SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA

FAMILY PLANNING PRACTICES AMONG ADOLESCENTS IN THE TEMA CENTRAL SUB-METROPOLIS, GREATER ACCRA REGION

BY

DOUGLAS ADU-FOKUO
(10703721)

THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF THE MASTER OF PUBLIC HEALTH DEGREE

JULY, 2019

DECLARATION

I, Douglas Adu-Fokuo. declare that with the exception of quotations and references contained in published works which have all been identified and acknowledged, this thesis is entirely my own work, and it has not been submitted either in part or whole for another degree elsewhere.

……

DOUGLAS ADU-FOKUO (Principal Investigator)

DATE: 12/ 04/ 2019

……

DR. PATRICIA AKWEONGO (Supervisor)

DATE: 12/ 04/ 2019

DEDICATION

To my parents, Mr. Joseph Adu-Adom and Mrs. Mary Adu-Adjei and siblings, Kingsley, Francis, Faustina and David.

ACKNOWLEDGEMENT

I am most grateful to God for the grace and favour I received from him to complete this programme successfully.

I would like to express my sincere appreciation to my supervisor, Dr. Patricia Akweongo, for her remarkable patience and effort devoted to the realisation of this thesis. Special gratitude to the faculty and staff of the School of Public Health, most especially, the Health Policy Planning and Management Department.

I acknowledge the director and staff of the Tema Metropolitan Health Directorate of the Ghana Health Service, for their support and to all my research assistants, particularly Grace Amewu and Samuel Atuahene who helped with the field activities.

I acknowledge all adolescents whose responses formed the basis of this thesis.

To my parents, I am most grateful for their inspiration and ceaseless prayers to God for me throughout the period of my study.

ABSTRACT

Background

The public health importance of family planning is well documented some of which include averting the number of unintended pregnancies, reducing maternal and child mortality and number of abortion episodes among women. Adolescents are mostly vulnerable to peculiar health risks in relation to reproduction and sexuality. Despite interventions aimed at improving their family planning uptake, family planning practices among adolescents remain low at 42% in Ghana. This study was carried out to determine factors influencing knowledge of FP practices among adolescents at the Tema Central sub-metropolis.

Methods

A descriptive cross-sectional study design was used to investigate the objective of this study. A total of 381 adolescents from adolescent friendly units in the Tema Central sub-metropolis were randomly sampled for the study. Data was analysed using Stata Version 15. Demographic data was analysed descriptively using frequencies, percentages, averages and standard deviations. Knowledge of adolescents on FP services was analysed descriptively using frequencies, percentages. The Chi-Square statistic was used to estimate differences in FP knowledge and demographic data of respondents. Statistical significance was considered based on p-value <0.05. Family planning practices of adolescents was also analysed descriptively using frequencies, percentages

Results

There was a high level of awareness of family planning among the adolescents (96.1%). Knowledge on family planning was good among almost all the adolescents (98.4%). Age (P<0.05) and level of education (P<0.05) had significant influence on knowledge on family planning among the adolescents. However, out of the 381 adolescents, only twelve (3.1%) had ever used a FP method in the past and only six, were using a FP method at the time of the study. Adolescent general perception of youth friendly services provided for the adolescents was positive.

Conclusion

Despite the high level of awareness and good knowledge of family planning among the adolescents, their family planning practices were poor. There is the need to repackage and advertise adolescent family planning services and make the services attractive to adolescents through collaborative effort between the Ghana Health Service, the media and all stakeholders.

TABLE OF CONTENTS

Content

Page

LIST OF TABLES

Table

Page

LIST OF FIGURES

Figure **Page**

LIST OF ABBREVIATIONS

FP	-	Family Planning
GDHS	-	Ghana Demographic Health Survey
GHS-ERC	-	Ghana Health Service – Ethical Review Committee
IUD	-	Intrauterine Device
LAM	-	Lactational Amenorrhea Method
PMNCH	-	Partnership for Maternal, Newborn and Child Health
SSA	-	Sub-Saharan Africa
UNFPA	-	United Nations Fund for Population Activities
USAID	-	United States Agency for International Development
WHO	-	World Health Organization

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the study

Family Planning (FP) is a service rendered to individuals and couples to allow them anticipate and attain the desired number of children and spacing and timing of their birth (World Health Organizatkon [WHO], 2015). The public health importance of family planning is well documented some of which include averting the number of unintended pregnancies, reducing maternal and child mortality and number of abortion episodes among women (Apanga & Adam, 2015; Atuahene, Afari, Adjuik, & Obed, 2016; Cates *et al.*, 2010). Family planning is also used to promote gender equality and women empowerment (Yue & Sparks, 2010). Despite the enormous benefits, the proportion of women not using family planning services is high (Bradley, Croft & Fisher, 2012).

There exist vast disparities in FP use among women globally (Adugnaw et al, 2011). The proportion of women using family planning ranges from 18% in Ethiopia to 92% in Vietnam (Adugnaw et al, 2011). In general, there is less use of FP among women in rural areas. However, this is not always so in Central and West African countries. Educated women in countries like Guinea, Liberia, Mali and Niger use family planning less than the less educated. In the Eastern, Asian and African countries, including Ghana, use of FP is almost invariably low or non-existent among women with no children but increases as parity increases (Bradley *et al.*, 2012). In addition, the use of FP among adolescent girls is low (Darroach, Woog, Bankole & Ashford, 2016).

Adolescence is defined by the World Health Organization (WHO, 2018) as the period of human growth and development which occurs between ages 10 and 19 years. This growth and development occur between childhood and adulthood (WHO, 2018).

Globally, 23% of adolescent girls are married or in union, and 3% are unmarried but sexually active (UNFPA, 2016). About 11% of all births and 14% of maternal deaths worldwide are among 15 to 19-year-old females with 95% of adolescent births taking place in developing countries (WHO, 2011a; International Planned Parenthood Federation, 2010). In 2015, 15 million adolescent girls in developing countries gave birth and 13 million adolescents lacked access to contraceptives. Only about 15% of adolescent girls who were married or in union were using contraception. Half of this number lived in Asia and the Pacific and more than 30% lived in sub-Saharan Africa (UNFPA, 2016).

In Sub-Saharan Africa (SSA), millions of youth are at risk of poor reproductive outcomes. There is high adolescent birth rate of 120 per 1000 girls aged 15 to 19 years in SSA (WHO, 2011b). The rate of pregnancy among adolescents aged 15 to 19 years has remained high in Ghana in spite of a slight decline from 14% in 2000 to 12.2% in 2007 (Enuameh *et al.*, 2014). They are mostly vulnerable to peculiar health risks in relation to reproduction and sexuality yet their uptake of family planning services is low (Denoo, Hoopes & Chandra Mowti, 2015).

Globally, the use of FP among unmarried adolescents range from 21% to

64% and from 6% to 67% among married adolescents (WHO, 2012). In Asia, less than 1% unmarried sexually active adolescents use FP compared to 28% in Haiti up to 64% in Peru within Latin America and the Caribbean. However, use of FP among the married adolescents in Asia range from 6% in Azerbaijan to 47% in Bangladesh. In sub-Saharan Africa, the proportion of unmarried sexually active adolescents using FP ranges from 21% in Mali to 42% in Ghana with FP use among married ones ranging from 8% in Mali to 36% in Zimbabwe (WHO, 2012; Bradley et al., 2012). This indicates low uptake of FP services among adolescents.

Factors responsible for this low uptake of FP services among adolescents include, but not limited to, unavailability of FP services to adolescents (Lauria *et al.*, 2014; Magnani *et al.*, 2012), laws and policies restricting adolescent access to FP services (Pulerwitz & Barker, 2004), poor knowledge of contraceptive use (Malini & Narayanan, 2014; Meekers, Agha, & Klein, 2005), religious restrictions on use of contraceptives (Apanga & Adam, 2015) and negative public perception about adolescent use of contraceptives (Gaetano *et al.*, 2014; Plautz & Meekers, 2007). This is aggravated by negative attitude of FP service providers (Atuahene *et al.*, 2016; Michaels-Igbokweetet al., 2015; Magnani et al., 2012; Pulerwitz & Barker, 2004). Easy access to and availability of wide range of FP methods can have greater influence on the uptake of such services by adolescents (Gaetano *et al.*, 2014; Atuahene et al., 2016).

Quality of care in FP remains one of the greatest determinants of patronage of FP services (Tessema *et al.*, 2016). Quality of FP services however, is

affected by three conditions: client, provider and facility characteristics; structural factors; process factors (Ahmed *et al.*, 2012) where the process factors include those factors such as provider-client interactions, privacy, client waiting time and eligibility requirement (Ahmed *et al.*, 2012). Provider's years of working experience can be linked to quality of care as this creates room for provider familiarization with how clients behave (Hutchinson *et al.*, 2011).

Improving use of family planning services is key to improving maternal health. In addition, provision of quality of care in family planning services is critical to support higher levels of contraceptive uptake (Tessema *et al.*, 2016). To this end, this study seeks to determine the factors associated with family planning services rendered to adolescents in the Tema Central sub-metropolis, in the Greater Accra Region.

1.2 Problem Statement

In Ghana demand for family planning is 40% among the general population while usage stands at 34% (Partnership for Maternal, Newborn and Child Health [PMNCH], 2013). There is low patronage of family planning services among adolescents in Ghana (Enuameh *et al.*, 2014). Evidence from the Ghana Demographic and Health Survey revealed that proportion of adolescents (10-19 years) who received family planning services in the Tema Metropolitan area in 2016 stood at 10%. This reduced to 5.4% in 2017. In 2016 and 2017, family planning acceptor rate for adolescents in Tema central was 4.9% and 2.5% respectively. However, adolescent family planning services acceptor rate dropped from 2.5% in 2017 to 0.8% in 2018.

Afenyadu and Goparaju (2003) in their study in Ghana found that among sexually active adolescents, 41% did not use a condom, 34% did not use any modern contraceptive (e.g. vaginal foaming tablet, pill, condom, IUD, injectable, Norplant) and 30% did not use any family planning method at all during their last sexual encounter. Lack of knowledge of sex and family planning and the lack of skills to put that knowledge into practice prevent adolescents from patronizing family planning services which places them at risk of unintended pregnancy (Gyesaw & Ankomah, 2013). Some sexually active adolescent girls in Ghana do not even know they could get pregnant from engaging in sexual intercourse (Gyesaw & Ankomah, 2013).

Interventions aimed at increasing family planning uptake and usage among adolescents includes school and community-based educational programmes, mass-media campaigns, peer education and provision of youth friendly health services in clinical and outreach services (Michaels-Igbokwe *et al*., 2015). However, the uptake of FP practices among adolescents still remains low. There was therefore, the need to investigate adolescent FP practices and the factors influencing uptake of FP services among adolescents in the Tema Central Sub-Metropolis.

1.3 Justification

Over the years, women especially in their adolescent ages report to the health facility where I worked with issues of abortion, its complications and other related problems. My interrogation with some of them showed that most of them had little or no knowledge about family planning let alone its uses. This triggered my interest to research into this area in order to actually

know what the problem was and see how best it could be controlled. The outcome of the study may provide evidence-based information on FP practices among adolescents. This may inform planning, policy development and interventions that could directly improve upon family planning practices among adolescents.

Findings from the study would help to identify factors that prevented adolescent patronage of family planning services. This may help family planning service providers and all stake holders to carry out informed interventions to address these bottlenecks and promote uptake of FP services among adolescents.

The study would also provide direction for future research into adolescent family planning in Ghana.

1.4 Research Questions

The specific research questions are

1. What is the level of knowledge of adolescents on family planning practices?
2. What are the family planning practices among adolescents in Tema Central?
3. What are the factors influencing knowledge of FP practices among adolescents?
4. What is the perception of adolescents of youth friendly services provided in Tema Central?

1.5 Objectives of the study

1.5.1 General objective

To determine the factors influencing knowledge of family planning practices among adolescents at the Tema Central sub-metropolis.

1.5.2 Specific objectives

1. To determine the level of knowledge of adolescents of family planning practices
2. To investigate family planning practices among adolescents in Tema Central
3. To assess adolescent perception of youth friendly services provided in Tema Central Sub-Metropolis.

Summary of the chapter

The chapter presented the background of the study, the problem that necessitate the study, justification of the study, research questions and objectives of the study.

The next chapter discusses the literature review and conceptual framework of study as well as the theory that underline the study.

CHAPTER TWO

2.0 LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 Introduction

This chapter seeks to present discussions of other scientific studies related to use of FP (Family Planning) among adolescents. Previous studies on factors influencing the use of FP services among adolescents have also

been presented in this chapter.

2.2 Adolescence

The term adolescent refers to a phase of transition comprising growth and development from childhood to adulthood (Csikszentmihalyi, 2019). The World Health Organization (WHO) defines an adolescent as any person between ages 10 and 19 years (Canadian Paediatric Society, 2003). An expanded and more inclusive definition of adolescence by the WHO is a stage between 10-24 years and is considered as an important stage for the framing of appropriate laws, service systems and social policies (WHO, 2019). The age range of 10-19 years was used in this study which represents the period of onset of sexual development among young people.

Almost 1.2 billion adolescents globally, most of them live in the developing countries. More than 1.8 billion of the population worldwide are the youth who are from 10-24 years of age (Alehegn, Mulunesh, Yilkal & Abebaw, 2018).

About 16 million adolescent women aged 15-19 years are estimated to give birth worldwide and majority (95%) of these births among adolescents occur in the middle- and low-income countries. In adolescence, childbirth poses a health risk. These include various lethal and negative health outcomes, including complications from unsafe abortion, increased risk of premature delivery, delivery complications and postnatal complications, obstetric fistula, to mention but a few (Singh, Kumar & Pranjali, 2014). Nations worldwide are therefore, committed to the needed interventions to ensure that over the next 15 years, reproductive and sexual health services, including FP services are easily accessible to all adolescents in addition to ensuring that reproductive

rights of all persons including adolescents are respected. Within the 2020 agenda for sustainable development, there are two targets that are relevant for FP, which are subsets of goals aimed at improving the general health and well-being of the general population (Goal 3) and ensuring gender equity and to empower women and girls (United Nations, 2017).

2.3 Family planning

Family planning is referred to as the conscious effort that couple make to determine the number of children to have and to space their children by means of using contraceptive methods (Ghana Statistical Service, 2014). The practice of FP prevents a third of deaths related to pregnancies in addition to the prevention of about 44% of neonatal deaths. The adequate spacing of births for not less than 2 years is imperative to the prevention of adverse outcomes related to pregnancy in addition to the high incidence of premature deliveries, and malnutrition which leads to stunted growth among children. Birth spacing for optimal pregnancy outcomes apply globally and not only in poor settings. The individual has the choice to decide whether or not to give birth and the number of children to have.

