SCHOOL OF PUBLIC HEALTH

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AWARENESS AND UTILIZATION OF CONTRACEPTIVES AMONG IN-SCHOOL ADOLESCENTS IN ADAKLU DISTRICT IN VOLTA REGION, GHANA

BY

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DECLARATION

I, Prince Henry Nyame, by this, do declare that this work is my own, done and supervised by me. I again declare that, apart from references to other works which have been duly cited, this work does not contain any material that has been submitted for the award of any degree anywhere else.

22/09/2023

Prince Henry Nyame — Date

(Student)

22/09/2023

Dr. Ernest Tei Maya — Date

(Supervisor)

DEDICATION

To my supportive wife Empress, my family, and my friends do I dedicate this work

ACKNOWLEDGEMENT

To God the Father, Son and the Holy Ghost be all glory for the ability to put this masterpiece together.

My profound gratitude goes to Dr. Ernest Tei Maya for his patience and commitment to supervising this work. I could not have come this far without his tremendous guidance. I also wish to express my profound appreciation to the entire staff of the School of Public Health, particularly the Population, Family and Reproductive Health Department for their direction. I also wish to thank the Volta Regional Director of Education, the Adaklu District Director of education as well as the staff and students of the district for their permission to carry out this work.

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LIST OF ABBREVIATIONS

AIDS	-	Acquired Immune Deficiency Syndrome
CPR	-	Contraceptive Prevalence Rate
GES	-	Ghana Education Service
GHS	-	Ghana Health Service
GMHS	-	Ghana Maternal Health Survey
GSS	-	Ghana Statistical Service
HBM	-	Health Belief Model
HIV	-	Human Immune Virus
LAM	-	Lactational Amenorrhea Method
LARC	-	Long-Acting Reversible Contraceptives
LIC	-	Low-Income Countries
MOE	-	Ministry of Education
MOH	-	Ministry of Health
SRH	-	Sexual and Reproductive Health
STI	-	Sexually Transmitted Infections
UN	-	United Nations
UNESCO	-	United Nations Educational, Scientific and Cultural Organization
UNICEF	-	United Nations Children's Emergency Fund
UNFPA	-	United Nations Population Fund
WHO	-	World Health Organization

ABSTRACT

Background: A lot of efforts and measures are being put in place by many countries to increase knowledge and access to contraception among women of reproductive age, especially among adolescents. Though in many sub-Saharan African countries including Ghana, the knowledge of contraceptives is high, this does not seem to translate into utilization. Though contraceptives uptake among adolescents in the Adaklu district is not encouraging coupled with the high numbers of teenage pregnancies, few studies have been conducted to examine the factors that may be at play. The purpose of this study was to assess the awareness and utilization of contraceptives among in-school adolescents in the Adaklu district.

The design employed to collect the data was a cross-sectional survey with a structured closed-ended questionnaire. This was used to assess in-school adolescents' awareness and uptake of modern contraceptives..

Objectives: The objective of the study was to assess awareness and factors associated with the utilization of modern contraceptives among in-school adolescents.

Methods: The study employed the cross-sectional design which used quantitative methods to assess the level of awareness and the factors associated with contraceptive utilization among in-school adolescents. A structured questionnaire was administered to participants as a data collection tool. A total of 396 in school adolescent students in both the basic and senior high schools within the district were interviewed. Frequencies, proportions and means were used for univariate analysis. Chi square and Fisher's exact test were used for tests for association. Multivariable logistic regression was used to test the strength of the association between the dependent and independent variables. In all the analysis $p < 0.05$ was considered statistically significant.

Results: Three hundred and ninety-six students took part in the study. Out of the 396 students, 84.1%

were aware of modern contraceptives. The major sources of awareness were teachers (79.3 %) and the media (73.9%). , Out of the 333 sexually active adolescents, 42.3% had ever used a contraceptive method. Some of the reasons for non-usage stemmed from the notion that contraceptive use makes women promiscuous (55.4%), parent or guardian does not offer education on contraceptives (55.5%), and lack of accessibility to contraceptives (51.1%). Factors that were found to be associated with contraceptive use were age, contraceptive accessibility , source of awareness of contraceptives.

Conclusion: Awareness levels of modern contraceptives among adolescents was appreciably high. However, a lack of parental/guardian education and support was responsible for the low levels of utilization. Parents/guardians should take up the responsibility of educating and encouraging their wards on modern contraceptive use. The Ministries of Health and Education, together with Ghana Health Service, should collaborate and ensure that modern contraceptives are made easily accessible to all sexually active adolescents.

CHAPTER ONE

INTRODUCTION

1.1 The Study Background

According to the WHO (2014) 'adolescence' is a time of life that spans between the ages of 10 and 19 years. It is the period of physical, cognitive, and psychosocial development (WHO, 2014; Patton & Viner, 2007; United Nations [UN], 2014). Adolescents are more susceptible to unintended pregnancies, induced abortion, sexually transmitted infections (STIs), aggression, accidents, and mental disorders, even though they are assumed to be healthy (WHO, 2014; UN, 2014). The World Health Organization in 2018 reported that, roughly 21 million girls aged 15 to 19 years and 2 million girls aged under 15 years become pregnant each year in developing countries, with an estimated 16 million girls aged 15 to 19 years and 2.5 million girls under the age of 16 years giving birth (WHO, 2018). Almost half of the pregnancies (49%) that occur in teenagers are within the age group of between 15 and 19. Most of these pregnancies occur in low-income countries and unwanted. More than half of these pregnancies end in abortions, sometimes under dangerous circumstances (Darroch, Woog, Bankole, & Ashford, 2016). Although the global adolescent birth rate fell to 47 births per 1000 women in 2015 from 65 births per 1000 women in 1990, the global adolescent population continues to grow, and adolescent pregnancies are expected to rise by 2030, with West and Central Africa and Eastern and Southern Africa seeing the most significant increase (WHO, 2018). According to projections, the number of adolescent mothers will reach 86 million by 2030. (United Nations Population Fund [UNFPA], 2013).

Pregnancy among adolescent girls have important repercussions that may negatively impact on the lives of both the adolescent mothers and their offspring. Adolescent pregnancies, whether planned or not, tend to negatively affect the health, education, social, and economic wellbeing of well-

beingscent (Wado, Sully, & Mumah, 2019). Maternal deaths, diseases, and disabilities such as obstetric fistula, complications of botched abortion, sexually transmitted infections, are all factors that have an influence on adolescent mothers (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2017). Every year, 70,000 adolescent girls in low-income countries (LICs) die from pregnancy and childbirth-related causes (UNESCO, 2017). Pregnancy and childbirth difficulties constitute the second largest cause of death among adolescent girls aged 15–19 years in LICs, and newborns to younger females are prone to high health risks than those born to older females (Darroch, Woog, Bankole, & Ashford, 2016). Pregnancy during adolescence interrupts adolescent girls' education, limiting their future economic options, including job opportunities (UNESCO, 2017; Kafle, 2010). The health of babies is also affected by adolescent childbearing, with greater perinatal mortality and underweight babies born to women under the age of 20. (UNESCO, 2017; Kafle, 2010; WHO, 2014).

(Hounton et al., 2015; Ngome, & Odimegwu, 2014; Nyarko, 2015). The contraceptive prevalence rate (CPR) among adolescent females aged 15–19 years in LICs is 21% for all methods (Hounton et al., 2015; Arthur & Champiti, 2016). The poor usage of contraception among adolescents persists despite evidence that adopting family planning methods can help prevent some of the negative effects that may result due to pregnancy and childbirth issues among adolescents. Some of the advantages are ability to choose the number of children to give birth to and how far apart they should be, as well as improvements in health-related outcomes such as maternal and infant mortality reductions and increment in schooling and economic outcomes (Rutstein, & Winter, 2015; Canning, & Schultz, 2012; Schultz, & Joshi, 2013).

According to studies, a variety of factors impact adolescents' decisions on whether to use contraceptives or not. These include individual, family, societal, cultural and religious factors

(Feleke, et all, 2013; Khan, Hossain, & Hoq, 2012; Morris, & Rushwan, 2015; Ochako et al., 2015; Abubakari et al., 2015).

Unintended pregnancies account for around 30% of all pregnancies in Ghana, with teenagers (70%) having a substantially higher rate than adults (Ameyaw, 2018). Teenagers who may get pregnant may be confronted with a variety of health, educational, and social consequences, including societal rejection, which usually manifests itself as stigma and discrimination. (WHO, 2020). Unwanted pregnancies among young females also lead to a high proportion of school dropouts and a halt in future growth. Most unwanted pregnancies among adolescents are usually aborted, with a large majority of them being unsafe (Owoo et al. 2019; Ghana Statistical Service [GSS], Ghana Health Service [GHS] & ICF, 2018). In Ghana, unsafe abortion is frequent since abortion is not legal unless the pregnancy is the consequence of rape, defilement, or incest, or the pregnancy poses a serious risk to the mother and/or the infant (Morhee & Morhee, 2006). Modern contraceptives are unquestionably key in stopping undesired pregnancies, abortions conducted under life-threatening conditions, and health problems related to ill performed abortions in teenagers. This study is basically to assess factors that influence adolescent contraception use in Adaklu, which is in the central part of the Volta Region of Ghana.

1.2 Statement of the problem

Preventing unwanted pregnancies, sexually transmitted infections, and unsafe abortions requires improving adolescent sexual and reproductive health (SRH) (Ali et al., 2018). In Sub-Saharan Africa (SSA), there has been a major improvement in adolescent SRH outcomes in recent years, including a decrease in child marriage, an increase in school enrollment, and contraceptive use (United Nations Children's Emergency Fund [UNICEF], 2018; UN, 2013). Despite these gains,

SSA continues to have disproportionately poor SRH outcomes when compared to other countries of the world, with the highest prevalence of adolescent pregnancy and the lowest rate of contraception. Despite these gains, SSA continues to have remarkably low SRH results when compared to other countries of the world, with the highest adolescent pregnancy rate and the lowest contraceptive use rates (Radovich et al., 2018). As a result, adolescents in Sub-Saharan Africa have a substantial unmet demand for contraception (Ali, & Cleland, 2018; Enuameh et al., 2015). According to the 2017 Ghana Maternal Health Survey (GMHS), 35.6 percent of teenagers use contraception (GSS, GHS, & ICF, 2018). These figures are lower than the respective estimates from 2014 (43.7 percent) and 2008 (66.6 percent) (GSS, GHS, and ICF, 2015; 2009). Meeting the contraceptive needs of teenagers is a need for achieving Sustainable Development Goal 3.7, which states that by 2030, everyone should have access to contraception (UN, 2016).

In Ghana, knowledge of any method of contraceptive is widespread with 99%. The Volta Region has a contraceptive awareness level of 100%, which is slightly higher than the national average (GMHS,2017). However, the region is among the lowest in terms of modern contraceptive utilization accounting for 22%. This is reflected in the region having one of the highest teenage pregnancies in the country with 15.5 percent. (Wilson et al., 2017). This agrees with the GMHS (2017) which also found that the percentage of women aged 15-19 who have begun childbearing in the region is 18%. Figures from the District Health Information Management (DHIMS,2020) show that the number of adolescents (10-19 years) who became mothers increased from 95 (12.5%) in 2019 to 126 (13.3%) in 2020. The report again indicated that the contraceptive acceptor rate among adolescents in the district reduced from 10,395 in 2018 to 2,972 (28.6%).

Despite the rising rate of teenage pregnancy in the Adaklu district, little research has been conducted to determine factors associated with contraceptive utilization among adolescents. This

study seeks to investigate the awareness and factors associated with contraceptive usage among in-school adolescents in the Adaklu district of the Volta Region of Ghana.

1.3 Justification

Adolescent motherhood is a major contributing factor to infant and maternal mortality in less developed nations, as well as starvation among teen mothers and their children. Meeting the contraceptive needs of women is critical to achieving gender equality. One strategy to empower young women of childbearing age, particularly girls, is to provide family planning services to those who require them (Say et al.; Felenke et al., 2013).

"In Ghana, teenage pregnancy is increasing, and Adaklu District in the Volta Region is not an exemption" (GSS, 2014). While this may indicate a low usage of modern contraceptives, there is a dearth of information about the variables that may be impacting the adolescents in Adaklu District's non-use of modern contraceptives.

