AKENTEN APPIAH-MENKA UNIVERSITY OF SKILLS TRAINING AND ENTREPRENEURIAL DEVELOPMENT

FACULTY OF ENVIRONMENT AND HEALTH EDUCATION,

DEPARTMENT OF PUBLIC HEALTH EDUCATION

EVALUATION OF PREDICTORS OF MODERN CONTRACEPTIVE USE AMONG ADOLESCENTS AGED 10-14 YEARS IN SEKYERE SOUTH DISTRICT

BY

CLEMENT AMOAH NEWTON NTOW

(8238000025)

A thesis submitted to the Department of Public Health Education of the Faculty of Environment and Health Education, Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development, in partial fulfillment of the requirements for the award of a Master of Philosophy in Public Health.

DECEMBER, 2025

DECLARATION

Candidate's Declaration

I hereby declare that this thesis, with the exception of quotations and references contained in published works which have been duly acknowledged; is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

Clement Amoah Newton Ntow

Signature: ………………………… Date: …………………………..

Supervisor's Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development.

Principal Supervisor: Dr. Ernest Osei

Signature: ……………………….. Date: …………………………

Co-Supervisor: Dr. Kofi Sekyere Boateng

Signature: .... Date: ....

ACKNOWLEDGEMENT

I wish to express my profound gratitude to Almighty God for granting me the strength, knowledge and wisdom to carry out this research work successfully.

I want to express my appreciation to the Department of Public Health Education, particularly its head, Dr. Denis Dekugmen Yar. My profound thanks and gratitude are also extended to my parents, especially my mum, for their emotional and spiritual support and encouragement during my research work and studies at Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development.

Moreover, I would like to thank all the participants who took the time to respond to my questionnaires for the cooperation and support they provided, which made this study a success. Finally, I would like to acknowledge the various authors, books, journals, and other research works that I referenced in conducting this research study.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

Adolescent contraceptive use remains a public health priority in Ghana. It plays a crucial role in reducing unintended pregnancies and enhancing reproductive health outcomes. Despite increasing awareness of modern contraceptives, usage among young adolescents is still low. This study evaluated the predictors of modern contraceptive use among adolescents aged 10–14 years in Sekyere South District, Ghana. A cross-sectional design was employed. A total of 429 adolescents were selected using a random sampling method. Data were collected using a structured questionnaire. Descriptive statistics, chi-square tests, and logistic regression analyses were employed to determine the associations between predictors and contraceptive use. Most respondents were female (50.6%), Christian (88.3%), and in school (96.3%). Knowledge of modern contraceptives was high, with condoms (67.8%), pills (57.8%), and injectables (42.9%) as the most recognized methods. However, only 31.9% reported current use. Socio-cultural factors significantly influenced uptake; adolescents who discussed contraception with parents (AOR=2.45, 95% CI: 1.38–4.33) or partners (AOR=1.97, 95% CI: 1.12–3.45) were more likely to use contraceptives. Stigma and myths reduced the likelihood of use. Health system factors, such as proximity to facilities (AOR = 2.68, 95% CI: 1.51–4.76), availability of methods (AOR = 2.31, 95% CI: 1.29–4.12), and receiving counselling (AOR = 3.05, 95% CI: 1.74–5.35), were positively associated with use. This study demonstrates that awareness of modern contraceptives among adolescents is relatively high, but actual utilization remains low. Socio-cultural barriers, misconceptions, and limitations within health service delivery continue to restrict uptake. Interventions should prioritize strengthening parental and community engagement, improving access to adolescent-friendly services, and correcting misconceptions through targeted education. Such strategies are essential to reduce unintended adolescent pregnancies and their associated health and social consequences.

Kwame Nkrumah University of Science and Technology, Kumasi

College of Health Sciences
SCHOOL OF MEDICINE AND DENTISTRY

COMMITTEE ON HUMAN RESEARCH, PUBLICATION AND ETHICS

Our Ref: CHRPE/AP/664/25

22nd July 2025

Mr. Clement Amoah Newton Ntow
Department of Public Health Education
Akenten Appiah Menka University
KUMASI.

Dear Sir,

LETTER OF APPROVAL

Protocol Title:	***"Evaluating the Predictors of Modern Contraceptive Use Among Adolescents Age 10-14 Years. Evidence from Sekyere South District."***
Proposed Sites:	***Sekyere South District, Ashanti Region, Ghana.***
Sponsor:	***Self-Sponsored.***
Students:	Mr. Clement Amoah Newton Ntow.
Supervisor:	Prof. Richard Amankwa Kuffour

Your submission to the Committee on Human Research, Publications, and Ethics on the above-named protocol refer.

The Committee reviewed the following documents:

- A notification letter of 15th April, 2025, from the Sekyere South District, Ashanti Region, Ghana (study site), indicating approval for the conduct of the study in the district.
- A Completed CHRPE Application Form.
- Participant Information Leaflet and Consent Form.
- Research Protocol
- Questionnaire.

The Committee has considered the ethical merit of your submission and approved the protocol. The approval is for one year, renewable after that, from **22nd July 2025 to 21st July 2026.** The Committee may, however, suspend or withdraw ethical approval at any time if your study is found to contravene the approved protocol.

Data gathered for the study should be used for the approved purposes only. Permission should be sought from the Committee if any amendment to the protocol or use, other than that submitted, is made of your research data.

The Committee should be notified of the actual start date of the project and would expect a report on your study, annually or at the close of the project, whichever one comes first. It should also be informed of any publication arising from the study.

Thank you for your application.

Yours faithfully,

Rev. Prof. John Appiah-Poku.
Honorary Secretary
FOR: CHAIRMAN

Room 7, Block L, School of Medicine and Dentistry, KNUST, University Post Office, Kumasi, Ghana
Tel: +233 (0) 322 063 248 **Mobile:** +233 (0) 205 453 785 **Email:** chrpe.knust.kath@gmail.com / chrpe@knust.edu.gh

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Adolescents between 10 and 14 years are in the early stages of growth. At this stage, they undergo numerous physical and emotional changes. These changes affect their behaviour and choices, including decisions about sex and health (Ezenwaka et al., 2020). Some adolescents in this group become sexually active, often without full knowledge of the risks. This puts them at risk of unwanted pregnancy and infections like HIV, syphilis, and gonorrhea (Haile et al., 2024). Modern contraceptives such as condoms, pills, and injectables can reduce these risks. However, many young adolescents do not use them. They face many challenges in accessing contraceptives. These include lack of knowledge, stigma from adults, fear of being judged, and absence of friendly health services. Myths and misinformation also prevent some from using contraceptives (Tampah-Naah et al., 2023). Parents, teachers, and health workers often avoid discussing reproductive health with them. This creates a gap in information and support during a critical stage of life.

Most health programs focus on older adolescents aged 15 to 19. This leaves a gap in support for younger adolescents. Nevertheless, this age group also needs protection and guidance. Globally, approximately 1.2 billion individuals enter adolescence each year (Sharma & Singh, 2022). Among this population, a significant number become pregnant annually, with around 12 million adolescent pregnancies occurring in developing countries (Kaniki et al., 2023). Of these, about 2 million result in live births each year (Sidibé et al., 2020). Most of these pregnancies are unintended and are often linked to the lack of modern contraceptive use (Sserwanja et al., 2021). In sub-Saharan Africa, there is a wide disparity in contraceptive use among countries. Zimbabwe reports a contraceptive prevalence rate of 62%, while Guinea records a much lower rate of only 6%. Many adolescents resort to unsafe abortions, which pose serious risks to individual and public health (Haile et al., 2024).