Contraceptives have been classified into traditional and modern contraceptive methods. Among the modern contraceptive methods are the injectables, implants, contraceptive pills, male and female sterilization, male and female condoms, the intrauterine device (IUD) and Lactational Amenorrhea Method (LAM). The withdrawal, rhythm, and folk methods as regarded as the traditional methods of contraception (SS, 2014).

Contraceptives are used by a majority of women (married or in-union women)

in almost all the regions of the world. In 2017, worldwide, 63 % of married women in the reproductive age were using some form of contraception, including any modern or traditional methods of contraception. The practice of contraception is known to be much lower among Africans (36%) compared with other places around the globe which ranges from 58% in Oceanic to about 75% in the northern part of America and the Caribbean (United Nations, 2017).

2.4 Knowledge of Family Planning among adolescents

The adolescents' knowledge of family planning methods promoting their sexual and reproductive health varies across the world (Renjhen, Kumar, Pattanshetty, Sagir, & Samarasinghe, 2010; Katama & Hibstu, 2016; Masood & Alsonini, 2017). Findings from a cross sectional study in India to assess adolescents' knowledge of family planning revealed that, almost all the adolescents surveyed had knowledge of family planning and heard about contraceptives. Condoms and contraceptive pills were the commonly known contraceptives. Most adolescents had poor knowledge of permanent methods and Cu-T. They knew that contraceptives were for prevention of unwanted pregnancies and for birth spacing (Renjhen *et al.*, 2010).

Similarly, a descriptive cross-sectional study conducted among adolescents in Yemen to assess their knowledge of family planning and reproductive health showed that, 95.6% of the adolescents had heard about sexual health and family planning. Adolescents' major source of information on sexual health and family planning was television followed by relatives, radio and newspapers. Majority of the adolescents also knew about the types of family

planning methods (Masood & Alsonini, 2017).

A study was conducted among adolescents by Katama and Hibstu (2016) in South Ethiopia to assess the knowledge of adolescents on family planning. Findings from the study revealed that, 94.7% of them had good knowledge of contraception. The most identified contraceptive method was injectable, oral contraceptive pill and condom. They obtained their source of information from television, radio and from their teachers. They knew the importance of contraception as preventing unwanted pregnancies, limiting birth spacing and preventing sexually transmitted diseases.

Secondly, a cross sectional study conducted in the northern part of Tanzania on the knowledge, attitude and practices of FP among secondary school going adolescents in the Hai District demonstrated that, 76.4% of the adolescents had adequate knowledge on family planning services compared with those with inadequate knowledge. They again stated that, their main source of information on family planning were the radio followed by newspaper (Dangat & Njau, 2013).

Within the Ghanaian context, Boamah et al. (2014) assessed contraceptive practices among adolescents to serve as evidence for the development of interventions that were appropriate for sexual health programs of adolescents. In this cross-sectional survey, both qualitative and quantitative approaches were employed to assess a total of 793 adolescents. Thus, comprising 43% males and 57% females aged from 15 to 19 years from October to May, 2010 at Kintampo in Ghana. About 90% of the adolescents who took part in this study knew at least one method of contraception. The

male condom was known by 84% of the adolescents which was the highest known contraceptive among the adolescents, both females and males.

Compared with their knowledge of condoms, knowledge of adolescents of other modern forms of contraception were lower. Among them, 314% knew about the pill, 25.5% knew about the injection and 5.6% knew about emergency contraceptives. Comparing knowledge of males and females of at least one of the contraceptive methods, the males had more knowledge than the females, thus 92.1% and 86.6%, respectively. Older adolescents, 18-19 years old had more knowledge of contraceptive methods (94.4%) compared to younger adolescents, 15 to 17 years old (Boamah *et al.*, 2014).

2.5 Family Planning Practices among Adolescents

The male condom seems to be the most widely used (56.7%) among adolescents and young women (Carrasco-Garrido *et al.*, 2011). This was found in a descriptive cross-sectional epidemiologic study on the factors determining use of a contraceptive method among sexually active adolescents and young women aged 16-29 years, living in Spain. Results from a cross sectional study in India among adolescents' use of FP services revealed that, 11% had used some form of contraceptives in the past and 7% were currently using at the time of the study. The most commonly used contraceptives were condoms followed by combined use of oral contraceptives and condom (Renjhen *et al.*, 2010). Majority of the adolescents in a cross-sectional quantitative study conducted in Yemen revealed that, the adolescents knew where they could access family planning. About 86% said family planning devices could be accessed from the

Government Health Center, Hospital, Private Clinic and Marie Stopes Clinic (Masood & Alsonini, 2017).

A nationally-representative USAID (United States Agency for International Development) Demographic and Health Surveys from 18 least developed Sub -Saharan African nations was carried out by McCurdy, Schnatz, Weinbaum and Zhu (2014). The aim of the study was to determine contraceptive use in adolescents in Sub-Saharan Africa using evidence from demographic and health surveys. A total of 212,819 Sub-Saharan African women with 45,054 of them being 15-19 years old were assessed. Most adolescents (92.4%) surveyed reported no contraceptive use, although 21.6% reported recent sexual activity. The adolescents indicated that injectable medications and contraceptive pills were the preferred future contraceptives at 39.9% and 31.4% respectively.

Using data from the 2008 Ghana Demographic and Health survey, Nyarko (2015) estimated the prevalence and correlates of contraceptive use among female adolescents in Ghana. He found that the overall contraceptive prevalence in the sample of 1037 women was 18.3 % comprising 14.6 % of modern methods and 3.7 % of traditional methods. The prevalence of contraceptive use was higher among female adolescents aged 18 to 19 years (31.4 %) than female adolescents aged 15 to 17 years (9.2 %). In terms of contraceptive prevalence, the highest was found among female adolescents with secondary or higher education (19.9 %) while the lowest was among those without formal education (3.5 %).

Secondly, in Korle-Gonno, a suburb in Accra, Ghana, a descriptive quantitative

cross-sectional study was conducted among 110 female adolescents 10-19 years of age to assess the prevalence of contraceptive use among them. More than half (55.5%) of the female adolescents were sexually active. Contraceptive prevalence among sexually active female adolescents was 38.0%. The male condom (73.9%) was the commonest method used. Majority (72.2%) of non-users had no specific reason for not using any form of contraception or had not thought of protection at the time of the sexual encounter (Kareem & Samba, 2016).

In their cross-sectional study on adolescent contraceptive practices in Kintampo, Ghana, Boamah et al. (2014) found that 67% of adolescents who were sexually active had ever used a contraceptive to prevent pregnancy. More than half (55.2%) of the adolescents were found to have ever used a contraceptive during their sexual encounter. However, 44.1% of them was found to sometimes use contraceptives whilst 22.9% of them consistently used contraceptives. Contraceptive methods used by the adolescents included the foaming tablet, condom, pill, to mention but a few. On the other hand, 33% of the adolescents in their study indicated that they had never used any contraceptive method to prevent pregnancy. The adolescents who used contraceptives consistently were found to be significantly unlikely to impregnate someone or get pregnant compared to their counterparts whose use of contraceptives was not consistent (thus 6.4% verse 93.6%, respectively). Most (62.1%) of the adolescents accessed contraceptives from the chemical sellers' shops and from the pharmacy. Just a few of them, comprising 4.9% females and 3.6% males, got their contraceptives from the health facilities.

2.6 Healthcare providers' attitude towards adolescent FP services

A positive attitude and behaviour of health care workers towards adolescents can help increase the uptake of family planning among adolescents. A qualitative cross-sectional studyamong adolescents in Mexico on provider-to-adolescent's relationships during family planning services showed that, adolescent girls were reportedly refused FP services at health facilities and they asked for more information on reproductive health services from their parents and from their schools. The adolescent girls also argued that, they were so uncomfortable with discussing FP with a health worker and felt that only men were given condoms to use and not to women (Dansereau *et al.*, 2017).

On the other hand, a study by Khan *et al* (2017) in Tehsil Muzaffargarh, Pakistan showed that, the health workers had a positive attitude with regard to their job, association of FP with their religion and trainings (Khan, Shah, Atif, Khan & Mustafa, 2017). Findings from a study carried out among health workers in two districts in Osun State in Nigeria' demonstrated that, 22.4% of the health workers stated that, family planning use among adolescents make them live promiscuous lives (Omishakin, 2015). Omishakin (2015) and Ahanonu (2014) both found that, the health workers thought the adolescent use of family planning made them live promiscuously. However, both studies were carried out in Nigeria and could be influenced by culture.

Furthermore, in Kenya, Tumlinson, Speizer, Archer and Behets (2013) found that, health workers that provided FP services to adolescents had a negative attitude towards their clients and even refused to greet them. This is

because the culture of Nigerians does not support premarital sexual activity. To more than half (51.7%) of them, adolescents should be discouraged from engaging in sexual activity instead of providing them with contraceptive services. More than a third (44.2%) of the health workers suggested that FP service providers should desist from providing FP services for both unmarried and married adolescents. They rather advice that adolescents who are not married should abstain from sex.

Contrary to findings by Tumlinson *et al.* (2013) in Kenya, a descriptive quantitative cross-sectional study conducted in the Akwapim North District of Ghana demonstrated that, the health care providers built good relationship with their clients by introducing themselves to them and greeting them. This created a friendly environment for the clients to have a good discussion with the health provider. Just a few, thus 4.5 % and 6.0 % of the adolescents expressed dissatisfaction with the visual and auditory privacy provided them, respectively. Most (79.1 %) of them were not given educational materials although majority (88%) of them were educated on FP and this could be as a result of the fact that the handouts were unavailable (Atuahene et al., 2016).

2.7 Factors influencing adolescent use of Family Planning

Barriers to adolescent access to Family Planning (FP) methods still persist worldwide. These include laws that restrict the use of contraceptives, policies that are poorly implemented, social norms that are deeply held and service providers who are unwilling to provide contraceptives for adolescents, which have a huge negative impact on adolescents' access to contraceptives to prevent their first pregnancy or be able to space their

subsequent pregnancies (Howard, 2017).

Chernick et al. (2015) interviewed female adolescents in the United States. The respondents were 14-19 years of age and were sexually active with concerns about their reproductive health. This was a qualitative study guided by the modified Health Belief Model. Among the 14 adolescents who were interviewed, they were mainly Hispanic (93%) with health insurance and were in a sexual relationship (86%). They found that the main barrier to the use of contraceptives was their perceived health risk which included perceived effects of contraceptives on their menstrual flow, general weight and their fertility in the future. Other related factors that limited contraceptive use among the adolescents were lack of confidence in the contraceptives, mixed feelings about their intention to get pregnant, the desire of their partners for them to get pregnant, indecision about the future and restricted access to contraceptives. However, adolescents who had a clear plan for the future in addition to their access to a school clinic promoted contraceptive used among the adolescents.

In Spain, Carrasco-Garrido *et al.* (2011) assessed factors influencing the type of contractive methods used by adolescents and young women who were sexually active. Factors that predicted only the use of condom as a contraceptive method included number of sexual partners, importance of sexuality and information on sexuality in ones' life. Secondly, factors that predicted the use of oral contraceptive pills among the respondents were being in a stable sexual relationship with one partner and having a positive perception of sexual health. Number of sexual partners strongly predicted

the use of combined methods of contraception among the respondents.

In a quantitative cross-sectional study in Ghana personal factors influencing adolescent contraceptive use including discussion of contraception with partner, decision to use contraceptives and negotiation of condom use were assessed (Boamah *et al.*, 2014). It was found that 42% of the sexually active adolescents had they have never engaged their partners in any form of discussion on contraception. More than a quarter (32%) of the adolescents who had ever practiced contraception indicated that the decision to use contraceptives was made by themselves. Majority (79%) of the adolescents who were sexually active were able to negotiate for the use of condom with their partners any time they had sexual intercourse. The adolescents were able to make their sexual partners use condoms by persuading them or through the “hard way”, thus by making condom use a condition for sex.

According to Boamah et al. (2014), although the age of adolescents did significantly predict the use of contraceptives among adolescents (p=0.64), their age at the onset of sexual intercourse significantly predicted the consistent use of contraceptives among the older adolescents (p=0.64). Older adolescents who initiated sex from the age of 18-19 years had a higher than threefold chance to practice contraception consistently compared with younger adolescents who initiated sexual debut at an early age of 11-14 years. Adolescents in general may not be able to afford contraceptives services and may now even know where to access these services. Even if they had easy access to contraceptives, stigmatizing behaviours and beliefs associated with sexual activity among non-married couples, the lack of

ability to make choices or decisions and societal pressure to demonstrate one's fertility may limit the use of contraceptive among adolescents (Howard, 2017).

In a descriptive quantitative cross-sectional study at Korle-Gonno, in Ghana, Kareem and Samba (2016) found that 30% of the female adolescents was encouraged by their mothers or female guardians to use contraceptives and 20% were encouraged by their fathers or male guardians to use contraceptives. Furthermore, 28.3%of the female adolescents indicated that they were encouraged by their sex partners to use contraceptives, 15% had the encouragement to use contraceptives by their health service providers and 33% of the adolescents were encouraged to use contraceptives by their peers. None of the female adolescents was discouraged from using contraceptives by their parents/ guardians or service provider's adolescents.

2.8 Quality of family planning services offered to adolescents

The use of contraceptives and the behavior of clients with regard to purchase of contraceptives are determined by the quality nature of the FP services and the general reproductive health care services that they receive. Due to this, the global goal for FP service providers is to improve upon the quality of the services they provide worldwide (United Nations, 2017). The constraints identified to affect the quality of services provided include but not limited to inadequate facilities and the needed equipment to work with, a disruption of supplies, less satisfactory information provided to clients, lack of adequate information to the clients and the inability of the providers to be sensitized to the needs of the client (Mbeki, Karama. & Mwaniki, 2017).

Individuals (adolescents) in addition to couples are not able to meet their reproductive health care needs in a safe and effective manner due to sometimes difficulties in accessing FP services. The quality of FP services was also assessed among primary health centres in the Jimma Zone of the Southwest of Ethiopia. This was a facility based cross sectional study and the findings showed that, there was some lack of medical equipment, trained staffs, and information and education materials. The lack of these critical materials affected the quality of FP services rendered (Fikru, Mirkuzie, & Berhane, 2013).