As a result, the goal of the study is to discover factors responsible for contraceptive uptake among adolescents in the Adaklu District. This information could be used to improve family planning programming for adolescents, such as modern contraceptive services, to prevent unwanted pregnancies. The outcome of the study could also be used to help the Ghana Health Service and partner organizations to draw up adolescent-focused and friendly programs and services across the country. The outcomes of the study will also reveal insights about adolescent sexual activity levels, which could be used to help build dual protection HIV prevention programs for adolescents.

1.4 Conceptual framework

One of the preferred theoretical frameworks for studying health-related behavior and adherence to health interventions is the Health Belief Model (HBM) (Figure 1). It is one of the most extensively utilized socio-cognitive models for predicting health behavior and promoting healthcare utilization. Hochbaum, Rosenstock, and Kegels (1950) established the HBM in response to the failure of the free tuberculosis (TB) health screening program (Glanz, Rimer, & Viswanath, 2008). The HBM has been used to investigate a wide range of long- and short-term health behaviors, including sexual risk behaviors and HIV/AIDS transmission. An individual will take preventative activity if they feel it will prevent sickness and if they want to avoid that illness, HBM (Koenker et al., 2013, p2.).

Perceived susceptibility, perceived severity, perceived benefits, perceived barriers, the signal for action, and self-efficacy are the important factors in the HeBM (Rosenstock et al, 1988).

Perceived susceptibility occurs when a person assesses the likelihood of developing a health problem. Individuals who believe they will catch a disease but believe it may be prevented have an interest in changing their unfavorable health habits (Orji, Vassileva, & Mandryk, 2012). When a person realizes that not utilizing contraception would result in an unwanted pregnancy or STI, the individual will be compelled to take action aimed at averting the danger. The greater the perceived risk, the more likely the individual will develop a behavior that reduces the risk. The seriousness an individual connects to the hazard of risky behavior is referred to as perceived severity (Hall, 2012). This is based on the individual's persuasion of the medical, societal, and economic implications. When a person believes that not taking contraception during sexual activity would result in him or her dropping out of school and losing the chance to acquire a good job in the future, he or she is more likely to develop a behavior that will assist to lower the risk. In the

case of STDs, the stigma of having syphilis, gonorrhea, HIV, or AIDS, as well as the problems he or she will face, will influence the decision to adopt a new behavior to avoid the health consequences of not using contraception. Individuals' perceptions of the challenges associated with adopting a new health behavior are referred to as perceived barriers (Orji et al, 2012).

The users of contraceptives may experience adverse effects such as mood swings or weight gain which may prevent the user from using the method again. The cost of acquiring the necessary tools might also be a barrier to developing behavior that minimizes unfavorable outcomes. Its use may be hampered by the trouble of recalling taking pills before or after sexual activity. Access to prescriptions for some procedures, such as the intrauterine device, is limited; distance to the nearest institution is also a factor, as is the attitude of the health care providers (Hall, 2012).

The belief or subjective sense of the necessity or utility of establishing a health behavior to offset the perceived risk is known as the perceived benefit (Orji et al., 2012). When it comes to contraception, many people believe that using it will help them avoid unplanned pregnancies and STIs. So, notwithstanding the discomfort, expense, and side effects, an individual may believe that using contraception will put them in a better position than not using it and that this will encourage them to create a contraceptive habit.

Internal and external elements that cause a person to become aware of a threat are referred to as cues to action (Hall, 2012). Self-efficacy is the belief in one's ability to carry out a task. For example, if someone believes that using a condom is beneficial but does not believe that he or she is capable of doing so, the new behavior is unlikely to be attempted (Orji et al., 2012).

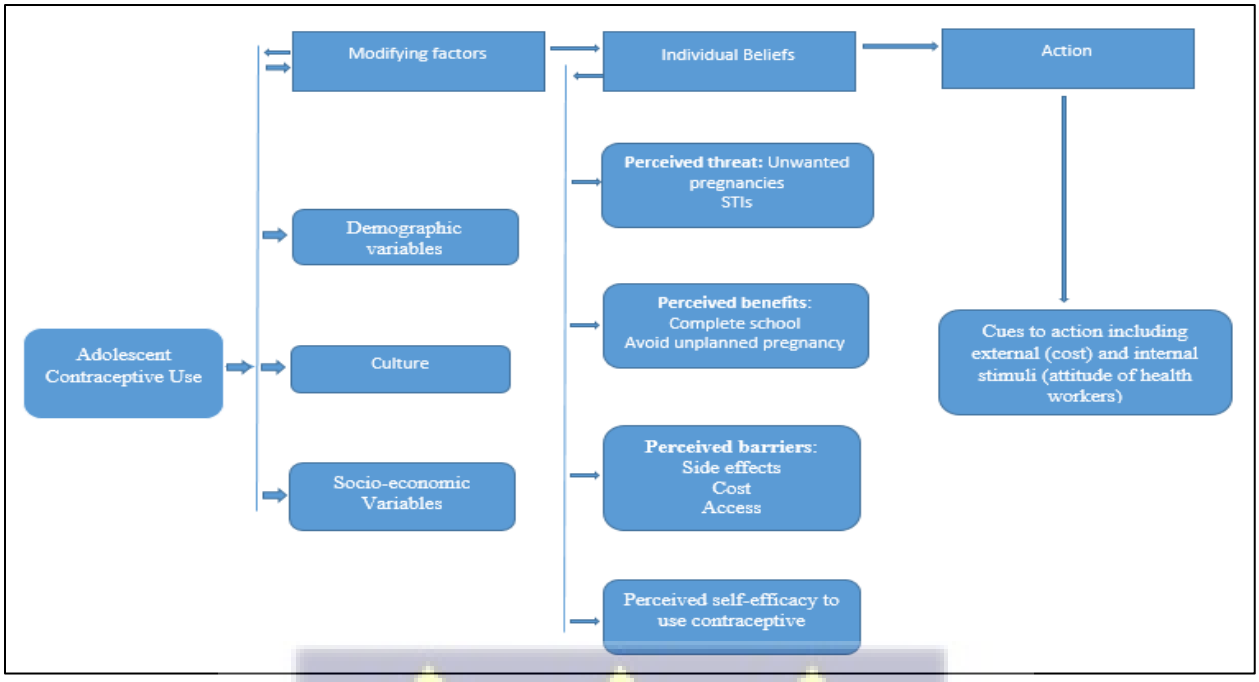

Figure 3.1: Conceptual Model for contraceptive utilization (Adapted from Loll et al., 2014)

1.5 The Objectives of the Study

1.5.1 General Objective of the Study

The main objective of the study was to determine the factors associated with adolescents' contraceptive usage in Adaklu District in the Volta Region.

1.5.2 Specific Objectives

1. To assess the awareness level of adolescents on contraceptives.
2. To investigate barriers to adolescent contraceptive uptake.
3. To assess factors associated with contraceptive utilization among adolescents.

1.6 Research questions

The following questions served as guiding principles for the researcher in his study:

1. What is the level of awareness among adolescents on contraceptives?
2. What are the barriers to contraceptive uptake among adolescents?
3. What are the factors associated with contraceptive utilization among adolescents?

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

An extensive literature search is conducted regarding the factors associated with the utilization of contraceptives among adolescents. The literature review was conducted using the University of Ghana library database, searches with Medline, CINAHL,, PubMed and Google Scholar (English only, full text). The search was guided by the keywords: 'Contraceptives utilization', 'Adolescents and contraceptive utilization', 'Awareness and Contraceptive utilization', 'Factors that influence contraceptive utilization', and barriers to contraceptive utilization'. Hence, the chapter is presented in four sections as follows: literature on awareness and contraceptive utilization, barriers to contraceptive utilization and summary of the chapter.

2.1 Awareness on contraceptive use

Awareness on contraceptive usage plays a key role in family planning policies stipulated by governments and major stakeholders globally. In 2017, Hindin and Kalamar reported that a little is known concerning the needs for individuals especially the adolescent and most specifically unmarried adolescent. Knowing the various reasons for the low utilization or non-use can help direct the policy and program responses within countries to reduce the obstacles or barriers in awareness and accessibility of contraceptives or family planning methods for individuals especially adolescents and the health professionals (Hindin & Kalamar, 2017).

Globally, youth aged between 15 to 24 years are the most vulnerable groups contributing more than fifty percent of HIV-infected individuals. In 2003, about ten million young persons aged between 15 to 24 years were living with HIV. These individuals who start sexual activity are more

likely to have multiple sex partners and eventually have sex with partners who had exposure to HIV without the use of family planning methods such as condom (Owusu, 2008).

Ghana, just like most other Sub-Saharan African countries recorded a decline in contraceptive prevalence rate and part of some nations that reported a decline in family planning or contraceptive utilization over a period (Hindin et al, 2014). In 2008, just 28% of sexually active unmarried adolescents utilized a modern family planning method (Guttmacher Institute, 2013).

A study conducted in United State of America revealed that there was a high rate of unintended pregnancies among an appreciable number of adolescents who are 18 years of age and above and this was due to not using a contraceptive or failure of the contraceptives due to improper use (Asut, et al., (2018).

"Asut et al (2018) reported that, the use of modern contraception seems good among adolescents. The study however, excluded adolescents who are below 15 years, majority of whom may be sexually active and may also need contraception. The WHO indicated that 2.5 million pregnancies occur annually.

In 2012, Nketiah-Amponsah suggested that contraceptive utilization increased marginally regardless the alarming decline in fertility rate.

Chofakian, et al. (2016) reported in their study conducted in Brazil that there was no significant relationship between the level of awareness and the utilization of contraceptive. Although 58% of the study participants use contraceptives most of the respondents clearly indicated that they have insufficient knowledge on contraceptive methods.

Subedi (2015) conducted a study on contraceptives use among adolescents and observed that most of the adolescents were aware of at least one contraceptive or family planning method. Also, the

study found that there is low utilization and lack of knowledge of the efficacy, mode of operation and proper ways usage were accounted for the under use of contraceptives.

Several studies were reviewed by the International Center for Research on Women between 2000 and 2013 in the quest to find out what is known about adolescents' demand for and access to family planning information and services. The review observed that the use of modern contraceptive methods is good to adolescents who have enough knowledge on family planning and adolescents with positive attitude regarding the use of family planning methods. However, the entire studies reviewed involved all the adolescent thus both males and females and this indicated that the exact reflection of a usage by males who are known to be very good partakers in sexual and reproductive services as compared to females. It was suggested that an independent study be carried to focus of unmarried adolescent females to find the factors that lead to the high rate of unwanted pregnancies (International Center for Research on Women, 2014).

Chofakian et al (2016) conducted a study in Brazil, Sao Paulo which sought to find the knowledge level of adolescents on emergency contraceptives. From the study, it was observed that 95% of the female's participants were aware of emergency contraception and only 58% utilize contraceptives. In connection with modern contraception, the WHO reported that adolescent females' lack of knowledge about relevant sexual and reproductive health care services in Sub Saharan Africa unquestionably prevents the use of modern contraceptives as the study shows that below 10% of the adolescent females in Senegal and Zambia are aware of the availability of some of the methods of contraception such as the emergency contraception (WHO, 2107). WHO suggested that a study should be conducted to address the unmarried adolescent females on knowledge on contraception methods or family planning methods, places to obtain contraceptives and how to effectively use the contraceptives to prevent unexpected pregnancies?

In Dar es Salama, Tanzania, a study was conducted by Mardi, Ebadi, Shahbazi and Moghadan (2018) on the knowledge of contraceptives among secondary school females and the study revealed that, 75.2% of the adolescents know about contraceptives and utilization was 12.4% among the 75.2% adolescent who knows about contraceptives. This implies that knowledge regarding something does not positively associate with the use of contraceptives, and it was recommended that a study be conducted to determine the factors that influence the utilization of contraceptives among unmarried adolescent females so that they can resolve or address the high rate of unwanted pregnancies among adolescent females (Mardi et al, 2018). In another study done among students Muhimbili University in Dar es Salama, it was revealed that all the undergraduate female students were aware modern family planning methods but only 56% of them have ever used one of the contraceptives. It was also observed that, condom was indicated to be used by most undergraduate females (23%) and pills (16%).

