Factors that	influences the	e use of co	ontraceptives	among	adolescents
in Ghana					

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Factors that influences the use of contraceptives among adolescents in Ghana

A thesis submitted in partial fulfilment of the requirement for the degree of Master of Public Health

By Emmanuel Kwesi Ayipah

Declaration:

Where other people's work have been used (either from a printed source, internet or any other source) this has been carefully acknowledged and referenced in accordance with departmental requirements.

The thesis "Factors that influences the use of contraceptives among adolescents in Ghana" is my own work.

Signature

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ABBREVIATIONS

ASRH Adolescent Sexual Reproductive Health

ASRHC Adolescent Sexual Reproductive Health Centers

CHPS community-based health planning and services

CHN Community Health Nurses

CHO Community Health Officers

DFID Department for international development

DHD Division for Health and Development

FGD Focus Group Discussions

GARHP Ghana adolescent reproductive health policy

GDP Gross Domestic Product

GHS Ghana Health Services

GOG Government of Ghana

GYC Gulu Youth Centre

HIV Human Immunodeficiency Virus

HDI Human Development Index

ICPD International Conference on Population and Development

IDI In-depth Interviews

IUDs Intra Uterine Devices

LMIC Low and Middle Income Countries

MOE Ministry of Education

MOH Ministry of Health

NRHP National Reproductive Health Strategic Plan

NTCD Nontraditional Condom Distributor

PATH Program for Appropriate Technology in Health

PDA Participatory Development Associates

PoW Program of Work

PSP Peer Service Provider

SRH Sexual and Reproductive Health
SRHR Sexual and Reproductive Health and Rights
STF Straight Talk Foundation
STI Sexually Transmitted Infection
UNFPA United Nations Fund for Population Activities
UNICEF United Nations Children Fund
WHO World Health Organization
YHFG Youth Harvest Foundation Ghana

ABSTRACT

Background: The identifying the various factors that influence the use of modern contraceptives among adolescents are relevant for efforts that are aimed at improving contraceptive use to reduce teenage pregnancies and STI, including HIV. This study therefore sought to recommend to policy makers to strengthen, or adopt strategies that have proven to improve modern contraceptive use among adolescents in Ghana.

Method: Published literature were reviewed for the required data for the study. It included English literature published after 2005. Nevertheless, some classics and strategic documents that were published before 2005 with relevance to the study were also included. Considering the complexity of adolescent reproductive health, the ecological model was used for the study.

Results: Factors that determined the use of contraceptives among adolescents in Ghana include the individual, relationship, community and the society which were embedded in Parent and child communication gaps, transactional sex, coerced sex, early marriage, gender norms, and attitudes of service providers.

Conclusion and Recommendation: Non-use of contraceptives resulted in sexually transmitted infections, pregnancies and deaths among adolescents. Contraceptive use could be improved through comprehensive, pragmatic and sustainable interventions that involves peer educators, males, opinion leaders, and adolescent sexual reproductive health training for community health officers. Programs that addressed gender norms with access to contraceptives were found to be effective.

Key words: factors, contraceptives, systematic reviews, pregnancy, Ghana. **WORD COUNT**: **11,924**

INTRODUCTION

My first experience of research on sexual reproductive health was in the years 2000-2008 when I was a fieldworker supervisor on The Vitamin A supplementation trial, locally called "ObaapaVitA". It was a clusterrandomised, double-blind, placebo-controlled trial that was carried out in seven districts in the Brong Ahafo Region in Ghana to compare the outcome with a previous trial in Nepal which found that vitamin A supplementation or its precursor (betacarotene) when given to women of reproductive age (15-45 years), reduces pregnancy-related mortality by 44% (95% CI 16-63). (1) The study participants included women of reproductive age (15-45 years) who were formerly consented to participate and were either given a vitamin A supplement (25 000 IU retinol equivalents) or placebo capsule, administered orally once every week with monthly follow-ups for data collection to identify pregnancy-related mortality and all-cause female mortality as primary outcomes. Unfortunately, the body of evidence was not enough to conclude that vitamin A supplementation was effective to support safe motherhood.

Again, in 2011, I was a research officer in charge of field work for the Oxytocin in Uniject Study. This study was also a community- based, clusterrandomized trial which was carried out in four rural districts in Brong Ahafo Region of Ghana to find out if Oxytocin in Uniject stored under room temperature, and administered by Community health officers (CHO) will prevent postpartum hemorrhage. (2) The study was safe and the outcome was positive. In 2012 again, we carried out a study on Knowledge and use of contraceptives among adolescents in Kintampo. The outcome of the study indicated more than 80% of adolescents had knowledge contraceptives yet a half of that group only used contraceptives during sex (3) These findings drew the attention of the Research Centre to form the sexual reproductive health (SRH) unit in 2015, to explore more about adolescent's sexual reproductive health.

The topic for this study is therefore of great importance to me and the research institution. It offered me the opportunity to do further review of literature on factors that determines contraceptive use among adolescents in Ghana and other parts of the world. The SRH unit is the newest in the Centre and working on this topic will add to my knowledge, and contribute to the development of research in the Centre and Ghana as a whole.

THE STRUCTURE OF THE REPORT

The study is structured in a manner that correspond with the outline of the objectives in the report. It consist of five main chapters. Chapter one discusses the background information of Ghana which includes the geography and demography, economy, Ghana adolescent reproductive health policy, contraception in Ghana, the health system, and education. The next chapter which is chapter two, discusses the problem statement and justification for the study, the methodology used for the study and the conceptual framework which is used to organize and analyze the findings of the study. Chapter three follows with the discussions of the main findings of the study from literature reviewed. It explains the interaction of the various factors that are influential in determining the use of contraceptives among adolescents in Ghana. Chapter four takes on interventions and programs that that have proven to effectively improve contraception in Ghana and other African countries which could be adapted by stakeholders in Ghana. Chapter five covers the discussions, conclusion and recommendations based on the best practices identified in the study.

1. CHAPTER ONE: BACKGROUND INFORMATION OF GHANA

1.1 Geography and demography

The republic of Ghana is located on the western coast of Africa, sharing boundaries with three west African countries namely Burkina Faso to the north, Cote d'Ivoire to the west and Togo to the east. The Gulf of Guinea and the Atlantic Ocean also borders the south, which forms the coastline of Ghana with a total land area of 238,537 square kilometers (4) (see Figure 1 in appendix I) Map of Ghana showing neighboring countries.

The country is divided into three vegetative zones: The coastal lands, deciduous forest extending from the south towards the middle belt and the savannah which covers the three northern regions. The climate is tropical throughout the year with two major seasons; dry and wet season characterized by harmattan and rains falls. (5) For political administration, Ghana, has 10 regions with 216 districts, with a population estimated to be 24,658,823 (6) with different densities across the regions increasing from 79 per square kilometer (km2) in 2000 to 102 per square kilometer (km2) in 2010 and 114 per square kilometer (km2) in 2014. The population is youthful with a large proportion of children below 15 years (38.8%) and a small proportion of the elderly (4.7%) aged 65 years and above. (5)

1.2 Economy of Ghana

Ghana was accorded the status of lower middle income on November 5, 2010, after the country's official Gross Domestic Product (GDP) per capita reached US\$1,363. In addition to the known traditional export commodities of Ghana (cocoa, timber, and minerals such as gold, bauxites, and manganese) the country now produces and exports crude oil making it likely to become aid independent. (5)

The Human Development Index (HDI) value of Ghana which measures the overall achievement of its socio-economic indicators increased from 0.391 in 1980 to 0.573 in 2014, showing an appreciation of 47 percent. This improvement in the social and economic dimensions resulted in Ghana becoming a medium human development country after it was ranked 138 out of 187 countries, and territories. (5)

1.3 The Ghana adolescent reproductive health policy (GARHP)

The Government of Ghana designed the adolescent reproductive health policy in 2000 in line with the objectives and purposes of the 1992 constitution; the goals of Vision 2020; the Youth and HIV/AIDS Policies; and the national health policy protocols and standards. (7) The Ghana Adolescent Reproductive Health Policy (GARHP) Policy also affirms the government's commitment to her international obligations including the objectives of the

International Conference of Population and Development (ICPD) of 1994, the Fourth Women's Conference in Beijing in 1995 and the post conference meetings held in The Hague in 1999 and New York in 2000. The policy intention was to promote proper implementation of adolescent sexual and reproductive health programmes and activities. (See appendix II). (7)

1.4 GHANA'S COMMITMENT TO INTERNATIONAL SRH POLICIES

1.4.1 The Maputo protocol

The Maputo protocol required member states to commit resources to improve sexual reproductive health and rights. It also highlighted on individual's right to life, integrity and security and clearly states among other things that women deserves to be treated with respect and integrity. People who treat women with violence must therefore face the rigors of the laws. Adolescents should be provided with adequate information about their rights to enable them report cases of violence such as forced sex to the appropriate legal agencies. (8) (See appendix III)

1.4.2 London summit

Furtherance to the affirmation of national commitments to family planning, Ghana announced during the London summit, plans to make contraceptive services free within the public sector facilities as well as ensuring their availability at the private facilities with the needed support for making them accessible to the people. (9) In pursuance of the London summit, the Government of Ghana in 2015, came out with another five years national strategic framework for implementation, starting 2016 to 2021, with some key priorities including adolescent rights to information, access and use of contraceptives within the age bracket 10-24 years. (5)

Youth promoters and adolescent friendly services will provide the various services including contraception. (9) Priority will be given to counseling and customer care and expansion of contraceptives commodities with variety to allow people make choices. (9) Long acting and permanent methods will be made available at the community level to be administered by lower cadre of health workers, thereby relieving the burden on the higher level health workers. (9) The CHN who operate at the lower level are trained to administer the long-acting reversible contraceptives. (9) Under the MDG 5 Acceleration framework, the government came up with a comprehensive multi-sectoral program to improve family planning which include advocacy, communication and male involvement such as the "Real Man" campaign. (9)

1.4.3 The sustainable development goals (SDGs)

The SDGs and the United Nations Global Strategy for Women's, Children's and Adolescents' Health are a combined global strategies that are expected to impact positively on the ASRH especially on LMIC if the various programs and interventions aimed at solving adolescent health problems are effectively implemented between 2015 and 2030. (10) (11) Even though, the goals have been agreed upon, discussions on indicators that will be tackled to achieve the targets through ASRH programming, policies and resources at global, national and local level. (12) One critical area is the SDGs 3 nine targets which could improve access and use of contraceptive services by vulnerable groups including adolescents. (13) Universal access to reproductive health services has been found to be an important factor contributing to many aspects of human life due to its ability to prevent the consequences of morbidity and mortality among women and particularly adolescents. (13)

1.5 Contraception in Ghana

In 1994, the International Conference on Population and Development (ICPD) in Cairo, discussed and regarded reproductive health contraception as a human rights issue which was also indicated in the MDGs. The Government of Ghana in collaboration with the Ministry of Health (MOH) over the years showed a high level of commitment to seeing improvement in the utilization of contraceptives across the various regions of the country. In 2007, the government developed a National Reproductive Health Strategic Plan (NRHSP) to assure among other health issues, promotion and provision of quality family planning services in order to increase the prevalence of contraceptives. (14) The GDHS conducted in 2014 have classified contraceptives into two types: modern and traditional methods: methods, available in Ghana, include short term acting methods such as the Pill and Spermicide, and Condoms (male and female condoms), long acting reversible contraceptives (LARC) such as implants, intrauterine device and injectables and more permanent methods such as female and male sterilization. The traditional methods usually include abstinence or rhythm, the withdrawal method, and the folk (the use of charms, herbs, among others) as well as continuous breastfeeding. The two main methods of contraception, the short and long term methods, are available in all health facilities that provide the services of family planning. The implant, intrauterine and Jadelle are considered as long term that could be reversed whiles vasectomy for males and the female sterilization are more permanent and maybe irreversible include the vasectomy for males and the female sterilization. The short term methods also include the oral contraceptives