Another Ethiopian study carried out by Fantahun (2015) in Northwest Ethiopia to determine the quality of family planning services in terms of client-provider interaction and availability of necessary resources revealed that, clients found it difficult to understand the service provider. Adolescents were not satisfied with communication and privacy provided by the FP service providers. There were deficiencies in information and communication with clients regarding infection prevention procedures and sexual transmitted diseases.

In another cross-sectional study on the availability and the quality of FP services provided for adolescents in the Demographic Republic of Congo showed that, availability of the services was very high within the health care system. On the other hand, public health facilities were more unlikely to provide quality FP services. The most common FP methods that were available were the male condom, injectable contraceptives which are progestin only and the combined oral contraceptive pills. Based on these

findings, the researchers concluded availability of FP services for adolescents and the quality of FP services rendered to adolescents were low (Mpunga *et al.*, 2017).

Conceptual framework of family Planning Practices among Adolescents

The study adapted the Donabedian conceptual model of quality of care as the conceptual framework. This is in recognition of the fact that the model has tenets which are very pertinent to the study and well-suited with the objectives of the study; to evaluate the healthcare providers-to-adolescent's relationships during family planning services delivery, to assess knowledge of adolescents of family planning services and access to family planning services and quality of family planning services rendered to adolescents.

The three components of the Donabedian conceptual model are structure (Inputs), Process (activities) and Outcomes (results) which focus on quality assessment which is suitable and widely used to measure quality of healthcare (Donabedian, 2002).

The structural components comprise all the inputs that enhance the health facility readiness to provide the needed services to clients. The structural components are supplies and equipment, human resources and physical infrastructure.

The process component are the activities and systems in place of delivery of care and how the system works to obtain the outcome. The process component is the protocols, systems and guidelines in place to manage medical emergencies associated with providing safe, effective and affordable family planning services to adolescents. The attitude of service

providers also influences the use and processes in delivery family planning services to adolescents.

The outcome demonstrates the end results of functional structure and set aims. It is basically the effect of health care of the status of patients and the population (Donabedian, 2002). The outcome for the provision of safe, effective and affordable family planning services to adolescents is to promote safe and sexual life and reduce sexually transmitted diseases.

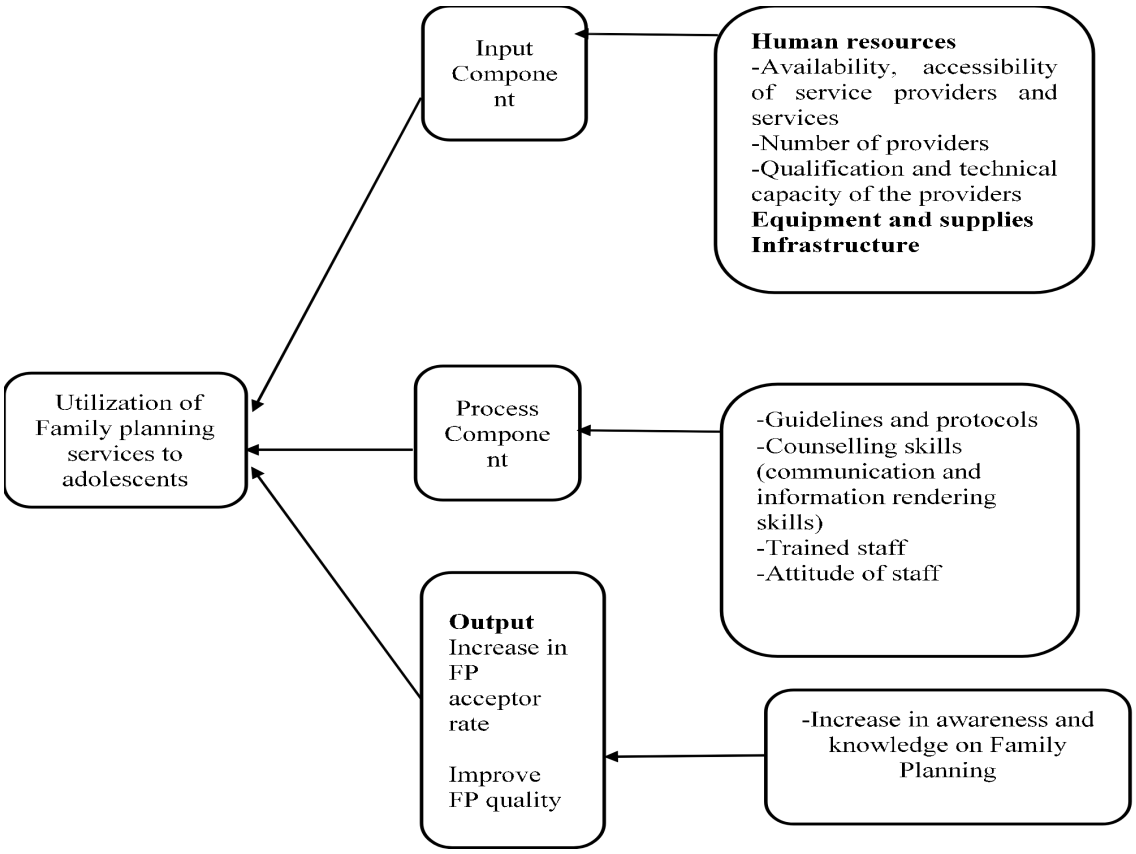

Figure 1.1. Conceptual framework of Family Planning Practices Among aldolescents.

Source: Adopted from Donabedian framework for assessing quality in health care (Donabedian, 1988)

2.9 Summary of the chapter

In conclusion, literature shows low use of contraception in Africa (Ainsworth

et al., 1996). General awareness and knowledge of FP among adolescents outside and within Africa including Ghana are reported to be good in the literature, despite a few differences. However, there are limited studies on knowledge on FP among adolescents in Ghana. Studies in Spain and Yemen showed high FP practices among adolescents compared with adolescents in Africa. This proportion is even lower among Ghanaian adolescents despite reported increase in adolescent sexual activity in Ghana. Attitudes of health workers towards adolescent FP practices also vary globally and between African countries with some reporting negative and others reporting positive attitudes of health workers towards adolescents accessing FP services. Few studies in Ghana have varying reports on factors influencing adolescent FP practices and factors influencing adolescent FP practices. This underscores the need for further investigation. The next chapter presents the methods applied to collect data for this study.

CHAPTER THREE

3.0 METHODOLGY

3.1 Introduction

This chapter presents detailed description of the study design, thus sampling procedure, a sample size calculation, inclusion and exclusion criteria, data quality and assurance, outcome and explanatory variables, data management and analysis and ethical considerations.

3.1 Study Design

The study employed a descriptive cross-sectional design. A cross-sectional study design enables the researcher to obtain a snapshot of the status and relationships between the variables under study (Polit & Beck, 2013). This design was used to guide investigation into family planning practices of adolescents and factors influencing family planning services rendered to adolescents in the Tema Central Sub-Metropolis. The study applied quantitative approaches to data collection. The study was carried out between May and June 2019.

3.2 Study site

The study was conducted in all the four adolescent corners situated in the Tema Central Sub-Metropolis. Tema Central Sub-Metropolis is located in the Tema metropolis, at the southern part of Greater Accra Region. It is one of the metropolises in Greater Accra Region and shares boundaries to the northeast with Dangme West District, south-west by Ledzokuku Krowor Municipal, north-west by Adentan Municipality and Ga-East Municipality,

north by the Akuapim South District and south by the Gulf of Guinea. It covers a total land area of about 87.8 square kilometers. The administrative capital is Tema (Ghana Statistical Service, 2014). The adolescent aged 10 to 19 years make up 18.9% (55,334) of the total Tema Metropolis population. About 91% of the population 11 years and older are literate and of this population, about 48% are literate in both English and Ghanaian languages; 30.5% are literate in English only and 3.2 percent are literate in a Ghanaian language only (Ghana Statistical Service, 2014).

The Tema Central Sub-Metropolis has four adolescent corners. Three are located in Senior High Schools within the sub-metropolis and the fourth one in the Tema General Hospital. These include the CHEMU Senior High School Adolescent Corner, the Tema Methodist Day Senior High School adolescent corner, the Tema Presbyterian Senior High School Adolescent Corner and the Tema General Hospital adolescent corner.

The adolescent corners in the 3 senior high schools within the Tema Central Sub-metropolis are located within the sick bays of these schools. These adolescent corners work on all working days throughout the week. Average annual attendance to all adolescent corners in the Tema Central Sub-Metropolis is 3,984 with the highest numbers coming from the Tema General Hospital. The breakdown includes 2,784 from Tema General Hospital, 432 from CHEMU Senior High School, 336 from Tema Methodist Day Senior High School and 432 from Tema Presbyterian Senior High School. Services provided include general medical assessment, counselling service and reproductive health services all specifically for adolescents. The adolescent

corners in the Tema Central Sub-Metropolis were selected because of the Tema General Hospital adolescent corner which has the largest clientele in the whole of the Tema Metropolis.

A map of Tema Metropolis is shown in figure 3.1.

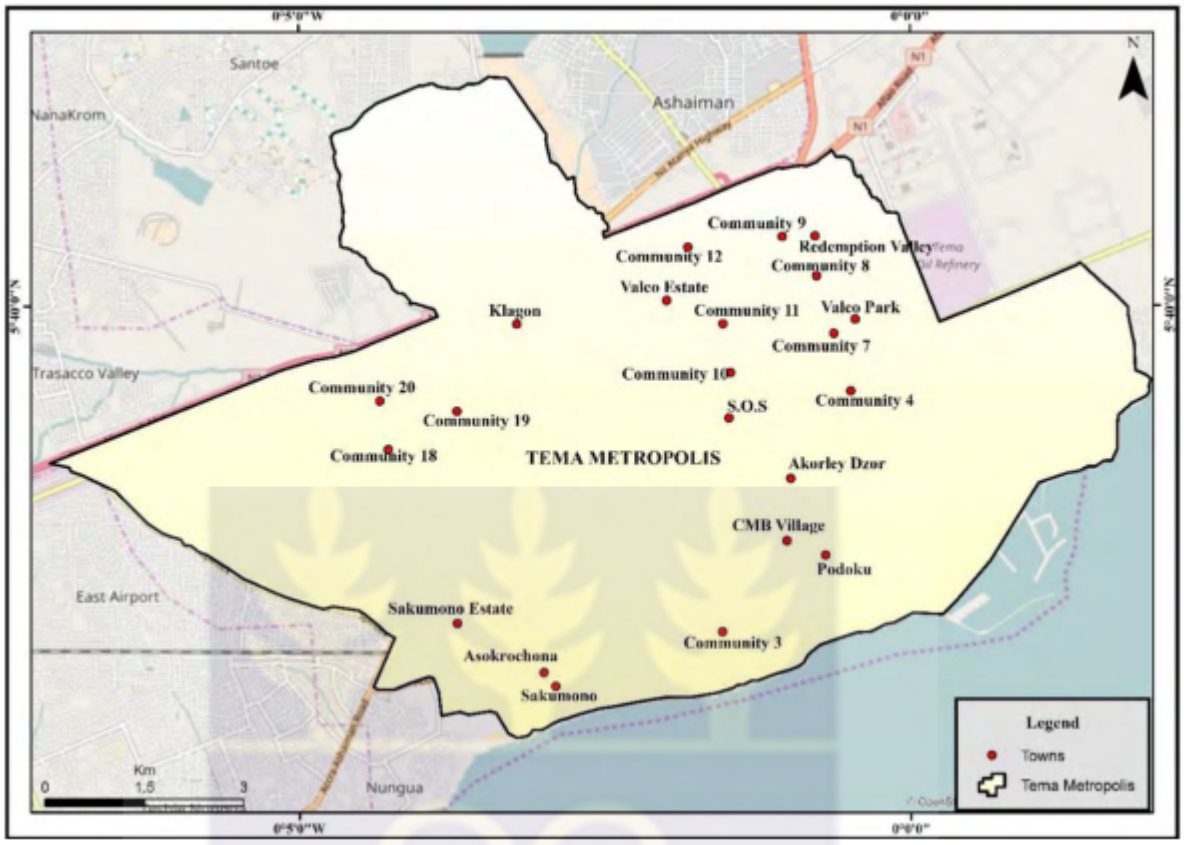

Figure 3.1: Tema Metropolis (Odoi et al., (2017).

3.3 Study population

The study population was made up of male and female adolescents living in the Tema Central Sub-Metropolis.

3.3.1 Inclusion criteria

Due to the vulnerable nature of the target population and the sensitive nature of the phenomenon under study, whereby adolescents might not want their

parents to know of their FP practices, only older adolescents, 16-19 years living in the Tema Central Sub-Metropolis were selected for the study. This was to secure adolescents who were matured enough to consent to their participation in the study. Adolescents 16-19 years of age accessing health care services from any of the four adolescent corners in the Tema Central Sub-Metropolis qualified for inclusion into the study.

3.3.2 Exclusion criteria

Adolescents, 16-19 years who refused to take part in the study were excluded from the study. Adolescents,16-19 years who were sick and looked so unwell to participate were also excluded from the study.

3.4 Variables

3.5.1 Outcome variable

Family planning practices of adolescents in the Tema Central sub-Metropolis.

3.5.2 Explanatory variable

Explanatory variables are variables found to be influencing outcome variables.

Socio-demographic characteristics (sex, age, level of education, religion, culture, perception about youth friendly services).

Input factors (availability, accessibility of services, number of providers, qualification and technical, equipment and supplies and infrastructure)

Process factors (guidelines and protocols, counselling skills, trained staff, attitude of staff)

Table3. 1: Variables in the study

Variable Type	Definition	Scale of Measurement
Dependent variable		
Knowledge of family planning practices	Information that adolescents have about the types, classification and the use of FP methods	Ordinal
Independent Variables		
1. Perception of youth friendly services	Opinions adolescents have about youth friendly services	Ordinal
2. Sex	Gender affiliation of adolescents	Nominal
3. Age (years)	Chronological years of adolescents	Interval
4. Educational level	Primary, secondary or tertiary level of education	Ordinal
5. Religion	Christian, Muslim, Traditionalist or other faith-based affiliation	Nominal

3.5 Sample size

Empirical evidence showed that, prevalence of contraceptive use among adolescents in Accra was 38% (Karim & Samba 2016). The sample size was calculated at 95% confidence level using a formula by Cochran (1977). The formula is given by:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n= required sample size

N= population size

Z^2 = standard normal deviate for two tailed-test based on 95% confidence level = 1.96

p= proportion of adolescents using family planning services = 38%=0.38

q=1-p= proportion of adolescents not using family planning services = 1-0.38 = 0.62

e= margin of error = 5% = 0.05

Therefore, the sample size was calculated as follows:

N= 362.03 = 363 participants

To cater for non-response rate, an attrition rate of 5% was used to adjust the sample size. Thus, 1.05 × 363 = 381. Therefore, 381 adolescents were surveyed in this study.