In Ghana, it has been observed that contraceptive use has continued to remain low (Tampah-Naah et al., 2023). Evidence suggests that about 70% of adolescent pregnancies are unplanned compared with their adult counterparts (Oppong, Logo, Agbedra, Adomah, Amenyaglo, Arhin-, et al., 2021). Arguably, factors including inadequate counselling, inadequate knowledge of contraceptive use, inadequate access to birth control methods, perceived side effects of contraceptives, inadequate availability of contraceptives in health establishments, disapproval from family members, and cultural and religious acceptability (Thakuri et al., 2022). Additionally, the level of education, age, exposure to social media, income, and decision-making power (Gebre & Edossa, 2020). Unfortunately, the use of modern contraceptives is known to prevent sexually transmitted infections, unplanned pregnancies, abortion, and its complications (Muanda et al., 2018). Additionally, it enhances educational advancement for young girls, reduces maternal deaths, and bridges poverty and famine thereby improving their economic outcomes (Budu et al., 2023). Further, the use of modern contraceptives has been highlighted to reduce the costs posed by teenage pregnancy (Sserwanja et al., 2021).

However, modern contraceptive use among adolescents continues to be low (Agyekum et al., 2022; Tampah-Naah et al., 2023). For instance, the prevalence of modern contraceptive use among adolescents aged 15-24 years in other settings of sub-Saharan Africa is 24.7% (Ahinkorah et al., 2020). This shows no change; the use of contraceptives has not increased but somewhat decreased from what was reported in a report by the World Health Organization in 2014, indicating that the prevalence of modern contraceptive use among adolescents ranges from 21%-42% for those who are unmarried compared to 8%-36% who are married (Makwinja et al., 2021). Elsewhere in the south western part of Nigeria, studies suggest that about 22% of young girls who are aged 15-19years revealed that, they have never used a contraceptive during their last sexual contact as compared to cover 50% of the adolescent population in the United Kingdom and about 39% of the population of adolescents in the United State of America respectively (Crawford et al., 2021). This thereby identifies a huge gap in modern contraceptive use among adolescents living in resource-poor countries (Sanchez et al., 2020).

The Sekyere South District in Ghana has rural and peri-urban communities. Many families in this district face poverty and low education. These conditions may affect how adolescents get information about reproductive health. Cultural beliefs may also stop young people from learning about contraception. Few studies have looked at contraceptive use among 10 to 14-year-olds in Ghana. There is little data on what makes them use or avoid modern contraceptives. Factors like parental support, school attendance, and peer influence may play a role. However, more research is needed to understand these links.

1.2 Problem Statement

Unwanted pregnancies among younger adolescents are a growing concern in Ghana. Most of these pregnancies are unintended because many of the girls engage in early sexual activity but have little or no access to modern contraceptives (Pritt et al., 2017).

This trend is alarming, as most of these pregnancies are unplanned and result from early sexual activity and the non-use of modern contraceptives. The lack of access to accurate reproductive health information and youth-friendly services exposes these adolescents to health risks such as obstructed labour, unsafe abortions, and maternal deaths (Dioubaté et al., 2021). Nearly 40% of maternal deaths in this age group are linked to these conditions. Other outcomes include school dropout, social stigma, and early parenthood (Dioubaté et al., 2021).

Despite some national efforts to improve adolescent reproductive health, services often do not target younger adolescents. In Sekyere South District, data from 2021 to 2023 show a concerning number of adolescent pregnancies, with 438 cases in 2021, rising to 527 in 2022 and slightly dropping to 371 in 2023 (Otim, 2020). Limited research exists on the specific predictors of modern contraceptive use among adolescents aged 10 to 14 in this district. Without this evidence, it is difficult for health planners and policymakers to design targeted and effective interventions. This study, therefore, aims to fill that gap by identifying factors that influence modern contraceptive use in this vulnerable age group. Therefore, the actual problem is the high and persistent rate of unwanted pregnancies among younger adolescents in Sekyere South District, driven by low contraceptive use and the lack of evidence on factors influencing this use.

1.3 Justification of the Study

This study focused on a population often neglected in reproductive health programs adolescents aged 10 to 14 years who face distinct biological, social, and systemic challenges. Although most public health interventions prioritize older adolescents, this younger group remains largely underserved. The research explored the key determinants influencing the use of modern contraceptives among these younger adolescents in Sekyere South District, Ghana. Through the use of a community-based cross-sectional design, including structured questionnaires and focus group discussions, the study examined their knowledge of contraceptives, the impact of socio-cultural norms, accessibility of health services, and personal autonomy in decision-making. The findings revealed that limited awareness, stigma, and poor access to youth-friendly services were major barriers.

By addressing these gaps, the study produced vital data that supports the formulation of age-specific and culturally appropriate interventions. The insights gained have the potential to inform policy and practice, especially in designing services that are more inclusive and adolescent-friendly. These outcomes contribute to reducing unplanned pregnancies, unsafe abortions, and school dropout rates among younger adolescents. Additionally, the findings also reinforce Ghana's ongoing efforts toward achieving national and global targets such as the Sustainable Development Goals (SDGs), particularly those focusing on health, education, and gender equality.

1.4 Research objectives

1.4.1 General objective

The general objective of this study evaluated the predictors of modern contraceptive use, drawing evidence from Sekyere South District in the Ashanti Region of Ghana.

1.4.2 Specific Objectives

The specific objectives of this study were to:

1. Examine the level of knowledge on contraceptives among adolescents aged 10–14 years.
2. Assess the socio-cultural factors influencing the uptake of modern contraceptives among adolescents aged 10–14 years.
3. Examine the health system factors influencing the use of modern contraceptives among adolescents aged 10–14 years.

1.5 Research Questions

This study seeks to answer the following questions:

1. What is the level of knowledge on modern contraceptives among adolescents aged 10–14 years?
2. What are the socio-cultural factors influencing the uptake of modern contraceptives among adolescents aged 10–14 years?
3. What are the health system factors influencing the use of modern contraceptives among adolescents aged 10–14 years?

1.6 Significance of the study

The findings from this study provide critical insights into the factors that influence modern contraceptive use among adolescents aged 10–14 years. This information is essential for public health officials, educators, and the Government to design and implement interventions that are age-appropriate and culturally sensitive. The study also highlights the existing barriers within the health system and community that limit contraceptive uptake, thereby guiding improvements in adolescent-friendly services. Furthermore, the study contributes to national and regional data on adolescent reproductive health, particularly for a group that is often underrepresented in research.

This will help Ghana align more effectively with international goals such as the Sustainable Development Goals (SDGs), particularly in promoting health, reducing gender inequalities, and ensuring access to quality education. On a local level, the results can support the Sekyere South District Health Directorate and other stakeholders in planning tailored programs that address the needs of younger adolescents. By understanding what drives or prevents contraceptive use in this age group, stakeholders can reduce early pregnancies, promote reproductive rights, and support healthy transitions into adulthood.