(microgynon and microlut), and the injectables (Norigynon and Depo Provera). (15) The Ghana Demographic Health Survey (GDHS) report for 2014 indicates that the male condom is the most used modern contraceptive in Ghana, followed by the injectable and the oral contraceptives. The family planning commodities including procurement of contraceptives, is the responsibility of the MOH, but in some cases, international agencies and organizations have over the years supported in the procurement of modern contraceptives, to rollout programs and interventions at various levels, and these agencies include, the United State Agency for International Development (USAID), United Nations Populations Fund (UNFPA), World Health Organization (WHO) and USAID/Deliver Project. (15) Private health care facilities also play a role in the provision of contraceptives. (16) (17) Even though the public sector is the largest source of contraceptive methods in Ghana serving 64% of clients, an increased from 39% in 2008, 33% of users get their contraceptives from the private health facilities, largely from chemical or drug stores (22%) and pharmacies (7%). The users from the private facilities also dropped from 51% in 2008 to 33% in 2014 signifying a sharp drop in users who accessed their methods from either the chemical shops or drug stores. With regards to the specific methods, implants (94 %), female sterilisation (92%), injectables (90%), and IUDs (84%) are accessed or performed in the public health facilities. (18) Inspite of the improved procurement methods for family planning commodities between 2013 and 2014 which led to a slight increase in the family planning acceptance rate from 25% to 29% respectively, the GDHS still reported a high (51%) unmet need for contraception among adolescents age 15-19 years. (18)

1.6 The health system

In 1996, the Ghana Health Service (GHS) was established to provide health care services to the public under a statutory Act 525. It is an autonomous body under the MOH vested with the responsibility of the implementation of all national health policies. Its mandate is "To provide and prudently manage comprehensive and accessible quality health services with emphasis on Primary Health Care in accordance with approved national policies." The vision of the Ghana Health Service is to promote "A Healthy population with Universal Access to Quality Health Service." (15)

Notwithstanding the importance of the GHS and all efforts to ensure the health of the population at large is improved, the service continues to experience challenges and as of 2013/2014, the GHS report indicated it is still battling with its sub-district structures. Problems hindering the effectiveness of the health system include inadequate programs to serve the

needs of the people at the various communities under the sub-district which weakens their community engagement for routine activities. (15)

Funds for the operation of the GHS for some few years now have been withdrawn by the GOG which also hampers the smooth operations of the health service delivery in the country with particular effect on the implementation of promotion and prevention activities at the public health level. Delays in releasing funds for the reimbursement to the National Health Insurance Authority (NHIA) is another challenge affecting the performance of health delivery. (15)

1.6.1 Human resource for health

The number of skilled staff over the years have increased nationwide and this has helped in closing up the gap of staff inadequacy. More Community Health Workers (CHW) were trained to provide contraceptive services at the CHIPS in the rural areas as well as make compound visitation to provide services including contraceptives. (19) These efforts have been tremendous yet the impact on rural and remote areas still needs more to be done. (15) According to the 2014 report, the Ghana Health Service is the largest health workforce institution with 54,082 health workers representing 64% of the total health workers in the health sector. This indicates an increase of 4% in staff strength from 2013. The second largest representing organization (14%) is the Christian Health Association of Ghana (CHAG) followed by the Teaching Hospitals (11%) across the regions of the country. Trends in the distribution of Health Workforce among the various agencies shows a steady increase in the number of staff with the exception of the Health Training Institutions and Health Trainees. (15)

1.6.2 Health care financing

The Government of Ghana in 2003 established the National Health Insurance Scheme (NHIS) under a statutory law (Act 650) which requires every citizen to enroll for a health insurance coverage which could either be in a form public (NHIS) or private coverage. Membership is voluntary, and people are not penalized for not being able to enroll. A fee for membership and ID card is paid in addition to yearly premiums by individuals not contributing to social security. Workers who have social security contribute to the scheme on monthly basis through the SSNIT. Some category of people are however exempted from paying premiums: "People over age 70; Children under 18 whose parents both enrol; The "core poor," defined as being unemployed with no visible source of income, no fixed residence, and not living with someone employed and with a fixed residence" (20) (21) and now include all pregnant women since 2008. (22)

The premiums for membership as prescribed by the NHIA guidelines are paid according to level of income which ranges from GhC 7.20 for the "very poor" to GhC 48.00 for the "very rich" (23). Implementation of this operation has since not been successful because of difficulty in determining accurate income for people in the private sector. (23)

1.7 Education

The 2010 population and housing report shows that 23.4 % Ghanaians aged three years and above has never attended school. The proportion who are attending school and those who have ever attended school are 39.5% and 37.1% respectively. Those never attended school in the rural area (33.1%) is more than twice that of the urban area (14.2%) with a difference between males (9.1%) and females (14.3%) who have never been to school. (6)

There is also a variation in school attendance among the regions with the highest proportion of people who have never attended school in the three northern regions with a range between 44.5% in Upper East and 54.9% in the Northern region. The rest of regions ranges from 10.1% in the Greater Accra to 26.4% in Brong Ahafo Region. Nearly half (46.4%) of the population are in primary schools while 18% are in Junior High and Senior High School. Females are relatively higher (53.0%) than males (4 0.5%) with Primary and Junior High and Senior High School as their highest educational level. This implies a likelihood of higher female drop-out at the basic level compared with males. (6)

CHAPTER 2: PROBLEM STATEMENT, JUSTIFICATION, OBJECTIVES AND METHODOLOGY

2.1 Problem statement

Globally, 16 million adolescents aged 15-19 years give birth each year accounting for 11% of all recorded births. (24) Pregnancies, STIs, and maternal mortality among adolescents is unacceptably high and has become a public health concern. (25) (26) (27) Pregnancy and delivery complications are the leading causes of death among adolescents (15-19) in low and middle income countries. (28) The high morbidity and mortality risk among adolescents decreases with age between 10-19 years. Whiles 10-14 years is considered more risky, giving birth at 15 and 16 years is equally high risk and this has been reported as a huge contributor of death among this younger age group. (28) (29) Married adolescents are less able to negotiate for contraceptives use because the norms of society requires them to have sex only in marriage and so, in wedlock, they are expected to make babies. Some unmarried adolescents who are sexually active equally have sexual intercourse without protection. Nonuse of contraceptives which sometimes result in STIs, or unintended pregnancies may lead to unsafe abortion, violence, disability, school drop-out, unemployment, and reproductive health problems. (30) (31) (32)

In Ghana, the GDHS revealed that 11% of women aged 25-49 years had first sexual intercourse by age 15, 44% by age 18, and 68% by age 20, and the median age for women 25-49 years at first intercourse was 18.4 years. 15% of adolescents (married and unmarried) 15-19 years were found to be pregnant during the survey. (18) Though, literature points that adolescents are sexually active, discussions about contraception at the family level is mostly on abstinence, whiles issues of modern contraception is rarely spoken about due to religious and cultural norms which defines sex as a preserve for married couples. (33) (34) Cross sectional surveys in Ghana revealed that unmarried adolescents are involved in risky sexual behavior (35) for reasons including curiosity (38%), paid sex (28.5%), peer pressure (21%) and parents not being able to cater for their basic needs (12%) at home (36). and the consequences of non-condom use among adolescents include STIs (6.6% for females and 6.9% for males aged 15-19 years) and pregnancies, including other modern methods of contraception, which may result in unsafe abortions and maternal deaths (10%) as revealed by a facility based study, which is a public health concern in Ghana. (37)

2.2 Justification

Modern contraceptives are a better choice for the prevention of STIs and pregnancies and they have been recommended for use by adolescents. (3) However, the GHS report in 2014 showed a low use of contraceptives among adolescents in Ghana. The reasons for this as revealed in an earlier survey by Clottey et al. include ignorance of how contraceptives prevents the occurrence of pregnancy, inability to negotiate for contraceptive use, cultural and religious factors, access and affordability. (38) Preventing teen pregnancy is generally considered a priority among policy makers and the public because of its high economic, social, and health costs for families and the state. (39) The health sector Program of Work (PoW) initiated by the Ministry of Health (MoH) made provisions to improve access to adolescent health services including contraception at community level through the health facilities, the School Health Education Program (SHEP) under the Education Service (GES). International Non-Governmental Organizations (NGO) also rolled out programs targeting adolescents by providing education that promotes healthy behaviors, and empowerment to prevent teenage pregnancy including HIV and AIDS among adolescents in Ghana. (40) (41) Inspite of all these efforts, Ghana still has a high record of adolescent pregnancies including STI due to low use of contraceptives. (18) Considering the evidence that abstinence has been the main approach through education, to prevent STI and pregnancies among adolescents, it is imperative to review existing literature to find out other factors that influences the use of contraceptives. The findings of this study will be used to inform the Ministry of Health, Non-Governmental Organizations (NGO), Non-Governmental Organizations International (INGO), international organizations and other stakeholders that play a role in adolescent health and development, to adopt strategies to address the problem of teenage pregnancy by exploring factors that inhibit modern contraceptive use among adolescents in Ghana.

2.3 Overall objective

To explore factors that influences contraceptive use among married and unmarried adolescents in order to recommend interventions to increase contraceptive use to prevent teenage pregnancy, STIs and HIV in Ghana.

2.3.1 Specific objectives

 To describe the individual, socio-cultural and economic factors that influence access and use of modern contraceptive methods among adolescents.

- To assess health system factors affecting sexual reproductive health services to adolescents in Ghana.
- To review the effectiveness of interventions on improving contraceptive use among adolescents in Ghana and outside of Ghana.
- To make recommendations to policy makers to strengthen or adopt strategies that have proven to improve modern contraceptive use among adolescents, in order to prevent STIs and unintended pregnancy.

2.4 Methodology

To document the various factors that influence modern contraceptive use among adolescents in Ghana, a literature review was done. The review covered two thematic areas. First of all, issues related to socio-cultural factors and also health systems, and interventions that are effective in improving contraceptive use among adolescents in Ghana.

Published articles, peer reviewed journals and grey literature were considered for the review. The internet was the main source for literature retrieval and the search was done using Google, Google Scholar, PubMed, Researchgate, VU library, Cochrane library and other International Institutions websites such as WHO, UNFPA, UNICEF, USAID, and FHI. The local institutional websites include the Kintampo Health Research Centre (KHRC), MoH, GHS, and Ghana Statistical Service (GSS). Publications that were done in English language and were after 2005 were considered. A few publications that provided some anthropological, and historical data before 2005 were also included in the review.

The first search strategy was conducted by combining key words that identified the determining factors for utilization and reasons for contraceptive use. Relevant articles thus include:

- Reviews on the determinants of contraceptive use by scientific journals and reports from international organizations.
- Cross sectional survey data on adolescent contraceptive use in Ghana.
- Anthropological articles on the cultural settings related to SRHR in Ghana.

The second strategy used terms relating to programs and interventions to select articles that include:

- Qualitative studies that gave account of community involvement in adolescent reproductive health issues.
- Systematic reviews on interventions that have proven effective on reducing teenage pregnancy through safe sex among adolescents using the Cochrane database.
- Other studies in Africa that reports on successful interventions related to the prevention of teenage pregnancy.