In a 2017 study conducted in Kenya among undergraduate students at the University of Nairobi, it was revealed that 72.1% of the undergraduates had an awareness on modern contraceptives but just 23% of the undergraduates use contraceptives method frequently. Also, in a study conducted among urban adolescent in South Africa found that adolescents in urban areas have the more tendency to use a modern contraceptive as compared to their counterparts in the rural areas. This may be attributed to the low educational level and lack of contraceptive accessibility (Makola, Mlangeni, Mabaso, Chibi, Sokhela, Silimfe, Naidoo, Khumalo, Mncadi & Zuma, 2019). A survey done in Malawi, reported that adolescent girls are rarely taught about contraception and other sexual and reproductive health services in schools hence they have little knowledge regarding prevention of unintended pregnancies (Convention on the Elimination of all forms of Discrimination Against Women, 2015).

A study conducted in South Africa and Kenya found that the underutilization of contraceptives was associated with limited knowledge on contraceptive accessibility in poor areas leading to a high rate of undesired pregnancies among adolescents (Christofides, et al., 2014) and Ochako., et al 2015).

The Ghana Statistical Service in 2013 reported that 42% of unmarried women who are sexually active, have unmet need for contraceptives and 45% are currently using contraceptive methods. It was also reported that 87% of the sexually active unmarried women demanded for family planning methods and just 51% were currently satisfied with the family planning method asked for (GSS, 2013) and the lack of accessibility to contraceptives leads to unexpected pregnancies with tragic consequences in low- and middle-income countries (Chandra-Mouli et al, 2014).

In Ghana the general contraceptive knowledge among adolescents was high (89%) with the adolescents having an awareness of one contraceptive method or the other. Most of the adolescents (84%) identified the male condom as the type of contraceptive they know, other forms of contraceptives identified were pills, injections, and emergency contraceptives. Also, it was observed from a comparative study between males and females, it was observed that, knowledge on contraceptives among the males was higher with 92.1% as compared to females with 86.6%. Again, comparing the knowledge level among the age groups, the study revealed that adolescents between 15-17 years had the least knowledge as compared to adolescents within 18-19 years of age thus 85.3% and 94.4% respectively. With regards to the educational level on the knowledge of contraceptives among the adolescents, it was found that adolescents who had an educational level beyond junior high school were high (97.4%) as compared to those adolescents with only basic education (87.5%) (Mahama & Owusu-Agyei, 2014). This was confirmed in a study by Nsubuga, Sekandi, Sempeera & Makumbi (2016) and found that knowledge on contraceptives is

96.6% of the adolescents and just 22.1% of the study participants were aware of the female condom.

A study among female adolescents by Nyarko (2015) found that female adolescents who knew their menstrual cycle were more likely to use a contraceptive method as compared to colleagues who do not know their ovulation period. The study further indicated that female adolescents who know their menstrual cycle can use appropriate contraceptives. In 2014, GDHS reported that the awareness of contraceptives among adolescents aged between 15 to 19 years was 92.5% (GDHS, 2014a). Hagan and Buxton (2012) in their study in senior high schools showed that 81% of the adolescents knew at least one method of contraceptives with condom being the highest among other methods of contraceptives.

Bankole et al (2007) conducted a study in Ghana, Malawi, Uganda, and Burkina Faso and found that education on sex- related issues may expose the adolescents to be aware and have knowledge on family planning or contraceptives and the utilization of contraceptives. The study revealed that students who had sex education in school demonstrated or show how one can use contraceptive as compared to peers who had zero education on contraceptives. It was also revealed that practically teaching or demonstrating to learners about the use of contraception in school have a positive effect on the students. Again, the study indicated that adolescent boys who were taught how to utilize contraceptives are more likely to use condom during sex as compared to their colleagues who had zero education on contraceptive use.

In South Africa, a study by Khan and Mishra (2008) in their study indicated that female adolescents who became pregnant showed that they lacked knowledge on which contraceptive method to use which caused them to get pregnant. They also indicated that getting the right kind of education on the type of contraception and how to utilize contraceptives is a necessary move towards the

utilization of contraceptive during a sexual activity (Khan and Mishra, 2008). A study by Hagan and Buxton (2012) identified that there is a gap between knowledge students have on contraceptives use and the actual use. It was revealed that in a selected school in Central region, few students (18.7%) had knowledge on contraceptives and only 48% of all students who had sexual intercourse on a regular note often do so without the use of contraceptives method.

A study was conducted to determine the level of awareness of Lactational Amenorrhea Method (LAM) as a method of family planning among adolescent mothers in Aksum town, Tigray Region (Abraha et al, 2018). The study revealed that the level of awareness of LAM was low among study participants. Lakew et al (2013) reported that education plays a vital role in influencing the use of contraceptives and educated women had a greater chance of contraceptive usage than uneducated married women implying that use of contraceptives is positively related with high levels of education (Lakew et al, 2013). Also, a study conducted by Saurina, Vall-Ilo,sera and Saez (2012) in Catalonia, Spain found that high level of education and the idea of having children influences the utilization of contraceptives thus 30.59% and 39.29% have a greater chance to use contraceptives.

Atuyambe et al (2015) found that adolescents had problems such as unwanted pregnancies, sexually transmitted infections, defilement, rape and substance abuse. These problems require special focus through adolescent-friendly services.

A study was conducted by Yidana (2015) to examine what determines contraceptive use among adolescents. Data collection spans January to December 2013 with 400 adolescent men and women of reproductive age as study respondents in the Yendi Municipality of the Northern Region of

Ghana. The study employed the questionnaire and focus group discussion for data gathering and the study revealed that 74.8% had adequate knowledge of a method of contraception.

Kumar et al (2007) found that inadequate knowledge of modern family planning methods for contraceptives was the main reason for the non-use of contraceptives among adolescents and adolescents do not patronize contraceptives because of inadequate knowledge of how to use the family planning methods or how the method of contraception is applied. The Ghana Statistical Service (GSS) in 2014 indicated that acquiring knowledge on contraception is a vital step to accessing family planning services and choosing a suitable method and the ability to identify a family planning method when it is defined as a simple test of a participant's knowledge on the method but not certainly a signal to an extent an individual's level of knowledge (GSS, 2014). According to the GDHS (2014) the percentage of women including adolescents who identify any method of contraception has risen from 76% in 1988 to 98% in 2003 and 2008 and 12 to 99% in 2014 (GSS, 2014).

Tayo et al. (2011), in their study found that, nearly 45% of respondents were aware of a contraception method from their parents. Opoku (2010) indicated that, engaging in risky sexual behaviours puts a woman at increased risk of acquiring unintended pregnancies and STIs. Abstaining from sexual activities is the only guaranteed 100% effective way to avoid getting pregnant or a sexually transmitted infection (Office of Adolescent Health, 2014). Sexually active adolescents using efficient and effective contraceptives was necessary to avoid unexpected pregnancies and in addition using condoms anytime during sexual contact to reduce the exposure to sexually transmitted infections (Office of Adolescent Health, 2014). The use of contraception increases with increasing levels of education. About 19% of married women with no education are

using a method of contraception. This was found to be in sharp contrast with 34% of married women with a higher level of education. (GSS, 2014).

A study indicated that "women believed that the hospital was the best place to the contraception as blood tests were needed to match women with the appropriate and accurate method" and awareness of how contraception worked and knowledge of basic reproductive anatomy was long among women (Hindin et al., 2014).

Mandiwa, et al. (2018) conducted a study and found that, out of 10422 participants 30.9% used contraceptives. About half of the population (50.5%) were within the group age of 15-19 years and 49.5% were within the group age of 20-24 years. Mandiwa et al, (2018), stated that 86.9% of the study population identified themselves as Christians, 12.9% as Muslims and 0.2% were affiliated with no religion. The majority of the respondents 60% had primary education, 49.4% were working and 40.3% were living under abject poverty. Regarding the awareness level of contraceptives, the study indicates that most of the respondents (82.7%) know and 58.1% were aware of contraceptives through health professionals.

In 2018, Mandiwa et al in their investigation revealed that women who were aware and knew about their menstrual period or ovulatory cycle had a higher odd (75%) and are more likely to utilize contraceptives than women who have zero knowledge of the menstrual cycle or ovulatory cycle. They also found that women who visit health facilities are 61% more likely to utilize or make use of contraceptives than women who do not regularly visit the health facility. Also, 47% of educated women with even primary education are more likely to utilize contraceptives as compared to uneducated women. The study also indicate that Muslim women had 49% lesser of making use of contraceptives than their Christian women. Regarding the urban and rural areas, more women in the urban sector, 76% are more likely to use contraceptives than women in rural areas. Also,

information dissemination between the urban and the rural, showed that 90.3% of the study participants in the urban sector heard of information on contraceptives from the health professionals as compared to 4.2% of the study participants in the rural areas.

2.2 Barriers to utilization of contraceptives

A lot of factors account for the utilization of contraceptives and also the non-use among the adolescent women in general. Williamson et al (2009) reported that in Sub-Sahara Africa 20 percent to 30 percent of partners or sexually active partners oppose to the use of contraceptives and do not encourage the utilization of contraceptives. Religion was found to be a barrier or an obstacle to the use of contraceptives for decades because people considered children as special gifts from the Supreme Being. (Moreau, Trussell & Bajos, 2013). The study also found that mostly Roman Catholics and Muslims see contraception as a gateway for immoral sexual behavior. Moreover, societies that put high premium on the number of children as a source of security and safety of lineage and human power on farms would desire high numbers of children. Also, the study indicated that, this ideology prevents women and adolescent girls in such societies from using contraceptives to limit the number of children" and societies where contraceptives are perceived as a means to eliminate a race or tribe, that community would not use contraceptives (Moreau et al., 2013).

A study conducted in Sub-Sahara Africa by Williamson et al. (2009) states that some vast reasons or obstacles that prevent adolescents from the use of contraceptives.

The obstacles include inadequate or poor knowledge and awareness of the use of contraceptives, fears about the side effects, partners' influence and relatives (Williamson et al, 2009). Chernick et al (2015) also indicate in their study stated that menstrual cycle, body weight and potential fertility

problems, lack of trust in contraceptive uptake, unsure pregnancy intentions, doubt about the future and partners' preference for pregnancy are the various or commonest reason that influences the use of contraceptives.

A study conducted in Nigeria observed that adolescents who engaged in early sex are least expected to use contraceptives than older women; also, about 77% of teenagers were aware of a type of modern family planning method but did not use them (Ojikutu et al., 2010). Another study in Delta state indicated that lack of resources reduces accessibility to contraceptive and reproductive advice in developing countries. It further stressed that this situation has been exacerbated by religious beliefs that discourage the use of artificial birth control or family planning methods (Ibrahim & Olugbenga, 2012).

Kisaakye (2014) conducted a study in Uganda and found that the major factors that influence contraceptive use is health related issues or undesired effects. The fear of cessation of the menstrual period and the dread of becoming impotent with the utilization of hormone-based contraceptives are other factors that discourage adolescents from contraceptive use. Ali, Claeland & Shah (2012) identified in their study that sexually active unmarried adolescents are not looking to become pregnant and married adolescents may not wish to become pregnant at a young age or, if they have already had a child, desire to defer a second pregnancy. Contraceptive non-use in Ghana comprises of the fear of side effects and the resistance to the use on religious background (GSS, 2008). Partner negation and the fact that some adolescents feel they are not disposed to pregnancy are some reasons why adolescents do not use contraceptives (Mbizvo & Zaidi, 2012).

Another study in Uganda among adolescents found that adolescents who were not in a relationship were not making use of any form of contraceptive as to those who were married but there was a statistical difference between the age of the adolescents, male and female and the use of

contraceptives. It was also revealed that there was a statistical significance between age, settlements, the educational background of the head of household, and the use of any form of contraceptives. Furthermore, the residence of the adolescent also impacts contraceptive utilization (Mehra et al., (2012). Moreover, where adolescents reside also had an influenced on their contraceptive utilization (Mehra et al (2012). A study by Ngome and Odinmewu (2014), found that factors such as the age of the adolescents, status of marriage, and number of births, have an impact on the utilization of contraceptives. The study also indicated that one's educational status, access to media and current economic status does not affect the use of family planning or contraceptives.