1.7 Scope of the study

This study was conducted in the Sekyere South District of Ghana focusing specifically on adolescents aged 10 to 14 years. It examined the level of knowledge, socio-cultural factors, and health system influences on the use of modern contraceptives within this age group. The research covered both rural and peri-urban areas within the district, ensuring representation of various socio-economic backgrounds. The study did not include adolescents aged 15 years and above, as these are commonly addressed in other reproductive health programs. It also excluded other reproductive health services outside of contraceptive use. Data were collected using a mixed-methods approach, combining quantitative surveys with qualitative interviews and focus group discussions. The findings reflect the situation during the data collection period and may not represent long-term trends or nationwide patterns. The scope was limited to predictors of contraceptive use and did not assess clinical outcomes or long-term behavioural changes. However, the insights gained provide valuable information for policy, planning, and adolescent health programming in similar settings.

1.8 Organization of the study

This research report is structured into three main chapters. Chapter One presents the background of the study, including the statement of the problem, research objectives, research questions, justification, significance of the study, and the scope. Chapter Two provides a detailed review of existing literature, drawing on both international and local research relevant to adolescent contraceptive use. Chapter Three outlines the research methodology, including the study design, sampling methods, data collection procedures, and techniques used for data analysis. Each chapter builds on the previous one to provide a coherent understanding of the research findings and their implications.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This literature review looked at what other studies had already said about contraceptive use among young adolescents, especially those aged 10–14 years. It began by explaining what contraceptives were and why they were important for young people. The review then focused on three main areas. First, it looked at how much adolescents knew about contraceptives. This included where they got information from, what they believed, and what they understood about using contraceptives. Second, it discussed the cultural and social factors that affected whether adolescents used contraceptives. This included the role of parents, religion, tradition, and peer pressure. Third, it focused on how the health system affected access to contraceptives. This included factors such as the attitude of health workers, the availability of services, and how easy or hard it was for young people to get help. The review also highlighted gaps in the research and explained why the study in Sekyere South District was important. It helped to show what still needed to be done to support young adolescents in making safe and informed choices.

2.2 Knowledge of Contraceptives Among Adolescents Aged 10–14 Years

Adolescents undergo numerous physical and emotional changes. These changes affect their growth and health needs (Ahmed & Seid, 2020). One important area is sexual and reproductive health (SRH). SRH includes education, safe practices, and access to services. It helps prevent early pregnancies and infections. It also promotes healthy adulthood (Akunvane et al., 2024). Adolescents aged 10 to 14 are often excluded from SRH programs. A study in Kenya found that 11% of girls aged 12 had already experienced sex (Gbagbo, 2020). In Ghana, the 2017 MICS report showed that some girls under 15 had started childbearing (Klutse, 2021). Early sex without protection leads to school dropout and health risks. Contraceptives can prevent teenage pregnancy and STIs. However, many young adolescents lack access to information. For example, a study in rural Ethiopia found low contraceptive knowledge among adolescents aged 10–14 (Apambila et al., 2020). In Ghana, research primarily focuses on older adolescents. There is limited focus on those aged 10–14. In Sekyere South District, data on this age group is scarce. It is unclear how much they are aware of contraceptives. Factors that influence their decisions are also not well understood. This study aims to address these gaps and provide local evidence.

2.2.1 Understanding Contraceptives

Contraception refers to the use of various methods to prevent pregnancy by stopping ovulation, fertilization, or implantation. These methods help women to plan when and how many children they want to have (Hoopes et al., 2016). Contraceptives can be grouped into hormonal and non-hormonal types and include options such as intrauterine devices (IUDs), implants, injections, condoms, sterilization, oral pills, and spermicides. Contraceptive methods are also categorized as either modern or traditional (Kumar & Brown, 2016). Modern methods include IUDs, oral pills, sterilization for both sexes, injections, condoms, and diaphragms. In addition to these, practices like extended breastfeeding and postpartum abstinence, which have traditionally been used for child spacing and child survival, also contribute to limiting family size (Williams et al., 2021). Among adolescents, condoms are the most commonly used contraceptive method, followed by hormonal options. However, hormonal contraceptives are often recommended for those in stable, monogamous relationships. Except for sterilization, the safety of contraceptives used by adults generally extends to adolescents as well (Guzzo & Hayford, 2018).

Despite this, adolescents often face more social and psychological barriers than older women when it comes to accessing contraception. These challenges are often linked to the denial of their sexual rights (Guzzo & Hayford, 2018). Adolescent sexual health requires recognition of their rights, provision of proper education, counseling, and assurance of confidential services (Shu et al., 2016). Addressing adolescent reproductive health in sub-Saharan Africa is critical, as teenage childbirth significantly contributes to high fertility rates in the region. Improving access to contraception and education can help reduce poverty and promote women's empowerment. The erosion of traditional values, influenced by modern media and education, has contributed to declining emphasis on chastity before marriage. Entertainment media has been found effective in delivering culturally acceptable health messages (Mbadu Muanda et al., 2018a).

Teenage pregnancy remains widespread in Africa, yet the use of contraceptives among sexually active adolescents is still low, despite high awareness. This is often due to stigma and lack of support from families, communities, and healthcare providers, which discourages young women from seeking contraceptive services (Pritt et al., 2017). In many cases, adolescents are unaware of their fertile periods. Globally, millions of women lack access to effective contraception, leading to high numbers of unplanned pregnancies. In many developing countries, poor access to family planning results in numerous unintended pregnancies every year (Dioubaté et al., 2021). Unfriendly health services and judgmental attitudes from providers further deter adolescents from seeking help. Unsafe abortions resulting from unplanned pregnancies continue to cause severe maternal health complications, including death, underweight births, and other serious outcomes. In some regions, such as East Africa, a significant portion of maternal deaths are linked to unsafe abortions (Mbachu et al., 2021).

Adolescent pregnancy is a major public health concern, both in Africa and globally. Teen pregnancies are often unintended and carry severe health risks, such as increased maternal and infant mortality and poor neonatal outcomes. Studies show that many adolescent pregnancies are unplanned, and they often lead to unsafe abortions and their consequences (Mbachu et al., 2021). These pregnancies also disrupt the prospects of many young girls and increase their risk of contracting sexually transmitted infections. As such, there is an urgent need to promote contraceptive use and sexual health awareness among adolescents. Studies indicate that adolescents between the ages of 10 and 19 make up a significant portion of the global population (Shu et al., 2016). If the current rate of adolescent pregnancies continues unchecked, it could impact future population growth. Therefore, there is a pressing need to strengthen adolescent reproductive health policies, promote contraceptive use, and expand research in this area. These factors have informed the focus of this study, which seeks to assess the level of contraceptive use among adolescent females in James Town, Accra, Ghana (Agyemang et al., 2019).

2.2.2 Sources of Information

In this context, 'sources of information' refer to the various channels, platforms, and people through which adolescents receive knowledge and messages about sexual and reproductive health (SRH), including contraceptive use (Todd & Black, 2020). These may include formal education systems, family members, peers, healthcare providers, media, and digital platforms. The type and quality of information adolescents receive from these sources greatly influence their understanding, beliefs, and behaviours related to contraception (Williams et al., 2021). Sources of information on sexual and reproductive health (SRH) play a critical role in shaping adolescents' knowledge, beliefs, and behaviours. Teachers are well-positioned to educate adolescents. In many countries, school-based SRH education has improved awareness and positive attitudes toward contraceptives (Mbachu et al., 2021). However, in Ghana, SRH topics are often neglected in formal education. A study by Boadu (2022) reported that many schools avoid teaching contraception due to fear of backlash from parents and religious leaders. In contrast, in countries like Rwanda, structured SRH programs in schools have led to higher contraceptive knowledge among adolescents (Boadu, 2022). Parental communication also plays a key role. Unfortunately, in many Ghanaian households, parents avoid conversations about sex. This silence leads to poor understanding among adolescents. A study by Boamah et al. (2016) showed that adolescents who had open discussions with parents were more likely to understand contraceptives. In Uganda and Kenya, the combination of school and parental involvement led to improved adolescent sexual health outcomes (Amoah et al., 2023).