The table below describes a summary of the search process that was used to retrieve literature for the review:

TABLE 1: SUMMARY OF SEARCH STRATEGY

STUDY OBJECTIVE	SOURCE	KEY WORDS
To describe the individual, socio- cultural and economic factors that influence access and use of modern contraceptive methods among adolescents.	,	Adolescents Men Gender Norms Decision making Residence Early marriage Reasons Teenage pregnancies Ghana Ghana Africa Beliefs Contraceptives Utilization Socio-cultural Income
 To assess health system factors affecting sexual reproductive health services to adolescents in Ghana. 	Researchgate Google Scholar PubMed	Accessibility Acceptability Affordability Availability Attitudes

To review the effectiveness of interventions on improving contraceptive use among adolescents in Ghana and outside of Ghana.	websites PubMed	Interventions Programs Policies Evidence Ghana Africa Systematic Reviews Contraceptives

2.5 Conceptual framework: the ecological model for contraceptive use among adolescents

To analyze factors that influence modern contraceptive use among adolescents in Ghana, a search for a suitable conceptual framework initially found two well-known conceptual frameworks: the Anderson Behavioral model, and the Health Belief model. These models where however found to operate largely at individual level and seldom used for SRH studies and interventions due to the difficulty in applying them to conceptualize pregnancy prevention in relation to the complex nature of contraceptive use determinants. (28)

The ecological model has been widely used to understand factors that determines health behaviors and outcomes. It was also used to explain that adolescent sexual and reproductive health (SRH) is largely influenced by multiple factors such as social, cultural, political, economic, and inequalities. These factors increases their vulnerability to SRH risks (e.g., unsafe sex, sexual coercion, early pregnancy) and forms barriers to access to SRH information and services. (42) This framework has therefore been chosen to apply in identifying, understanding and explaining the multiple factors that interact to determine the sexual behavior with regards to the utilization of contraceptives and its consequences among adolescents. (43) (44) Notwithstanding the importance of the individual behavior as a factor, the model transcends to include the influence of structural factors that are far beyond, and are critical in shaping behavior and determining outcomes related to health and development including contraception. (43)

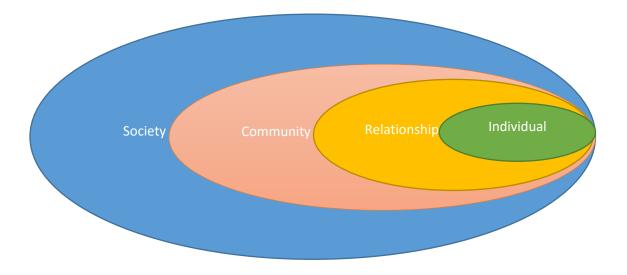
The study will review interventions and make recommendations to address factors at multiple levels as a tenet of the framework, which are proven to be more effective (Figure 2). Ecological models focusing on intrapersonal

factors have been widely used in the design of effective interventions aimed at modifying individual behaviors. (45)

This conceptual framework will be used to discuss the factors that influences contraceptive use and by applying the principles at the various levels as follows:

- 1. The individual level: The individual Knowledge, education, attitudes and behaviors.
- 2. Relationship level: the parents at the family level, sexual partners and peers.
- 3. At the community level, the socio-cultural norms, community support, access to SRH information, and services.
- 4. Societal level: services by the health care system (availability, accessibility, acceptability and affordability) and intervention.

Figure 2: Ecological model for determining factors influencing contraceptive use among adolescents. (42)



2.6 Study limitations

The literature search was done using only English language and that could result in leaving out important articles from the review. Research information on contraceptive use among adolescent in Ghana is also very

limited especially for the age grouped 10-14 years, due to problems of consenting. It was also not possible to get information from this younger group because the issue of consent is similar to other African countries that could have provided similar information. Relevant literature from neighboring countries were however included to support the data. Literature before 2005 were included especially with regards to policies and interventions. For quality assurance, the methodology was followed, literature was searched from online. Unpublished data which could have been relevant to the study was however not included.

CHAPTER THREE: FACTORS INFLUENCING THE USE OF MODERN CONTRACEPTIVES AMONG ADOLESCENTS

3.0 INTRODUCTION

This chapter will discuss factors that influence the use of contraceptives to prevent teenage pregnancies and STI among adolescents in Ghana. A combination of factors including place of residence, household wealth, educational level, access and availability of modern methods of contraception, societal norms and age. (46) (3) (38) Efforts have been made over the years to assure adolescent's sexual reproductive health needs are addressed, yet a huge proportion of adolescents are yet to be reached. (46)

3.1 THE INDIVIDUAL LEVEL FACTORS

3.1.1 Knowledge, and use of contraceptives

Several studies have shown that Knowledge, is an important factor which influences the adolescents in making decisions about contraceptive use. (3) ASRH Programs emphasis on education with the assertion that adolescents who have been educated about the importance of contraceptives, and how to use them correctly and consistently, are more likely to use them each time they have sex. This assertion however is a reflection of the other side of the coin from other research findings across low and middle income countries (LMIC) including Ghana, where knowledge was found not to correlate with use of contraceptives. Clottey et al. (2012) and Boamah et al. (2014) all found that adolescents' knowledge of contraceptives is well above 80%, pinning down on condoms and pills as widely known, but its use among sexually active adolescents is below 40%. Out of the few adolescents who even use contraceptives do not use them consistently (3) and another study in Ghana also found that adolescents lack information and so, have the impression that infrequent sex does not lead to pregnancy and so, they tend not to use contraceptives consistently (38) Yet on the level of knowledge, a study conducted in northern Ghana among adolescents in Secondary schools showed that 78.5% (males) and 87.1% (females) agreed that abstinence was the appropriate means of preventing pregnancy and STIs but in response to their knowledge about modern methods of contraception for the prevention of pregnancies and STIs. (47) Other studies also reported educational status as a major factor playing a role in contraceptive use among women of reproductive age in Ghana. (48) (49) (50) Most research findings posits that, adolescents with secondary education are more likely to use contraceptives than those with primary or no education. (51) A review of survey data by Marrone et al., (2014) found that 15% of adolescent females aged 15-19 years without formal education

used modern contraceptives against 53% for adolescents within the same age category with secondary education.

3.2 RELATIONSHIP LEVEL FACTORS

3.2.1 Family relations

Effective SRH communication between parents and children helps in shaping and changing the attitudes of adolescents from risky sexual behavior towards the practice of safer sex. (52) A survey conducted in Ghana shows that little or no communication exist between parents and adolescents in discussing sexual reproductive health issues including contraceptives due to the norms surrounding sexual issues, referring to sex as a preserve for the married. About 82% of parents occasionally talked about sexual reproductive health matters with their children. Whiles contraceptive methods such as condoms (5.2%) are rarely discussed, abstinence (73.6%) is largely emphasized. Adolescents are mostly told by their parents or guardians to abstain from sex but are not told about how to prevent pregnancy or STIs when they find themselves in sexual intercourse. (33) Some studies outside of Ghana also found similar reports especially the non-discussion of condoms as a contraceptive between parents and children. (26) (53)

3.2.2 Effect of peer pressure

Peer pressure is one important determinant that influences adolescent decision on contraceptive use. (54) Self-report data among adolescents from a study in Ghana shows that an increase of 10% in proportion of students in a class who uses one method of contraception or the other, is very likely to influence an increase in contraceptive use among their peers in the class by about 5%. (55)

Although, some studies have found that peer pressure inhibit the use of contraceptives among adolescents in communities with strong enforcement of cultural values and norms, a discussion on condom use and support from peers invariably inspire them to use. (56) (57) (58) (59) For instance, in South Africa, Harrison et al. (2012) reported that the odds of using condoms among adolescents is higher if their colleagues are using it.

3.2.3 Partner's influence

The decision to use contraceptives among adolescents is strongly influenced by partners. A survey in Northern Ghana found that husband's opposition to the use of family planning services, including condom use by their wives was very high. This becomes a constraint, especially on married female adolescents who are usually expected to start having children in wedlock. (48) (49). This finding was not different from the results of a study by Allen et al. (2014) in Uganda. A survey in central Ghana also found that 57.5% of adolescents married or living together perceive contraceptive use as a responsibility of the female partner alone whiles the unmarried, but sexually active male adolescents (78.3%) and another group (widowed separated or divorced) of female adolescents (65.2%) perceive contraceptive use as a sign of unfaithfulness to one's partner, and could end up in promiscuity as indicated by 43.8% (females) and 42.5% (males) respondents. (60) Studies in Tanzania and South Africa also found that, apart from concerns about side effects of modern contraceptives, sexual partners often conclude that using condom for instance, means that one is either not faithful, or may have been hiding a deadly disease from a partner. (61) (62) (63) In Burkina Faso, 39% of females and 43% of male adolescents 15-19 years, also stated a sign of lack of trust for a partner for using a condom during sex, whiles 19% females and 28% males view condoms as a barrier that affects the natural pleasure experienced during sexual intercourse. (64)

3.2.4 Coerced sexual intercourse among adolescents

As mentioned earlier, adolescents are likely to have been coerced to sexual activity with casual acquaintances. (42) A systematic review of four countries by Moore et al. (2007) indicates that girls are the main victims of sexual coercion and in Ghana, girls were six times more likely to be coerced when their first sex partner was a casual acquaintance (OR = 6.00, p<0.001 significance level) than with boyfriend partners compared to about three and a half times more (OR = 3.53, p<0.001 significance level) likelihood in Uganda. The review in Malawi also showed that adolescents whose first sexual intercourse was with a husband were significantly less likely to mention that they were coerced because the norms of society makes sex in marriage a duty to accomplish by the girl. (65)

Orphanhood associated with socio-economic vulnerability is another factor that increases the risk of girls' exposure to sexual coercion. They may also be vulnerable when they are not living with their biological parents. Living with non-family members in a household gives a leeway to males within the household to have easy sexual access to them. Another possibility is the lack of monitoring by parents which is not different from the situation of the orphaned. (66) (67)

A study in Ghana found that 10% of the participants reported they had their first sexual intercourse at age 10-14 years, with males being the majority (15%) and fewer females (6.8%). Participants in response to a question on whether their first sexual experience was planned or coerced, a larger

proportion of the participants (68%) reported they had voluntarily agreed to have sex, while the remaining participants (32%) reported they were coerced to have sex. (68) It is however known that coercion is implicit, sometimes using force, or offering gifts to the girl who is vulnerable and finds it difficult to say no to sex. (69)

Ajuwon et al. (2006) report on in-school adolescents in Nigeria also indicated that, 36% of the participants reported an experience of at least one form of sexual coercive behaviors from the opposite sex. These were elaborated to include unwanted touch of the female sensitive parts of the body, thus the breast and backside as most frequent (31%), followed by attempt by someone to forcibly have sex with participant (11%) and the lowest report being, tricked into having sex (9%). Those eventually being raped was reported by 5%, and the proportions for male and females were similar. (67)

Ajuwon et al. (2006), further disclosed that adolescents in lower classes in schools were 2 times less likely to experience sexual coercion than those in upper classes because they are more empowered to say no, and have less visible female features. Moore et al. (2007) also went on to explore the importance of parental guidance on the sexual behavior of the adolescent, and found that, the presence of both parents in a family is a protective factor to sexual coercion among adolescents. In Ghana, a comparison between female adolescents whose both parents were alive and were living with them and those who had a single parent indicated that the later were at twice the risk of experiencing a coerced first sex. (65) (70)

3.3 COMMUNITY LEVEL FACTORS

3.3.1 Gender norms

Gender roles and power differences between males and females in Ghana potentially influences the use of contraceptives, commonly condoms (82.0%) among adolescents. (3) Boamah et al. further reported of low use of the other methods of contraceptives; the pills (7.9%), injection (0.9%), and foam (0.3%). The impact of female empowerment is minimal among women in most parts of Ghana especially in the rural areas but most visible in the northern part of the country where inheritance is patriarchal, and decision making is solely by the male partner, making it difficult for females to decide on their health issues including SRH. (71) (72). Female adolescents therefore are unable to negotiate for modern contraceptive use. (73)

Similarly, a research in South Africa has shown that female adolescents who closely observe gender norms were less likely to have initiated condom use

with their partners. (74) In other South African communities where there was gender equity through economic empowerment, female adolescents were more likely to use condoms consistently. (75) For instance, Harrison et al. (2006) findings revealed a paradigm shift in gender roles and relationship norms for both males and females in the KwaZulu/Natal province of South Africa. In this province, women are empowered through micro-financing, which gives them the freedom to make own decisions and have more egalitarian relationship norms in their own right, have masculine characteristics reflecting a belief in greater equality with males. (76)

Religion is one factor that builds the morale values in people through the teachings and indoctrination. A qualitative research findings on the influence of religion on contraception in Ghana reported that religion does not greatly influence the individual in making decision on whether or not to use contraceptives. (77) A study however reported of religion as a factor that prohibits or thwarts the use of contraceptives among women in Kenya. (78)

3.3.2 Presence of health facility and opinion leaders acceptability

Availability of improved health care facilities, with youth friendly services at the community level influences the use of contraceptives, but may not be effective for adolescents' needs. (79) The youth friendly services are mostly used by older males, whiles the adolescents who are most of the time, not able to afford for the services only visit the centers to play games. (80) (81) The ability to generate demand for SRH services among adolescents and assurance of acceptability by opinion leaders and parents, whose cultural beliefs may be in opposition to provision of such services to adolescents is a necessity. (82)

Adolescents themselves need to accept the need for contraceptives in order to realize the goal of prevention of pregnancy and STIs. A study in Northern Ghana among adolescents in a Secondary School indicated a low level of contraceptive use where 74.7% (males) and 82.1% (females) responded they never used any contraceptives. (47) Although, it is evidenced that not all adolescents are sexually active, an earlier study estimated that 30% of females and 16% of males 15–19 years ever had sex. (83) In order to achieve the goal for contraceptive use among adolescents at all levels, family planning services should adequately cover the entire country. This had been thwarted as a result of low nurse to person's ratio, especially at the rural areas. The Community Health Workers (CHW), comprising of trained Community Health Officers (CHO) and Community Health Nurses (CHN) coverage at the rural areas stands at 60% of the rural population with a ratio of 1 to 500 individuals. A target of 27845 CHW by 2023 is planned

through a phased scaled-up strategy in order to ensure a 100% coverage at all rural communities in Ghana.