3.6 Sampling method

The proportionate cluster sampling technique was employed in the selection of respondents for the study. The proportionate cluster sampling technique is a type of cluster sampling technique whereby the sample size of each designated cluster is proportionate to the size of the population (Kemper et al., 2003). By so doing adolescents seeking FP services at the adolescent health corners of the Tema Central Sub-Metropolis were divided into four

clusters based on their average monthly attendance.

Proportionate stratification was then carried out by assigning a sample proportional to each of the adolescent corner's average monthly attendance. With a total average annual attendance of 3,984 adolescents at the adolescent corners, the sample proportional to the population of each of the adolescent corners was calculated as N/3,984 x 381, where N= average monthly attendance of adolescents at the adolescent corners in the Tema Central Sub-Metropolis.

The sample sizes for the selected adolescent corners were proportionately calculated based on their population sizes.

Tema General Hospital	2,784/3984*381= 267
CHEMU Senior High School	432/3984*381= 41
Tema Methodist Day Senior High School	336/3984*381= 32
Tema Presbyterian Senior High School	432/3984*381= 41

The adolescents were then randomly selected from their respective adolescent corners. The random sampling was done by writing "Yes" and "No" into folded pieces of papers and given to the adolescents to pick. The required number of adolescents who randomly pick "Yes" from each adolescent corner was then selected for the study. The picked papers were replaced before the next picking in order to ensure that all the respondents had equal chance of being selected.

3.7 Data collection

A structured questionnaire was administered to the adolescents at the Tema Central Sub-Metropolis. This was in four sections. Section "A" covered socio-

demographic characteristics of the respondents, including their age, sex, religion, level of education. The Section "B" was on knowledge of adolescents of FP services and Section "C" covered FP practices among adolescents. Adolescent perception about youth friendly services was assessed in Section "D".

Structured questionnaires were used to collect data to determine FP practice of adolescents and factors associated with knowledge on FP services delivered to adolescents in Tema Central sub-metropolis. Questionnaire was administered individually to the adolescents. They were all informed about the study and given the questionnaire to fill after they consented to participate. They were allowed enough time to complete the questionnaires after which the filled questionnaires were collected the same day. Those who were unable to read and write English had their questions read out to them in "Twi", a common vernacular in Ghana. This was to ensure that they all understood the questions well and provide appropriate responses.

3.8 Quality Control

To ensure reliable data, the questionnaire was pre-tested on 4 adolescents at the Tema Manhean Senior High School Adolescent Corner. Pre-testing was done to ensure that, errors and inconsistences during data collection were corrected. It also served as an opportunity for the researcher to familiarize with the data collection process. After each day of data collection, the researcher reflected on the field activities to identify challenges during data collection and how to address them. Before leaving the field, the researcher checked for data completeness. During and after data collection, identity codes were used to identify study participants.

3.9 Data analysis

Data was entered into STATA Version 15 for analysis. Demographic data was analysed descriptively using frequencies, percentages, averages and standard deviations. Knowledge of adolescents of FP services was analysed descriptively using frequencies, percentages. The Chi-Square statistic was used to estimate differences in FP knowledge and demographic data of respondents. Statistical significance were considered based on p-value <0.05. Family planning practices of adolescents was also analysed descriptively using frequencies, percentages. Means and standard deviations were used to analyse factors influencing adolescent FP practices and healthcare providers attitude towards adolescent FP services. The results were displayed in tables and graphs.

3.9.3 Validity and reliability of the tool

The questionnaire was adapted from Ghana Health Service patient satisfaction survey tool, (GHS, 2004), but it was modified to suit the purpose of this study. These tools were considered because of the benefit of having good reliability and validity.

Structured questionnaires were used to collect data to determine FP practice of adolescents and factors associated with knowledge on FP services delivered to adolescents in Tema Central sub-metropolis. Questionnaire was administered individually to the adolescents. They were all informed about the study and given the questionnaire to fill after they consented to participate. They were allowed enough time to complete the questionnaires after which the filled questionnaires were collected the same day. Those who were unable to read and write English had their questions read out to

them in “Twi”, a common vernacular in Ghana. This was to ensure that they all understood the questions well and provide appropriate responses.

3.10 Ethical consideration

Ethical clearance:

Ethical approval for the conduct of the study was granted by the ethical review committee of the Ghana Health Service Ethical review Committee with reference number: GH-ERC-074/04/19.

Study area approval: An introductory letter from the school of public health, College of Health Sciences University of Ghana, Legon, was sent to the Tema Metropolitan Health Directorate to inform them about the study, seek approval to collect data within the Tema Central Sub-Municipality. Copies of the letters were sent to the heads of selected schools with adolescent corners and management of the Tema General Hospital for approval to collect data. Permission was sought from all staff in charge of the selected adolescent health corners.

Purpose of study: All respondents were duly informed about the purpose of the study. They were allowed to ask questions and seek clarifications about the study.

Description of consenting process: Although adolescents less than 18 years are considered as minors and require parental accent to take part in the study, the sensitive nature of the study might have deterred adolescents who genuinely wanted if their parents got to know. As such, only adolescents 16-19 years who were considered as matured enough to also consent on their own were contacted. Those who agreed were asked to sign a consent form as evidence of their willingness; Participation was entirely voluntary and no

one was coerced to take part in the study.

Voluntary withdrawal: All respondents (adolescents and FP service providers) were informed that they were free to opt out of the study anytime they wished to discontinue without any penalty.

Potential risks and benefits: This study posed minimal risk to the respondents. However, some respondents might have felt upset and uncomfortable with some of the questions posed to them. In the event of such an occurrence, the participant was referred to a counsellor, a clinical psychologist for counselling and reassurance.

There were no direct benefits from this study. However, the outcome provide evidence-based information that would guide adolescent FP service providers, non-governmental organizations and all stakeholders in their interventions to promote adolescent sexual and reproductive health.

Privacy and confidentiality: Questionnaires were administered individually to ensure privacy. Names and other identifying information about the adolescents were not collected. Codes were rather assigned to each entry instead of names in order to ensure anonymity. Eligible adolescents for the study were also assured that findings from the study and its disseminations will not have their names or any information that could be used to trace or identify them.

Data storage, security and usage: Data collected was only accessible to the researcher and the supervisor. All data collected was stored and saved on a password protected computer. All filled questionnaires were kept under lock and key and safely kept in the custody of the researcher.

Compensation: This study provided for participation.

Declaration of conflict of interest: There exists no conflict of interest in this work.

Protocol funding information: This research work was funded in its entirely by the researcher. No other source of funding was secured.

CHAPTER FOUR

RESULTS

4.0 Introduction

This chapter presents the results of the study and is divided into sections. The first section reports on the socio-demographic characteristics of participants. The remaining sections present the results on level of knowledge of adolescents of family planning (FP) practices, factors influencing knowledge of FP practices among adolescents, FP practices among adolescents and adolescent perception of youth friendly services provided.

4.1 Socio-demographic Characteristics of Respondents

Majority of the respondents were from Tema General Hospital (70%). The remaining adolescents who participated in the study were from the youth friendly units in the three senior high schools, (30%). Average age of the respondents was 17.6 years (SD=0.56) ranging from 16 to 19 years. Majority of them were females (90%). About 92.9% of the respondents were never married. However, 3.9% were cohabiting and 12 (3.1%) were married.

Almost all, 96.9% of the respondents had Senior High school or Technical level of education. Also 41.7% of the respondents lived with both parents and 28.3% of them lived with their mother whiles 9.4% of the respondents lived with other persons who were not their relatives. Table 4.1 shows the result of the socio-demographic characteristics of respondents.

Table 4.2: Socio-demographic Characteristics of Respondents (n=381)

Variable		Frequency (n)	Percent (%)
Institution	Tema General Hospital	267	70
	Chemu Senior High School	41	11
	Tema Methodist Day Senior High School	32	8
	Tema Presbyterian Senior High School	41	11
	Total	381	100
Gender	Male	36	9.4
	Female	345	90.6
	Total	381	100
Religion	Christian	351	92.1
	Muslim	30	7.9
	Total	381	100
Marital status	Never married	354	92.9
	Married	12	3.1
	Cohabiting	15	3.9
	Total	381	100
Level of education	Primary	3	.8
	JHS/ Middle School	9	2.4
	SHS/Technical	369	96.9
	Total	381	100
Who one lives With	Mother	108	28.3
	Father	27	7.1
	Both mother and father	159	41.7
	Siblings	24	6.3
	Relatives	27	7.1
	Other	36	9.4
	Total	381	100

4.2 Adolescent Knowledge and awareness of family planning

Almost all 96.1% of the respondents were aware of family planning. Majority

of the respondents, 94.5% described family planning as a method to prevent pregnancy and space births. About 85% of the respondents indicated pills, IUD, injectables, foaming tablet as family planning methods and 15% indicated the safe period as a family planning method. To most of the respondents, 85% the best time to use contraceptives was all the time. However, 15% of the respondents indicated that the safe period was the best time to use contraceptives.

Furthermore, 72.4% of the respondents indicated that condoms effectively protect against HIV and sexually transmitted infections and effectively protect against pregnancy. On the other hand, 27.6% of them indicated that condoms can disappear inside a woman's body and that it can be used more than once.

Almost all, 96.1% of the respondents indicated the benefits of family planning was helping the mother to regain her strength before another pregnancy and 3.9% of the respondents indicated that family planning allows couples to decide the number of children to have and prevent unwanted pregnancies. This is shown in Table 4.2.

Table 4.3: Adolescents Knowledge and awareness of family planning

Knowledge		**Frequency (n=381)**	**Percent (%)**
Awareness of family planning	Not aware	15	3.9
	Aware	**366**	**96.1**
What one knows family planning is	Abstinence from sex	21	5.5
	Methods to prevent pregnancy and space births	360	**94.5**
Family planning methods that are known	Safe period	57	15.0
	Pills, IUD, Injectable, Foaming tablet	**324**	**85.0**
Best time to use contraceptives	In the safe period	57	15.0
	All the time	**324**	**85.0**
What one knows about condoms	Can disappear inside a woman's body & Can be used more than once	105	27.6
	Effectively protect against HIV and sexually transmitted infections & Effectively protect against pregnancy	**276**	**72.4**
Known benefits of family planning	Allows couples to decide the number of children to have & Prevent unwanted pregnancies	15	3.9
	Helps mother to	366	**96.1**

	regain her strength before another pregnancy		

Knowledge of family planning services was ranked on two levels. Correct answers were ranked 2.0 and all wrong answers were ranked 1.0. Mean scores ranged from 1.0 to 2.0. Means scores at 1.0, 1.1 to 1.5, 1.6 to 1.9 and 2.0 represented poor, average, good and very good knowledge, respectively.

More than half, 420 (55.1%) of the respondents had good knowledge and 330 (43.3%) had very good knowledge of family planning. Twelve (1.6%) however, had average knowledge of family planning.

The main sources of information on family planning among the respondents were from their teachers, 126 (33.1%) and the hospital, 123 (32.3%). This was followed by friends, 45 (11.8%), radio/ television, 45 (11.8%) and parents, 27 (7.1%). The results are in table 4.3.

Table 4.4: Knowledge level and source of information on family planning

Knowledge		**Frequency (n=381)**	**Percent (%)**
Knowledge level of family	Average	12	1.6
	Good	**420**	**55.1**

planning	Very good	**330**	**43.3**
Source of information on family planning	Friends	45	11.8
	Teacher	**126**	**33.1**
	Hospital (Nurse/ Doctor)	**123**	**32.3**
	Radio/Television	45	11.8
	Internet	3	.8
	Parent (Mother/Father)	27	7.1
	Sibling (Brother/Sister)	3	.8
	Other	9	2.4

4.4 Factors influencing Knowledge of Family Planning

A linear logistic regression analysis was performed between level of knowledge of family planning (dependent variable) and age, religion, marital status, level of education of respondents at $P< 0.05$ level of significance. Age ($P<0.05$) and level of education ($P<0.05$) significantly predicted knowledge of family planning.

This implies that older adolescents and adolescents with higher levels of education were significantly more knowledgeable of family planning compared with the younger and less educated adolescents. However, religion and marital status of adolescents did not significantly contribute to knowledge of family planning. Table 4.4 shows the results.

Table 4.5: Relationship between knowledge level and demographic variables

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig P_Value.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	1.996	.723		2.759	.006	.574	3.418
Age	-.005	.029	-.009	-.162	.871	-.061	.052
Religion of respondents	-.092	.099	-.047	-.927	.355	-.286	.103
Marital Status of respondents	-.042	.046	-.048	-.902	.368	-.133	.049
Level of education of respondents	.417	.118	.184	3.525	.000	.184	.649

4.5 Practice of Family Planning among adolescents

As shown in Table 4.5, majority of the respondents, 92.1% had never visited the clinic for family planning services in the past 12 months whiles 1.6% of them had been there once in the past 12 months. But 6.3% of them had visited the clinic for family planning services more than once in the past 12 months.

Secondly, only 3.1% of the respondents had ever used a family planning method to prevent pregnancy. Majority of the respondents, 96.9% had never used a family planning method to prevent pregnancy. Among the 12 respondents who had ever used a family planning method to prevent pregnancy, 75% of them decided on their own to use the family planning method whilst 25% of them were encouraged by their partners to use a

family planning method. Among those who had ever used a family planning method in the past, 50% used the pills and the other 50% observed the safe period.

At the time of the study, only 1.6% of the respondents were using the pills as a family planning method whilst 98.4% of the respondents were not using any family planning method. Among the 6 respondents who were using the pills at the time of the study, 3 obtained it from their partners and the other 3 obtained it from the health facility. Only 3.1% of the respondents discussed family planning with their partners. The results are shown in table 4.5.

