: 52-57. DOI: 10.3923/ijtmed.2011.52.57

Planned Parenthood Federation of America, Inc (PPFA) (2012), Birth control. Retrieved December 20, 215 from http://www.plannedparenthood.org/health-topics/birth-control-4211.htm

Pope LM, Adler NE, Tschann JM (2001). Post abortion psychological adjustment: are minors at increased risk? Department of Family Practice and Health Psychology, University of California, San Francisco, California, USA. J Adolescent Health. 2001 Jul;29(1):2-11

S. Kane, M. Kok, M. Rial, A. Matere, M. Dieleman, and J.E. Broerse, "Social norms and family planning decisions in South Sudan," BMC Public Health, vol.16, no.1, article1183,2016

Sakara, A., Badu-Nyarko, S.K.&Namoog,M. (2014) Strategies for effective male involvement infamily planning practice in Wa District,Upper West Region, International Journalof Current Research, 5(2), 5592-5599.

Stewart, M., McNamee, K and Harvey, C. A. (2013), Practical Guide to Contraception Part 3: Traditional Methods, Sterilisation and Emergency Contraception Medicine Today, 2013, 14(9), 55-6.

Stover J, Cahill N, Sonneveldt E, Weinberger M, Williamson J, Wei C, Brown W & Alkema L. (2011). Modern contraceptive use, unmet need, and demand satisfied among women of reproductive age who are married or in a union in the focus countries of the Family Planning 2020 initiative: a systematic analysis using the Family Planning Estimation Tool. Lancet. 2018 Mar 3;391(10123):870-882. doi: 10.1016/S0140-6736(17)33104-5. Epub 2017 Dec 5.

TAMDHD (2019). *Annual and Mid-Year Report 2019*. Central Region, Ghana: Twifo Atti- Mokwa District Health Directorate, Ghana Health Service.

Tayo, A., Akinola, O., Babatunde, A., Adewunmi, A., Osinusi, D. and Shittu, L. (2011), Contraceptive Knowledge and Usage amongst Female Secondary School Students in Lagos, Southwest Nigeria, Journal of Public Health and Epidemiology Vol. 3(1), 34-37.

Trussell J. Contraceptive efficacy. In: Hatcher R, Trussell J, Nelson A,Cates W, Kowal D, &Policar M, editors. 20th revised edit. Atlanta, GA:Ardent Media, Inc.; 2011. p. 779-863.

United Nations Population Fund & Center for Reproductive rights (20 I0). The right to contraceptive information and services for women and adolescents. Retrieved from http://www.unfpa.org/sites/default/files/resource-pdf/Contraception.pdf

Venkatraman Chandra-Mouli, Donna R McCarraher, Sharon J Phillips, Nancy E Williamson & Gwyn Hainsworth (2014). Contraception for adolescents in low- and middle-income countries: needs, barriers, and access. *Reproductive Health*volume 11, Article number: 1 (2014)

Victor Chima,Oluwatobi Abel Alawod (2019). Modern contraceptive use among female adolescents in ruralNigeria: Does exposure to family planning messages

matter? Across-sectional study. Department of Demography and Social Statistics, Obafemi Awolowo University, Ile-Ife, Osun, Nigeria. 01 Mar 2019:627

Vu LTH, Oh J, Bui QT-T, Le AT-K. Use of modern contraceptives among married women in Vietnam: a multilevel analysis using the multiple Indicator cluster survey (2011) and the Vietnam population and housing census (2009). Glob Health Action. 2016;9(1):29574.

Weller SC, Davis-Beaty K. Condom effectiveness in reducing heterosexual HIV transmission. Cochrane Database of Systematic Reviews2002, Issue 1. Art. No.: CD003255. DOI: 10.1002/14651858.CD003255.

WHO. Core competencies in adolescent health and development for primary care providers: including a tool to assess the adolescent health and development component in pre-service education of health-care providers. Geneva: WHO; 2015.

Williamson, L. M., Parkes, A., Wight, D., Petticrew, M., & Hart, G. J. (2009). Limits to modern contraceptive use among young women in developing countries: a systematic review of qualitative research. Reprod Health, 6(3), 1-12.

World Health Organisation& UNAIDS (2014). Global Standards for Quality Health-Care ServicesforAdolescents. Retrieved from http://www.who.int/maternal_child_ adolescent/documents/global-standards-adolescent- care/en/.