Pursuance to scaling up, the MOH provided sexual reproductive health services in every health facility in Ghana, with increased workforce which contributed to increase in family planning coverage from 24.7% in 2013 to 29.1% in 2014 (84), adolescents needs have not been addressed because they are still discriminated and stigmatized at the health facility. (19)

3.4 SOCIETAL-LEVEL FACTORS

3.4.1 Early marriage

According to the 2011 Multi-Indicator Cluster Survey (MICS) 28% of adolescents entered into marriage before age 18 years, and about 6% for age before 15 years. (85) Comparing the prevalence of early marriage across the ten regions in Ghana, the national survey shows that the Upper East has the highest record (50%), followed by Upper West (39%), Northern (36%), Volta (33%), Brong-Ahafo (33%), Central (28%), Ashanti (23%), Western (18%), Eastern (18%), and Greater Accra (11%) being the lowest. (85) In 2012, whiles some regions witnessed, (especially the three northern regions) a decrease in the prevalence of early marriage due to SRH interventions, the statistics still point at high percentages of girls who are married before their 18th birth day: Upper East (39.2%), Western Region (36.7%), Upper West (36.3%), Central (31.2%), Ashanti (30.5%), Volta (29.3%), Brong Ahafo (29.1%), Northern (27.4%), Eastern (27.2%), and the Greater Accra (12.2%) recording the lowest. (86) Reasons that account for early marriage include economic, cultural, family honor, high school dropout among girls, and lack of awareness of the laws on child rights and lack of parliamentary oversight in the implementation of the laws. (87) The UNDP report describes child marriage as "a marriage where one or both partners are under 18 years" (88)

A study in Gambia similarly found that majority of participants (94%) who married before their 20th birthday were females, and were more likely not to use contraceptives as compared with women who married between ages 25 and 29 years who may have had the opportunity to acquire substantial knowledge about their reproductive system through higher education. (89)

3.4.2 Transactional sex

Transactional sex has been widely practiced among people in most cultures as a means through which women exhibit their sexuality and as a power niche to gain socio-economic power that enables them to seek and access material wants, social status, and sexual experience. (90) As reported by

Moore & Biddlecom, (2007), this assertion makes women in Ghana to take advantage and indulge in transactional sex not only to make money, but to improve upon their status from men in higher positions. In their multi-site systematic review on transactional sex, the data from Ghana showed that transactional sex is very common, and more than two thirds of sexually active adolescents are involved. (91) This behavior most of the time reduces their ability to negotiate for the use of contraceptives such as the condoms. Research shows that transactional sex is correlated with coerced sex, and so, girls who have experienced coerced sex are more likely to be involved in transactional sex as a coping mechanism. (92)

3.5 HEALTH SYSTEMS FACTORS:

3.5.1 Availability of contraceptives

A very relevant service that was required by the MDGs goal 5 to improve maternal health by reducing maternal mortality by 2015 was family planning, which was evidenced through the effective use of modern methods of contraceptive by sexually active females. (93) Adjei et al. (2015) found a low availability of some contraceptives including the implants (14 %) and IUDs (14 %) in the health facilities. They also found that, though, the male condoms (78 %) and oral contraceptives (82 %) were largely available, emergency contraceptives were less likely to be found in public health facilities. (94)

Modern contraceptives are available across all the regions and districts of Ghana. (94) Outlets providing these services include the health facilities, Pharmacies, drug stores, drug peddlers and in drinking spots in some communities. (95) Adolescents are generally denied the services when they go to purchase contraceptives at the pharmacies and drugstores. It is also evident that some health workers react to adolescents in unfriendly manner which keeps them away from accessing contraceptives at the facility level. For reasons related to faith, the faith based organizations do not also supply contraceptives to people below the age of 18 years. (95) These concerns are not different from other African countries as a respondent in a study in Kenya reported that they are being stigmatized and denied services based on their age and so, it is not easy to have access to contraceptives as quoted by a 16 year old unmarried adolescent:

"It is not easy for small [young] people like us to go to a pharmacy to ask for

Condoms or pills'..." (96)

3.5.2. Issues of access and affordability of contraceptives

Access and affordability of contraceptives among adolescents in the rural poor areas is also a challenge, as Nyarko (2015) found a low contraceptive prevalence (16.3%) among rural communities as compared with urban areas (21.0%) in Ghana. (97) Access to contraceptives among adolescents is nevertheless, a challenge at the societal level due to certain barriers, such as cost of contraceptives, acceptability, and unfriendly environment for access to contraceptives at the various health facilities. (36) (60) According to the National Health Insurance Authority, individuals with access to free healthcare through the universal health coverage in 2013 is 38% of the Ghanaian population. Even though, adolescents below the age of 18 years are exempted from payment of premium, the scheme faces a challenge of reimbursement from the health facilities making it difficult for procurement of family planning commodities. (20)

The GHS contributed in the area of promoting youth-friendly policies (7) yet the evidence indicates that adolescents are still distant from SRH services due to discrimination and stigmatization by the health workers. (98) It is also evident that some health workers react to adolescents in unfriendly manner which keeps them away from accessing contraceptives at the facility. For instance, prevention of pregnancy is possible using the injectable and implant which may be preferable for adolescents if they decide on their own to go for it, yet access has not been easy for them due to reasons of poor attitude among health professionals who administer these commodities. Again, for reasons related to faith, the faith based organizations do not supply contraceptives to people below the age of 18 years. (99)

CHAPTER FOUR: PROVEN INTERVENTIONS THAT IMPROVED THE USE OF MODERN CONTRACEPTIVES

4.0. INTRODUCTION

Many systematic reviews on programs and interventions that are aimed at providing contraceptives, especially to adolescents have been widely evaluated and documented in recent years. (100) A very comprehensive systematic review by Chandramouli et al. (2015) showed that interventions related to maternal health (information and services) to improve child birth and spacing, and prevention of unintended pregnancies that have been well implemented have proven to yield the intended results and the reverse is true. (79) Other research findings have also been published which shared similar findings by crediting the success of interventions based on effective intervention-delivery mechanisms, whiles indicating that ineffective delivery of programs does not improve adolescent sexual and reproductive health. (101) (102) Most interventions are poorly implemented and do not provide adequate training on skills to health workers and volunteers to provide nonjudgmental services. The facilities may also not look attractive to the adolescents, and little efforts are made in terms of providing outreach services to pass on information to adolescents about the services available as well as leaving out community leaders in programming. (103)

A review of evidenced based interventions and strategies that have worked effectively in some parts of Ghana and other countries with similar characteristics are discussed below with evaluations from published articles and institutional reports.

4.1 SRH EDUCATIONAL PROGRAMS

4.1.1 Youth harvest foundation Ghana (YHFG)

SRH education programmes that have been provided to adolescents in Ghana focused largely on knowledge, attitudes and behavior of students mostly in the Junior and senior high schools. According to a report on a recent evaluation of a program in Northern Ghana which was rolled out in 2007 by the Youth Harvest Foundation Ghana (YHFG), adolescents were able to provide only half (50%) of correct responses to questions regarding SRH prior to the start of the program. The aim of the program was therefore, 'promoting the SRH and rights of adolescents and make a positive contribution to their healthy development into adulthood, particularly by providing accurate information to young people, supporting their advocacy activities for their rights and access to youth-friendly services'. (104) Participants had increased knowledge and were empowered to decide on when to have sex, and the ability to negotiate for condom use which is a

positive indicator against the heat of peer pressure in sexual relations. (104) (53) However, the findings of the study indicated a difficulty in accomplishing the behavioral intentions by the adolescents due to problems of availability and affordability of contraceptives, thereby, affected the effectiveness of the intervention. (104) One most effective, yet criticized program in recent times in Africa, is the provision of contraceptives alongside SRH education to school children in South Africa. (105) Following the rights of the child's campaign for children above 12 years of age in South Africa, the Department for Education collaborated with the MOH to make condoms available to students by strategically placing them in toilets where students could pick the number needed without being stigmatized or burdened by cost. Though, there were reports of misuse, the free access contributed to the reduction of teenage pregnancy, STIs and HIV among inschool adolescents. (105) However, SRH Education as a first step has since been added to the educational curriculum in Ghanaian schools in 2014, being coordinated by SHEP unit in the basic schools. (106)

4.1.2 West African Youth Initiative (WAYI)

Sexual Reproductive Health Educational program that was reported as effective in a systematic review was the West African Youth Initiative (107). It was carried out in three districts in Ghana and six in Nigeria. It targeted the youth aged 12-24 in secondary, post-secondary and out- school in selected sites. Its activities include the community engagement through drama, peer counseling, youth involvement in the designing of the information, education and communication materials, the use of multimedia, and condom distribution. Parents were educated on consequences of early marriage and child birth. Evaluation of the intervention indicated it effectively changed the contraceptive behaviors of the in-school adolescents on the use of contraceptives, but was not effective on out-school adolescents. The results as combined for Ghana and Nigeria, indicated that 62.1% of participants in the intervention versus 45.8% of control group of in-school had used modern contraceptives. For out-school, 46.6% of intervention and 40.7% of the control group used modern contraceptives. The probable reasons why the out-school youth was not effective was that their needs were different because some of them were preparing for work whiles others already employed, and are considered by the society as "adults". They will need a different strategy from the in-school adolescents.

4.2 COMPREHENSIVE YOUTH FRIENDLY SERVICES

4.2.1 The Africa Youth Alliance (AYA) program

The Africa Youth Alliance (AYA) program was previously launched in Ghana in 2001 aimed at improving the overall ASRH in order to reduce STIs and HIV among adolescents. The program used an outreach service provision to youth by applying two strategies; peer service providers (PSP) and nontraditional condom distribution (NTCD). They were recruited from people between the ages of 15-24 years for training. After the training, they were given some kit including bags, contraceptives demonstration kit (e,g penis modules and condoms) to do counselling, share information and distribute condoms.

Their target group was the youth whom they visited for discussions either in groups or one-on-one during home visits, at funerals, football parks and in other social grounds.