Adolescents also turn to their peers for information. Peer influence can spread both helpful and harmful ideas. The internet and social media are growing sources of information. While platforms like YouTube and TikTok offer educational content, they also spread misinformation (Allotey & Bosoka, 2024). A survey in Nigeria found that 45% of adolescents got SRH information online, but only 20% of that was accurate. In Ghana, adolescents often lack the skills to verify online content. Misinformation from untrusted sources increases myths and reduces safe practices. Media can also be both helpful and harmful (Kantorová et al., 2021). Educational campaigns on radio and TV have been successful in places like Malawi and South Africa (Amoah et al., 2023b). In Ghana, campaigns such as "Adolescents Corner" have tried to improve awareness, but coverage and consistency remain limited. Adolescents in rural areas, such as Sekyere

South, may not have regular access to these media programs. This lack of consistent, accurate information contributes to the poor knowledge observed among this age group.

2.2.3 Misconceptions and Myths

In this context, a *misconception* refers to a wrong or inaccurate idea or belief, often a misunderstanding. A *myth* is a widely held but false belief, often passed down through culture or tradition and accepted as accurate by many people (Oppong et al., 2021). Misconceptions and myths about contraceptives are widespread among young adolescents. These false beliefs cause fear and confusion, which prevent many adolescents from using contraceptives (Amenya et al., 2024). Some adolescents believe that using contraceptives can cause infertility, cancer, or birth defects. A study in Northern Ghana found that 40% (Takyi et al., 2023) of adolescents believed that using contraceptives before marriage could make a woman barren (Abdul-Rahman et al., 2017). Other myths include the idea that contraceptive use leads to immoral behaviour or promiscuity. These beliefs are often passed down by parents, elders, or religious figures. Adolescents may avoid discussing or using contraceptives for fear of being judged or labelled as “spoiled.” Another common fear is related to side effects (Lasong et al., 2020). Adolescents report hearing that pills cause severe weight gain, mood swings, or lasting damage to their health. A Kenyan study found that over half of adolescents avoided contraceptives due to fears about side effects (Amenya et al., 2024). In Ghana, similar fears exist and are often perpetuated without proper education.

These myths also reduce confidence in health systems. Adolescents may avoid seeking care at clinics because they fear being judged or turned away (Asiedu et al., 2020). In some communities, health workers may deny contraceptives to unmarried youth, reinforcing the idea that contraceptive use is shameful (Yidana et al., 2015). To combat these misconceptions and myths, strong education programs are needed. Healthcare workers, teachers, parents, and the media must work together to provide clear, accurate information. Programs in countries like Rwanda and South Africa show that involving schools and communities can help reduce myths and improve contraceptive use (Yen et al., 2015).

2.3 Socio-Cultural Factors Influencing Contraceptive Uptake

Adolescents aged 10–14 face many social and cultural challenges. These challenges affect how they learn about and use contraceptives. Their choices are shaped by their families, communities, religion, and local customs (Olika et al., 2021). In this section, we explore the key socio-cultural factors that influence contraceptive use among these young people. These factors are common across many parts of Africa, but some studies show differences between rural and urban areas (Casey et al., 2020).

2.3.1 Cultural Beliefs and Traditional Practices

Many cultures do not expect adolescents to be sexually active. Because of this belief, sexual topics are often not discussed openly at home or in schools. Talking about sex is seen as taboo in many African communities (Ivankovich, 2022). Some parents think such talks may encourage children to engage in sex early. In some communities, using contraceptives is seen as a sign of bad behaviour. Girls who use them are often judged or labelled negatively (Asiedu et al., 2020). Some people also believe that contraceptives can harm future fertility. Others think it is against traditional ways of living. These cultural beliefs make it hard for young adolescents to access accurate information. As a result, many people are unaware of how to protect themselves. Studies in Ghana and Nigeria have shown that these beliefs are common, particularly among older generations

(Izugbara, 2018). In contrast, studies from South Africa show that adolescents in urban settings are more open to contraceptive use due to better education and access to media. Despite progress, there is limited data on adolescents aged 10–14. Most studies focus on older youth. This creates a gap in understanding the specific cultural pressures this younger group faces.

2.3.2 Religion and Faith-Based Influence

Religious teachings play a significant role in shaping adolescent behaviour. Most religions encourage abstinence until marriage. They do not support the use of contraceptives. Churches and mosques often preach against contraceptive use (Kistiana et al., 2020). They believe it is wrong and goes against moral values. Some religious leaders say that teaching adolescents about contraception may promote immorality (Sweya et al., 2016a). Young people who attend church or mosque regularly may avoid using contraceptives. They fear being judged by their religious groups (Kantorová et al., 2021). Even when health services are available, religious pressure can stop adolescents from using them. A study in Kenya found that religious beliefs were one of the strongest reasons adolescents avoid reproductive health services. Similarly, in northern Ghana, faith-based resistance to contraception creates fear among adolescents (Williams et al., 2021). However, in some regions, progressive religious leaders are now involved in sexual health programs. These efforts are still limited and not widespread. A gap remains in involving religious leaders in youth-focused health education. Most existing programs do not address the strong role of religion in shaping early attitudes (Sweya et al., 2016b).

2.3.3 Role of Family and Community

Families are the first place where children learn values and behaviour. In many African societies, however, parents do not talk openly about sexual health. Parents often feel shy or believe that such discussions are not appropriate for younger adolescents. They assume children aged 10–14 are not ready for this information (Ezenwaka et al., 2020). This silence leaves adolescents uninformed and vulnerable. As a result, many turn to friends or the media, where information may be incomplete or incorrect. Some families believe that talking about contraceptives encourages early sexual activity. This belief causes many parents to avoid the topic altogether. According to Awusabo-Asare et al. (2017), Ghanaian parents rarely discuss reproductive issues with their children due to fear of promoting immorality. In comparison, studies in South Africa and Kenya have demonstrated that family communication improves when parents are trained on how to talk about sexuality. This suggests that parental silence is not a cultural destiny, but can be changed through education and support (Gyan & Marhefka-Day, 2021).

Extended families also influence adolescent choices. In Ghana, aunties and grandmothers often pass down traditional beliefs. These views may discourage modern contraceptive use. Community members also judge young girls who are seen asking for contraceptives (Todd & Black, 2020). This judgment instils fear and shame, especially in rural areas. For instance, a study in northern Nigeria found that adolescents avoided clinics because they feared being seen by neighbours. Peers play a critical role in shaping behaviour. Some adolescents receive positive encouragement from friends who support protection. Others face teasing or pressure to take risks. Friends can act as either a support system or a source of misinformation. A study in Uganda found that peer-led sexual health clubs helped improve contraceptive knowledge. However, in many places, such peer education programs are not available or are not designed for those under 15. This shows a clear gap in interventions targeting younger adolescents with community and peer-based approaches (Mahmud et al., 2021).