World Health Organisation (2017). WHO Recommendations on Maternal Health: Guidelines Approved by the WHO Guidelines Review Committee; Tuncalp, O., et al., (2015). Quality of care for pregnant women and newborns—the WHO vision, BJOG 2015, 122 :1045–1049.

World Health Organisation. Global and regional estimates on violence against women: Prevalence and health effects of intimate partner violence and non-partner sexual violence. Geneva: WHO; 2013.

Yoder, P., Guèye, M., & Konaté, M. (2011). The use of family planning methods in Mali: The how and why of taking action.

Zhenmei Zhang & Mark D. Hayward (2006). Gender, the Marital Life Course, and Cardiovascular Disease in Late Midlife. Journal of Marriage and Family 68:639-657 · January 2006 *with* 240 Reads

APPENDICES

SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA

Appendix A: Participants Information Sheet

This information sheet provides information about the research for female students at Twifo Atti Mokwa secondary school and Mokwa **Secondary School** to make an informed decision of whether to participate in the study or not. It will outline the nature of the research, what the research involves, risks, benefits and compensation.

Title of Study:"Contraceptive Use Among Female Adolescents in the second cycle institution in Twifo Atti Mokwa District in The Central Region of Ghana".

Introduction: I am Catherine Aku Klutse, a Master of Public Health (MPH) student at the School of Public Health of the University of Ghana, Legon. My email address is klutsecatherine@yahoo.com and my telephone numbers are 0208189580 /0555405778 I am conducting a research on the topic: Contraceptive Use Among Female Adolescents in the second cycle institution in the Twifo Atti- Mokwa District In The Central Region of Ghana.

Nature of research: This study is a quantitative study, focusing on contraceptive use among female students in the Atti -Mokwa District of the Central region. I am interested in finding the use of contraceptives among female students. Two hundred and eighty-one female students will be consented in this study. The study will take place right here in your institution.

Participants Involvement: I would like to invite you to participate in this study because you are an adolescent who is at least 14-19 years old and a female student in the Twifo Atti Mokwa District. I believe that you can help me by providing the appropriate responses.

Duration /what is involved: A self-administered questionnaire will be issued to female students. If you are interested in participating in this study, you can go ahead and fill in the questionnaire which will be collected afterwards. It will then be entered into a statistical software for analysis. The self-administered questionnaire will take 5-10 minutes of your time.

Potential Risks: There would be no anticipated risk or harm from the study. The only inconvenience would be the time spent in the interview. In view of this, the design of the

interview guide is well structured to facilitate the discourse. The respondents will be informed about the general nature of the study and assured of no potential harm during the study.

Benefits: Though you may not have any immediate or direct benefits from the study, your responses would be helpful in policy planning and formulation of recommendations to appropriate authorities concerning contraceptive use among female secondary students.

Costs: Participation in this study will not cost you any money. You will also not receive any money/incentives for participating in this research.

Compensation: You will not be compensated for your participation and loss of time

Declaration of Conflict of Interest: The researcher has no conflict of interest in this study.

Confidentiality: Your name and identity will not be taken in this study. However, the information you are going to provide will be coded and will be treated strictly confidential. You are assured of total confidentiality to the information you will give. Apart from the researcher and supervisor of this research, no one else will have access to information provided whether in part or whole. Data files would be kept for six months after which they will be destroyed or discarded.

Voluntary participation/withdrawal: Participation is voluntary. You are free to choose if you want to take part in this study. Also, you can withdraw your consent at any time without further explanation, and without any adverse consequences.

Outcome and Feedback: Data gathered will help to improve policy formulation adolescent females who use contraceptives in Ghana.

Feedback to participant: No feedback will be given to you as an individual but a report will be given to the various stakeholders involved in formulating policies for female adolescent students Ghana (GHS, MoH just to mention a few).

Funding information: The principal investigator if funding this study.

Sharing of participants Information/Data: Data gathered will be kept in my possession and will not be shared with any other organization(s) or individuals. It will be solely mine.

Storage of samples: Data files would be kept for six months after which they will be destroyed or discarded. Clearance will be sought from the ERC before it would be used for any other purpose.

Provision of Information and Consent for participants: You will be given copy of the Information sheet and Consent after it has been signed or thumb-printed to keep.