In 2005, the program was evaluated with qualitative research using In-depth interviews (IDI). The results indicated that majority of people in the community had improved attitude towards discussing SRH issues, and gained greater understanding for the need to use contraceptives which led to acceptance of SRH information and services in their communities. About 84% of the young clients reported they had changed their attitudes positively towards the use of condoms. 56% of the youth who actually used condoms said they used it to prevent HIV/AIDS while 44% stated they used it to prevent pregnancy. (108)

One notable challenge was the effect of socio cultural norms which strongly fought against the SRH education activities for young people. A peculiar challenge for the coverage of the intervention was that some prospective peer service providers discouraged the peer service providers and non-traditional condom distributors from participating in the program, thus, affecting its effectiveness. (108)

4.2.2 Ghana Adolescent Reproductive Health Project (GARHP)

Currently, a three year project: Ghana Adolescent Reproductive Health Project (GARHP), funded by the department for international development (DFID), is one of the programs that are partnered with the GOG to deliver various maternal health programs in order to reduce maternal mortality and improve the intake of family planning. It is an ongoing project running from January 2014 to March 2017 at the national and regional levels, but focusing much on the Brong Ahafo Region under the Umbrella of the Futures Group, now Palladium. (109) The program is reaching adolescents through "adolescent corners" by providing youth friendly services. The project has

contracted five NGOs to implement the GARHP intervention and works directly with community leaders and the young people in order to bring about change in norms clouding out adolescent contraceptive use. (110) Since the start of the intervention in 2014, the region has reported a decline in adolescent pregnancies among girls aged 15-19 years from 22% to 14.5% in 2015. (110)

4.2.3 The Gulu Youth Centre (GYC)

The Gulu Youth Centre (GYC) which also aimed at improving adolescents sexual life was established in 2004 in Uganda by a national NGO; The Straight Talk Foundation (STF), purposely to provide the youth, including adolescents and their children, and parents of adolescents, some SRH information during the conflict in northern Uganda. (111) Under the program model, the GYC served the community with integrated SRH information and services build around a comprehensive prevention approach made up of "Talk + Services + Livelihoods." Infotainment /edutainment which were attractive to the adolescents, including community outreach services in some selected sites to discuss health issues with community members. (111) Though, parents initially were of the view that the GYC was "teaching young people to have sex" rather than educating them about sexuality, their involvement over time erased that mentality. The WRC (2012) report indicated that the preventive approaches combined with livelihood and skills development for SRH effectively empowered adolescents and created community cohesiveness which protected the most vulnerable to sexual abuse within the communities.

4.3 Involvement of traditional leadership (the "grandma" and "grandpa" program)

The traditional leaders are role models that all community members including adolescents respect and emulate. Considering the level of power they wield within their traditional areas, the 'Grandma' program was launched in 2005 in the Central Region of Ghana, following a poor performance of SRH indicators, particularly high (15.2%) teenage pregnancy. (112)

The male opinion leaders known as the "Grandpa" in the communities were later included in response to fulfilment of a quest to involve males and making the program a gender balanced one. Starting with a pilot site in 2005, the program expanded to cover 22 sites in 7 deprived districts within the region. The opinion leaders were giving skill training on contraceptives, to talk to adolescents during durbars and other community social activities, about the need to use contraceptives and where to have access. Adolescents

found the program attractive for learning about contraception because Ghanaian folklores in a form of storytelling were used as interludes. (112)

The program, using the opinion leaders was able to reach 4600 adolescents (65% females and 35% males) which contributed to the reduction in the proportion of teenage pregnancy between 2004 and 2011 from 15.2% to 14.3% in the Central Region. Maternal mortality rates in the region generally dropped from 134 per 100,000 livebirths to 115 per 100,000 livebirths. Even though, not empirical, community members gave anecdotal evidence that the program led to a reduction in pre-marital sex as well as teenage pregnancies among in-school adolescents. (112)

4.4 Parent to child SRH communication interventions

A sexual reproductive health communication intervention study which focused on training parents on discussing SRH issues, including contraceptive use with children at home, recruited parents into an intervention and control groups. The intervention group was giving communication skills as well as information about contraceptives. Prior to the intervention, a baseline data collected indicated that more than half of the participants of the intervention group (52.1%) and control (59.7%) groups indicated they had never discussed contraceptives as a topic with their children at home. At the, the end of the study, parents in the intervention arm who still did not discuss contraceptive topics reduced to 34.3%. The intervention had led to positive outcomes by improving the level of comfort and ability to discuss issues of sexuality with children among the participants.

(See appendix IV for illustration of the attitudes of parents towards condom use among adolescents before and after the intervention). (113)

Concerning the views of parents about condom use among adolescents, preintervention data shows that 43.8% of parents in the intervention and 40.3% of the control arm indicated they will not allow their children to use condoms. Nevertheless, the attitudes of parents changed after the intervention, and those who indicated they would allow their children who are sexually active to use condoms increased from 42.5% to 81.4% among the intervention group and from 41.7% to 61.1% in the control group. Even though the intervention was a short term one, the results were beneficial to the parents in terms of knowledge gained and to their children, for receiving valuable information about their sexuality and use of contraceptives.

4.5 The "Families Matter!"

A similar communication skill intervention was the "Families Matter!" initially implemented in the United States of America and later adopted by the CDC and implemented in Kenya. (114) It was designed to provide parents with skills to enable them address issues of communication between them and their children with regards to SRH. Parents were equip with knowledge and confidence to talk to their children about preventing sexual risk before their sex debut. Participants were therefore drawn from parents whose children were between ages 10-14 years in the Nyanza Province in Western Kenya. During the fifth week of the program, children were recruited to participate in a guided exercise. The program evaluation reports indicated increased parental skills and positive changes of the attitude of parents towards sexuality and sexual risk reduction. (114) End line evaluation of the program found that parents' attitude regarding sexuality education changed positively after one year of intervention, they developed skills that led to an increase in parent-child communication about sexuality and sexual risk reduction. (114)

4.6 Male involvement interventions (the "Zurugalu" approach)

In the Upper East Region of Ghana, men were involved in family planning activities in a project called the "Zurugelu" approach, which means "togetherness". The project recruited volunteers from within the community who were given training on skills to communicate with community members on SRH issues. Health-care action committee was formed from the existing leadership committees to provide supervision and services to community. The project organized community durbars with chiefs and elders in every 90 days interval to pass on information including contraceptive use. Working hand in hand with the CHW, elders and men were made advocates to sensitize their fellow men within their communities about SRH issues. The communication activities overtime made opinion leaders, men, and women alike to share similar sentiments about the need for modern contraception and its acceptability. Exposure of communities to the project therefore resulted in a decline in fertility rate of 15% below the rates in control communities who were served by CHO. (115) This represented a reduction in one birth per woman in three years of exposure to the project with a CPR increase by 9% (from 54% to 63%). (116) The intervention was however not scaled-up and only remained within the domains of the rural areas that were involved, and the MOH could not also sustain the program activities or adopt to merge with the CHO activities which suddenly phased off. (116) The intervention led to the spread of SRH information within the areas covered which led to a change in the norms and beliefs surrounding the use of contraceptives.

4.7 Political commitment and advocacy

Following the declaration of the London summit where the Government of Ghana committed to making contraception free in public health facilities, the Planned Parenthood Association of Ghana (PPAG) led an advocacy for contraceptive security. The association was instrumental in finding ways of making contraceptives available for free in the public sector. This led to the Government adding contraceptives to the list of services that are offered without cost at the public health facilities. (117) Budgetary allocation for family planning including contraceptives also increased from 3.2% in 2013 to 14% in 2015 (118) (119) Nevertheless, the inability of the NHIA to reimburse the cost of contraception commodities for making new procurements still leaves a gap of unmet need for contraceptives. (120) A similar advocacy by the International Planned Parenthood Federation members in Democratic Republic of Congo led to the first ever budgetary allocation of one million dollars for contraception as well as passing a family planning law in the country. (117)

CHAPTER FIVE: DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 DISCUSSIONS

The findings from the reviewed literature indicated a combination of factors influences the use of contraceptives among adolescents. These factors as presented earlier in chapter three and four, using the conceptual framework at multiple levels which include the individual level, relationship level, the community level, and societal level factors. The literature makes it clear that ability to have access and use of contraceptives is vital to the development of the individual and the society at large. The MDG 5 therefore highlighted on contraception as a family planning method which again, has been given a greater attention by the SDG 3.

The study identified multi-level and interrelated factors; Knowledge and SRH communication (between parents and children, influence of partners and peers), norms and gender, sexual coercion and transactional sex, and access to contraceptives as important determinants for contraceptive use among adolescents in Ghana. Programs and interventions that have been implemented in some parts of Ghana, and in other countries that have been proven to be effective were also closely studied for discussion.

The usefulness of the framework: The ecological model used as the framework for this study has been very helpful in locating articles and other publications for the purpose of the study. Inspite of the complexity of adolescent contraception, the framework has been able to identify all factors responding to the objectives, at multi-level (Individual, relationship, community and societal) that influences the use of contraceptives among adolescents. The interaction of the various factors helped tremendously during the discussions on the issues identified in the findings. The design of the framework also made it easier to identify stakeholders for appropriate recommendations.

5.1.1 Knowledge of contraceptives and SRH communication

Literature suggest that a greater proportion of adolescents in Ghana have a good knowledge about contraceptives yet a smaller proportion of those that are sexually active actually use them during sex. (3) (38) This shows a distinction between knowledge and use of the various contraceptive methods and that knowing the methods doesn't mean adolescents are using them. (3) (55) (38) The review indicates that a greater proportion of adolescents have knowledge about contraceptives but a half of that proportion who are sexually active are using and even, not consistently. This points to the fact

that something more than just the knowledge is required. These include the ability to have access, and in a non-judgmental environment where society does not frown upon sexual activity among adolescents. Majority of the knowledgeable adolescents are the in-school and those who attained a higher education. (112) School curriculum discusses issues of ASRH including contraceptives making adolescents privy to the methods and how they are being used. However, they are not given access to the contraceptives in schools as compared to South Africa where schools are allowed to distribute condoms to students in need. (105)

Another dimension of contraceptive use is related to encouragement of adolescents by parents, peers, and sexual partners who relate closely within the community. At the family level, communication about SRH issues between parents and children in Ghana is either found not to exist, or, a little is spoken about it. (33) (34) This unspoken situation exist because the culture of Ghanaian society makes parents presume that adolescents are not involved in sexual activity and so, abstinence become the core of contraception. Discussions surrounding contraceptive use is therefore seen as initiating girls into sexual activity rather than preparing them into safer sex practices. Parents rather prefer talking about sex and sexuality in terms of gender roles and how to keep ones "private parts" clean to prevent infections.

Again, parents lack the knowledge about comprehensive SRH, especially on modern contraception and so, they feel uncomfortable to discuss the use of contraceptives with their children. The only way parents could acquire knowledge about contraception to contribute to the knowledge base of adolescents is through their involvement in SRH programs. However, most of the programs and interventions on SRH are skewed towards information and service to the community, and little is done about formally educating parents through durbars or workshops to make them confident and capable of talking about sex, and prevention of STI and pregnancy among adolescents. A few interventions have proven to be effective in improving parent/child SRH communication in Ghana but sadly, they were not scaledup. Programs in other countries like South Africa also indicated parents who had some training on communication skills reported they had good time discussing issues of contraceptive use with their children. (121) Peers can also be counted upon as educators for lessons on contraception because they easily share their experiences with colleagues whom they tend to trust in. Their ability to negotiate for contraceptive use is nevertheless thwarted in many cases due to male dominance in decision making. They may also

ignore the use of condom, for instance when they are curious to test sex for the first time which may result in either pregnancy or infections.