According to Mandiwa et al (2018) utilization of contraception was significantly associated with social and demographic characteristics; thus the participants between the age group of 20 - 24 years, 93% of them have a higher likelihood of using a contraceptive as compared to participants within the age group of 15-19 years (AOR=1.93; 95%, CI=1.73 – 2.16); women who were married and formerly married have a greater tendency to utilize a contraceptive in comparison with unmarried women (AOR=3.94; 95% CI = 3.23 – 4.81), also women in the central and southern sector of Malawi were more likely to use contraceptives than those in the northern part of Malawi. Marrone et al (2014) reported in their investigation conducted in Ghana that looked that possible predictors of family planning methods among adolescents. The study revealed that adolescent do not have a relation with regard to contraceptive uptake. The investigation also indicated that the educational status, ethnicity, and the status of the economy of adolescent has no association with family planning methods or contraceptive methods used. However, it was revealed that there was no statistical significance between married adolescent and contraceptive use and also there was no

correlation between adolescent who lives in either urban or rural areas and contraception uptake (Marrone et al, 2014).

Nyarko (2015) reported that adolescents aged between 15-19 years are more mature and are more likely to use contraceptives because they are more exposed to information, and have easy access to any method of contraceptives. Comparatively, adolescents aged between 10-14 years may not have it using contraceptives because they have the perception that at their age, they should not have anything to do with sex that will trigger them to use contraceptives for any protection or whatsoever. Also, adolescents between the ages of 15-19 are likely to be working, married, and possibly have attained a more educational level, and more likely to be sexually active than their younger counterparts. Educated adolescents are also more likely to use contraceptives as compared to adolescent with no formal education (Nyarko, 2015).

A study conducted in Bangladesh among adolescents by Khan, Hossain and Hoq (2012) shows that adolescents who do not attend school are not likely to use contraceptives whiles a study conducted by Nketiah-Amponsah, Arthur and Aaron (2012) indicated that study participants with higher level of education have a higher probability of utilizing contraceptive methods and it was assumed that education has the potential of making the general public know the various types of contraceptives.

Hindin, McGough and Adanu (2013) conducted a study to reveal the knowledge of various contraceptive methods and their effectiveness and to determine their knowledge of how the reproductive system functions also act as an obstacle to contraceptive usage. They revealed that there is a "low knowledge of contraceptives and how it works breeds a lot of misconceptions and the fear of health effects and the need for a woman to do a blood test to determine which method of contraceptive was appropriate to use". The study suggested that creating avenues for people to

advance and progress knowledge of how various methods of contraceptives work and are used, as well as addressing the myths and misperceptions about contraceptive use would help improve contraceptive prevalence. In 2014, Amalba, Mogre, Appiah and Mumuni reported that the current knowledge indicates that a minimum of one modern family planning method is known in the Ghanaian population which recorded as high as 98% and 99% respectively among females and males (Amalba et al (2014).

A study conducted in Uganda by Prachi et al (2008) to investigate the level of knowledge and attitudes among women age between 15-49 years of age towards the use of LARC indicated that awareness of contraceptive methods as well as where to access a contraceptive had a positive influence on contraceptive utilization (Anguzu et al, 2014). However, an investigation conducted in India indicated that adolescents having adequate knowledge in contraceptives does not guarantee the use of contraceptives and that there is a need to understand the culture in a particular society before introducing any intervention to improve the use of contraceptives (Prachi et al, 2008).

Morgan, (2014) observed that, awareness of family planning methods among adolescents leads to a higher utilization of contraceptives. It adds that, being knowledgeable about the various family planning types, as well as knowing how each contraceptive method functions goes a long way to eliminating misconceptions about the uptake of modern contraception. Those who use contraceptives hence become more aware and confident about the choice of contraceptive methods they make. It was observed in many less developed countries where contraceptive knowledge is high where usage in many of these countries is seen as a basic right for contraceptive users. (Morgan, 2014). However, Egede et al., 2015 found that, modern family planning usage in many other developing countries is low. One way of limiting misconceptions and making family

planning methods accessible is to increase education and awareness concerning contraception. (Hindin et al., 2013).

The MOH, and other private sector groups have put in several measures aimed at increasing people's knowledge and awareness of reproductive health challenges and modern family planning uptake (Mehra et al., 2012). Okereke, (2010) noted that, several communication outlets have been deployed in many parts of the country to increase the public's awareness and knowledge base on healthcare delivery. To ensure an extended usage of contraceptives, several methods of modern family must be made available to those who need them.

A study by Egede et al., (2015), observed that, ensuring that all the types of contraceptives are available where a decision could be made about any of the methods to use with restricting what is available is an important way of controlling the population growth, sexually transmitted diseases, abortion and other complications of pregnancy. The essence of making available contraception methods to improve contraceptive use and family planning coverage which was accentuated by the Ghana Millennium Development Goals Acceleration Framework in one of their reports which took cognizance of the issue that making available family planning commodities in health facilities was one of the major tailbacks that needed to be addressed to improve maternal health in Ghana (Apanga & Adam, 2015).

Ensuring that adolescents gain unrestricted access to modern contraceptives as and when they need them will help in reducing the occurrences of teenage pregnancies and the development of STIs. This is because, when a teenager becomes pregnant, it becomes a source of worry to society as it offsets many negative consequencies. (Morhe, Tagbor, Ankobea, & Danso, 2012).

This means that, one sure way of avoiding teenage pregnancy is when contraceptives are made readily available to adolescents as and when they need them.

Another found that when contraceptives are made available, it leads to increased usage among women in their reproductive age. One other obstacle to contraceptive usage is the effect of religion. This plays a major role in determining whether people will use a family planning method or not. Religious beliefs can influence a person's resolve to use a family planning method no matter their level of education or social status. Thus, religion plays a significant role in the human ecosystem and comprises of values, norms that predominantly shapes and regulate individual behaviour, including sexual and reproductive health behaviour, hence it is important to examine its influence on contraceptive use among adolescent. A study done in some parts of Nigeria observed that, many women had different preferences for different methods of contraceptives due to their religious affiliation (Akintunde, Lawal, & Simeon, 2013).

Similar studies in Ghana, Malawi and Cameroon revealed that, there seems to be differences in contraceptive preferences among different religious groups due to dissimilarities in their doctrines on contraceptive uptake. (Doctor, Phillips, & Sakeah, 2009). However, Agadjanian (2013) stated in a report that religion has an influence on contraceptive use, the relationship between contraceptive use and religion remains a question of considerable debate. On the contrary, Ngome & Odimegwu (2014) however observed that, religion plays no significant role in a person's decision to use contraception. In a similar study in North America around 99% of respondents said that their religions do not frown on contraceptive usage (Jones & Dreweke, 2011).

In another investigation done by OLI (2017) among Nigerians, it was observed that, even though most religious affiliations support contraception, others have the belief that, all children are God-given and so therefore, children must be allowed into the world without any hindrance. In a study conducted in Mozambique, it came to light that, regular church attendance and the utilization of modern family planning methods are directly proportionate one to the other. (Agadjanian, 2013).

When students at the University of Ghana were asked in a study if the religion, they were affiliated to had an impact on them in their decision to use a contraception, most respondents said religion did not play any role. Similarly, a study in Northern parts of Ghana also revealed that, religion does not play any role in how people use contraceptives. (Achana et al., 2015).

Anguzu et al., (2014) observed in their study among women in their reproductive years in sub-Saharan Africa that, husbands have the capacity to determine whether their partners use contraceptives or not. This is because a man's opinion carries weight in matters of family planning. For example, a study revealed that 43% of Namibian men and 46% of Ghanaian men have the view that a woman who uses contraceptives might become immoral and some women also opposed contraception for fears of partners' disapproval (Burdette, Haynes, Hill, & Bartkowski, 2014). The study agreed with a similar one conducted in Uganda, which revealed that men's opposition to contraception was associated with an increase in women not using contraceptives though they want to prevent pregnancy or space birth, where two in five women who were not practicing family planning said their partner's disapproval was a reason for not using contraceptives (Do & Kurimoto, 2012).

Apanga & Adam, (2015), in their study found that, one of the obstacles to family planning utilization among women of reproductive age is that their husbands were against the use. Do & Kurimoto (2012), also observed in their studies carried out in Ghana and Zambia that, a lot of husbands felt that choosing to use a family planning method means that someone other than themselves oversaw their wives' reproductive lives. Many female adolescents were also not using any family planning method because their male counterparts were not of age to decide their choice or preference (Anjum et al., 2014).

Studies done considering potential side effect and misconception on contraception uptake shows that it is critically a significant issue bordering the uptake of contraceptive among individuals who are sexually active and are either not ready to conceive, want to space childbirth, prevent STIs or among the adolescent prevent teenage pregnancy. In 2010, Nalwadda, Mirembe, Byamugisha, and Faxelid conducted a study and found that adolescents believed the use of contraception, interrupted their fertility, and they have the fear when it comes to contraceptive use that could at the end give them with giving birth in the future. It was believed by most adolescents that contraceptives thus pills burn eggs in the womb.

A study by Chernick et al, (2015) indicated that reasons some people may have for not using contraceptives were misconceptions such as pills accumulate in the body and cause swelling, such as fibroids, cancer, and destruction of the fallopian tubes whiles some contraceptives use can lead to abortion or that some intrauterine device could pierce the uterus.

Some other common misconceptions related to contraceptives among female adolescents include condoms can damage the uterus, may get stuck in the reproductive tract and cause death, do not fit properly, may be porous and might have infectious lubricant. The male adolescents also pointed out in the study that; condoms may have been infected with HIV. Some also had the impression that the oil on the condoms was infectious to women and feared that condoms had pores or grooves with actual perforations that allowed transmission of HIV (Boamah et al, 2014).

A study conducted in Kenya by Ochako et al, (2015) showed that, one major obstacle to utilizing a contraceptive is fear. They observed that, most of the interviewees had reservations about the use of contraceptives because most of the participants were afraid to use contraceptives because of the myths and untrue stories about their usage. The fear of being rendered infertile (Ochako et al, 2015). Hindin et al, (2013), in their study on modern family planning methods in Ghana found

that most of the study participants stated side effects as the barrier for not using contraceptives and this includes a change in weight, bleeding and lack of sexual desire.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The chapter entails the methods employed in undertaking the study. This includes the design, study area, study population, inclusion and exclusion criteria, variables of the study, sampling procedure, sample size determination, data collection techniques, data gathering instruments, pretesting, data processing and analyses and ethical consideration

3.1 Study design

The study employed the cross-sectional design which used quantitative methods to determine the factors associated with contraceptive utilization among adolescents in Adaklu District. The design of a study was the road map for any research study. According to Hemed (2015), cross-sectional design measures simultaneously the exposure and health outcome within a given population or a study interest group and in a given geographical area at a certain period.

The cross-sectional design is useful in evaluating how study participants are affected by the conditions and whether the frequency of the occurrence varies across individuals, groups, or populations features. Also, the cross-sectional design mostly carried out in planning for public health problems, especially in studies relating to the knowledge, attitude, practices, barriers and prevalence of a health case or condition. It is also used to understand the prevalence of various conditions, treatments, services or other outcomes and the factors associated with such outcomes (Hemed, 2015). Therefore, the cross-sectional design is most appropriate for this study.

3.2 Study Area

The study was the Adaklu district in the Volta Region (Figure 3.1). The Adaklu District used to be part of the Adaklu-Anyigbe district until 2012 when it was given a full district status. The population and housing census conducted in 2010 reported that Adaklu District had a population of 36,391 forming 1.7% of the entire population of the region. Females constitute 51% of the population. The district is completely rural with no urban areas and the Adaklu district shares a boundary to the east with Ho West, North-Tongu to the south, Agotime-Ziope to the north and Akatsi North district to the east. The district has a total land area of 800.8qkm. The district has two (2) government-sponsored SHS, a private senior technical school and thirty-one (1) basic schools. Fertility in the district begins at around age 12.