Who to Contact for Further Clarification/Questions: If you have a concern about any aspect of this research, please contact Catherine Aku Klutse at The School of Public Health, Legon or speak to me on tel. no…0555405778 /0208189580 For further clarification on ethical issues please contact Nana Abena Apatu, the administrator at the Ghana Health Service Ethics Review Committee on Tel 0503539896.

Appendix B: Consent Form

UNIVERSITY OF GHANA

COLLEGE OF HEALTH SCIENCES

SCHOOL OF PUBLIC HEALTH

CONSENT FORM FOR STUDY PARTICIPANTS

PARTICIPANTS' STATEMENT

I acknowledge that I have read or have had the purpose and contents of the Participants' Information Sheet read and satisfactorily explained to me in a language I understand (English). I fully understand the contents and any potential implications as well as my right to change my mind (ie withdraw from the research) even after I have signed this form.

I voluntarily agree to be part of this research.

Name or Initials of Participant……. ID Code ……..

Participants' Signature ……OR Thumb Print…… OR Mark (Please specify)…….

Date:…….

GUARDIAN INFORMATION SHEET

I acknowledge that I have read or have had the purpose and contents of the Guardian Information Sheet read and that all questions have been satisfactorily explained to me. I fully understand the contents and any potential implications as well as my decision and right as a head teacher/master to allow study participants participate in the study as well as my right to change mind or make participants withdraw from the research even after I have signed this form.

I voluntarily append my signature to be part of this research.

Name or Initials of Participant……..ID Code ……..

Participants'Signature……OR ThumbPrint……OR Mark(Please specify)……

Date……

INVESTIGATOR STATEMENT AND SIGNATURE

I certify that the participant has been given ample time to read and learn about the study. All questions and clarifications raised by the participant has been addressed.

Researcher's name…….. Signature…….

Date ……Participant's ID Code……..

Place……

Appendix C: Questionnaire for Students

Dear Student,

This is an academic research questionnaire aimed at assessing the level of knowledge, attitude and Use of contraceptives. The results of the survey are for research purposes only and the confidentiality of respondents is guaranteed. Thank you for your contributions to this research.

You are kindly requested to read through the items and respond to them.

SECTION A

SOCIO-DEMOGRAPHIC INFORMATION

Write or Tick [√] the appropriate box that corresponds to your choice concerning each statement below.

1. Form**: ……...**
2. Sex: Male [ ] Female [ ]
3. Age: **a.** 15 [ ] b.16 [ ] c.17 [ ] c 18 [ ] d 19[ ]
4. Religion: **a.** Christianity [ ] **b.** Islam [ ] **c.** African traditional religion [ ] **d.** Others (Specify): …….
5. What is your marital status: **a** married **b**. not married **c**. co-.habiting **d**. divorced
6. Who do you stay with? A; parent b: Partner c:Guardian d; self
7. What is the level of education of your father? a : No education b:Primary education **c**:JHS d: SHS **e**:Tertiary
8. What is the level of education of your mother? : No education b:Primary education **c**:JHS d: SHS **e**:Tertiary
9. What is the occupation of your father? ….....
10. What is the occupation of your mother…….

SECTION B

KNOWLEDGE AND SOURCE OF CONTRACEPTIVES INFORMATION

Instructions: *Tick [√] the appropriate option* Meaning of contraceptives **Yes/No**

11. Have you heard of contraceptive before? If **no skip to 15**
    a. Yes [ ] **b.** No [ ] if yes how did you hear about it?

12. How did you get to know or hear about contraceptives Tick *[√] as many as applicable*

a. Through parents

b. Through peers

c. Through the mass media. Thus radio, mass media etc

d. Through teachers

e. Friends,

f. Magazines and books, and mass media and

g. Movies

h. Others specify

13. Have you ever heard of any modern contraceptive before?

a. Yes [ ] **b.** No[ ] if yes tick from the list of modern contraceptives

a. Condom [ ]

b. Femidom [ ]

c. Intrauterine device (IUDS) [ ]

d. Implants [ ]

e. Oral contraceptives (Pills) [ ]

f. Vaginal Spermicidal [ ]

g. Injectable contraceptives [ ]

e. Lactational amenorrhea LAM [ ]