5.1.2 Gender norms

There is a general saying that "men are men" and this is a reflection of men in the forefront of every affair. These gender norms goes a long way to affects the ability of females to make their own decisions especially, with regards to SRH issues. Even though, society is dynamic, it requires time, innovations and rigorous commitment and involvement of community leadership in programs and interventions aimed at bringing change to the existing cultural norms. (122) Traditional leaders are custodians of the land in Ghana and they hold authority, and are knowledgeable in the cultural norms. In order to reshape the norms, their involvement as champions to change, so as to free up adolescents to take their own decisions with their sexual life is very much needed. Involvement of traditional and religious leaders in programs yielded some desired changes to norms which improved contraceptive uptake among adolescents (116) (115) (61) (62) (63) and reference can be made to the "Zurugelu" approach in Navrongo, Ghana. It is therefore not surprising that majority of sexually active people (men and women) in a involved in qualitative interviews after the intervention reported of a greater acceptance of family planning methods as compared with the past. (116) (115)

5.1.3 Sexual coercion and transactional sex

Sexual coercion is shadowed with transactions in most cases. Considering the age of adolescents, especially below the age of 18 years, the laws of Ghana disqualifies them from giving consent to marriage and yet some female adolescents believe that they can consent to have sex with a man at their own will. Technically, we find an element of coerciveness and transactions in these situations because the little girls are merely exploited and given a token. (68) These adolescents, being ignorant of the consequences of having sex at an early age usually do not know that they are being coerced in most of the time by elderly men known as "sugar daddies". (91) and it contributes largely to school dropouts as a result of pregnancy among adolescent girls mostly in the upper levels of the basic schools. Another issue of coerced sex activity results from the fact that girls are given out for marriage at early age sometimes due to economic difficulties, and is often referred to as "early and forced" marriage because at that tender age (16 years) or below, the girls are either not old enough to make informed decision about implications of marriage, or are pressured, or given out to marriage against their will. (69) In their matrimonial homes,

they are expected to have sex to make babies which in itself is the denial of the girl to negotiate for condom use. Also, care for some children, especially female adolescents whose parents are deceased are often left unattended to by extended families which exposes them to risky sexual activities. If parents could adequately provide the needs of their children, the rate of transactional sex among adolescent females will drastically reduce and the effect of non–contraceptive use and its consequences will also see a decrease. Female adolescents who find themselves in these situations in Ghana where the children's Act 560 is not seriously implemented, will never have a voice or peace of mind to decide on using contraceptives.

5.1.4. Access to contraceptives among adolescents

Provider and client relations that reflects a non-judgmental attitude towards adolescent's access to contraceptives, will more likely lead to an improvement on the use of contraceptives provided at the health facility. (123) The MOH/GHS has over the years worked collaboratively with international organizations to improve the quality and access to contraceptive services provided to clients in public health facilities. Training of CHWs have been scaled up to provide contraceptive services, extending their catchment areas to rural communities and even doing compound to compound visitation to provide services (124) yet the unanswered question remains "why do adolescents prefer to obtain contraceptive services from the private facilities compared to the public health facilities". We know behind the screens that it is all due to reasons of stigma and discrimination among others. (28)

5.2 CONCLUSIONS

Generally, the low use of contraceptive among adolescents over the years in many parts of the world had taken toll on public health priority list, and this was captured on the MDGs and further prioritized on the SDG 3. The concern has been to protect adolescents from teenage pregnancy as well as STIs, in order to prevent the dangers of delivery complications and health of teenage mothers. The fight to save adolescents from sexual reproductive health problems is however a big challenge to public health. Practically, modern contraceptives have been proposed as a panacea to eliminate outcomes of adolescent risky sexual behavior and a lot has been done over the years by the government of Ghana and supporting shareholders, yet the problem still persist.

Adolescence is known to be the most critical stage in the life of the individual as both physical and psychological changes manifest with curiosity and selfdecision making, resulting in risky sexual behavior. Therefore, the study considered the ecological framework which comprehensively addresses the issues of adolescent's contraception in Ghana. The reasons for the low use of contraceptives as found by the study identified multiple factors including the individual, community, relationship, and societal level factors. A concerted effort by governments, international organizations and NGOs at various levels have contributed their quota to improve contraceptive use among adolescents yet research indicates a huge proportion of sexually active female adolescents have sex without using contraceptives which results in pregnancy, and consequently school dropout among in-school adolescents. Most often than not, interventions that target adolescent contraception are limited to the individual level without incorporating their surroundings which makes them ineffective. A more comprehensive approach covering the knowledge, the involvement of the parents, peers, males, community leaders as well as skill training for health care providers, with focus on gender norms for change and making contraceptives accessible, are necessary factors for improving the use of contraceptive among adolescents in Ghana.

5.3 RECOMMENDATION

Considering the findings from the literature review of the multiple factors that influence the use of modern contraceptives among adolescents, coupled with the identified interventions that have proven to be effective within Ghana and other countries with similar characteristics, the following recommendations are made to improve contraceptive programming and use among adolescents in Ghana;

5.3.1 Community level

- SRHR programs should factor in information that will bring changes to the existing gender norms and values with reference to individual community situation, using men within the community as vocal persons in order to reduce the negative cultural perceptions about contraception;
- 2. Parent/child SRHR communication skill programs for parents should be scaled-up by the Ministry of Health to improve the level of communication between parents and children about contraceptive use.

3. Opinion and religious leaders should also be involved as stakeholders in the design and implementation of SRHR programs so as to influence the community members to accept and participate in the program activities;

5.3.2 Societal level

- 1. Ministry of Health and Ghana Education Service should collaborate and provide comprehensive contraceptive services including free contraceptives for sexually active adolescents in schools;
- 2. The Ministry of Education (MOE) should provide training on SRH and communication skills to parents in order to complement SRH lessons children learnt from school.

5.3.3 Health facility level

- 1. The Ghana Health Service should develop a routine training schedule for refreshing the knowledge of the CHO/CHN on guidelines for service delivery in order to facilitate a nonjudgmental service provision to adolescents who visit the facility;
- 2. The MOH should create adolescent corners in all healthcare facilities to run youth friendly services including contraception to adolescents;

5.3.4 National / Policy level

- 1. The law enforcement agencies of Ghana should enforce the implementation of the children's Act 1998 (Act 560) to prevent child marriage, as well as punish perpetrators of child marriage in Ghana;
- 2. The GOG and MOH should scale-up and claim ownership of programs that are proven to be effective, to cover the entire country;
- 3. The Division for Health and Development (DHD) under the Ministry of Health should conduct further research (qualitative: Focus group discussions(FGD) and In-depth Interviews (IDI) at the community) on adolescent sexual and reproductive health to determine further ways of improving contraceptive use among adolescents

REFERENCES

- Kirkwood, B, Hurt, L, Amenga-Etego, S, Tawiah, C, Zandoh, C, Danso, S, Chris Hurt, C, Edmond, K, Hill, Z, Asbroek, G, Fenty, J, Owusu-Agyei, S, Campbell, O, Arthur, P. Effect of vitamin A supplementation in women of reproductive age on maternal survival in Ghana (ObaapaVitA): a cluster-randomised, placebo-controlled trial. Thelancet. 2010 May 8; 375(9726): p. 1640-1649.
- Stanton CK, Newton S, Mullany LC, Cofie P, Tawiah Agyemang C, Adiibokah E, et al. Effect on Postpartum Hemorrhage of Prophylactic Oxytocin (10 IU) by Injection by Community Health Officers in Ghana: A Community-Based, Cluster-Randomized Trial. PLoS Med. 2013; 10(10).
- 3. Boamah E.A, Asante K.P, Mahama E, Manu G, Ayipah E.K, Adeniji E, Owusu-Agyei S. Boamah EA, Asante KP, Mahama E, Manu G, Ayipah EK, Adeniji E, Owusu-Agyei S Use of contraceptives among adolescents in Kintampo, Ghana: a cross-sectional study. 2014; 5: p. 7-15.
- 4. Oppong-Anane K. Country Pasture/Forage Resource Profiles, Ghana. 2006.
- 5. World Health Organization (Country office, Ghana). WHO Country office for Ghana annual report, 2014., Theme Working towards better Health. Accra:; 2015.
- 6. Ghana Statistical Service. 2010 Population & housing census., summary report of final results. Accra:, GSS; 2012.
- 7. National Population Council. Adolescent Reproductive Health Policy. 2000.
- 8. African Commission on Human and Peoples' Rights. Protocol to the African charter on human and peoples' rights on the rights of women in Africa.; 2003.
- 9. London Summit on Family Planning. Summaries of commitment.

- London:; 2013.
- 10. United Nations. Sustainable Development Goals. New York:; 2015.
- 11. United Nations. The Global Strategy for Women's Children's and Adolescents' Health 2016-2030.; 2016.
- 12. Hindin MJ, Tuncalp O, Gerdts C, Gipson JD, Say L. Monitoring adolescent sexual and reproductive health. AZX Bulletin (World Health Organization). 2016.
- 13. UNFPA. Universal access to Reproductive Health: Programme and challenges. Geneva:; 2016.
- 14. Ghana Health Service. Reproductive Health Strategic Plan 2007- 2011. 2007.
- 15. Ghana Health Service. GHS 2014 FAMILY HEALTH ANNUAL REPORT. Accra: Ghana Health Service, Family Health Division; 2015.
- 16. Ministry of Health (MOH). Private Health Sector Development Policy. Accra: MOH; 2012.
- 17. Basu S, Andrews J, Kishore S, Panjabi R, Stuckler D. Comparative performance of private and public health care systems in low-and-middle income Countries: a systematic review. Plos. 2012.
- 18. Ghana Statistical Service. Ghana Demographic Health Survey:2014. Accra: Ghana Statistical Service, Ghana Health Service; 2015.
- 19. Ghana Health Service (GHS). GHS 2011 Annual report. Accra: GHS; 2011.
- 20. National Health Insurance Authority. National Health Insurance Authority. Annual Report. Accra:; 2013.
- 21. National Health Insurance Regulations. LI 1809. Accra., Ghana:; 2004.
- 22. Sarpong N, Loag W, Fobil J, Meyer C.G, Adu-Sarkodie Y, May J, Schwarz N.G. National health insurance coverage and socio-economic status in a rural district of Ghana. 2010;: p. 191–197.

- 23. Dixon, J, Tenkorang EY, & Luginaah I, 2013, Ghana's National Health Insurance Scheme: a national level investigation of members' perceptions of service provision. BMC International Health and Human Rights2013. Ghana's National Health Insurance Scheme: a national level investigation of members' perceptions of service provision. Dixon, J, Tenkorang EY, & Luginaah I, 2013, Ghana's National Health Insurance ScheBMC International Health and Human Rights. 2013.
- 24. World Health Organization. Maternal, newborn, child and adolescent health. 2016.
- 25. Monjok, E., Andrea, S., John, E.E., Essien, E.J. Contraception practices in Nigeria, Literature review and recommendation for future policy decisions, Open Access Journal of Contraception, Review, Vol. 1: 9-22. Open Access Journal of Contraception. 2010; 1: p. 9-22.
- 26. Guilamo-Ramos V, Soletti AB, Burnette D, Sharma S, Leavitt S, Mc-Carthy K. Parent-adolescent communication about sex in rural india:U.S.-india collaboration to prevent adolescent HIV. Qualitative health research. Qualitative health research. 2012; 22(6): p. 788-800.
- 27. World Health Organization. Maternal Mortality. Geneva:, RHR; 2014.
- 28. Lopez L.M, Hiller J.E, Grimes D.A. Education for contraceptive use by women after childbirth. Cochrane Database of Systematic Reviews. 2010.
- 29. Patton G.C, Coffey C, Sawyer S.M, Viner R.M, Haller D.M, Bose K, Vos T, Ferguson J, Mathers C.D. Global patterns of mortality in young people: a systematic analysis of population health data. Lancet, 2009, 374:881–892. Lancet. 2009; 374: p. 881-892.
- 30. Yen S, Martin S. Contraception for adolescents. Pediatr Ann. 2013; 42(2): p. 21-25.
- 31. Gyan, C. The Effects of Teenage Pregnancy on the Educational Attainment of Girls at Chorkor, a Suburb of Accra. Journal of Educational and Social Research. 2013; 3(3).
- 32. UNFPA. Adolescent pregnancy. New York:; 2013.