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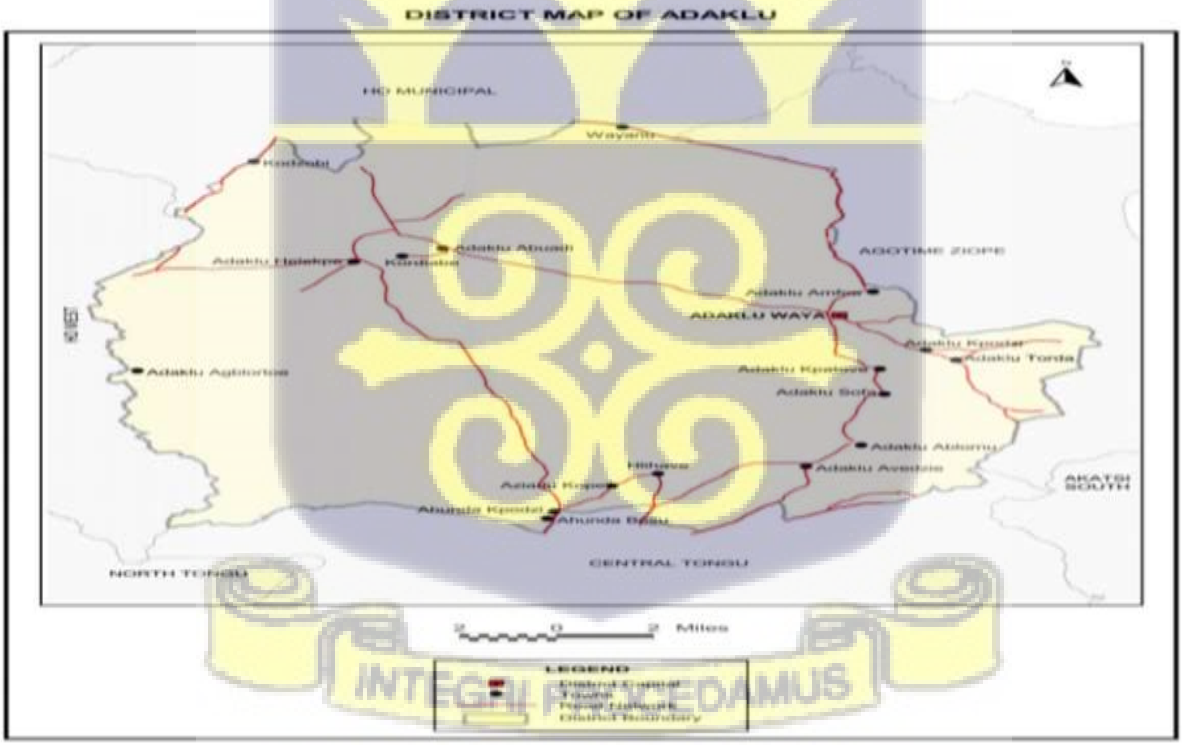

Figure 1: Map showing Adaklu District in the Volta Region of Ghana

3.3 Study Population

The study population were in-school adolescent boys and girls from 10 to 19 years in Senior High School (SHS), Junior High Schools (JHS) and in Adaklu District.

3.4 Inclusion and Exclusion Criteria

3.4.1 Inclusion criteria

The study involved all students in the selected basic and senior high schools who were in the age group of 10-19 years.

3.4.2 Exclusion Criteria

The study excluded students who were absent from school on the day of data collection.

3.5 Variables of the Study

The study variables were examined in two categories: the dependent and independent variables.

Dependent Variable

Contraceptive utilization was the dependent variable of interest. **Independent variables**

The independent variables were: socio-demographic characteristics (which included age, sex, educational level, religion and residential status), awareness on contraceptives, barriers to contraceptive use and contraceptive utilization.

All the variables were further described according to how they were measured (nominal, ordinal, interval, ratio). For instance, sex was measured as nominal while the educational level of the participants was measured as ordinal. Further description of the variables is provided in the table below.

Description of the variables of the study.

SN	**INFORMATION**	**Operational definition**	**Scale of measurement**
1	How old were you at your last birthday?	Age at the time of the study	Interval and continuous
2.	Educational level/class	Level of formal education	Ordinal A. BS5-BS6 B. BS7-BS9 C. SHS1-SHS3
3.	Sex		Nominal
4.	Marital status	Married at time of study	Nominal 1. Married 2. Single 3. Separated 4. Divorced
5.	Who do you stay with?		Nominal 1. Both Parents 2. Single parent 3. Guardian 4. Friend 5. Fiancé/e
6.	Religious background	Religious affiliation at the time of the study	Nominal 1. Christian religion 2. Islamic religion 3. Traditional religion
Section B. Awareness on Contraceptives			
7.	Do you know of any modern contraceptives?	Awareness level of contraceptives	Nominal 1. Yes 2. No
8.	If yes, where did you hear it from?	Source of awareness for contraceptives	Nominal 1. Media (newspaper, radio, TV) 2. Teachers 3. Health workers 4. Peers/friends/sexual partner 5. Parents
9.	Do you know of any problem or side effect that can occur in using contraceptive?	Negative effects of using a contraceptive	Nominal 1. Yes 2. No

3.6 Sampling procedure

The study employed the purposive sampling technique. Purposive sampling was used to select public schools in the study area. These schools included basic and senior high schools in the district. The sample in each school was proportionate to the number of adolescents per school that meets the inclusion criteria. Therefore, the school with the highest ratio gave more students in the study and vice versa.

Secondly, stratified random sampling was employed in each school using the various classes as strata to get study representatives from each of the forms. Then, simple random sampling using the lottery method was used to get the specific participants in the study from the forms. The researcher wrote on pieces of paper a 'YES' or a 'NO' and put them in a bowl the study participants were then asked to pick from the bowl and whoever picked a 'YES' was included in the study. This was repeated in the selected schools till the sample size of 400 was achieved.

3.7 Sample size determination

The sample size was calculated using the formula provided by Cochran (1997). The formula is used for sample size calculation since the population of the study participants that utilize contraceptives is unknown.

n = $\frac{Z^2pq}{e^2}$.

Where

n = sample size,

e = level of precision (0.05)

p= the estimated proportion of adolescents that utilize contraceptives (49%)

q=1-p and Z=critical value on a standard normal distribution.

$$= \frac{(1.96 * 1.96) * 0.49\ (1 - 0.49)}{(0.0025)}$$

$$\frac{0.960}{0.0025}$$

n = 384

Therefore, the minimum sample size for the study comprised 384 adolescents in both the Basic and Senior High Schools in the Adaklu District. The researcher increased the sample size by 4% which is 15.36 = 16 samples to account for non- response and incomplete filled questionnaire. This makes a total sample size of four hundred (400) student adolescents which were considered for the study.

3.8 Data Collection Techniques and Procedure

The quantitative research approach was employed for the study. The quantitative approach ensures that the investigator generates statistics using a close-ended questionnaire. The questionnaire was structured into sections to aid for seeking the relevant information to address the various aims of the study. All selected study participants were approached by the principal investigator and two trained research assistants to agree on the appropriate time to commence the survey. This was done to ensure the completeness of the questionnaire and minimize errors.

The questionnaires were self-administered with supervision from the principal investigator and research assistants by moving from classroom to classroom to gather data from available respondent. Participants who did not understand some questions in the questionnaire had the questions explained to them by research assistants. The questionnaires were structured in a way that made it easy for study participants to complete. It took approximately about 15 to 25 minutes for a study participant to complete responding to the questionnaire. Data were collected from the

study participants from Monday to Friday beginning at 8 am and closing at 3 pm each day. Data collection was supervised by the principal researcher.

3.9 Data collection instrument

The tool or questionnaire was adopted and modified by Murigi (2012). The questionnaire was divided into four sections to collect information as follows: Section A comprised questions about the socio-demographic characteristics of the study participants. This included age, sex, level of education, and religious affiliation. The second part of the questionnaire, which is Section B, consisted of questions that were used to measure the awareness levels of study participants on contraceptive use. As such, this section enquired about the understanding and importance of contraceptive utilization. The third section of the questionnaire, Section C, was made up of questions relating to barriers associated with contraceptive uptake. The final section, Section E, consisted of questions relating to the associated with contraceptive utilization among adolescents.

3.10 Quality control

- Study materials were explained to study participants before the administration of questionnaire.
- Two research assistants were intensively trained to carry out the survey accurately.

3.11 Pretesting

Pretesting of the data collection tool (questionnaire) was done at the Ziope Senior High School outside the study area with 30 study participants to validate the tool for data gathering. The main

reason was to ensure that the tool for data gathering was worded and devoid of ambiguities. The pretesting helped in making the necessary correction before the actual data collection.

3.12 Data Processing and Analysis

Data gathered after the fieldwork were entered into Microsoft Excel, version 2019. Cleaning of the data was done by performing frequencies of the variables to check inconsistently coded data. The data were imported into SPSS version 20.0, coded, and analyzed. Descriptive test statistics such the frequency table, percentages, mean and standard deviation was used to analyze the demographic characteristics of the study participants. Chi square was used to assess the awareness levels, barriers and factors associated with contraceptive utilization among adolescents (independent variables) and contraceptive utilization (dependent variable). Logistic regression was used to determine the association between the dependent and the independent variables. A 95% confidence interval and a p-value < 0.05 was considered statistically significant for the study

3.13 Ethical considerations

Ethical Clearance:

Ethical clearance was obtained from the Ghana Health Service Ethics Review Committee with the approval number as GHS – ERC: 018/02/22. Written permission was also sought from the Regional and District Administrations of health and education as well as from the heads of selected schools.

Participant's consent

The main purpose of the study was provided to the study participants and a study participant's form was given to study participants to read and sign before data collection. The principal investigator explained to the study participants in detail the purpose of the study and some instances used the local language (Ewe) for participants' deeper understanding.

Confidentiality and anonymity

The study participants were guaranteed the confidentiality and privacy of the information provided. Study participant's names as well as nicknames and contact addresses were not asked.

Voluntary nature of participation:

Study participants were assured that taking part in the study was entirely voluntary and were at liberty to discontinue being a participant in the research. Also, were made aware that if they decided to participate in the study, they were at liberty not to answer questions they are not comfortable with. Those participants who did not understand what they read had it explained to them by PI and the RAs.

Compensation

Study participants were not given any financial compensation to take part in the study. However, each participant was given one iced cream (yogurt) after the exercise as a refreshment with a unit price of Ghc. 3.00.

Potential risks/benefits

There was low or no risks for taking part in this study. In addition, there were no incentives or direct benefits to individual participants. However, participants were made to understand that the information they provided might indirectly benefit them if the findings of the research are adopted and incorporated into educational and teaching syllabuses.

Covid 19 protocol observation

Strict adherence to the national guideline and protocols on COVID-19 infections were observed. Social distancing was ensured as the study team provided nose masks to study participants who do not have as well as hand sanitizers were also provided by the team for regular sanitizing of the

hand. Finally, for those institution without veronica bucket and soap for hand washing, the study team will carry a long veronica bucket and provided water for regular hand washing before contacting the study team.

Conflict of interest

The study was devoid of conflict of interest.

CHAPTER FOUR

RESULTS

4.0 Introduction

The focus of this chapter is on the presentation of the results of the research. It reports on the socio-demographic characteristics of respondents, awareness of modern contraceptives, use of modern contraceptives, barriers to contraceptive use and factors influencing use of modern contraceptives among student adolescents in the Adaklu District of the Volta Region. Four hundred students were invited to participate in the study, however 396 of them agreed to take part, which translates into a response rate of 99%.

4.1 Socio-Demographic Characteristics of the Participants

Out of the 396 students who took part in the study, a little above half of the students (50.8%) were within the age group of 16-19; followed by the age group 12-15 with 37.4%. Regarding the level of education, the majority (50.8%) of the respondents were in the SHS category. The marital status of respondents composed mainly of singles (94.4%) with only 3.5% being married. Besides, majority of respondents (59.6%) were staying with their parents. Concerning their religious affiliation, majority (77.5%) were Christians. Table 4.1 shows the details of sociodemographic characteristics of the study participants.