14. Can a girl become pregnant the first time after having unprotected sex?

a. Yes [ ] **b. No [ ]**

15. Do you think the use of modern contraceptives during sexual intercourse provides 100% protection from becoming pregnant?

a. Yes [ ] **b. No [ ]** **c. Don't know**

16. Do you think the use of modern contraceptives is the decision of the woman and therefore the man should not worry about it?

a. Yes [ ] **b. No [ ]**

17. A woman who uses contraceptives may become promiscuous (unfaithful)?

a. Yes [ ] **b. No [ ]**

18. Contraceptives are devices used by women to prevent pregnancy

a. Yes [ ] **b. No [ ]**

19. Contraceptives are devices used by sexually active people.

a. Yes [ ] **b. No [ ]**

20. Do you think the use of modern contraceptives can make a woman to become infertile?

a. Yes [ ] **b. No [ ]**

21. Which of the following contraceptives are you familiar with?

Tick [√] as many as you know.

a. Condom [ ] **b.** Femidom [ ]

c. Intrauterine device (IUDS) [ ] **d.** Implants [ ]

e. Oral contraceptives (Pills) [ ] **f.** Vaginal Spermicidal []

g. Injectable contraceptives [ ]

Utilization

22. Have you ever had sex before? **If no Skip to ……**

a. Yes [ ] **b. No [ ]**

23. If **yes** How old were you? **……..**

24. Have you ever used modern contraceptive before?

a. Yes [ ] **b. No [ ]**

25. If yes, which one are you using?

a. Condom [ ]

b. Femidom [ ]

c. Implants [ ]

d. Intrauterine device (IUDS) [ ]

e. Oral contraceptives (Pills) [ ]

f. Vaginal Spermicidal [ ]

g. Injectable contraceptives [ ]

h. None [ ]

26. If no why are you not using?

a. Side effects **b.** Religious reasons **c.** Societal Norms **d.** Others specify

27. i. Which of these contraceptives have you used before? *Tick [√] as many as applicable*

a. Condom [ ]

b. Femidom [ ]

c. Implants [ ]

d. Intrauterine device (IUDS) [ ]

e. Oral contraceptives (Pills) [ ]

f. Vaginal Spermicidal [ ]

g. Injectable contraceptives [ ]

h. None [ ]

28. Which of them (above) do you prefer most? (If yes to any) **a, b, c, d, e, f, g & h**

29. Give reason(s)

……

……

30. Do you know where you can get any of the contraceptives above within the community to buy?

a. Yes b. No

31. Will you like your parents to know that you are using contraceptives?

a. Yes [ ] **b.** No [ ]

32. Will your parents approve of your use of contraceptives?

a. Yes [ ] **b.** No [ ] **c.** Don't know

33. If your answer to question **32**is Yes, why do you think it is necessary for them to know?

……

34. If your answer to question ***11***is No, why don't you want them to know?

……

……

SECTION C
ACCESS TO CONTRACEPTIVES

In this section, old adolescent refers to a person between the ages of 15 - 19.

35. At what stage should adolescents use contraceptives?

a. Junior High [ ]

b. Senior High [ ]

c. University [ ]

36. Do you think adolescents should have access to contraceptives?

a. Yes [ ] **b.** No [ ]

37. Why do you think the use of contraceptives is necessary for adolescents?

…….....

38. Have you ever had any sex related problem (s)? Tick [√]

a. Yes [ ] **b.** No [ ]

39. Which of these sex problems are you aware of?

a. Sexually transmitted disease [ ] **b.** Pregnancy [ ]

c. Abortion [ ] **d.** Rape [ ]

e. Defilement [ ]

40. Which of the following contraceptive information providers do you have in your community? *Tick [√] as many as applicable*

a. Chemical shops [ ] **b.** Clinic's [ ] **c.** Hospitals [ ]

d. Pharmacy [] **e**. Planned Parenthood Association of Ghana PPAG) [ ]

f. Others (Specify) ……...

41. Which of the service providers in Q **20** would you like to buy contraceptives from? *List them in order of choice*

a. .....

b. .....

c. …..

42. Give reason(s) for choosing a particular service provider to Q 20.

a. Low price [ ] **b.** Friendly attitude of service provider [ ]

c. Short distance [ ] **d.** Information and guidance attach to service [ ]

e. Convenience [ ]