2.3.4 Gender Dynamics

In many places, boys and girls are treated differently. Boys are allowed more freedom. Girls are expected to be quiet and obedient. Girls are often told not to talk about sex. They are expected to wait until marriage before learning about such matters. This limits their ability to ask questions or seek help. It also stops them from making informed choices. Many girls cannot ask their boyfriends to use condoms. They fear rejection or violence. In some relationships, especially with older partners, girls have no power (Akuiyibo et al., 2021).

They do what they are told. This puts them at risk of unwanted pregnancy or infections. Boys, on the other hand, may not see the need for contraceptives. They often believe it is the girl's responsibility. Studies in sub-Saharan Africa show that gender roles greatly affect young girls' ability to make choices about their health (Shu et al., 2016). A study by Mbadu Muanda et al. (2018) found that fear of partner reaction was a major reason girls did not request condom use. By contrast, boys in the same study said they felt confident deciding when and how to use protection. These gender differences reduce contraceptive use among girls and increase the risk of pregnancy and infection. Programs that support equal power in relationships are few and mainly target older youth. There is a clear gap in efforts that empower younger adolescents to speak up and protect themselves (Cohen et al., 2017).

2.3.5 Stigma and Discrimination

Stigma is a major barrier for young adolescents. Many fears being judged if they are seen asking for contraceptives. Health workers sometimes scold or embarrass young clients. This discourages adolescents from returning to the clinic (Mardi et al., 2018). Some girls lie about their age or reason for visiting a health centre. They do this to avoid shame. Community members may gossip about adolescents who seek family planning services. This creates fear and stops others from trying. Even school teachers may react harshly to students who ask about sex education. Because of this, many adolescents choose to remain silent (Nyarko, 2015a).

They take risks instead of seeking help. A study in Ethiopia found that the fear of being labelled sexually active discouraged girls from accessing contraception (Hoopes et al., 2016). Few programs actively train providers on how to treat young clients with dignity. Gaps remain in creating safe, friendly, and non-judgmental health spaces for adolescents under 15. Until these issues are addressed, stigma will remain a strong barrier to contraceptive uptake.

2.4 Health System Factors Affecting Contraceptive Use

Health system factors play a significant role in whether adolescents use contraceptives. These include how close services are, how health workers behave, how services are delivered, and whether young people feel safe and respected when asking for help. Adolescents aged 10–14 are especially vulnerable. They depend on adult support and have limited power to seek help without fear or judgment. This section explores the extent to which the health system supports or limits their access to contraceptives, with evidence from Ghana and other low- and middle-income countries (Lim et al., 2015).

2.4.1 Availability and Accessibility of Services

Availability and proximity of services are essential for adolescent access to contraception. In many rural and low-income areas, health centres are far from where adolescents live. The lack of nearby services is a major barrier, especially for younger adolescents who rely on adults for transport. In Ghana, some districts have only one health centre serving thousands of people, making access difficult. Long distances discourage adolescents from visiting clinics, especially girls who may face social restrictions. A study in Ethiopia found that adolescents were less likely to use contraceptives if they had to walk more than 30 minutes to reach a facility (Mardi et al., 2018). Similar findings were reported in Malawi and Tanzania, where distance significantly lowered the use of reproductive health services among youth (Todd & Black, 2020).

Even in urban areas, physical access does not always guarantee use. Many facilities are not designed to serve adolescents. They lack privacy, flexible hours, or clear entry points for youth services. Adolescents may not feel comfortable entering a clinic where most clients are adults. Even when clinics are nearby, not all of them stock a full range of contraceptives. Some may only provide condoms or injectables. There are also frequent stockouts, especially in remote areas. A facility survey in Kenya showed that 37% of clinics lacked at least one key contraceptive method.

Moreover, youth-friendly services are rare. The concept of "youth corners", designated safe spaces for adolescents in clinics, has shown promise in countries like Uganda and Rwanda (Todd & Black, 2020). These corners improve adolescent visits and allow them to ask questions freely. However, many such corners are poorly funded, understaffed, or nonexistent in Ghana. Another issue is operating hours. Clinics usually run during school hours, which clash with adolescents' availability. Mobile outreach programs have improved access in some regions, but they are not available in most districts. There is a critical gap in service delivery models that consider the unique needs of adolescents aged 10–14 (Lim et al., 2015). Most programs and policies focus on older adolescents (15–19), ignoring younger groups who may already be at risk of early sexual activity. There is limited data on how many facilities in Ghana provide accessible services specifically tailored to this younger age group.

2.4.2 Service Delivery and Health Worker Attitudes

The way services are delivered and how health workers treat adolescents has a strong influence on contraceptive use. Adolescents need a safe, welcoming, and respectful environment to ask questions and seek help. Unfortunately, many health systems fall short in this area. Many health workers have not received special training in adolescent care. As a result, they may not know how to handle sensitive issues with young clients. In Ghana, a study found that nurses and midwives sometimes scold or shame adolescents who ask for contraceptives, especially girls (Nyarko, 2015). Respect and confidentiality are critical. If a girl thinks the health worker will tell her parents or teachers, she will not return.

In contrast, health centres that offer respectful and private care report more adolescent visits. A study in Rwanda showed that clinics with youth-trained staff and private rooms were more likely to be used by adolescents (Binagwaho et al., 2022). In Ghana, however, such services are still rare and often limited to a few urban centres. Some health centres have started training staff and setting up youth corners or rooms for adolescent consultations. These efforts are encouraging but not enough. Rural clinics often lack space, staff, or support for youth services. Some health workers also hold personal beliefs that contraceptive use among adolescents is wrong. These attitudes create fear and push young people away. There is also the issue of gender bias. Girls are more likely to face judgment and rejection from health workers. Boys may be ignored or told to return later. These negative encounters discourage repeat visits and leave adolescents with few trusted sources of support (Kinaro et al., 2015). Improving service delivery means training health workers, creating safe spaces, and promoting non-judgmental care.

2.4.3 Health Education and Promotion Programs

Health education and promotion programs are essential tools in improving contraceptive knowledge and access. For adolescents aged 10–14, structured education in schools and communities is critical. These programs can dispel myths, build confidence, and promote healthy choices. However, their success depends on content, delivery, and cultural acceptance (Sharma et al., 2021).

In Ghana, the Comprehensive Sexuality Education (CSE) framework was designed to educate students on issues like puberty, reproductive health, and contraception (Gaferi et al., 2018). Although backed by global best practices, CSE has faced resistance from religious and cultural groups. Many fear that teaching adolescents about sex will promote immoral behaviour. As a result, many schools avoid teaching the complete curriculum or omit contraceptive topics altogether. Countries like the Netherlands, which have strong school-based sexuality education, report lower rates of adolescent pregnancies and higher contraceptive use. These programs emphasize respect, rights, and access to services. In contrast, many Ghanaian schools only provide limited biology lessons on reproduction, leaving students unaware of how to access contraceptives safely (Skrzeczkowska et al., 2015).

Community-based programs can complement schools, especially in areas with low school attendance. NGOs in countries like Uganda and Kenya have used radio, drama, and peer education to reach younger adolescents. These strategies are especially useful in engaging boys and out-of-school youth. Despite some successful projects, there remains a major gap in adolescent-cented education programs for children aged 10–14. Most campaigns target older teens and young adults. Younger adolescents are often overlooked, yet early intervention is crucial before risky behaviours begin. Programs must be tailored for this age group, simple, age-appropriate, and community-supported (Mwanangombe et al., 2020).