Table 4.5: Family planning practices of adolescents

Practice		**Frequency (n)**	**Percent (%)**
How often one has visited the clinic for family planning services in the past 12 months	**None**	351	**92.1**
	Once	6	1.6
	Twice	12	3.1
	Thrice	6	1.6
	Four-Five times	6	1.6
Have you ever used a family planning method to prevent pregnancy?	Ever used	12	3.1
	Never used	369	96.9

If “Yes”, whose decision was it for you to use a family planning method?	My self	9	75.0
	Partner	3	25.0
Family planning method used in the past	Pills	6	50
	Safe period	6	50
Family planning method one is currently using	Pills	6	1.6
	None	375	98.4
Where one obtained the family planning method	Partner	3	50
	Health facility	3	50
Do you discuss the use of family planning methods with your partner?	discuss	12	3.1
	Don’t discuss	3	.8
	Missing	366	96.1

4.6 Adolescents Perception of Youth Friendly Services

When asked about their perception of youth friendly services, majority, 78.8% of the respondents perceived that adolescents did not get their choice of service during a visit to the adolescent youth friendly clinic. Secondly,

majority, 83.5% of the respondents perceived that the health workers at the adolescent clinic make adolescents feel comfortable enough to ask questions. Thirdly, most, 83.5% of the respondents perceived that the health workers at the adolescent clinic involved adolescents in deciding the youth friendly services that would best suit their needs. Table 4.6 displays the results.

Table 4.5: Perception of youth friendly health services

Attitude	Friendly n (%)	Not Friendly n (%)
Do adolescents get their choice of service during visit to the adolescent clinic?	81 (21.3%)	300 (78.7%)
Did the health workers at the adolescent clinic make adolescents feel comfortable enough to ask questions?	318 (83.5%)	63 (16.5%)
Do you perceive that adolescents are involved in the decisions regarding their care when they visited the facility?	318 (83.5%)	63 (16.5%)
Do the service providers spend enough time to listen to adolescents' concerns?	321 (84.3%)	60 (15.7%)
Do the service providers spend enough time to examine adolescents?	327 (85.8%)	54 (14.2%)
Do the service providers treat adolescents in a respectful and friendly manner?	315 (82.7%)	66 (17.3%)
Do the service providers assure	321 (84.3%)	60 (15.7%)

adolescents that, their information will be treated as confidential?		
Do the service providers condemn adolescents' decisions or actions?	309 (81.1%)	72 (18.9%)

Furthermore, 84.3% and 85.8% of the respondents perceived that the staffs at the adolescent clinic would spend time to listen to adolescents and examine them, respectively. In addition, 82.7% and 321 (84.3%) of them perceived that health workers treat adolescents in a respectful and friendly manner and assured adolescents that, their information would be treated as confidential, respectively. However, 309 (81.1%) of them perceived that the service providers condemned adolescents' decisions or actions. This is shown in Table 4.6.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.0 Introduction

This chapter presents a discussion of the findings of the study. The discussion responds to the study's objectives (adolescent knowledge of FP, factors influencing adolescent knowledge of FP, FP practices among adolescents and adolescents' perception of youth friendly services). Firstly, this chapter will consist of a discussion of the demographic characteristics of the respondents in the study. Secondly, a discussion of findings on the knowledge that the youth had on family planning, followed by a discussion of findings on factors influencing knowledge of family planning among the youth. A discussion of findings on practice of family planning among adolescents and adolescent perception of youth friendly services are also presented in this chapter.

To begin with, majority (96.1%) of the adolescents were aware of family planning and majority (94.5%) of them described family planning as methods to prevent pregnancy and space births. Pills, IUD, injectables, foaming tablet were the common family planning methods known (85%). Condoms were known to effectively protect against HIV and sexually transmitted infections and effectively protect against pregnancy (72.4%). Majority (96.1%) of the adolescents indicated that family planning could help the mother to regain her strength before another pregnancy. The main factors influencing knowledge of FP among adolescents were age and level of education of

adolescents.

Only 3.1% of the adolescents had ever used a FP method to prevent pregnancy. About 50% of the respondents used the pills and the other 50% observed the safe period. Only 1.6% was using the pills as a family planning method at the time of the study. Also 50% obtained it from their partners and the other 50% obtained it from the health facility. The adolescents mainly perceived that adolescents did not get their choice of service during a visit to the adolescent friendly clinic (78.8%). However, majority perceived that the health workers at the adolescent clinic make adolescents feel comfortable enough to ask questions (83.5%), involve adolescents in deciding the youth friendly services that would best suit their needs (83.5%), spend time to listen to adolescents (84.3%) and examine them (85.8%).

The average age of the adolescents in this study was 17.6 years (SD=0.56) ranging from 16 to 19 years. This showed that the adolescents were older adolescents (WHO, 2018). In a similar study on adolescents FP knowledge and practices in Kintampo, Ghana, Boamah et al. (2014) assessed adolescents aged 15–19 years with a mean age of 16.9 years. Usually, older adolescents are known to engage in more sexual activities than younger adolescents with high birth rate among adolescent girls from 15-19 years of age (WHO, 2011). This usually mades them more vulnerable to peculiar health risk in relation to reproduction and sexuality. However, their uptake of family planning services was low (Denoo *et al.*, 2015; WHO, 2012; Bradley *et al.*, 2012). As such, this group has the highest need for adolescent health care services compared with younger adolescents.

Majority 90.6% of them were females which also suggested that female adolescents form the largest proportion of clients that access adolescent health care services. This also implies that female adolescents were more health conscious than their male counterparts. They might be accessing adolescent health care services at the adolescent heath corners rather than services from the family planning unit of the adolescent friendly health corner since the use of FP among adolescent girls was known to be low (Darroach *et al.*, 2016). However, literature shows that male adolescents indulge in riskier sexual behaviours than the females (UNFPA, 2016) but this reported none of the males using a FP method.

5.2 Adolescents level of Knowledge and awareness of family planning

One of the objectives of the study was to assess the knowledge that the adolescents had of family planning. Findings from the study show a very high level of awareness (96.1%) of FP among the adolescents. This finding is in line with a study done in India on adolescents' knowledge on FP. The results indicated that almost all the adolescents in the study had heard about FP and were knowledgeable of FP (Renjhen *et al.*, 2010). This elaboration of high level of awareness of FP methods among adolescents also confirms the findings of Masood and Alsonini (2017) from their cross-sectional study where 95% of adolescents in Yemen were found to be aware about FP and sexual health.

Family planning comprises deliberate efforts by couples to control or space birth through the use of contraceptives (Statistical Service, 2014). In this study, majority (94.5%) of the adolescents knew that FP involved methods to

prevent pregnancy and space births. This confirms the finding of Renjhen *et al*. (2010) who assessed knowledge of family planning among adolescents in India. They found that the adolescents knew that the purpose of contraceptives was to aid in the prevention of unwanted pregnancies and to allow for proper birth spacing. Similarly, Dangat and Njau (2013) also found that adolescents in Tanzania had adequate knowledge of FP services. Moyo and Rusinga (2017) in their study on "Contraceptives: Adolescents' Knowledge, Attitudes and Practices. A Case Study of Rural Mhondoro-Ngezi District, Zimbabwe" also found universal knowledge and awareness on FP methods among adolescents in Zimbabwe. This shows that the non-use of FP among the adolescents in this study may be due to other factors other than lack of awareness about the existence of birth control methods.

Commonly known FP methods among the adolescents were the condom, pills, IUD, injectables and foaming tablet (85%). A study in India which was done to assess adolescent knowledge on FP also found that condoms and contraceptive pills were the common contraceptives known to adolescents (Renjhen *et al*., 2010). Similarly, Katama and Hibstu (2016) found that injectables, the oral contraceptive pill and condom were the commonly identified contraceptives among adolescents. The male condom, pills and injectables were also commonly indicated by adolescents in Kintampo, Ghana (Boamah *et al*., 2014). Thus, an indication of high awareness of modern contraceptives among adolescents.

However, just a few (15%) of them indicated the safe period as a family planning method. Observing the safe period as a FP method actually involves

no cost however, it requires discipline and knowledge of the female's menstrual cycle. Thus, an indication that adolescents generally do not understand how to observe the safe period as a FP method or perhaps may not be aware of the safe period as a FP method. This explains why the safe period was not mentioned by adolescents in previous studies (Renjhen *et al.*, 2010; Boamah *et al.*, 2014; Katama & Hibstu, 2016).

Majority (85%) of the adolescents knew that was the best to use contraceptives as all the time. This usually guarantees a pregnancy free sex life within or outside the safe period. There however, exist some knowledge gap among 15% of the adolescents who indicated the safe period as the best time to use contraceptives. Use of contraceptives during the safe period only provides a double guarantee that there will be no pregnancy. This does not imply that contraceptives cannot be used to protect against pregnancy outside the safe period (Yen & Martin, 2013; Boamah *et al.*, 2014).

Among the FP methods commonly known by adolescents, condoms were indicated by 72.4% of the adolescents as a method to effectively protect against HIV and sexually transmitted infections and effectively prevent pregnancy. This confirms the finding of Kayiki and Forste (2011) in Uganda where adolescents were found to be highly aware about the importance of condoms in protecting one from contracting HIV/ AIDS during sexual intercourse. Thus, an indication that the majority of the adolescents had good understanding of how condoms actually work. However, in practice, Muchiri, Odimegwu and Wet (2017) found that the perceived risk of getting infected with HIV among sexually active adolescents in South Africa did not

influence their use of condoms.

The notion that a quarter (27.6%) of the adolescents held that condoms could be used more than once and could disappear inside a woman's body was an indication that some misconceptions still exist among sections of adolescents of condoms in general and how they were used appropriately. These are myths and misconceptions adolescents have about FP methods. However, Gueye, Speizer, Corroon and Okigbo (2015) found that in Africa myths that are held by the youth were that "people who use contraceptives end up with health problems," "contraceptives are dangerous to women's health" and "contraceptives can harm your womb." Adolescents in Chile were also found to have misconceptions of FP (Parra, Domínguez, Maturana, Pérez, & Carrasco, 2013). This implies that more health education needs to be done to address these misconceptions and make all adolescents knowledgeable of FP methods.

Family planning was known by majority (96.1%) of the adolescents to help mothers to regain her strength before another pregnancy. Usually, the spacing of births that occurs with the practice of FP allows the mother enough time to regain her strength physically and psychologically before getting pregnant (WHO, 2015). This is consistent with a study by Katama and Hibstu (2016) in South Ethiopia where it was found that adolescents knew of the importance of contraception and also indicated that FP prevented unwanted pregnancies and could help with birth spacing.

In this current study, the knowledge scores on FP were 55.1% for adolescents reporting good knowledge and 43.3% reporting very good

knowledge of FP. This suggests an overall good knowledge of FP among the adolescents. Studies confirm that adolescents have good knowledge on FP with good knowledge levels ranging from 76.4% among adolescents in northern Tanzania (Dangat & Njau, 2013) to 94.7% among adolescents in South Ethiopia (Katama & Hibstu, 2016). The high level of knowledge of FP among adolescents in this study might be due to the fact that majority (96.9%) of them were pursuing Senior High School or Technical level of education who as part of their curriculum received some form of sexual and reproductive health education. This could be linked to studies conducted in Ghana by Nyarko (2015) which reported that adolescents with higher level of education had good knowledge on FP methods. Similarly, studies inTanzania (Dangat & Njau, 2013) and Yemen (Masood & Alsonini, 2017) also suggested high levels of knowledge of FP among adolescents with higher level of education.

The common sources of information on FP among the adolescents were their teachers (33.1%) and the hospital (32.3%). This suggests the important roles that teachers and health workers play in disseminating information on FP to adolescents. This contradicts the finding from a study in Yemen which showed that television, relatives, radios and newspapers were the common sources of information on FP among adolescents in Yemen (Masood & Alsonini, 2017). In northern Tanzania, Dangat and Njau (2013) also found that the main sources of information on FP among adolescents in their study were the radio and newspaper. Thus, the adolescents in Yemen and Tanzania rely on mass media outlets for information on FP compared with the adolescents in this study who relied on their teachers and health workers

for FP information. This highlights the differences in the sources of information on FP among adolescents in different settings.

5.3 Factors influencing Knowledge of FP

Findings on factors influencing knowledge of FP among adolescents showed significant differences between age ($P<0.05$) and level of education ($P<0.05$) and, knowledge of FP. Usually, as adolescents age, they meet more people and learn more. This is likely to make them get to know more about contraceptives compared with the younger ones. Secondly, this also means that as adolescents climb higher in the academic ladder, the more they get to know about FP. In a similar study in Ghana, Boamah et al. (2014) compared knowledge level and age of adolescents in Kintampo and found that older adolescents, 18-19 years of age had higher knowledge on FP compared with younger adolescents, 15 – 17 years of age. Thus, an indication that the older the adolescent, the more knowledge he or she has of FP.

Boamah *et al*. (2014) also found that adolescents with Senior High School level education or higher had higher knowledge of at least one method of contraception compared with adolescents with Primary/ Junior High School level education or no formal education. Dangat and Njau (2013) also reported that adolescents who were in the higher class had significantly higher knowledge of FP compared with adolescents in the lower class. This could also be linked to the findings of Masood and Alsonini (2017) where the youth with undergraduate level education in Yemen had signifacantly high level of knowledge of FP than the youth who were in the secondary schools. This underscores the need to encourage education among adolescents.

However, Nyarko (2015) found in Ghana, that the highest percentage of contraceptive use was among adolescents with senior high school education or higher and the least use was among adolescents with no formal education.

5.4 Practice of FP among adolescents

One of the objectives of the study was also to assess the practice of FP among adolescents. At the adolescent health corner established in secondary schools and health facilities, adolescent FP services are not the only service provided. Close to 8% of the adolescents in this study visited the FP unit of the adolescent corner at least once within the past one year to access FP services. This implies that the adolescents mainly visited the adolescent corners for other services such as education and counselling, nutrition, first aid and mental health services among others, then to access FP services. Does that mean adolescents are not interested in FP services in general or is it that they prefer to access FP services from other outlets rather than that provided at the adolescent corners? Howard (2017) however, posited that even in situations whereby access to FP services is made easy for adolescents, stigmatising attitudes against pre-marital sexual relations among adolescents or pressure from society to demonstrate fertility may deter adolescents from patronising these FP services. Other studies report of stigmatising attitudes against adolescents use of FP methods (Ahanonu, 2014) and low decision-making power, especially among female adolescents, with regard to the uptake of FP methods (Raj & Chandra-Mouli, 2016), as factors deterring adolescents from taking up FP methods.

In addition, only 3.1% of the adolescents in this study had ever used a FP

method to prevent pregnancy. This suggested how poor use of FP methods among the adolescents. This confirms existing reports that the use of contraceptives in Africa is low (United Nations, 2017). Yet, literature shows that adolescents are increasingly becoming sexually active at a younger age and engaging in sexual activities (McCurdy et al., 2014; Kareem & Samba, 2016), which underscores the need for them to patronise FP services to protect their sexual and reproductive health. The poor practices of FP among the adolescents despite its availability and ease of access at these FP units at the adolescent corners have implications for policy, planning and implementation of the adolescent or youth friendly corners in Ghana.