Table 4.1: Socio-demographic Characteristics of Study Participants

Characteristics	Frequency (n=396)	Percentages
Age Years		
Less than 12	47	11.9
12-15	148	37.4
16-19	201	50.8
Educational Level		
Primary 5-6	55	13.9
JHS 1 – JHS 3	140	35.4
SHS1- SHS3	201	50.8
Sex		
Female	204	51.5
Male	192	48.5
Marital Status		
Married	14	3.5
Single	374	94.4
Separated	5	1.3
Divorced	3	0.8
Who student stays with		
Both parents	236	59.6
Single parents	97	24.5
Guardian	42	10.6
Friends	13	3.3
Fiancée	8	2.0
Religious Background		
Christian	307	77.5
Muslim	74	18.7
Traditionalist	15	3.8

4.2 Awareness and perception of Contraceptives among Respondents

Awareness of modern contraceptives was high among student adolescents. Out of the 396 respondents, the majority (84.1%) were aware of modern contraceptives and most of the students (73.9%) received information about modern contraceptives through the media (newspapers and radio). Regarding the side effects of the use of modern contraceptives, the majority (65.9%) of the students said they knew of some side effects, whiles (34.1%) were not aware of the side effects.

On the other hand, most of the adolescents (75.0%) believe modern contraceptives do not offer any protection. As to whether the use of contraceptives was solely a woman's business, a great number of participants, (77.7%) responded in the negative. Again, the study found that majority (54.0%) indicated that those who use modern contraceptives are seen as being promiscuous.

Table 4.2: Awareness and perception of Contraceptive

Variables	Frequency	Percentage
Aware of modern Contraceptive (n=396)		
Yes	333	84.1
No	63	15.9
Source of Awareness of contraceptives *		
Media newspaper, radio, etc.	246	73.9
Teachers	264	79.3
Health workers	225	67.6
Peers/friends/sexual partner	209	62.8
Parents	115	34.5
Aware of side effect of contraceptive use (n=327)		
Yes	202	61.8
No	125	38.2
Contraceptives protect against pregnancy (n=322)		
Yes	69	21.4
No	253	78.6
Contraceptive a woman's business (n=319)		
Yes	62	19.4
No	257	80.6
Contraceptives use make women promiscuous (n=314)		
Yes	174	55.4
No	140	44.6
Guardians/parent offer education on contraceptives (n=319)		
Yes	142	44.5
No	177	55.5

4.3 Utilization and Barriers to Modern Contraceptives among Student Adolescents.

Concerning the use of modern contraceptives, the study revealed that only 42.3% of the respondents have ever used a contraceptive method and condom (61%) was found to be the most utilized contraceptives method. The study again revealed that, majority of the respondents (64.5%) were comfortable using a modern contraceptive method. Concerning how often modern

contraceptive is utilized, the study revealed that 34% respondent use contraceptive anytime they had sex, 13.5% uses them whenever their sexual partner was not in a safe period, 27% uses contraceptives occasionally, 15.5% uses it on demand from their partner, and 10% use contraceptive whenever it is available.

With regards to the barriers to contraceptive utilization, most of the study population 84% agreed that cultural beliefs were not a barrier to contraceptive uptake. Also, 72.5% of the respondents indicate that their parents do not frown on contraceptive use. On the views of the study participants on the easy accessibility of contraceptives, more than half of respondents (51.5%) believed contraceptives were not easily accessible

Table 4.3: Utilization and Barriers to Modern Contraceptive

Variables	Frequency	Percentages
Ever used contraceptive (n=333)		
Yes	141	42.3
No	192	57.7
Type of Contraceptive Used (n=141)		
Intrauterine device (IUD)	10	7.1
Condoms	86	61.0
Pills	30	21.3
Injections	12	8.5
Implants	3	2.1
Comfortable use of contraceptives (n=141)		
Yes	91	64.5
No	50	35.5
Often use of contraceptives (n=141)		
Any time of Sex	48	34.0
Partner or I not in safe period	19	13.5
Occasionally	38	27.0
On-demand by partner	22	15.5
Whenever contraceptives are available	14	10.0
Cultural belief prevents contraceptive use (n=333)		
Yes	53	16.0
No	280	84.0
Religious belief discourages contraceptive use (n=332)		
Yes	60	18.0
No	272	82.0
Parent against contraceptive use (n=331)**		
Yes	91	27.5

No	240	72.5
Contraceptives accessible (n=332)		
Yes	161	48.5
No	171	51.5

4.4 Bivariate Associations between respondent factors and contraceptive use

Table 4.4 presents the relationship between socio-demographic factors and the use of modern contraceptives. The result revealed that, the age of the students was associated with the use of modern contraceptives (p-value=0.001). This further indicates that 119 students (59.2%) who are within the age group of 16-19 years utilize modern contraceptives as compared to the other age groups. Concerning the educational level of the students, there is a statistically significant (p-value=0.005) association between the educational level of the students and the use of modern contraceptives. The study also revealed that, gender was associated with the use of modern contraceptives (p-value=0.013) with females (48.8%) using modern contraceptives as compared to the males (35.4%). The study again revealed that marital status (p-value=0.007) and place of stay (0.001) were associated with the use of modern contraceptives.

Table 4.4: Association between socio-demographic factors contraceptive use

Variables	Use of contraceptive		p-value
	Yes (n=141)	No (n=192)	
Age of Respondents			<0.001
Less than 12	0 (0.0)	11 (100.0)	
12-15	22 (18.2)	99 (81.8)	
16-19	119 (59.2)	82 (40.8)	
Educational Level			0.005
BS5-BS6	2 (12.5)	14 (87.5)	
BS7-BS9	43 (36.1)	76 (63.9)	
SHS1-SHS3	96 (48.5)	102 (51.5)	
Gender of Respondents			0.013
Female	84 (48.8)	88 (51.2)	
Male	57 (35.4)	104 (64.6)	
Marital Status of the Respondents			0.007
Married	11 (78.6)	3 (21.4)	
Single	125 (40.2)	186 (59.8)	
Separated	2 (40.0)	3 (60.0)	
Divorced	3 (100.0)	0 (0.0)	
Whom student stays with			<0.001
Both parents	68 (35.2)	125 (64.8)	
Single parents	38 (46.3)	44 (53.7)	
Guardian	17 (45.9)	20 (54.1)	
Friends	11 (84.6)	2 (15.4)	
Fiancé	7 (87.5)	1 (12.5)	
Religious Background			0.78
Christian	113 (43.1)	149 (56.9)	
Muslim	23 (38.3)	37 (61.7)	
Traditionalist	5 (45.5)	6 (54.5)	

*p<0.05

4.5 Association between contraceptive awareness and contraceptive use.

Table 4.5 depicts the association of awareness of modern contraceptives and the utilization of modern contraceptives. It was observed from the study that, being aware of a type of modern contraceptives is associated with the use of modern contraceptives since the p-value of 0.021 is less than the alpha value of 0.05.

The sources of information on modern contraceptive such as the media (p-value=0.021), health workers (p-value=0.021), peers/friends/sexual partner (p-value=0.001) and parents (p-

value=0.043) are significantly associated with the use of modern contraceptives. However, teachers (p-value=0.81), contraceptive a women's business (p-value=0.15) and guardian education on modern contraceptive (p-value=0.21) were not significantly associated with the use of modern contraceptives.

Table 4.5: Association between contraceptive awareness and contraceptive use

Factors	Use of Contraceptive		p-value
	Yes (n=141)	No (n=192)	
Know of a modern Contraceptive **			0.021
Yes	141 (42.3)	192 (57.7)	
Media (newspaper, radio, etc.) **			0.021
No	46 (52.9)	41 (47.1)	
Yes	95 (38.6)	151 (61.4)	
Teachers			0.83
No	30 (43.5)	39 (56.5)	
Yes	111 (42.0)	153 (58.0)	
Health workers **			0.021
No	36 (33.3)	72 (66.7)	
Yes	105 (46.7)	120 (53.3)	
Peers/friends/sexual partner **			<0.001
No	35 (28.2)	89 (71.8)	
Yes	106 (50.7)	103 (49.3)	
Parents **			0.043
No	101 (46.3)	117 (53.7)	
Yes	40 (34.8)	75 (65.2)	
Contraceptives protect against pregnancy **			<0.001
Yes	42 (60.9)	27 (39.1)	
No	97 (38.3)	156 (61.7)	
Guardian offer education on contraceptive			0.21
Yes	66 (46.5)	76 (53.5)	
No	70 (39.5)	107 (60.5)	

*p<0.05

4.6 Barriers to contraceptive use

Table 4.6 shows the barriers to modern contraceptive use. From the results, accessibility to modern contraceptives is associated with modern contraceptive use (p-value=0.001). However, cultural beliefs, religious beliefs and parents against contraceptives use were not significantly associated with modern contraceptive use (p-value=0.081, 0.085 and 0.40 respectively). Also, the awareness of side effect of modern contraceptive (p-value=0.050) is associated with modern contraceptive use.

Table 4.6 Barriers to contraceptive use

Variables	Contraceptive Use		
	Yes	No	p-value
Cultural belief prevents contraceptive use			0.081
Yes	8 (42.1)	11 (57.9)	
No	125 (44.6)	155 (55.4)	
Not Really	8 (24.2)	25 (75.8)	
Religious belief discourages contraceptive use			0.085
Yes	6 (46.2)	7 (53.8)	
No	122 (44.9)	150 (55.1)	
Not Really	13 (27.7)	34 (72.3)	
Parent frown on contraceptive use			0.40
Yes	19 (50.0)	19 (50.0)	
No	103 (42.9)	137 (57.1)	
Not Really	19 (35.8)	34 (64.2)	
Accessibility of contraceptives			<0.001
Yes	94 (58.4)	67 (41.6)	
No	30 (25.6)	87 (74.4)	
Not Really	17 (31.5)	37 (68.5)	
Contraceptive a women's business			0.15
Yes	32 (51.6)	30 (48.4)	
No	107 (41.6)	150 (58.4)	
Contraceptives use make woman promiscuous			0.36
Yes	73 (42.0)	101 (58.0)	
No	66 (47.1)	74 (52.9)	
Aware of side effect of contraceptive use **			0.050
Yes	95 (47.0)	107 (53.0)	
No	45 (36.0)	80 (64.0)	

*p<0.05

4.7 Logistic regression of factors associated with the use of contraceptive

Table 4.7 presents the logistic regression of factors associated with the use of contraceptives. From the study, the results revealed that students who are aged between 16-19 years are 9.3 times likely to use any modern contraceptive as compared to students less than 16 years of age (AOR=9.25; 95CI% = 4.12-20.80; p-value=0.001). Also, the male students were 66% less likely to use contraceptive comparerd to their female counterparts (AOR=0.34; 95%CI = 0.18-0.67; p-value=0.002). With respect to the source of information on modern contraceptives, students who have peers/friends/sexual partners as a source of information on modern contraceptive were 5.4 times more likely to use modern contraceptives as compared to students who had media, teachers, health workers and parents as the source of information on modern contraceptives (AOR=5.38: 95% CI = 1.95-14.79: p-value=0.001)

Students who indicated that contraceptives protect against pregnancy are 3.3 times more likely to use modern contraceptives as compared to students who indicated that contraceptive does not protect against pregnancy (AOR=3.28; 95%CI = 1.43-7.56; p-value=0.005). Finally, the results revealed that students who find it very difficult to access modern contraceptive were 76 % less likely to use modern contraceptives (no and really) as compared students who indicated that accessibility to modern contraceptives was easy (AOR=0.24; 95% CI = 0.10-0.56; p-value=0.001).