2.4.4 Cost and Affordability

Cost is another barrier that prevents adolescents from accessing contraceptives. Although some services are free, many young people still face financial challenges. These include the cost of the contraceptive itself, transportation, and even unofficial fees from health providers (Mbachu et al., 2021). In Ghana, the National Health Insurance Scheme (NHIS) covers some reproductive health services. However, many adolescents are not enrolled in NHIS or do not know what is covered. In rural areas, services may still require out-of-pocket payments.

In comparison, countries like Ethiopia have implemented youth-centred initiatives that include free distribution of condoms and oral pills. These efforts increased uptake, especially when combined with outreach and youth-friendly education (Mbadu Muanda et al., 2018b). Transport costs are also important. A girl living far from a clinic may need money for a motorbike or taxi. Without it, she cannot access services even if they are free. Adolescents often depend on others for money, which can create a barrier. To address cost barriers, Ghana needs to strengthen school-based and mobile services that bring contraceptives closer to young people. Free services should be clearly communicated, and health workers trained not to demand unofficial payments. Financial barriers must be removed to ensure equity in access for younger adolescents.

2.4.5 Legal and Policy Barriers

Legal and policy environments determine whether adolescents can access services without fear. In Ghana, policies broadly support adolescent reproductive health. However, specific laws and guidelines remain unclear about the age at which adolescents can access contraceptives without parental consent. This lack of clarity causes confusion among health workers. Some deny services to younger adolescents out of fear of legal consequences or moral judgment. Others deliver care secretly, which may breach official rules. In contrast, South Africa allows adolescents from the age of 12 to access contraception without consent. This policy has improved access to service and empowered youth to seek help early (Hall et al., 2017). Ghana could benefit from adopting clearer and more adolescent-friendly laws.

Stigma and fear of punishment also influence how laws are applied. Even where policies allow access, adolescents may be turned away due to personal beliefs of staff or community pressure (Ivankovich, 2022). Legal literacy among health workers and adolescents themselves is low. Most young people do not know their rights or available services. To improve the legal and policy environment, Ghana needs to review its adolescent health policies with a focus on the 10–14 age group (Apambila et al., 2020). Clear protocols should guide providers on confidentiality, consent, and referral. Law reform should align with human rights and public health goals. Without this, many adolescents will continue to be denied care (Liu et al., 2021).

2.5 Methods of Contraception

There are several methods available for adolescents to prevent pregnancy. The best method for a particular individual depends on their age, sexual activity, number of partners, future fertility plans, and health conditions. Contraceptive methods are broadly categorized into four types: intrauterine devices (IUDs), hormonal methods, barrier methods, and emergency contraception. Each method has its advantages, limitations, and suitability based on personal and medical factors (Mwanangombe et al., 2020).

2.5.1 Intrauterine Devices (IUDs)

Intrauterine devices are small, T-shaped contraceptive devices inserted into a woman's uterus by a trained health worker. They offer long-term pregnancy prevention and are reversible (Makola et al., 2019). There are two main types: hormonal IUDs and copper

IUDs. Hormonal IUDs, also known as intrauterine systems (IUS), release the hormone progestin (levonorgestrel), which thickens cervical mucus and prevents sperm from reaching the egg (Kinaro et al., 2015). It may also thin the uterine lining and, in some cases, suppress ovulation. Hormonal IUDs are highly effective with a failure rate of less than 0.5% (Cohen et al., 2017). They can also help reduce heavy menstrual bleeding. However, around 4% of women may experience expulsion, requiring reinsertion. The copper IUD is a non-hormonal device that uses copper to immobilize sperm and prevent fertilization. It may also inhibit the implantation of a fertilized egg. It can be effective for up to 10 years, but has a slightly higher failure rate of about 1% (Skrzeczkowska et al., 2015). This method is not recommended for women with pelvic infections, certain cancers, unexplained vaginal bleeding, or previous uterine perforation. Like hormonal IUDs, copper IUDs may also be expelled in some users (Lim et al., 2015).

2.5.2 Short-Acting Hormonal Methods

Short-acting hormonal methods are temporary contraceptive options that work by preventing ovulation, the release of an egg from the ovary. These hormones may also thicken cervical mucus or thin the uterine lining, making it harder for sperm to reach the egg or for a fertilized egg to implant (Gaferi et al., 2018). Common delivery forms include implants, injections, pills, patches, and vaginal rings. Contraceptive implants are small rods placed under the skin of the upper arm. They release progestin gradually and are effective for up to five years, with a failure rate below 0.5% (Sharma et al., 2021). Examples include Jadelle and Implanon. Injectable contraceptives such as Depo-Provera are given every 1 to 3 months and are convenient for those who prefer less frequent dosing. However, they may reduce bone density, especially in adolescents, though this is typically reversible. Progestin-only pills (POPs) must be taken daily at the same time.

They work mainly by thickening cervical mucus and may cause irregular bleeding (Chandra-Mouli & Akwara, 2020). Combined hormonal methods contain both estrogen and progestin. These are available as daily pills, patches, or vaginal rings and work by suppressing ovulation and thickening cervical mucus. Though effective, combined methods carry a risk of blood clots due to the estrogen component. Oral contraceptives, commonly called "the pill," are the most widely used method in this category. They must be taken daily at the same time and are over 91% effective with typical use (Nsanya et al., 2019).

2.5.3 Barrier Methods

Barrier methods physically prevent sperm from entering the uterus. They are a non-hormonal alternative and are effective when used consistently and correctly. These methods can also protect against sexually transmitted infections (STIs). Male condoms are thin sheaths made of latex or polyurethane worn on the penis during intercourse (Nyarko, 2015b). They collect semen and prevent it from reaching the female reproductive tract. They are disposable and provide dual protection against pregnancy and STIs. Female condoms are soft plastic sheaths with two rings. One ring is inserted into the vagina, while the other stays outside the vaginal opening (Ezenwaka et al., 2020). Like male condoms, they are used once and offer STI protection. Spermicides are chemical agents, such as nonoxynol-9 (N-9), that are inserted into the vagina before sex. They work by killing sperm and are often used with diaphragms or cervical caps. However, they do not protect against STIs and may cause irritation or allergic reactions. Diaphragms are dome-shaped devices made of latex or silicone. They are inserted into the vagina before intercourse to block sperm entry (Guzzo & Hayford, 2018). They are used in combination with spermicides and must remain in place for 6–8 hours after sex but should be removed within 24 hours. They are not recommended for women who have undergone recent pelvic surgery or experienced significant weight changes (Shu et al., 2016).

2.5.4 Emergency Contraceptives

Emergency contraception is used to prevent pregnancy after unprotected sex or when regular contraception fails. Emergency contraceptive pills (ECPs) contain hormones that delay ovulation and thicken cervical mucus. Common brands include Levon-2, Lydia, and Postinor-2 (Dioubaté et al., 2021). These pills should be taken as soon as possible after unprotected intercourse, preferably within 72 hours. They may be taken as a single dose or two doses 12 hours apart. Emergency contraceptives are not intended for regular use and do not protect against STIs (Mbadu Muanda et al., 2018a). They are ineffective if ovulation has already occurred or if unprotected sex happens again during the same menstrual cycle. These pills provide a safe option for preventing pregnancy in emergency situations but should not replace regular contraceptive methods (Akuiyibo et al., 2021).