- 33. Manu, A. A., Mba, C. J., Asare, G. Q., Odoi-Agyarko, K., Asante, R. K. O. Parent-child communication about sexual and reproductive health: evidence from the Brong Ahafo region, Ghana. Reproductive Health. Manu, A. A., Mba, C. J., Asare, G. Q., Odoi-Agyarko, K., & Asante, R. K. O. (2015). Parent-child communication about sexual andReproductive Health. 2015.
- 34. Awusabo-Asare, K, Bankole, A, Kumi-Kyereme, A. Views of Adults on Adolescent Sexual and Reproductive Health: Qualitative Evidenceal and Reproductive Health: Qualitative Evidence from Ghana. Occasional Report No 34. 2008.
- 35. Bearinger L.H., Sieving, R.E., Ferguson, J., Sharma, V. Global perspectives on the sexual and reproductive health of adolescents: patterns, prevention, and potential. The lancet. 2007 April; 369: p. 1220-31.
- 36. Yidana A, Ziblim S.D, Azongo T.B, Abass Y.I. Socio-Cultural Determinants of Contraceptives Use Among Adolescents in Northern Ghana. Public Health Research. 2015; 5(4): p. 83-89.
- 37. Gumanga, S., Kolbila, D., Gandau, B., Munkaila, A., Malechi, H., Kyei-Aboagye, K. Trends in Maternal Mortality in Tamale Teaching Hospital. Ghana Medical Journal.; 45(3): p. 107.
- 38. Clottey C. Social Barriers that affect the non-use of contraceptives among adolescents in the Gomoa East District', Masters' thesis. 2012.
- 39. Solomon-Fears C. Teenage pregnancy prevention: Statistics and programs. Congressional Research Service. 2015.
- 40. Ministry of Health. Holistic Assessment of the Health Sector Program of Work (PoW) final version. Accra:; 2013.
- 41. Ghana Statistical Service. Ghana Multiple Indicator Cluster Survey with an Enhanced Malaria Module and Biomarker, 2011, Final Report. 2011.
- 42. Svanemyr, J., Amin, A., Omar J. Robles, O.J., Greene, M. E. Creating an Enabling Environment for Adolescent Sexual and Reproductive Health: A Framework and Promising Approaches. Journal of Adolescent Health. 2015.

- 43. Gupta G.R, Parkhurst J.O, Ogden J.A. Structural approaches to HIV prevention. Lancet. 2008.
- 44. Lee, J., Park, J.H. Kim, M. Social and Physical Environments and Self-Rated Health in Urban and Rural Communities in Korea. Int. J. Environ. Res. Public Health. 2015.
- 45. Baral, S., Logie, C. H., Grosso, A., Wirtz, A. L., Beyrer, C. Modified social ecological model: a tool to guide the assessment of the risks and risk contexts of HIV epidemics. BMC Public Health, 13, 482. http://doi.org/10.1186/1471-2458-13-482. BMC Public Health. .
- 46. UNFPA. Universal access to Reproductive Health: Programme and challenges. Geneva:; 2016.
- 47. Rondini, S., Krugu, J.K. Knowledge, Attitude and Practices Study on Reproductive Health Among Secondary School Students in Bolgatanga, Upper East Region, Ghana. Afr J Reprod Health. 2009; 13(4): p. 51-66.
- 48. Apanga, P.A., Adam., M.A. Factors influencing the uptake of family planning services in the Talensi District, Ghana. The Pan African Medical Journal. 2015.
- 49. Marrone, G., Abdul-Rahman, L., Coninck, Z., Johansso, A. Predictors of Contraceptive use Among Female Adolescents in Ghana. Afr J Reprod Health. 2014.
- 50. Teye J.K. Modern Contraceptive Use among women in Asuogyaman District of Ghana: Is Reliability More Important than Health?. African Journal of Reproductive Health.; 17(2): p. 58-71.
- 51. Kabagenyi, A., Ndugga, P., Wandera, S.O., Kwagala, B. Modern contraceptive use among sexually active men in Uganda: does discussion with a health worker matter? BMC Public Health. 2014; 14(1): p. 1-8.
- 52. Dessie Y, Berhane Y, Worku A. Parent-Adolescent Sexual and Reproductive Health Communication Is Very Limited and Associated with Adolescent Poor Behavioral Beliefs and Subjective Norms: Evidence from a Community Based Cross-Sectio. PLOS. 2015 July 13.

- 53. Maticka-Tyndale E. Condoms in sub-Saharan Africa. Sexual Health. 2012; 9(1): p. 59-72.
- 54. Lang, D.L, Sales, J.M, Salazar, L.F, DiClemente, R,J, Crosby, R.A, Brown, L.K, Donenberg, G.R. Determinants of Multimethod Contraceptive Use in a Sample of Adolescent Women Diagnosed with Psychological Disorders Infectious Diseases in Obstetrics and. 2011.
- 55. Ali M.M, Amialchuk A, Dwyer D.S. Social network effects in contraceptive behavior among adolescents. J Dev Behav Pediatr. 2011; 32(8): p. 563-71.
- 56. Rau A, Coetzee J.K, Vice A. Narrating student life in a time of risk. Qualitative Sociology Review. 2010; 6(3): p. 81-98.
- 57. Boileau C, Zunzunegui M.V, Rashed S. Gender differences in unsafesexual behavior among young people in urban Mali. AIDS Care. 2009.
- 58. Taylor M, Dlamini S, Nyawo N, Huver R, Jinabhai C, De Vries H. Reasons for inconsistent condom use by rural South African high school students. Acta Paediatrica. 2007; 96(2): p. 287-291.
- 59. Kabiru C.W., Orpinas P. Correlates of condom use among male highschool students in Nairobi, Kenya. J Sch Health. 2009; 79(9): p. 425-432.
- 60. Enuameh, Y., Nettey, O.E., Mahama, E., Tawiah, C., Boamah, E., Sulemana, A., Adjei, G., Gyaase, S., Asiedu, S.A., Manu, A., Zandoh, C., Asante, K.P., Owusu-Agyei, S. Family Planning Needs of Adolescents in Predominantly Rural Communities in the Central Part of Ghana. Open Journal of Preventive Medicine. 2015.
- 61. Wight D, Plummer M, Ross D. The need to promote behaviour change at the cultural level: One factor explaining the limited impactof the MEMA Kwa Vijana adolescent sexual health intervention in ruralTanzania: A process evaluation. BMC Public Health. 2012.
- 62. Maree J.E. 'No condom, no sex': Easy to say, but not possible for all South African women. Health SA Gesondheid. 2010; 15(1).

- 63. Irani, L., Speizer, I., Barrington, C. Attitudes, beliefs and normsrelating to contraceptive use among young migrant and non-migrantadults in urban Dar es Salaam, Tanzania. Global Public Health. 2013; 8(9): p. 1048-1062.
- 64. Guiella, G., Madise, N. J. HIV/AIDS and Sexual-Risk Behaviors among Adolescents: Factors influencing the use of condoms in Burkina Faso. African Journal of Reproductive Health. 2007; 11(3): p. 182–196.
- 65. Moore, A.M., Awusabo-Asare, K., Madise, N., John-Langba, J., Kumi-Kyereme. Coerced First Sex among Adolescent Girls in Sub-Saharan Africa: Prevalence. Afr J Reprod Health. 2007; 11(3): p. 62-82.
- 66. Kumi-Kyereme A, Awusabo-Asare K, Biddlecom AE, Tanle A. Influence of social connectedness, communication and monitoring on adolescent sexual activity in Ghana. African Journal of Reproductive Health. 2007.
- 67. Ajuwon A.J., Olaleye, A., Faromoju, B., Ladipo, O. Sexual behavior and experience of sexual coercion among secondary school students in three states in North Eastern Nigeria. BMC Public Health. 2006.
- 68. Darteh E., Nnorum C.C.P Sexual Behaviour and Condom Use among Adolescents Living in Urban Poor Areas in the Brong Ahafo Region, Ghana. Journal of Alternative Perspectives in the Social Sciences (2012) Vol 4, No 3, 619-639 http://www.academia.edu/20631437/. Sexual Behaviour and Condom Use among Adolescents Living in Urban Poor Areas in the Brong Ahafo Region, Ghana. Journal of Alternative Perspectives in the Social Sciences. 2012; 4(3): p. 619-639.
- 69. WiLDAF Ghana. Final Report: Scoping study for Parliamentary Advocacy Programme on Combating Early and Forced Marriage in Ghana. Accra:; 2014.
- 70. Glover, E.K., Bannerman, A., Pence, B.W., Jones, H., Miller, R., Weiss, E., Nerquaye-Tetteh, J. Sexual health experiences of adolescents in three Ghanaian towns. International family planning perspectives. 2003;: p. 32-40.
- 71. Nukunya G.K. Tradition and Change in Ghana: An Introduction to Sociology, Ghana. Second Edition ed. Accra: Universities Press; 2004.

- 72. Williams T, Mullen S, Karim A, Posner J. Evaluation of the African Youth Alliance program in Ghana: Impact on Sexual and Reproductive Health Behavior among Young People. Rosslyn VA: JSI Research & Training Institute. 2007.
- 73. Achana, F. S., Bawah, A. A., Jackson, E. F., Welaga, P., Awine, T., Asuo-Mante, E., Oduro, A., Awoonor-Williams J.K., Phillips, J. F. Spatial and socio-demographic determinants of contraceptive use in the Upper East region of Ghana. Reproductive Health. 2015; 12(29).
- 74. Bhana, A., Zimmerman, R., Cupp, P. Gender role attitudes and sexualrisk among adolescents in South Africa. Vulnerable Children and Youth Studies. 2008; 3(2): p. 112-119.
- 75. Jama Shai, N., Jewkes, R., Levin, J., Dunkle. K., Nduna, M. Factors associated with consistent condom use among rural young women inSouth Africa. AIDS Care. 2010; 22(11): p. 1379-1385.
- 76. Harrison, A., O'Sullivan, L. F., Hoffman, S., Dolezal, C., Morrell, R. Gender Role and Relationship Norms among Young Adults in South Africa: Measuring the Context of Masculinity and HIV Risk. Journal of Urban HealthJournal of Urban Health: Bulletin of the New York Academy of Medicine. 2006; 83(4): p. 709-722.
- 77. Appiah-Agyekum, N. N., Kayi, E. A. Students' Perceptions of Contraceptives in University of Ghana. Journal of Family & Reproductive Health. 2013; 7(1): p. 39-44.
- 78. Burke H.M., Ambasa-Shisanya C. Qualitative study of reasons for discontinuation of injectable contraceptives among users and salient reference groups in Kenya. African journal of reproductive health. 2011 Jun 1; 15(2).
- 79. Chandra-Mouli, V., Lane, C., Wong, S., 2015, What Does Not Work in Adolescent Sexual and Reproductive Health: A Review of Evidence on Interventions Commonly Accepted as Best Practices. Glob Health Sci Pract doi: 10.9745/GHSP-D-15-00126 vol. 3 no. 3 p. 3. What Does Not Work in Adolescent Sexual and Reproductive Health: A Review of Evidence on Interventions Commonly Accepted as Best Practices. Glob Health Sci Pract. 2015; 3(3): p. 3.