Only 25% of the adolescents using FP in this study were encouraged by their partners to do so. This percentage was less than the finding of Kareem and Samba (2016) in Korle-Gonno, within Accra, where 30% of sexually active female adolescents was encouraged to use contraceptives by their guardians, partners and healthcare providers. Raj and Chandra-Mouli (2016) on the other hand reported less decision-making power and very rigid societal norms as factors affecting uptake of FP methods among female adolescents in Indonesia. However, Gbagbo and Nkrumah (2019) found that the most vulnerable adolescents in Ghana found it difficult to access contraceptives due to perceived social stigma.

Common FP methods used among the adolescents in this study who had engaged in FP previously were the pills and observing the safe period. However, Kareem and Samba (2016) and Boamah *et al.* (2014) found that condoms were commonly used by adolescents in Ghana.

Only 1.6% of the adolescents in this study reported using the pills as a FP method at the time of the study. This rate was lower compared with the findings of Renjhen et al. (2010) in India where 7% of adolescents used contraceptives at the time of the study (Renjhen *et al.*, 2010). Similarly, McCurdy *et al.* (2014) found that majority (92.4%) of adolescents in Sub-Saharan African nations do not use contraceptives.

Furthermore, the adolescents using the pills in this study usually obtained it from their partners and from the health facility, which contradicted the findings of Boamah et al. (2014) where chemical shops and the pharmacies were known to be major sources from which adolescent's access FP methods from. However, Alege, Matovu, Ssensalire and Nabiwemba (2016) reported that government and private health facilities were the main sources of FP services among young women in Uganda. In some other areas the laws and policies governing the use of contraceptive among adolescents are restrictive which also limits their choices of access to FP services (Chandra-Mouli, McCarraher, Phillips, Williamson & Hainsworth, 2014).

In this study, only 3.1% of the adolescents discussed FP with their partners which may be due to lack of confidence of shyness to discuss FP with their partners. In their quest to assess adolescent decision to use contraceptives in Ghana, Boamah et al. (2014) found that only 42% of the sexually active adolescents did not discuss FP use with their partners whilst 32% of them decided on their own to use contraceptives which were inconsistent with findings from the current study. Low decision-making power among female adolescents may discourage them from discussing family planning with their

partners (Raj & Chandra-Mouli, 2016). Feeling of shyness is also mentioned as one of the reasons why adolescent girls may not discuss FP services with their partners (Shahabuddin *et al.*, 2017).

5.5 Adolescent Perception about Youth Friendly Services

Findings from the study on the perception of adolescents of youth friendly services provided at the adolescent corners showed that majority (78.8%) of them perceived that adolescents usually did not get their choice of service during visits to the adolescent corner. A number of services designed purposively to meet the needs of adolescents is mostly provided at the adolescent health corners. Among them were general health education, management of adolescent developmental problems, sexual and reproductive health education and counselling (including family planning services), nutrition services, mental health services, first aid services, non-communicable disease prevention and services and referral services. Therefore, the inability of adolescents to get their choice of health service from the adolescent clinic raises a lot of concerns.

Instead of the inability to find the FP method of choice at the adolescent corner among adolescents in this study, Fikru *et al.* (2013) rather found shortage in equipment and resources needed to provide FP services for adolescents in Southwest Ethiopia. Secondly, availability and access to FP methods among adolescents were also found as a barrier to adolescent FP uptake by Rojas, Eguiguren, Matamala, Palma and Gálvez (2017) among adolescents in Chile. All these might explain the low patronage of services at the adolescent corners. It also poses a threat to the sustainability of the

adolescent corner concept.

On the other hand, majority (83.5%) of the adolescents perceived that adolescents were made to feel comfortable enough to ask questions at the adolescent corner and were involved in decisions concerning youth friendly services that will best suit their needs. The study done by Atuahene et al. (2016) in the Akwapim North District of Ghana reported that the health care workers at the adolescent corners relate well with the adolescents and created a conducive environment for interaction between the staff and the adolescents. This could also be linked to the finding of Nalwadda, Namutebi and Volgsten (2019) in Uganda, where adolescent FP providers interacted well and put in their best to provide the needed FP services for adolescents.

This shows that the adolescents are encouraged to interact well with the staff at the adolescent corner. Such interactions are usually expected to help health workers identify adolescent health care needs and provide care suitable for these adolescents. The inability of adolescents to access health care services of their choice at the adolescent health corners questions the kind of interaction that goes on between the staff and the adolescents. On the contrary, adolescent girls in Mexico felt uncomfortable discussing FP practices with their health workers (Dansereau *et al.*, 2017). Rojas Ramírez *et al.* (2017) also had a similar finding in Huechuraba, Chile that adolescents were perceived to feel uncomfortable discussing FP issues with health workers due to problems with trust and confidentiality.

Furthermore, the adolescents in this study perceived that the staff at the adolescent clinic spent time to listen to adolescents (84.3%) and examined

them (85.8%). Similarly, in Uganda, Nalwadda *et al*. (2019) found that adolescent FP service providers were willing to teach adolescents about FP and provided them with FP services. Thus, an indication of satisfaction with communication and interaction between the staff and the adolescents at the adolescent corner.

This finding however, was not consistent with findings of Fantahun (2015) in Northwest Ethiopia that the adolescents were rather dissatisfied with how their FP service providers communicated with them.

The adolescents were also of the view that health workers treated adolescents in a respectful and friendly manner (82.7%) and assured adolescents that, their information would be treated as confidential (84.3%). Treatment of clients with respect and ensuring confidentiality with interactions carried out with clients, especially adolescents, are likely to lead to the development of mutual respect and trust between the adolescents and the health staff at the various adolescent corners. This corresponds with a study in Pakistan by Khan *et al* (2017) where positive attitude towards work was reported among health workers attending to adolescent sexual and reproductive health needs. This also confirms another study in the Akwapim North District of Ghana where health care providers were found to greet and introduce themselves to adolescents in order to build good rapport with them thus, creating a friendly environment within which they could interact well with adolescents (Atuahene *et al,* 2016). This however, contradicts the findings in a study in Kenya where FP providers were found to be rude and disrespectful to their clients (Tumlinson *et al*., 2013).

Surprisingly, 81.1% of the adolescents perceived that the service providers condemn adolescents' decisions or actions. Such a condemnation is likely to generate mixed feelings that may discourage adolescents from patronising the adolescent corner. Such condemnation may be due to stigmatizing beliefs and attitudes of healthcare workers against adolescent sexual activity (Howard, 2017). This could be linked with the finding from a study in Nigeria where health workers believed that the provision of contraceptives for adolescents could promote adolescent sexual promiscuity (Ahanonu, 2014). On the contrary, Kareem and Samba (2016) found that no parent, guardian or service provider in Korle-Gonno, Ghana discouraged their female adolescents from using contraceptives.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter focuses on conclusions of the study, implications of the finding for research, policy, practice and education. Also included in this chapter are the limitations of the study and recommendations based on the findings of the study.

6.2 Conclusion

In conclusion, the study revealed that most of the adolescents in the Tema Central Metropolis have good knowledge and are aware of FP as well as their practices. Though the adolescents were able to describe some of the various FP methods, however, their general practice was very poor.

Lastly, the general perception of youth friendly services provided for the adolescents was positive.

6.3 Implications of the Study

The findings from this study have implications for practice, management, education, policy and research for the adolescent or the youth friendly service programme in Ghana. These implications centre on the effectiveness and sustainability of the adolescent or youth friendly service programme in Ghana.

6.3.1 Implications for Research

The fact that the adolescent corner is a developing concept in Ghana has implications for research within the Ghanaian context. The unique meanings

and experiences of adolescents as they visit the adolescent corners for adolescent health services need to be explored. This may help in future planning and refinement of services provided and the way services are provided at the adolescent corners.

6.3.2 Implications for Policy Making

The adolescents perceived their preferred choice of service at the adolescent corner was not available. This has significant implications for policy making and planning in order to ensure sustainability of the programme. The Ghana Health Service and its partners should develop programs that ensure deeper involvement of adolescents in the planning and implementation of services provided at the adolescent corners. This may help ensure that services provided at the adolescent corners best suit the needs of adolescents.

6.3.3 Implications for Practice and Management

The poor patronage of FP services among adolescents at the Tema Central Sub-Metropolis has significant implications for practice and management of the adolescent corners. It behooves on the Ghana Health Service, Ghana Education Service, non-governmental organizations and all stakeholders in collaboration to make health services more attractive at the adolescent corners to keep the patronage.

6.3.4 Implications for Education

General findings from the study showed that misconceptions of FP still existed among some adolescents. This implies that FP should be considered as a key part in the general courses thought in secondary schools. This may help equip adolescents with the necessary knowledge of FP.

6.4 Limitations to the Study

Firstly, the use of a structured questionnaire in quantitative study restricted respondents' chances of providing explanations to answers provided. However, many options were provided to enable the respondents find options that represent the best description of their choice of answer.

Secondly, conducting a scientific inquiry into a sensitive issue such as family planning among an adolescent population made it difficult to get participants who were willing to open up and share their experiences. As a result of this, staffs that already provided services for adolescents at the targeted adolescent corners were involved in the recruitment of respondents and the collection of data in order to increase their participation in the study.

6.5 Recommendations

Based on the findings of the study, the following recommendations were made;

1. Findings from the study showed that most of the adolescents perceived that they did not get their preferred choice of service at the adolescent corner. There is the need for the Ghana Health Service, Ghana Education Service, non-governmental organisations and all stakeholders to re-strategize and do thorough needs assessment and involve the youth in planning of services that will be provided at the adolescent corners. This will help plan and provide services that best suit the needs of the youth and make them satisfied with the youth friendly services provided at the adolescent corners in the country.

2. General patronage of FP services at the FP unit of the adolescent

corners of the Tema Central Sub-Metropolis was poor. This underscores the need for the Ghana Health Service, Ghana Education Service, non-governmental organisations (NGOs), Parent-Teacher Association (PTA) and all stakeholders in collaboration with the media to further support adolescent FP services at the youth friendly units. This may help create more awareness and make the FP services attractive to these adolescents and consequently increase patronage of FP services provided at the adolescent corners by the adolescents.

3. Despite the overall good knowledge adolescents had of FP, some misconceptions still existed and not all the FP methods were known. Community health nurses in collaboration with the school health and education programme coordinators should intensify health education campaigns on FP in schools, adolescent clubs and at the adolescent corners to broaden their knowledge and address misconceptions that adolescents have about some FP methods.

4. The creation of adolescent corners is a new emerging concept targeted to promote adolescent reproductive and sexual health. Future qualitative studies should be conducted to explore experiences of adolescents at youth friendly units. This may help policy makers understand the unique experiences associated with adolescent patronage of youth friendly services and the meanings they derive from the patronage of these services.

REFERENCES

Ainsworth, M., Beegle, K., & Nyamete, A. (1996). The impact of women's schooling on fertility and contraceptive use: A study of fourteen sub-Saharan African countries. *The World Bank Economic Review*, *10*(1), 85-122.

Adugnaw, B., Sibhatu, B., Alemayehu, A., Sudhakar, M., Alemayehu, B., & Kebede, D. (2011). Men's knowledge and spousal communication about modern family planning methods in Ethiopia. *African journal of reproductive health*, *15*(4), 24-32.

Afenyadu, D. & Goparaju, L. (2003). Adolescent Sexual and Reproductive Health Behaviour in Dodowa, Ghana. Washington: *USAID and CEDPA*.

Ahanonu, E.L. (2014). Attitudes of Healthcare Providers towards Providing Contraceptives for Unmarried Adolescents in Ibadan, Nigeria. *Family Reprod Health,* 8(1): 33–40.

Ahmed S., Li Q., Liu, L. & Tsui A.O. (2012). Maternal deaths averted by contracep- tive use: an analysis of 172 countries. *The Lancet 380: 111–25.* Doi: 10.1016/S0140-6736(12)60478-4 PMID: 22784531

Alege, S. G., Matovu, J. K., Ssensalire, S., & Nabiwemba, E. (2016). Knowledge,

sources and use of family planning methods among women aged 15-49 years in Uganda: a cross-sectional study. *The Pan African medical journal,* 24, 39. doi:10.11604/pamj.2016.24.39.5836

Alehegn, B. G., Mulunesh, T. T., Yilkal, T. A., Abebaw, A. G. (2018). Sexual and Reproductive Health Services Utilization and Associated Factors among Preparatory School Students in Mecha District, Northwest Ethiopia: Cross Sectional Study. *J Gynecol Women's Health*, 11(5): 555824. DOI: 10.19080/JGWH.2018.11.555824

Apanga P. A. & Adam M. A. (2015). Factors influencing the uptake of family planning services in the Talensi District, Ghana. *Pan African Medical Journal; 20:10* Doi:10.11604/pamj.2015.20.10.5301

Atuahene M. D., Afari E. O., Adjuik M. & Obed S. (2016). Health knowledge, attitudes and practices of family planning service providers and clients in Akwapim North District of Ghana. *Contraception and Reproductive Medicine 1:5.* DOI 10.1186/s40834-016-0016-3

Boamah, E.A., Asante, K.P., Mahama, E., Manu, G., Ayipah, E.K., Adeniji, E. & Owusu-Agyei, S. (2014). *Journal of Contraception, 5,* 7—15. DOI https://doi.org/10.2147/OAJC.S56485

Boerma J.T., Bryce J., Kinfu Y., Axelson H., & Victora C.G. (2008). Mind the gap: equity and trends in coverage of maternal, newborn, and child health services in 54 Countdown countries. *Lancet;371(9620):1259–67.*

Bradley S.E.K., Croft T.N. & Fishel J.D. (2012). Revising unmet need for family planning. *DHS Analytical Studies 25: 63.*

Canadian Paediatric Society (November, 2003). Age limits and adolescents. *Paediatr Child Health, 8*(9), 577-8.

Carrasco-Garrido, P., López de Andrés, A., Hernández Barrera, V., Jiménez-Trujillo, I., Santos-Sancho, J. & Jiménez-García, R. (2011). Predictors of contraceptive methods among adolescents and young women residing in Spain. *The Journal of Sexual Medicine, 8*(9), 2431-8. doi: 10.1111/j.1743-6109.2011.02346.x.