Table 4.7 Logistic regression of factors associated with the use of contraceptive

Variables	Unadjusted logistic		Adjusted logistic	
	COR (95% CI)	P-values	AOR (95% CI)	P-values
Age				
< 16 years	1		1	
16-19 years	7.26 (4.24, 12.43)	<0.001	9.26 (4.12, 20.80)	<0.001
Educational Level of Respondent				
BS5-BS6	1		1	
BS7-BS9	3.96 (0.86, 18.30)	0.078	0.39 (0.08, 1.99)	0.260
SHS1-SHS3	6.59 (1.46, 29.82)	0.014	0.35 (0.07, 1.90)	0.226
Gender of Respondent				
Female	1		1	
Male	0.57 (0.37, 0.89)	0.014	0.34 (0.18, 0.67)	0.002
Marital Status of Respondent				
Ever Married	1		1	
Never Married	0.25 (0.10, 0.66)	0.005	1.08 (0.28, 4.12)	0.915
Stay				
Parents (Both/Single)	1		1	
Other	2.43 (1.36, 4.33)	0.003	1.51 (0.62, 3.68)	0.366
Religion of Respondent				
Christian	1		1	
Muslim	0.82 (0.46, 1.46)	0.499	0.84 (0.35, 2.04)	0.706
Traditionalist	1.10 (0.33, 3.70)	0.879	1.83 (0.32, 10.41)	0.494
Media as a source of awareness				
No	1		1	
Yes	0.56 (0.34, 0.92)	0.022	0.76 (0.30, 1.95)	0.572
Teachers as a source of awareness				
No	1		1	
Yes	0.94 (0.55, 1.61)	0.830	0.77 (0.28, 2.11)	0.613
Health Workers as source of awareness				
No	1		1	
Yes	1.75 (1.08, 2.83)	0.022	1.81 (0.66, 4.94)	0.249
Peers/friends/sexual partner as a source of awareness				
No	1		1	
Yes	2.62 (1.62, 4.21)	<0.001	5.38 (1.95, 14.79)	0.001
Parents as source of awareness				
No	1		1	
Yes	0.62 (0.39, 0.99)	0.044	0.29 (0.12, 0.72)	0.008
Side effects of Contraceptive				
Yes	1.58 (1.00, 2.50)	0.051	1.20 (0.56, 2.56)	0.642
No	1		1	
Contraceptive protection				
Yes	2.50 (1.45, 4.32)	0.001	3.28 (1.43, 7.56)	0.005
No	1		1	

Contraceptive a woman's business				
Yes	1.50 (0.86, 2.61)	0.157	0.92 (0.42, 2.00)	0.827
No	1		1	
Contraceptive use makes women promiscuous				
Yes	0.81 (0.52, 1.27)	0.359	1.01 (0.52, 1.96)	0.979
No	1		1	
Guardian offers education on contraceptive				
Yes	1.33 (0.85, 2.08)	0.215	0.73 (0.34, 1.59)	0.430
No	1		1	
Cultural belief Prevents contraceptive use				
Yes	1		1	
No	1.11 (0.43, 2.84)	0.830	1.78 (0.44, 7.27)	0.421
Really	0.44 (0.13, 1.48)	0.184	1.36 (0.21, 8.94)	0.750
Religious belief discourages contraceptive use				
Yes	1		1	
No	0.95 (0.31, 2.90)	0.927	2.04(0.39,10.64)	0.398
Really	0.45 (0.13, 1.58)	0.211	1.31 (0.20, 8.54)	0.778
Parent frown on Contraceptive use				
Yes	1		1	
No	0.75 (0.38, 1.49)	0.415	1.37 (0.41, 4.57)	0.607
Really	0.56 (0.24, 1.31)	0.179	1.25 (0.22, 7.16)	0.805
Contraceptives accessibility				
Yes	1		1	
No	0.25 (0.15, 0.41)	<0.001	0.24 (0.10, 0.56)	0.001
Rarely	0.33 (0.17, 0.63)	0.001	0.27 (0.10, 0.69)	0.006

*p<0.05; COR- crude odds ration; AOR = adjusted odds ratio CI = confidence interval

4.8 Summary of study findings

From the study, it came to light that, awareness on contraceptives among in-school adolescents in the Adaklu district was relatively high (84.1%) as most respondents had a general awareness of one method or the other.

Though there was a high level of awareness of contraception among adolescents, real usage was low (42.3%). The most common method used was the male condom with 64.5% being comfortable in using one method or the other.

With regard to barriers to adolescent contraceptive uptake, the study found that, no notable barriers. The study participants did not identify culture (84%) and religion (82%), parent/guardian not frowning on contraceptive (72.5%) as barriers. However, 51.5 % of the study adolescents believed contraceptives were not easily accessible in their locality.

CHAPTER FIVE

DISCUSSION

5.1 Introduction

This chapter deals with discussion, conclusion, and recommendations. This includes discussion on findings such as awareness of contraceptives, contraceptives utilization, barriers to contraceptive use and the factors associated with contraceptive utilization among adolescents. The chapter ends by reflecting on the limitations as well as the strengths that the study outlined.

5.2 Discussion of findings

5.2.1 Awareness and Perception of Contraceptives

The awareness level of the respondents (adolescent) about modern contraceptives was identified to be adequate. From the study, majority of the respondents (84.1%) have heard of a modern family planning method. The findings from this study are consistent with findings from previous studies which revealed that, 84.1% of respondents had heard of modern contraceptives. This agrees with a study by Chofakian et al (2016) conducted in Brazil which observed that 95% of the female's participants were aware of emergency contraception. This is also consistent with a 2017 study conducted among Kenyan students which showed that, 72.1% of the undergraduates had an awareness on modern contraceptives. This also resonates with the GDHS study in 2014s which reported that the awareness of contraceptives among adolescents was 92.5%. The high level of contraceptive awareness among adolescents is in unison with the findings by Hagan and Buxton (2012) showed that 81% of the adolescents were aware of at least one method of modern contraceptives.

Teachers were the major source of information regarding family planning methods followed by the media, while least form of information came from parents.

This could mean that there is an appreciable level of education on family planning and the places where one can obtain a family planning method. This agrees with a study done by Subedi (2015) and reported that, even though respondents know about the contraceptive method, there is low utilization.

With respect to participants' perception on whether the utilization of modern contraception was a 'woman's business' or when a 'female uses a contraceptive she may become promiscuous', 55.4% disagreed that % contraception is not just a woman's business. However, 64.3% of respondents agreed that the community perceives females who use a modern contraceptive method as being promiscuous.

5.2.3 Contraceptives Utilization

The study revealed that majority of the study participants (57.7%) have never used any modern family planning method as compared to 42.3% who are active users. Thirty-four percent of adolescents indicated using contraceptives anytime they wanted to engage in intercourse; whiles 27% of them use a method whenever they or their partner is not in a 'safe period.

Out of the 141(42.3%) who are active users, the male condom was the method most frequently used (61.0%), followed by the users of oral pills (21.3). The least method used by the adolescents was the implants with a percentage of 4.3. On how comfortable the participants were whenever they are using a method, 64.5% were very comfortable, as against 35.5% who were not. With regards to the frequency of modern contraceptives usage among these adolescents, 34% of them utilize a contraceptive method anytime they engaged in sexual activity. On the other hand,

occasional users of one method or the other were 27%. The least among this category are those who use a method whenever it is available with a percentage of 10, which agrees with the findings by Ojikutu et al, that though about 77% of adolescents knew about some type of contraceptives, only, a few were users. (Ojikutu et al., 2010).

The adolescents who got the information on contraceptive use from peers were more likely to use modern contraceptives. This may suggest that, educating a lot of adolescents on contraceptives may lead to an increase in modern contraceptive use. On the contrary, those adolescents who got the awareness of contraceptives from parents are less likely to use a modern contraceptive. It will therefore be of interest to ascertain the kind of information these parents share with the adolescents which turn to discourage them from using contraceptives.

In addition, those who agreed that contraceptives were easily accessible in the Adaklu district were more likely to use contraceptives more often as compared to those who responded in the negative.

5.2.4 Barriers to Contraceptive use

With regards to the barriers to modern contraceptive use, the study found that a great majority (84.0%) of the respondents indicated that cultural beliefs and practice do not affect the use of contraceptives among in-school adolescents; however, few of the respondents did indicate that cultural practices do play a role in determining whether adolescents use modern family planning methods or not. Similarly, 82. % of the study population indicated that religious beliefs and practices do not discourage them from using family planning methods whiles 18% of them thought otherwise. The study however is in sharp contrast with a similar study by Ibrahim and Olugbenga (2012) who found that, religious beliefs discourage the use of artificial birth control or family planning methods (Ibrahim & Olugbenga, 2012). Another factor that the participants did not

consider as a barrier to modern contraceptives utilization was whether parents/guardians frowned on them using a method. With this, 72.5% of respondents indicated that, their parents/guardian did not have problems with them using a method. The only factor that study participants saw as a barrier to adolescent contraceptive utilization was 'accessibility to contraceptive use as 64.8% thought that, difficulty in accessing contraceptives was a major factor in adolescent contraceptive use. The study follows a study done by Kisaakye, (2014) in Uganda indicated that, the main factor that influences the use of contraceptives is the concern about health risks or side effects

5.2.5 Strengths and weaknesses

This study like any other, has added to existing knowledge on contraceptive awareness and uptake in the Adaklu district and Ghana in general. This general awareness is key as it can help in filling the gaps in some misconceptions about adolescent contraceptive uptake.

This notwithstanding, the study identified some peculiar limitations. This study is limited to only in-school adolescents without considering those who are out of school or are pregnant within the Adaklu district. It also did not ask whether respondents were sexually active or not as at the time of this survey. This may limit the generalization of the findings of the study.

Consistency With Another Research

From the study, the current level of contraceptive awareness among adolescents innthe district was 84.1%. this figure was in line with (though slightly lower than) the national figure of 99% (GDHS,2014)

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusion

Based on the findings of the study, the researcher concludes that family planning methods among adolescent was quite high as 84.1% were aware and had heard of a family planning method. The main source of information are the teachers who teach these adolescents.

Utilization of family planning methods was however low among the study participants. The study concludes on this that, only 42.3% of the participant adolescents have ever used a family planning method with the male condom being the most widely used method by these adolescents. Thirty-four percent of adolescents indicated using contraceptives anytime they wanted to engage in intercourse; whiles 27% of them use a method whenever they or their partner is not in a 'safe period.

The study concludes that cultural (84.0%) and religious (82.0%) beliefs and practices do not negatively affect adolescent use of contraceptives.

6.2 Recommendations

Regarding the finding of the study, the following recommendation are suggested to be considered by the major stakeholders in health and education.

1. The Ghana Education Service, Ministry of Health and the Ghana Health Service should collaborate and come out with educative programs on sexual reproductive health needs of adolescents, particularly those who are in school. This will help highlight the benefits and importance of contraceptive use among sexually active adolescents to prevent unwanted pregnancies. In addition, the Ministry of Health Ghana and the Ghana Health Service

should collaborate with the electronic media and develop a proactive role play that will depict the consequences of unprotected sex among adolescents in general and particularly those who are still in school.

2. The study again suggests that parents and guardians of adolescents should freely discuss sexual and reproductive health issues with their wards at home. They should also play active roles in educating adolescents on contraceptives use and their benefits in preventing unplanned and unwanted pregnancies, contracting sexual-related infections such as HIV and gonorrhea among others.
3. District Health Personnel should endeavor to create awareness to adolescents about the availability of adolescent friendly health services through the mobilization of community health volunteers, local media, women's groups, and youth clubs. Peer educators should be trained and mobilized to raise awareness of family planning methods and their availability.
4. For further studies, it is recommended that a study is conducted to investigate the sexual activity status of the student or adolescent in the district to bridge the gap between literature.
5. The Ghana Health Service (GHS) and other Non-governmental Organizations (NGO) must increase the level of peer education on contraceptive utilization. These peers will in turn educate their colleagues on contraceptive use.
6. It is also recommended that, future research should focus on parental level of awareness of contraceptives as well as the kind of information parents give to their children about contraceptive use.
7. Another recommendation is that, GHS and its stakeholders should make contraceptives more accessible to adolescents within the Adaklu District.

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APPENDICES

School of Public Health

College of Health Sciences, University of Ghana

APPENDIX 1: PARTICIPANT INFORMATION SHEET

Title of study: Awareness and utilization of modern contraceptives among in-school adolescent in Adaklu district in Volta region, Ghana.

Affiliated Institution

Department of Population, Family and Reproductive Health, School of Public Health, College of Health Sciences, University of Ghana.

Introduction

My name is Prince Henry Nyame, the Principal Investigator (P.I). I am a student from the school of Public Health at the University of Ghana, Legon where I am pursing a master's degree in public health.

Purpose of this Study

The purpose of this study is to investigate awareness and utilization of contraceptives among in-school adolescents in the Adaklu district.

Procedure

I am conducting a study on awareness and utilization of modern contraceptives among in-school adolescent in Adaklu district.