- 80. Zuurmond MA, Geary RS, Ross DA. The effectiveness of youth centers in increasing use of sexual and reproductive health services: a systematic review. Zuurmond MA, Geary RS, Ross DA. The effectiveness of youth centers in increasing use of sexual and Medline. 2012.
- 81. Zuurmond, M.A., Geary, R.S., Ross, D.A. The effectiveness of youth centers in increasing use of sexual and reproductive health services: a systematic review. Stud Fam Plann. 2012; 43(4): p. 239-254.
- 82. Denno, D.M., Hoopes, A.J., Chandra-Mouli, V. Effective Strategies to Provide Adolescent Sexual and Reproductive Health Services and to Increase Demand and Community Support. J Adolesc Health. 2015.
- 83. Awusabo-Asare, K., Abane, A.M., Kumi-Kyereme, A. Adolescent Sexual and Reproductive Health in Ghana: A Synthesis of Research Evidence. Occasional.; 2004. Report No.: 13.
- 84. Ghana Health Service. 2014 Annual Report. Annual Report. Accra:; 2015.
- 85. Ghana Statistical Service. Ghana Multiple Indicator Cluster Survey with an Enhanced Malaria Module and Biomarker. Final Report. Accra:; 2011.
- 86. United Nation: Ghana Office. Day of the Girl to be marked in Ghana for the First Time. 2012 October 11.
- 87. WiLDAF Ghana. Final Report: Scoping study for Parliamentary Advocacy Programme on Combating Early and Forced Marriage in Ghana. Final Report.; 2014.
- 88. United Nations Department of Economic and Social Affairs Population Division. World Fertility Policies.; 2011.
- 89. Jammeh, S. S., Liu, C.-Y., Cheng, S.-F., Lee-Hsieh, J. Community based study on married couples' family planning knowledge, attitude and practice in rural and urban Gambia. African Health Sciences. 2014.
- 90. Barnett, J.P., Maticka-Tyndale E., HP4RY Team. The gift of agency: sexual exchange. Journal of Sex Research. 2011.

- 91. Moore, A.M, Biddlecom, A.E, Zulu E.M. Prevalence and meanings of exchange of money or gifts for sex in unmarried adolescent sexual relationships in sub-Saharan Africa. Afr J Reproductive Health. 2007; 11: p. 44-61.
- 92. Messman-Moore, T.L., Walsh, K.L., DiLillo, D.K. "Emotion Dysregulation and Risky Sexual Behavior in Revictimization". Faculty Publications, Department of Psychology. 2010.
- 93. Cleland J, Conde-Agudelo A, Peterson H, Ross J, Tsui A. Contraception and health. Lancet. 2012; 380: p. 149-156.
- 94. Adjei, K. K., Laar, A. K., Narh, C. T., Abdulai, M. A., Newton, S., Owusu-Agyei, S., Adjei, S. A comparative study on the availability of modern contraceptives in public and private health facilities in a peri-urban community in Ghanaprivate health facilities in a peri-urban community in Ghana. Reproductive Health. 2015.
- 95. Participatory Development Associates. Adolescents and young people (10 to 24years) in Ghana; a situation analysis. PDA. 2014 January.
- 96. Mumah J.O, Kabiru C.W, Izugbara C.H, Mukiira C.A. Coping with unintended pregnancies: Narratives from adolescents in Nairobi's slums. J African population and health research centers. 2014 April.
- 97. Nyarko S.H. Prevalence and correlates of contraceptive use among female adolescents in Ghana. BMC Women's Health DOI: 10.1186/s12905-015-0221-2. BMC Women's Health. 2015.
- 98. Aninanya, G. A., Debpuur, C. Y., Awine, T., Williams, J. E., Hodgson, A., Howard, N. Effects of an Adolescent Sexual and Reproductive Health Intervention on Health Service Usage by Young People in Northern Ghana: A Community-Randomised Trial. 2015; 10(4).
- 99. Participatory Development Associates. Adolescents and young people (10 to 24years) in Ghana. A situational analysis. 2014 January.
- 100. Bongaarts, J, Cleland, J, Townsend, J, Bertrand, J, Gupta, M.D. Family Planning Programs for the 21st Century: Rationale and Design. New York: Population Council.

- 101. Glinski A, Sexton M, Petroni S. Glinski A, Sexton M, Petroni S. 2014, Adolescents and family planning: what the evidence shows. International Center for Research on Women. 2014.
- 102. Kasedde S, Kapogiannis B.G, McClure C, Luo C. Executive summary: opportunities for action and impact to address HIV and AIDS in adolescents. J Acquir Immune Defic Syndr. 2014; 66.
- 103. Magnani R, Gaffiakin L, Leao de Aquino EM, Seiber EE. Chagas Almedia M de C, Lipovsek V. Impact of an integrated adolescent reproductive health program in Brazil. Stud Fam Plann. 2001. 2001; 32(3): p. 230-243.
- 104. Van Der Geugten J, Van Meijel B, Den Uyl M, De Vries. Evaluation of a Sexual and Reproductive Health Education Programme: Students' Knowledge, Attitude and Behaviour in Bolgatanga Municipality, Northern Ghana. African Journal of Reproductive Health. 2015 September; 19 (3).
- 105. Beksinska, M.E., Smit, J.A., Mantell, J.E. Progress and challenges to male and female condom use in South Africa. Sex Health. 2012; 9(1): p. 51-58.
- 106. Ghana News Agency. GES launches School Health Education Programme Policy Guidelines. 2014 February 10.
- 107. Gottschalk L.B., Ortayli, N. Interventions to improve adolescents' contraceptive behaviors in low-and middle-income countries: a review of the evidence base. Contraception. 2014 September; 90(3): p. 211-25.
- 108. Pathfinder International. Youth-Friendly Services: Ghana End of Program Evaluation Report African Youth Alliance (AYA).; 2005.
- 109. FP2020. Ghana: Adolescent reproductive health project empowers Brong Ahafo youth. Accra:; 2015.
- 110. Ardayfio, R. Adolescent reproductive health project empower Brong Ahafo youth 09 December 2015 Graphic, Accra. 2015 December.
- 111. Women's Refugee Commission, Save the Children, UNHCR, UNFPA. Adolescent Sexual and Reproductive Health Programs in Humanitarian

- Settings: An In-depth Look at Family Planning Services. Resaerch.Rethink.Resolve. 2012.
- 112. UNFPA/Government of Ghana. Ghana country office 5th country program (CP5) 2006/2011: 'Time with Grandma (TWG)', Increasing access to Adolescent and Sexual Health Reproductive Information and Services in the Volta Region. Cumulative report. Accra:; 2012.
- 113. Baku, E.A 2014 Parent training and parent-adolescent communication about sexuality in Accra Metropolis, Ghana. Parent training and parent-adolescent communication about sexuality in Accra Metropolis, Ghana. Thesis. 2014.
- 114. Vandenhoudt HA, Miller KS, Ochura J, Wyckoff SC, Ochieng F, Odera W, Mboi P, Adipo Obong'o C, Njika G, Otwoma N, Nasokho P, Poulsen M, Lin C, Menten J, Marum E, Buv'e A. From Parents Matter! to Families Matter!. AIDS Education and Prevention. 2010; 22(4): p. 328-343.
- 115. Phillips JF, Bawah AA, Binka FN. Accelerating reproductive and child health programme impact with community-based services: the Navrongo experiment in Ghana. Bull; World Health Organ. 2006; 84: p. 949-955.
- 116. Dalaba, M. A., Stone, A. E., Krumholz, A. R., Oduro, A. R., Phillips, J. F., & Adongo, P. B. A qualitative analysis of the effect of a community-based primary health care programme on reproductive preferences and contraceptive use among the Kassena-Nankana of northern Ghana. BMC Health Services. 2016; 80: p. 16.
- 117. International Planned Parenthood Federation. Policy and Political.; 2012.
- 118. Ghana Health Service (GHS). 2013 Annual report. Accra: GHS; 2013.
- 119. Government of Ghana, Ghana Health Service, Futures Group. Ghana Family Planning Costed Implementation Plan, 2016-2020. Accra:; 2015.
- 120. Clarke, J., Tyson, S. Ghana health sector support programme: scenario planning and risk management. Draft Report. Accra: Ghana Health Service, Health and Education Advice and Resource Team; 2014.

- 121. Phetla, G., Busza, J., Hargreaves, J.R., Pronyk, P.M., Kim, J.C., Morison, C., Porter, J.D.H. They have opened our mouths': Increasing women's skills and motivation for sexual communication with young people in rural South Africa. AIDS Education and prevention. 2008; 20(6): p. 504-518.
- 122. Debpuur, C, Phillips, J.F, Jackson, E.F, Nazzar, A, Ngom, P, Binka, F.N. The Impact of the Navrongo Project on Contraceptive Knowledge and Use, Reproductive Preferences, and Fertility. Studies in Family Planning.; 33(2): p. 141-164.
- 123. Richey, C., Salem, R.M. Elements of Success in Family Planning Programming, Population Reports, Series J, No. 57, INFO Project. Series. Baltimore: Johns Hopkins Bloomberg School of Public Health; 2008.
- 124. Ministry of Health. Holistic Assessment of the Health Sector POW. Final version. Accra: MOH; 2013.
- 125. United Nations. Political Map of Ghana. , UN Carthographic Section; 2016.

APPENDICES

APPENDIX I: Map of Ghana showing the neighboring countries



SOURCE: UN Cartographic Section. (125)

APENDIX II: The goals of the Ghana adolescent reproductive health policy The Ghana Adolescent Reproductive Health Policy will achieve its goal if the under listed objectives are met:

- "Promote other policies that will enhance the development and implementation of adolescent sexual and reproductive health programmes.
- Pursue policies and programmes that will eliminate gender-based violence and biases against the girl-child. Promote programmes that will improve the knowledge of adolescents on sexual and reproductive health which will in turn guide them to develop socially acceptable and responsible attitudes towards sex and sexuality.
- Support the implementation of programmes that will help to either reduce or eliminate unintended pregnancies, reproductive tract infections, including HIV/AIDS, unsafe abortions, female genital cutting, early marriage and malnutrition among adolescents.
- Encourage and strengthen the teaching of population and family life education in the school curriculum, activities targeting out-of school youth and the non-formal education programme. Encourage the development of programmes in sexual and reproductive health that respond to the needs of special groups such as street youth, streetinvolved youth, and the physically and mentally challenged.
- Improve access to education and create employment opportunities for adolescents, particularly females as well as rural and urban poor youth.
- Support and strengthen training programmes for adolescents on various aspects of sexual and reproductive health.
- Ensure the development and strengthening of training of adolescents on leadership and skills to enable them formulate, implement, monitor and evaluate their own programmes.
- Encourage non-governmental organizations, private institutions and individuals to provide services such as counselling, family planning and advocacy on reproductive health for adolescents and young people"
 (7)

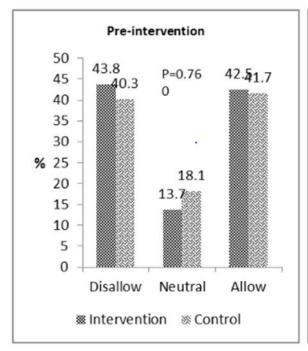
APPENDEX III: Objectives of the Maputo protocol

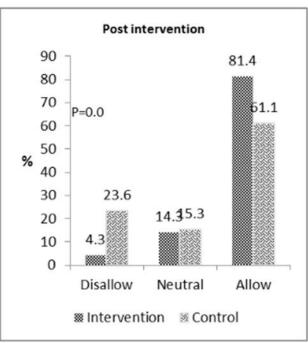
"Every woman shall be entitled to respect for her life and the integrity and security of her person. All forms of exploitation, cruel, inhuman or degrading punishment and treatment shall be prohibited" (8)

"States Parties shall take appropriate and effective measures to:

- a) Enact and enforce laws to prohibit all forms of violence against women including unwanted or forced sex whether the violence takes place in private or public;
- b) Adopt such other legislative, administrative, social and economic measures as may be necessary to ensure the prevention, punishment and eradication of all forms of violence against women;
- c) Identify the causes and consequences of violence against women and take appropriate measures to prevent and eliminate such violence;
- d) Actively promote peace education through curricula and social communication in order to eradicate elements in traditional and cultural beliefs, practices and stereotypes which legitimize and exacerbate the persistence and tolerance of violence against women;
- e) Punish the perpetrators of violence against women and implement programmes for the rehabilitation of women victims;
- f) Establish mechanisms and accessible services for effective information, rehabilitation and reparation for victims of violence against women" (8)

APPENDIX IV: illustration of the attitudes of parents towards condom use among adolescents before and after the intervention. (113)





Source: Baku (2014)