Cates W. J., Abdool Karim Q., El-Sadr W., Haffner D.W., Kalema- Zikusoka G. (2010). Global development. Family planning and the millennium development goals. *Science, 329:1603.*

Chandra-Mouli, V., McCarraher, D.R., Phillips, S.J., Williamson, N.E., & Hainsworth, G. (2014). Contraception for adolescents in low- and middle-income countries: needs, barriers, and access. *Reprod Health,* 11(1), 1.

Chernick, L.S., Schnalld, R., Higgins, T., Stockwellb, M.S., Castañoc, P.M., Santellib, J. & Dayana, P.S. (2015). Barriers to and enablers of contraceptive use among adolescent females and their interest in an emergency department-based intervention. *Contraception, 91*(3), 217–225 DOI: https://doi.org/10.1016/j.contraception.2014.12.003

Csikszentmihalyi, M. (February, 2019). Adolescence. Encyclopaedia Britanica. Accessed 10/04/2019 from https://www.britannica.com/science/adolescence

Dangat, C. M., & Njau, B. (2013). Knowledge, attitude and practices on family planning services among adolescents in secondary schools in Hai district, northern Tanzania. *Tanzania Journal of Health Research*, *15*(1), 1–8. https://doi.org/10.4314/thrb.v15i1.

Dansereau, E., Schaefer, A., Hernández, B., Nelson, J., Palmisano, E., Ríos-

Zertuche, D. … El Bcheraoui, C. (2017). Perceptions of and barriers to family planning services in the poorest regions of Chiapas, Mexico: a qualitative study of men, women, and adolescents. *Reprod Health*; 14: 129.

Darney, B. G., Saavedra-Avendano, B., Sosa-Rubi, S. G., Lozano, R., & Rodriguez, M. I. (2016). Comparison of family-planning service quality reported by adolescents and young adult women in Mexico. *International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics*, 134(1), 22-8.

Darroch J. E., Woog V., Bankole A. & Ashford L. S. (2016). *Adding it up: Costs and benefits of meeting the contraceptive needs of adolescents*. New York, Guttmacher Institute

Denno D. M., Hoopes A. J., & Chandra-Mouli V. (2015). Effective Strategies to Provide Adolescent Sexual and Reproductive Health Services and to Increase Demand and Community Support. *Journal of Adolescent Health 56; S22-S41*

Donnel C. O., Yue K. & Sparks P.L. (2010) The effect of spousal communication on contraceptive use in Central Terai, Nepal. *Patient Educ Couns;81(3):402-408.*

Enuameh Y., Tawiah C., Afari-Asiedu S., Nettey O. E. A., Sulemana A., Mahama E., … Owusu-Agyei S. (2014). Making Family Planning Services Relevant to Adolescents: Perspectives from Rural Communities in Central Ghana. *Open Journal of Preventive Medicine*, 4, 852-859.

Fantahun. M. (2015). Quality of Family Planning Services in Northwest

Ethiopia. *Ethiop. J. Health Dev.* 19(3). 195-203

Fikru, T., Mirkuzie, W., Berhane, M. (2013). Quality of Family Planning Services in Primary Health Centers of Jimma Zone, Southwest Ethiopia. *Ethiop J. Health Science*. 23:3

Fruhauf T., Zimmerman L., Kibira S. P. S., Makumbi F., Gichangi P., Shiferaw S., … Tsui A. (2018). Measuring family planning quality and its link with contraceptive use in public facilities in Burkina Faso, Ethiopia, Kenya and Uganda. *Health Policy and Planning; 33, 828–839* Doi: 10.1093/heapol/czy058

Gaetano, M., Lutuf, A., Zaake, D. & Annika, J. (2014). Predictors of Contraceptive Use Among Female Adolescents in Ghana. *African Journal Reproductive Health Mar; 18(1): 102.*

Gbagbo, F.Y., & Nkrumah, J. (2019). Family planning among undergraduate university students: a CASE study of a public university in Ghana. *BMC Women's Health, 19* (12), 1-9.

GDHS.(2014).Ghana Health Service. *Ghana Demographoc and Health Survey*.

Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF Macro. Ghana Demographic and Health Survey 2008: Key Findings. Calverton, Maryland, USA: GSS, GHS, and ICF Macro. 2009.

Ghana. Statistical Service. (2014). *2010 population and housing census report*. Ghana Statistical Service.

Gough, K. V., Tipple, A. G., & Napier, M. (2003). Making a Living in African Cities: The Role of Home-based Enterprises in Accra and Pretoria. International Planning Studies, 8(4), 253–277. https://doi.org/10.1080/1356347032000153115

Gueye, A., Speizer, I.S., Corroon, M., & Okigbo, C.C. (2015). Belief in Family Planning Myths at the Individual and Community Levels and Modern Contraceptive Use in Urban Africa. *International Perspectives on Sexual and Reproductive Health*, *41*(4), 191-199. doi: 10.1363/4119115

Gyesaw, N.Y. & Ankomah, A. (2013). Experiences of pregnancy and motherhood among teenage mothers in a suburb of Accra, Ghana: a qualitative study. *Int J Womens Health,* 12 (5) 773-80.

Hoffman, S. J., G. E. Guindon, J. N. Lavis, H. Randhawa, F. BecerraPosada, B. Boupha, G. Shi, Research to Policy & Practice Study Team. (2016). "Clinicians' knowledge and practices regarding family planning and intrauterine devices in China, Kazakhstan, Laos and Mexico." Reproductive Health. 13 (1):70. doi:10.1186/s12978-016-0185 1. http://dx.doi.org/10.1186/s12978-016-0185-1.

Howard, S. (July, 2017). Why adolescent contraceptive access and use is a global issue. Asccessed 10/04/2019 from http://blogs.biomedcentral.com/on-health/2017/07/11/family-planning-2020-why-adolescent-contraceptive-access-and-use-is-a-global-issue/

Hutchinson P.L., Do M. & Agha S. (2011). Measuring client satisfaction and the quality of family planning services: a comparative analysis of public and pri- vate health facilities in Tanzania, Kenya and Ghana. *BMC Health Services Research* 11: 203.

International Planned Parenthood Federation (IPPF) (2010). *Facts on the sexual and reproductive health of adolescent women in the developing world.* Guttmacher Institute.

Jayachandran, V., Chapotera, G., Stones, W. (2016). Quality of facility-based

family planning services for adolescents in Malawi: Findings from a national census of health facilities. *Malawi medical journal: the journal of Medical Association of Malawi*, *28*(2), 48-52.

Kareem, M. & Samba, A. (2016). Contraceptive use Among Female Adolescents in Korle-Gonno, Accra, Ghana. *Gynecology & Obstetrics, 6,* 414. doi: 10.4172/2161-0932.1000414

Katama, S.K., Hibstu, D.T. (2016). Knowledge, Attitude and Practice of Contraceptive Use Among Female Students of Dilla Secondary and Preparatory School, Dilla Town, South Ethiopia, 2014. *Health Care in Low Settings*. 1(4). DOI: 10.4081/hls.2016.5680

Kayiki, S.P. & Forste, R. (2011). HIV/AIDS Related Knowledge and Perceived Risk Associated with Condom Use among Adolescents in Uganda. *Afr J Reprod Health,* 15(1), 57-63.

Kemper, E. A., Stringfield, S., & Teddlie, C. (2003). Mixed methods sampling strategies in social science research. *Handbook of mixed methods in social and behavioral research*, 273-296.

Khan, T.A., Shah, H.B.U., Atif, I., Khan M.A., Mustafa, A. (2017). Knowlede, Attitude and Practices of Adolescent Health Workers .*Pak Armed Forces Med J 2017;*, *67*(3), 446–452.

Lauria L, Donati S, Spinelli A, Bonciani M, Grandolfo ME. The effect of contraceptive counselling in the pre and post-natal period on contraceptive use at three months after delivery among Italian and immigrant women. *Ann Ist Super Sanita;50(1):54-61*

Malini B. & Narayanan E. (2014). Unmet Need for Family Planning Among

Married Women of Reproductive Age Group in Urban Tamil Nadu. *Journal of Family and Community Medicine: 21(1), 53-5.*

Masood, M. S. A., & Alsonini, N. A. A. (2017). Knowledge and Attitude about Reproductive Health and Family Planning among Young Adults in Yemen. *International Journal of Population Research*, *2017*, 1–10. https://doi.org/10.1155/2017/1895472

Mbeki, G., Karama. M., Mwaniki, P. (2017). Factors associated with the quality of family planning services rendered to women of reproductive age at two health facilities in Nairobi Country, Kenya. *International Journal of Medical and Health Research*. 3(12);2454-9142

McCurdy, R.J., Schnatz, P.F., Weinbaum, P.J. & Zhu, J. (2014). Contraceptive use in adolescents in Sub-Saharan Africa: evidence from Demographic and Health Surveys. *Conn Med.*, 78(5), 261-72.

Michaels-Igbokwe, C., Terris-Prestholt, F., Lagarde, M., Chipeta, E, & Cairns, J. (2015) Young People's Preferences for Family Planning Service Providers in Rural Malawi: A Discrete Choice Experiment. *PLoS ONE 10(12): e0143287*. Doi:10.1371/journal. pone.0143287

Moyo, S. & Rusinga, O. (2017). Contraceptives: Adolescents' Knowledge, Attitudes and Practices. A Case Study of Rural Mhondoro-Ngezi District, Zimbabwe. *Afr J Reprod Health*, 21(1), 49-63.

Mpunga, D., Lumbay J.P., Dikamba, N., Mwembo, A., Mapatano, M.A., Wembodinga, G. (2017). Availability and quality of family planning services in the Democratic Republic of the Congo: High potential for Improvement. *Global Health: Science and Practice.* 5:2

Muchiri, E., Odimegwu, C., & Wet, N.D. (2017). HIV risk perception and

consistency in condom use among adolescents and young adults in urban Cape Town, South Africa: a cumulative risk analysis. *Southern African Journal of Infectious Diseases*, 32 (3), 105-110.

Nalwadda, G., Namutebi, M, & Volgsten, H. (2019). Health care providers' perceptions of family planning and contraception education for adolescents in Kampala, Uganda – A qualitative study. *Sexual & Reproductive Healthcare, 21,* 15-20.

Nyarko, S.H. (2015). Prevalence and correlates of contraceptive use among female adolescents in Ghana. *BMC Women's Health*, 19;15:60. doi: 10.1186/s12905-015-0221-2.

Odoi, A. N. K. (2017). *Utilisation of Youth-Friendly Health Services among Adolescents in the Tema Metropolis* (Doctoral dissertation, University of Ghana).

Omishakin, M.Y.K. (2015). Knowledge, Attitude and Practice of Family Planning among Healthcare Providers in Two Selected Health Centres in Osogbo Local Government, OsunState. Women's Health & Gynecology. 1: 1-4

Parra, V.J., Domínguez, P.J., Maturana, R.J., Pérez, V.R. & Carrasco, P.M. (2013). Adolescents' knowledge and perceptions of the family planning service in Chile. *Salud Colect.*, 9(3), 391-400. doi: 10.1590/S1851-82652013000300009.

Polit, D. F., & Beck, C. T. (2013). *Study guide for essentials of nursing research: appraising evidence for nursing practice*. Lippincott Williams & Wilkins.

Petroni, S. (2011). Improving youth sexual and reproductive health in the

developing world: An evidence-based approach

Rahman, M. M., & Kabir, M. (2005). Knowledge of adolescents on contraception and dynamics of its use. *Health and Population: Perspectives and Issues*, *28*(4), 164–177.

Raj, A., & Chandra-Mouli, V. (2016). *Family Planning for Married Girls: Lessons Learned From ICFP 2016.* Accessed 3/03/2019 from https://www.girlsnotbrides.org/family-planning-for-married-girls-icfp-2016/.

Razi, C.H., Bakırtaş, A.D. S. (2011). Knowledge and Attitudes of Adolescents towards asthma. *Int Arch Allergy Immunol.*, *156*(1), 81–89

Renjhen, P., Kumar, A., Pattanshetty, S., Sagir, A., & Samarasinghe, C. M. (2010). A study on knowledge, attitude and practice of contraception among college students in Sikkim, India. *Journal of the Turkish German Gynecological Association*, *11*(2), 78-81 doi:10.5152/jtgga.2010.03

Ringheim, K. & Gribble J. (2010). Improving the Reproductive Health of Sub-Saharan Africas Youth: A Route to Achieve the Millennium Development Goals. Population Reference bureau, Washington DC.

Rojas Ramírez, G., Eguiguren Bravo, P., Matamala Vivaldi, M.I., Palma Manríquez, I., & Gálvez Pérez, G. (2017). Adolescent access to contraception: perceptions of health workers in Huechuraba, Chile. *Pan African Journal of Public Health, 41* (77), 1-8.

Shahabuddin, A.S.M., Nöstlinger, C., Delvaux, T., Sarker, M., Bardají. A., Brouwere, V.D., & Broerse, J.E.W. (2016) What Influences Adolescent Girls' Decision-Making Regarding Contraceptive Methods Use and Childbearing? A Qualitative Exploratory Study in Rangpur District,

Bangladesh. *PLOS ONE, 11*(6), e0157664

Tessema G. A., Laurence C. O., Mahmood M. A. & Gomersall J. S. (2016). Factors determining quality of care in family planning services in Africa: a systematic review protocol. *JBI Database of systematic Reviews and Implementation Reports, 2016* DOI: 10.11124/JBISRIR-2016-003056

UNAIDS (2010). World report on the global AIDS epidemic. Geneva: Joint United Nations Programme on HIV/AIDS (UNAIDS)

WHO (2011a). Mortality estimates by cause, age, and sex for the year 2008. Geneva: World Health Organization

WHO (2011b). Preventing early pregnancy: What the evidence says. Geneva: WHO.

WHO (2011c). WHO guidelines on preventing early pregnancy and poor reproductive health outcomes among adolescents in developing countries. Geneva: WHO, 2011.

WHO (2019). The age of adolescence. The Partnership for Maternal, Newborn and Child Health. Accessed 10-04-2019 from https://www.who.int/pmnch/media/news/2018/the-age-of-adolescence/en/

World Health Organization (WHO) (2015). Family planning/contraception

Yen, S., & Martin, S. (2013). Contraception for adolescents. *Pediatr Ann., 42*(2), 21–25.

Yue, K., O'Donnell, C., & Sparks, P. L. (2010). The effect of spousal communication on contraceptive use in Central Terai, Nepal. *Patient education and counseling*, *81*(3), 402-408.