Your child has been selected to take part in this study. Your child participating in the study will help give a better understanding on the awareness and factors that are associated with how adolescents in Adaklu district use contraceptives. Every answer they provide will be kept very confidential. The whole interview will take about 15 minutes to complete. He/she can withdraw from the study at any time he/she chooses.

Risks/Benefits

The research team does not anticipate any risk to your child in the process of taking part in the study. However, a provision has been made to refer him or her to a psychologist for counselling in case he or she suffers an emotional trauma while answering the questions.

Confidentiality/Dissemination of Results

The information provided by your child will not be shared with a third party and will only be used for the sole purpose of the study. The final report of this study will be disseminated to the schools this data was collected from as well as the school the researcher is affiliated to.

Your Rights as Participant

This work has been reviewed and subsequently approved by the Ethical Review Committee of the Ghana Health. In case you have any reservations concerning your rights as a participant, you may contact the addresses below:

Prince Henry Nyame (Principal Investigator) on 0506816281/0241488840
Dr. Ernest Tei Maya (Academic supervisor) at the Department of Population, Family and Reproductive Health, University of Ghana.
The administrator, Ghana Health Service Ethical Review Committee, Nana Abena Apatu on 0503539896 or via email; ethics.reseach@ghsmail.org

APPENDIX 2 CONSENT STATEMENTS

PARTICIPANTS' STATEMENT

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

I voluntarily agree to be part of this research.

Name of Participant…….

Participants' Signature ……...OR Thumb Print……
Date…….

INTERPRETERS' STATEMENT

I interpreted the purpose and contents of the Participants' Information Sheet to the afore-named participant to the best of my ability in the language to their proper understanding.

All questions, appropriate clarifications sort by the participant and answers were also duly interpreted to their satisfaction.

Name of Interpreter……

Signature of Interpreter……. OR Thumb Print …….....

Date……

STATEMENT OF WITNESS

I was present when the purpose and contents of the Participant Information Sheet was read and explained satisfactorily to the participant in the language, he/she understood (Ewe)

I confirm that he/she was given the opportunity to ask questions/seek clarifications and same were duly answered to his/her satisfaction before voluntarily agreeing to be part of the research.

Name……

Signature…….. OR Thumb Print …….....

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 have been addressed.

Researcher's name:……

Signature:……

Date:……..

Parental consent Form

I have read the above document about the study on awareness and uptake of contraceptives among student adolescents in Adaklu district. Its potential risks and benefits have been explained to me, which I am comfortable with. I therefore agree that my child should take part as a volunteer.

Signature/Thumb print of parent……

Date……

APPENDIX 3: ASSENT FORM FOR STUDY PARTICIPANTS BELOW 18 YEARS

Project Title: Awareness and utilization of modern contraceptives among in-school adolescent in Adaklu district

Institution of affiliation: School of Public Health, University of Ghana, Legon.

Purpose of Research

My name is Prince Henry Nyame, a master of public health student at the school of public health, University of Ghana. I am conducting a study on Awareness and utilization of modern contraceptives among in-school adolescent in Adaklu district. I am interested in understanding the level of awareness and utilization of modern contraceptives among in-school adolescents in the Adaklu district. I will greatly appreciate your participation in my study. Your insight will assist me understand the reasons behind use of modern contraceptive among adolescents.

Research Procedure

If you agree to be in this study, you will be asked to answer questions about yourself as well as whether you use a modern contraceptive or not. These questions will be asked in a form of individual interview using an interviewer administered structured questionnaire. This will take between 10 – 15 minutes.

Risks and benefits: There are no risks if you take part in this study. There are also no incentives but the information you provide may help in the improvement of policies on your sexual and reproductive health matters.

Voluntary Nature of Participation

If you decide to participate in this study, you are free to answer the questions with much or as little details as you wish and feel comfortable to ask any question if you do not understand for further explanation. You are also at liberty not to answer particular questions or withdraw from the study at any time for any reason with no penalty.

Compensation

There is no compensation or incentive for this study. Participation is voluntary.

Confidentiality

You are assured of strict anonymity and confidentiality on any information you give. Only the research team will have access to the answered questionnaires. Confidentiality and privacy will be maintained by keeping all materials under lock and key. Your name will not be recorded. Instead, all data files will be coded and stored in randomly selected identification number making it impossible to identify you or your answers in anything written about this study.

Contact and Questions

If you have any further information or questions about the study, you may contact the principal investigator, Prince Henry Nyame on phone number: 0506816281

Your rights as a Participant:

This research has been reviewed and approved by the Ethics Review Committee of the Ghana Health Service. If you have any questions about your rights as a research participant you can contact the ERC administrator on 0243235225 or 0507041223 between the hours of 9am – 4pm on Monday to Friday.

Statement of Consent

I have read the information above, or it has been read to me. I consent voluntarily to be a participant in this study

Name of Participant: ……

Signature or Thumb print of Participant: ……..

Date: ……..

Thank you for agreeing to participate

Name of witness: ……..

Signature or Thumb print of witness: ……

Date: ……

I confirm that the individual has not been coerced into giving consent, and the consent has been given

freely and voluntarily.

Name of Researcher or Principal investigator: ……..

Signature of Researcher: ……

Date: ……

APPENDIX 4: CONSENT FORM FOR PARENT OR GUARDIAN OF PARTICIPANTS BELOW 18 YEARS

Project Title: Awareness and utilization of modern contraceptives among in-school adolescent in Adaklu district.

Institution of affiliation: School of Public Health, University of Ghana, Legon.

Purpose of Research

My name is Prince Henry Nyame, a master of public health student at the school of public health, University of Ghana. I am conducting a study on awareness and utilization of modern contraceptives among in-school adolescent in Adaklu district.

I will greatly appreciate your child/guardian participation in my study. The insight of your child/guardian will assist me understand the reasons behind use of modern contraceptive and issues of adolescent pregnancy.

Procedure:

If your child/guardian agrees to be in this study, they will be asked to answer questions about themselves as well as questions about the factors that influence use of modern contraceptive among adolescent. These questions will be asked in a form of individual interview using an interviewer administered structured questionnaire. The interview will take about 10 – 15 minutes.

Risks and benefits:

In this study, there will be questions concerning level of knowledge, sexual behavior and attitudes that may be embarrassing and or unusual. However, the risk of participation will be no greater than those encountered on day –to-day basis. If this document is adopted, it may benefit your child/guardian and the whole community in dealing with the issue of modern contraceptive use. The study would help health providers to plan how educate adolescents on the importance of using modern contraceptive.

Voluntary Nature of Participation

If your child/guardian decides to participate in this study, they are free to answer the questions with much or as little details as they wish and feel comfortable to explain. They are also at liberty not to answer particular questions or withdraw from the study at any time for any reason with no penalty.

Compensation

There is no compensation or incentive for this study.

Confidentiality

You are assured of strict anonymity and confidentiality on any information your child/guardian gives. Only the research team will have access to the answered questionnaires. Confidentiality and privacy will be maintained by keeping all materials under lock and key. Their names will not be recorded. Instead, all data files will be coded and stored in randomly selected identification number making it impossible to identify them the answers they give in this study.

Contact and Questions

If you have any further information or questions about the study, you may contact the principal investigator, Prince Henry Nyame

Your rights as a Parent or Guardian

This research has been reviewed and approved by the Ethical Review Committee of the Ghana Health Service. If you have any questions about the rights of your child/ guardian as a research participant you can contact the ERC administrator on 0243235225 or 0507041223 between the hours of 9am – 4pm on Monday to Friday.

Statement of Consent

I have read the information above, or it has been read to me. The study has been explained to me and my questions have been answered. I consent voluntarily for my child to be a participant in this study.

Name of Parent or Guardian: ……..

Signature or Thumbprint of Parent or Guardian: ……..

Date: ……..

Thank you for agreeing for your child to participate

Name of Researcher or Principal investigator: ……..

Signature of Researcher: ……..

Date: ……

APPENDIX 5: QUESTIONNAIRE

PARTICIPANTS INSTRUCTIONS:

Do not write your name or any other name on the form. Tick only one response or multiple responses per the instructions given. Only adolescents who are currently attending school and are between the ages of 10-19 are eligible to take part in this educational study.

Section A: Socio-Demographic Characteristics of Respondent

SN	**INFORMATION**	**RESPONSE**	**SKIP NO.**
1	How old were you at your last birthday?	Age in completed years……...	
2.	Educational level/class	A. BS5-BS6 [ ] B. BS7-BS9 [ ] C. SHS1-SHS3 [ ]	
3.	Sex	Female [ ] Male [ ]	
4.	Marital status	Married] Single [ ] Separated [ ] Divorced [ ] Others (specify)……	
5.	Who do you stay with?	Both Parents [ ] Single parent [ ] Guardian [ ] Friend [ ] Fiancé/e [ ] Others (specify)……	
6.	Religious background	Christian religion [ ] Islamic religion [ ] Traditional religion [ ] **Others, (specify)**……	
	Section B. **Awareness on Contraceptives**		
7.	Do you know of any modern contraceptives? **If no, skip the rest of the questions.**	Yes [ ] No [ ]	
8.	If yes, where did you hear it from?	Media (newspaper, radio, TV) [] Teachers [ ]	

	(Tick as appropriate)	Health workers [ ] Peers/friends/sexual partner [ ] Parents [ ] **Others, (specify)……**	
9.	Do you know of any problem or side effect that can occur in using contraceptive?	Yes [ ] No [ ]	
10.	Can a contraceptive provide protection against pregnancy?	Yes [ ] No [ ]	
11.	Do you think the use of contraceptives is a woman's business?	Yes [ ] No	
12.	Do you think the use of contraceptives may cause the person to become promiscuous?	Yes [ ] No [ ]	
13.	Has your parent or guardian ever educated or advised you on the use of contraceptive?	Yes [ ] No [ ]	
	Section C. **Contraceptives Utilization**		
14	Have you ever used a contraceptive?	Yes No (**if No, skip to question 19)**	
15.	If yes, which one (s) did you use? **(Tick as appropriate)**	Intrauterine device (IUD) Condoms Pills Injections Implants Other (please specify)	
16	Are you comfortable using the contraceptive?	Yes [ ] No [ ]	
17	How often do you use contraceptives? (**Tick as appropriate)**	Anytime I want to have sex [] When my partner or I am not in safe period [ ] Occasionally [ ] On demand by partner [ ] Whenever contraception is available [ ] Others (specify) ……	
	Section D. **Barriers to Contraceptive use**		

18	Does your cultural belief or practice prevent the use of contraceptive?	Yes [ ] No [ ]	
19	Does your religious belief or practice discourage people from using contraceptive?	Yes [ ] No [ ]	
20	Does your parent or guardian frown on the use of contraceptive?	Yes [ ] No [ ]	
21	Are contraceptives easily accessible in your locality?	Yes [ ] No [	

Thank you for your time.

APPENDIX 6: ETHICAL APPROVAL LETTER

GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

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

My Ref. GHS/RDD/ERC/Admin/App \ 22 \ 658
Your Ref. No.

Research & Development Division
Ghana Health Service
P. O. Box MB 190
Accra
Digital Address: GA-050-3303
Mob: +233-50-3539896
Tel: +233-302-681109
Email: ethics.research@ghsmail.org
28th February, 2022

Prince Henry Nyame
Nurses' Training College.
Private Mail Bag; Ho, Volta Region.

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

GHS-ERC Number	**GHS-ERC: 018/02/22**
Study Title	Contraceptive Uptake Among In-School Adolescents in Adaklu District
Approval Date	28th February, 2022
Expiry Date	27th February, 2023
GHS-ERC Decision	**Approved**

This approval requires the following from the Principal Investigator

- Submission of a yearly progress report of the study to the Ethics Review Committee (ERC)
- Renewal of ethical approval if the study lasts for more than 12 months,
- Reporting of all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.
- Submission of a final report after completion of the study
- Informing ERC if study cannot be implemented or is discontinued and reasons why
- Informing the ERC and your sponsor (where applicable) before any publication of the research findings.

You are kindly advised to adhere to the national guidelines or protocols on the prevention of COVID -19

Please note that any modification of the study without ERC approval of the amendment is invalid.

The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol

SIGNED..... .....
Dr. James Akazili
(Head, Ethics & Research Management Department)

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