2.5.3 Knowledge of Contraceptive Use

Contraceptives and how they work are essential for encouraging their use during sexual activity. When individuals, particularly adolescents, are well-informed about contraceptive methods, they are more likely to use them. However, many young people hold misconceptions about contraception. For instance, in Nagpur, many students believe contraceptives are unsafe for females, which discourages their use, despite their availability and generally positive attitudes (Relwani et al., 2022). Contraceptives are methods or substances used to prevent pregnancy by interfering with ovulation, fertilization, or implantation. The term also refers to whether a woman or her partner is currently using any contraceptive method. Contraceptive use is often assessed among married or in-union women aged 15 to 49 (World Health Organization, 2018). Among sexually active adolescents, about 87% have a demand for family planning, but only 51% of that demand is being met. This unmet need contributes to early, unintended pregnancies in many low- and middle-income countries (Wulifan et al., 2021).

A study in Western Nepal involving women aged 15–24 showed that 86.4% were not using any form of contraception. Despite this, 59.6% had high knowledge of modern contraceptive methods (Mbachu et al., 2021). Within the past three months, 58.1% had received information from mass media, while 56.6% had received it from interpersonal sources (Angdembe et al., 2019). In Congo, a national survey indicated high levels of awareness. About 95.3% of respondents could name at least one modern contraceptive. Among 15–19-year-olds, 83.8% knew at least one long-acting or permanent method, compared to 87.5% among 20–24-year-olds. Older respondents were more likely to receive information from health facilities (75.7%). Friends and family (54.1%) and radio (30.8%) were also among the most familiar sources (Casey et al., 2020). A survey among adolescents aged 13–23 focused on contraceptive knowledge, especially IUDs. Of the 130 participants, 80% were sexually active, and 69.5% reported current contraceptive use (Yen et al., 2015). However, only 2.6% used IUDs. Knowledge of IUDs was higher among females (56.6%) than among males (10.1%) (Sharma et al., 2021). Only 6.4% knew copper IUDs could be used for emergency contraception. Awareness was highest for male condoms (100%), oral pills (92.2%), and injectables (76.2%). Fewer knew about implants, patches, or vaginal rings (Sharma et al., 2021).

At Makerere University in Uganda, 1,008 female students participated in a study. Nearly all (99.6%) were aware of contraceptives (Pritt et al., 2017). Pills (86.7%) and male condoms (88.4%) were most recognized. Knowledge of injectables (50.3%), IUDs (35%), implants (26.7%), and female condoms (22.1%) was lower (Lim et al., 2015). Familiar sources included government hospitals (64.3%), private hospitals (53.6%), and pharmacies (36%) (Nsubuga et al., 2021).

In Nigeria, a survey among 504 sexually active adolescent girls found 98% knew about contraceptives. However, only 18.1% heard about family planning on the radio, 13.4% on TV, and 4.2% from newspapers. Only 15.3% had discussed family planning during health visits in the last year (Olika et al., 2021). Another Nigerian study used a descriptive cross-sectional design to assess knowledge of emergency contraceptive pills. Among 220 respondents, 86.5% had heard of the pills, but usage was low. Friends were the main source (46.8%), followed by health workers (31.2%). Most (58.5%) had never used any contraceptive (Williams et al., 2021). Those who had often got their information from friends or patent medicine vendors (Onasoga et al., 2019).

In Ghana's Kintampo area, 793 adolescents aged 15–19 were surveyed. About 89% knew at least one contraceptive method. Condoms were the most mentioned (84%). Awareness of pills (31.4%), injections (25.5%) (Mardi et al., 2018), and emergency contraception (5.6%) was lower. Among sexually active participants, 67% had used contraceptives. However, only 22.9% used them consistently. Most obtained them from pharmacies (62.1%) or shops, while a few obtained them from health facilities (Boamah et al., 2020). In Komenda-Edina-Eguafo Abrem, Ghana, a case-control study showed that more pregnant adolescents (61.2%) knew about traditional methods than non-pregnant ones

(38.8%) (Ahinkorah et al., 2021). A national survey in Ghana revealed that 99.8% of unmarried adolescent girls and young women knew at least one modern method, and 95.0% knew at least one traditional method (Oppong et al., 2021).

2.6 Barriers Associated with Contraceptive Use

Contraceptive use is influenced by various factors such as knowledge of available methods, understanding how to use them, accessibility, sociodemographic conditions, and negotiation skills (Boamah et al., 2020). Barriers to accessing contraceptive services and information often include cultural taboos, legal restrictions, attitudes of healthcare providers, and structural issues within the health system (WHO, 2020). The acceptability and accessibility of contraception among adolescents differ across regions and even within countries. Many young people face challenges such as limited clinic hours, cost barriers, concerns about confidentiality, and healthcare providers who lack adequate training (Shu et al., 2016).

Healthcare professionals may also act as obstacles by imposing personal beliefs, applying incorrect medical restrictions, delaying contraception for unnecessary reasons (such as waiting for menstruation or test results), demanding unwarranted tests (insisting on a Pap smear), or spreading false information about contraceptives (Leeman, 2021). Cost remains a significant barrier for adolescents (Mbadu Muanda et al., 2018a). Many cannot afford contraceptives and may need to rely on parental support, which can undermine confidentiality. While some countries provide contraceptives for free, others require payment through private systems. Free access can remove financial burdens, but does not always lead to increased use. Still, universal subsidies for contraception have proven to be cost-effective.

In Conakry, Guinea, a qualitative study explored barriers to contraceptive use among adolescents and youth aged 15–24. Participants included adolescents, parents, and healthcare providers (Shu et al., 2016). The study identified several interlinked barriers, with cost being the most mentioned. Adolescents and youth lacked financial independence, limiting access to contraceptives. Financial burdens included consultation fees and provider incentives. Geographic challenges such as the distance and cost of travelling to health facilities were also significant (Sweya et al., 2016b). Participants raised concerns about side effects, including fatigue, nausea, insomnia, and menstrual issues, which were said to last up to 10 days. Some feared infertility or complications during pregnancy and childbirth. These health fears often resulted in stigma from family members (Munakampe et al., 2018). A lack of accurate knowledge contributed to the spread of myths that negatively influenced contraceptive use. Religious beliefs also discouraged use, with some considering contraceptive use by newlyweds as morally wrong and equating it with denying a divine gift (Mbadu Muanda et al., 2018b). Views on-system-related barriers varied based on the experience and background of respondents. Identified issues included stockouts in public facilities, poor perception of services, negative provider attitudes, limited consultation time, distance to services, and the inadequate training of healthcare workers (Dioubaté et al., 2021).

2.7 Attitudes and Perception Towards the Use of Modern Contraceptives

Attitudes and perceptions greatly influence behaviours like using condoms, maintaining a healthy diet, and accepting contraceptives for reproductive health. Adolescents often develop their views about contraceptives through information from their families, schools, and media (Michelle et al., 2022). However, sexual information from these sources is often confusing, inaccurate, or misleading, affecting healthy sexual decision-making (Undie et al., 2018). There is also no clear guidance on how adults should discuss sexual issues with adolescents, leading to mixed interpretations (Izugbara, 2018).

A study in Australia with 16 migrant teenage mothers showed low contraceptive knowledge and negative attitudes toward their use (Watts et al., 2014). In Ethiopia, 94.7% of 263 female students had good knowledge, but most had poor attitudes and did not use contraceptives (Katama & Hibstu, 2016). Izugbara (2018) found that attitude can shape knowledge, as adolescents may ignore contraceptives even when they understand them. Some adolescents believe that sex is essential in relationships and feel relationships without sex are not modern (Okereke, 2017). Although many think sex before marriage is wrong, most practice it, showing a difference between belief and behaviour (Awusabo-Asare et al., 2016).