APPENDICES

APPENDIX A: QUESTIONNAIRE

UNIVERSITY OF GHANA
SCHOOL OF PUBLIC HEALTH
DATA COLLECTION TOOL

Project Title: Family Planning Uptake among Adolescents in the Tema Central Sub-Metropolis, Greater Accra Region

I am conducting a study on family planning practices of adolescents and the factors influencing family planning practices of adolescents in the Tema Central sub-Metropolis. I will be grateful if you could spend a little of your time to complete this questionnaire. There are no right or wrong answers. Any information provided is private and confidential. This study is only for academic purposes. Your participation in this study is entirely voluntary. Please feel free to answer the questions below.

INSTRUCTION: Please circle your choice of answer or write in the spaces

provided.	
SECTION I: SOCIO-DEMOGRAPHIC CHARACTERSITICS	
District: ……. **Date:** …….. **Name of interviewer:** ……	
1. Age of adolescent (in years)	……
2. Gender	1. Male 2. Female
3. Religion	1. Christian 2. Muslim 3. Traditional 4. Other (Specify): ……..
4. Marital Status	1. Never married 2. Married 3. Divorced 4. Co-habiting 5. Widow/widower
5. Level of education	1. No formal education 2. Primary 3. JHS/Middle school 4. SHS/Technical 5. Tertiary
6. Who do you live with?	1. Mother 2. Father 3. Both Father and Mother 4. siblings 5. Relatives 6. Others (specify): ……
SECTION B: KNOWLEDGE ON FAMILY PLANNING	
1. Have you heard of family planning?	2. Yes 1. No
2. What was your main source of information on family planning?	1. Friends 2. Teacher 3. Hospital (Nurse/ Doctor) 4. Radio/ Television 5. Internet 6. Parent (Mother/Father)

	7. Sibling (Brother/Sister) 8. Other (specify): ……
3. What is family planning?	1. Abstinence from sex 2. Methods to prevent pregnancy 2. Methods to prevent pregnancy and space births 1. Methods to prevent HIV/ ADS and sexually transmitted infections
4. Which family planning methods do you know of? *(you may circle more than one option)*	1. Safe period 2. Condom, Pills, Injectables, Emergency contraceptives, Foaming tablets, IUD
5. What is the best time to use contraceptives?	• In safe period • All the time
6. What do you know about condoms	1. Can disappear inside a woman's body & Can be used more than once 2. Effectively protect against pregnancy & Effectively protect against HIV and sexually transmitted infections
7. What are the benefits of family planning?	1. Prevent unwanted pregnancies & Allows couples to decide number of children to have 2. Helps mother to regain strength before another pregnancy & Allows couple to have time to nurture and bring up children well
SECTION C: FAMILY PLANNING PRACTICES	
1. In the past 12 months, how often have you visit the clinic for family planning services?	…… times
2. Have you ever used a family planning method to prevent pregnancy?	1. Yes 2. No (***If "No" move to question 9***)
3. If "Yes", whose decision was it for you to use a family planning method?	1. My self 2. My partner 3. Joint decision

4. Which family planning method(s) have you used in the past? *(you may circle more than one option)*	1. Condom 2. Pills 3. Injectables 4. Emergency contraceptives 5. Foaming tablets 6. IUD 7. Safe period 8. Other (specify): ……. …….
5. If "Yes", which family planning method(s) are you currently using? *(you may circle more than one option)*	1. Condom 2. Pills 3. Injectables 4. Emergency contraceptives 5. Foaming tablets 6. IUD 7. Safe period 8. Other (specify): ……. …….
6. Where did you obtain your current family planning method?	1. Partner 2. Health facility 3. Pharmacy/ Drug store 4. Friend 5. Other (specify): …….
7. Do you discuss the use of family planning methods with your partner?	1. Yes 2. No
8. If "No", do you intend to use family planning method in the future?	1. Yes 2. No
9. Did you obtain the family planning method of your choice during your visit to the family planning unit?	1. Yes 2. No
SESSION D: PERCEPTION ABOUT SERVICES PROVIDED AT THE ADOLESCENT CORNER	
1. Did the health workers at the adolescent clinic make you feel comfortable enough to ask questions?	1. Yes 2. No
2. Did you feel that you were involved in the decisions regarding your care when you	1. Yes 2. No

visited the facility?	
3. Do the service providers spend enough time to listen to your concerns?	1. Yes 2. No
4. Do the service providers spend enough time to listen to you and examine you?	1. Yes 2. No
5. Do the service providers treat you in a respectful and friendly manner?	1. Yes 2. No
6. Do the service providers assure you that, your information will be treated confidential?	1. Yes 2. No
7. Do the service providers condemn your decisions or actions?	1. Yes 2. No

APPENDIX B: INTRODUCTORY LETTER I

UNIVERSITY OF GHANA
DEPARTMENT OF HEALTH POLICY,
PLANNING AND MANAGEMENT
SCHOOL OF PUBLIC HEALTH

Ref. No.:.....

January 24, 2019

The Director
Tema Metropolitan Health Directorate
Tema

Dear Sir/ Madam,

LETTER OF INTRODUCTION

I write to introduce to you Douglas Adu-Fokuo, Master of Public Health (MPH) student of the Department of Health Policy Planning and Management, School of Public Health, University of Ghana, Legon. As part of the requirements for the award of MPH degree, he is expected to undertake a piece of research to enable him write his dissertation.

His research topic is " Factors associated with Family Planning Services rendered to Adolescents in Tema Central District, Greater Accra Region".

He is in the process of applying for ethical clearance from the Ethical Review Committee, Ghana Health Service for the study. I shall therefore be grateful if your outfit could provide him with any needed information at your facility for his study

Counting on your cooperation. .

Thank you.

Yours faithfully,

Dr. Patricia Akweongo
Head of Dept.

APPENDIX C: INTRODUCTORY LETTER II

In case of reply the number and date of this letter should be quoted.
My Ref. No. GHS/MHD/
Your Ref. No. .....

GHS Core Values

- PEOPLE -CENTERED
- PROFESSIONALISM
- TEAM WORK
- INNOVATION/EXCELLENCE
- DISCIPLINE
- INTEGRITY

Tema Metro Health Directorate
GHANA HEALTH SERVICE
PRIVATE MAIL BAG
TEMA
Tel: 0302 975 715

5th March, 2019

THE MEDICAL DIRECTOR
TEMA GENERAL HOSPITAL
TEMA

LETTER OF INTRODUCTION

The bearer of this letter is **Douglas Adu-Fokuo** from the University of Ghana Department of Health Policy, Planning and Management, School of Public Health. As part of the requirements for the award of MPH degree, he is expected to undertake a piece of research to enable him write dissertation.

He is permitted to undertake a research on the topic "**Factors Associated with Family Planning Services Rendered to Adolescents in Tema Central District, Greater Accra Region.**"

Kindly cooperate and accord him the necessary assistance and information he would need from your facility.

Thanks in advance

DR JOHN B. K. YABANI
METRO DIRECTOR OF HEALTH SERVICES
TEMA

APPENDIX D: PARTICIPANT INFORMATION SHEET

UNIVERSITY OF GHANA
SCHOOL OF PUBLIC HEALTH
PARTICIPANT INFORMATION SHEET

Appendix I: Informed Consent: Parents with adolescents aged below 18 years

Study Title: FAMILY PLANNING PRACTICES AMONG ADOLESCENTS IN TEMA CENTRAL SUB-METRO, GREATER ACCRA REGION

Introduction

I am in the person of Douglas Adu-Fokuo, a Masters student of the University of Ghana, School of Public Health and I am conducting a study on ***"Family Planning Practices among Adolescents in Tema Central sub-metro, Greater Accra Region".***

Telephone numbers: 0545490252 / 0505871133

Email: adufokuodouglas@gmail.com

Address: BT 426, Community 2, Tema

Place of work: Ghana Health Service, Headquarters

Name of Supervisors: Dr. Patricia Akweongo

Telephone numbers: 0243138376

Email: akweongo@gmail.com

Background and Purpose of research

The general objective of this study undertaken by Douglas Adu-Fokuo, a student of the School of Public Health, University of Ghana, is to determine Family Planning (FP) Practices of adolescents (16 to 19 years) and factors influencing family planning practices among adolescents (16 to 19 years) in the Tema Central sub-metropolis.

The purpose of the study includes: to determine level of knowledge of

adolescents on FP services, to investigate FP practices among adolescents in the Tema Central sub-metropolis, to determine

the factors influencing adolescent FP practices and to explore healthcare provider's attitude towards adolescent FP services in the Tema Central sub-metropolis. Adolescent's level of knowledge on family planning services and use will be deduced. Key factors influencing family planning practices of adolescents in Tema Central sub-Metropolis in the Greater Accra Region Ghana will be established. The findings will help inform measures to strengthen the healthcare system to improve family planning practices among the adolescents.

In Ghana demand for FP is 40% whiles usage stands at 34% (PMNCH, 2013). There is low patronage of family planning services among adolescents in Ghana (Enuameh et al., 2014). Evidence from the Ghana Demographic and Health Survey revealed the proportion of adolescents (10-19 years) who received family planning services in Tema metropolitan in 2016 stood at 10%. This reduced to 5.4% in 2017. In 2016 and 2017, family planning acceptor rate for adolescents in Tema central was 4.9% and 2.5% respectively. However, adolescent family planning services acceptor rate dropped from 2.5% in 2017 to 0.8% in 2018.

Afenyadu and Goparaju (2003) in their study in Ghana found that among sexually active adolescents, 41% did not use a condom, 34% did not use any modern contraceptive (e.g. vaginal foaming tablet, pill, condom, IUD, injectables, Norplant) and 30% did not use any family planning method at all during their last sexual encounter. Lack of knowledge about sex and family planning and the lack of skills to put that knowledge into practice prevent

adolescents from patronizing family planning services which places them at risk of unintended pregnancy (Gyesaw & Ankomah, 2013). Some sexually active adolescent girls in Ghana don't even know they could fall pregnant from engaging in sexual intercourse (Gyesaw & Ankomah, 2013).

Interventions aimed at increasing family planning uptake and usage among adolescents include school and community-based educational programs, mass-media campaigns, peer education and provision of youth friendly health services in clinical and outreach services (Michaels-Igbokweet al., 2015). However, the uptake of FP practices among adolescents still remain low. There is therefore the need to investigate adolescent FP practices and the factors influencing uptake of FP services among adolescents in the Tema Central sub-metropolis.

Nature of research

Randomly selected adolescents aged 16-19 years leaving within Tema Central sub-District will be included in the study.

Eligible participants who agree to partake in the study will be required to complete an interviewer-administered questionnaire. You will be asked question about your background, level of knowledge on family planning, level of satisfaction of family planning services rendered by healthcare providers, use of family planning services and providers-to-adolescents' relationship during family planning services. 126 participants are expected to be involved in the study. The study will take place at two randomly selected adolescent health corners and enumeration areas in Tema Central sub-District.

Participants involvement

If you agree to partake in the study, you will be required to truthfully answer a set of structured questions concerning the study. It will take at least 20 – 30

minutes of your time and will be administered to by a trained research assistant.

Risk /Benefits of the study

Participating in this study i**s** an opportunity for you to contribute to the determination of Family Planning (FP) Practices among adolescents (16 to 19 years) and factors influencing family planning practices among adolescents (16 to 19 years) in the Tema Central sub-metropolis. Participants will also be acknowledged in the research study. Apart from the time you will spend during the interview, the study will cause you no harm and money.

Funding information

I am funding this study personally. There is no any other sponsor.

Confidentiality

All the information collected about you during the study will be treated confidential. Your name will not be needed or used for the final data analysis. Instead of names, codes will be assigned to you for identification.

Compensation

You will be duly acknowledged in the final thesis for your participation, cooperation and contribution.

Mode of participation

You are not required to pay any amount of money or be forced to take part in this study. It will be recommendable that participant give full co-operation and feel confident during data collection. Also participants will not be paid after the study since the study is self-sponsored and purely for academic purpose. Participation is voluntary and you can withdraw at any stage without any penalty and you can opt out at any time. This will not affect service delivery.

Questions

You are at liberty to ask any question about the study as well as seek clarifications on any issue during administration of the questionnaire.

Provision of Information and Consent for participants

A copy of the Information sheet will be given to you after it has been signed or thumb-printed to keep.

Contact for further information

If you have any question about the study, you may contact: (Douglas Adu-Fokuo, Tel: 0545490252, Email: adufokuodouglas@gmail.com)

If you have any question about the study and your rights as a participant, you can contact the Ghana Health Service Ethical Review Committee at the following address:

Hannah Frimpong

GHS-ERC Administrator

GHS-Ethical Review Committee

Research and Development Division

Ghana Health Service

P.O. Box MB 190

Accra-Ghana

Office: 233(0)243235225 / 0507041223

Email: Hannah.Frimpong@ghsmail.org

APPENDIX E: PARTICIPANT CONSENT FORM

Study Title: FAMILY PLANNING PRACTICES AMONG ADOLESCENTS IN TEMA CENTRAL SUB-METRO, GREATER ACCRA REGION

PARTICIPANTS' STATEMENT

I acknowledge that I have read or have had the purpose and contents of the Participants' Information Sheet read and that all questions have been satisfactorily explained to me in a language I understand (English/Twi/Ga). 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 or Initials of Participant…… ID Code …….

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

OR Mark (Please specify) ……

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 (Twi/Ga) language to his proper understanding.

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

Name of Interpreter……

Signature of Interpreter…….

Date: ……

Contact Details

APPENDIX F: 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 (English/Twi/Ga)

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 ……

OR Mark (please specify) ……

Date: ……

INVESTIGATOR STATEMENT AND SIGNATURE

Brief statement or declaration that investigator has given enough information to participants to make informed decisions.

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……

APPENDIX G: ETHICAL APPROVAL LETTER

GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

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

Research & Development Division
Ghana Health Service
P. O. Box MB 190
Accra
Tel: +233-302-681109
Fax + 233-302-685424
Email: ghserc@gmail.com

MyRef. GHS/RDD/ERC/Admin/App 191127
Your Ref. No.

3rd May, 2019

Douglas Adu-Fokuo
University of Ghana
School of Public Health

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

GHS-ERC Number	**GHS-ERC 074/04/19**
Project Title	Family Planning Practices among Adolescents in the Tema Central Sub-Metropolis, Greater Accra Region
Approval Date	3rd May, 2019
Expiry Date	2nd May, 2020
GHS-ERC Decision	**Approved**

This approval requires the following from the Principal Investigator

- Submission of 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.
- 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. CYNTHIA BANNERMAN
(GHS-ERC CHAIRPERSON)

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