Religious beliefs often prevent adolescents from asking for contraceptives or seeking information from health workers (Okereke, 2017). A Congo study showed positive views on contraceptives: 85.4% agreed it helps families, and 76.9% said it does not cause infertility (Casey et al., 2020). In another study, 49.2% of adolescents who were satisfied with their method had used emergency contraceptives before (Sharma et al., 2021). Of those who had used emergency contraception, 83% were also using a contraceptive method at the time of the study. At Makerere University in Uganda, 93% of students said contraceptives are acceptable and 97.8% said they benefit both males and females (Nsubuga et al., 2021). Additionally, 96.2% believed counselling both partners increases male involvement in contraceptive use. In Nigeria, 51% of 220 participants agreed to use emergency pills when needed, and 74.5% disagreed that only promiscuous girls use them. More than half believed emergency pills are effective, and many agreed they are not only for married people (Onasoga et al., 2019). In Ghana, 69% of non-pregnant adolescents said contraceptives are only for married adults, unlike 31% of pregnant adolescents (Ahinkorah et al., 2021). Also, 70.2% of non-pregnant adolescents said they feel uncomfortable receiving contraceptive advice from family members.

2.8 Benefits of Contraception

Raising awareness and improving access to contraception provide several benefits to women, girls, families, and society. Contraceptives support better reproductive health and reduce unintended pregnancies. Increased access helps prevent adolescent pregnancies, which are linked to poor birth outcomes like low birth weight and preterm delivery. Teenage mothers often drop out of school, affecting their future and harming their communities. Contraceptives reduce the need for unsafe abortions by preventing unintended pregnancies (Nsanya et al., 2019).

Globally, 44% of pregnancies are unplanned, and more than half end in abortion. Using contraception helps women plan safe pregnancies and avoid health risks linked to abortion. Contraceptives also lower illness and death caused by pregnancy complications (Dioubaté et al., 2021). This is especially important for older women or those with health conditions. Some medications worsen pregnancy risks, but contraception gives time to manage health before conceiving. Contraceptive access empowers women to make choices about their bodies and futures (Munakampe et al., 2018). It supports their ability to complete education, find work, and reach life goals. Unplanned pregnancies can limit these opportunities, but contraception keeps their plans on track. Some contraceptives, like condoms, offer dual protection against pregnancy and sexually transmitted infections, including HIV. Hormonal methods help treat painful periods, PMDD, migraines, and acne. Studies also show that hormonal contraceptives reduce the risk of endometrial, ovarian, and colorectal cancers. Overall, contraception improves women's health, promotes empowerment, and helps achieve broader social and economic development (Gaferi et al., 2018).

2.9 Theoretical and Conceptual Frameworks

Understanding adolescent contraceptive behavior requires the application of appropriate theoretical models. The Health Belief Model (HBM), the Social Ecological Model (SEM), and the Theory of Planned Behavior (TPB) offer comprehensive frameworks to explain the factors influencing contraceptive decision-making among adolescents. These models are essential for interpreting behavioral patterns and guiding effective interventions (Chandra-Mouli & Akwara, 2020).

2.9.1 Health Belief Model (HBM)

The Health Belief Model (HBM) is a widely used framework for understanding health-related behaviors.

Key components of the HBM include:

- **Perceived susceptibility**: adolescents' belief in their risk of getting pregnant.
- **Perceived severity**: the belief about the seriousness of unintended pregnancy.
- **Perceived benefits**: belief in the effectiveness of contraceptives in preventing pregnancy.
- **Perceived barriers**: obstacles such as fear of side effects, stigma, or cost.
- **Cues to action**: external triggers like sex education or parental guidance.
- **Self-efficacy**: confidence in the ability to access and use contraceptives properly.

In the context of early adolescents (10–14 years), limited knowledge, misinformation, and low self-efficacy can strongly influence their behavior. Studies have shown that adolescents who perceive a higher risk of pregnancy and believe in the benefits of contraceptives are more likely to use them (Marrone et al., 2014).

2.9.2 Social Ecological Model (SEM)

The Social Ecological Model (SEM) recognizes that behavior is shaped by multiple levels of influence: individual, interpersonal, organizational, community, and policy (CDC, 2015). This model is particularly useful in understanding adolescent reproductive health behavior, as it takes into account the complex social and environmental context in which adolescents live.

- **Individual level**: personal factors such as age, knowledge, and attitudes.
- **Interpersonal level**: influences from family, peers, and partners.
- **Organizational level**: school-based programs, health services, and youth centers.
- **Community level**: social norms, stigma, and cultural practices.
- **Policy level**: laws and policies affecting contraceptive access for adolescents.

In rural Ghana, including Sekyere South District, social norms often discourage open discussion about sexuality and contraceptive use. Peer influence and lack of supportive environments further limit adolescents' ability to make informed reproductive choices. Similarly, Mardi et al. (2018) highlighted that community stigma and lack of adolescent-friendly services remain key barriers across sub-Saharan Africa.

2.9.3 Theory of Planned Behaviour (TPB)

The Theory of Planned Behaviour (TPB), developed by Ajzen (1991), explains how individual intentions lead to behaviuor. It emphasizes three key components:

- **Attitude toward the behaviour**: whether the adolescent views contraceptive use positively or negatively.
- **Subjective norms**: perceived social pressure from significant others.
- **Perceived behavioural control**: perceived ease or difficulty in accessing and using contraceptives.

The TPB is effective in predicting intentions and behaviours related to contraceptive use. Research indicates that adolescents with supportive attitudes and strong perceived control are more likely to practice safe sex and use modern contraceptives. In contrast, harmful peer norms and fear of judgment reduce motivation and access. Evidence from a study by Yen et al. (2015) confirmed that intention, influenced by attitudes and perceived control, was the strongest predictor of condom use among adolescents. A Ghanaian study by Akuiyibo et al. (2021) demonstrated that adolescents' beliefs about contraceptive safety, influenced by peer and parental views, significantly shaped their use of contraceptives.

2.9.4 Relevance of the theory to the Study

These theoretical frameworks offer a multidimensional lens through which to examine the contraceptive behaviour of adolescents aged 10–14 years in Sekyere South District. While HBM helps to understand personal beliefs and barriers, SEM highlights the influence of family, community, and systems. TPB connects beliefs and intentions to actual behaviour. By integrating these models, the study can identify individual and structural factors that shape contraceptive uptake and design targeted strategies for improving adolescent reproductive health outcomes.

2.9.5 Conceptual Review

The conceptual framework for this study integrates the Health Belief Model (HBM), Social Ecological Model (SEM), and Theory of Planned Behaviour (TPB) to explain the predictors of modern contraceptive use among adolescents aged 10–14 years in the Sekyere South District. The HBM explains how adolescents' knowledge and their perceptions, such as susceptibility to pregnancy, perceived severity, benefits, and barriers affect their willingness to use contraceptives, aligning with Objective 1. The SEM provides insight into how social and cultural influences, including family communication, peer norms, religious beliefs, and community attitudes, impact contraceptive use, addressing Objective 2. Lastly, the SEM's organizational and policy levels, together with TPB's focus on behavioural intentions and perceived control, relate to Objective 3 by emphasizing factors such as access to youth-friendly services, provider attitudes, cost, privacy concerns, and reproductive health policies (Casey et al., 2020).

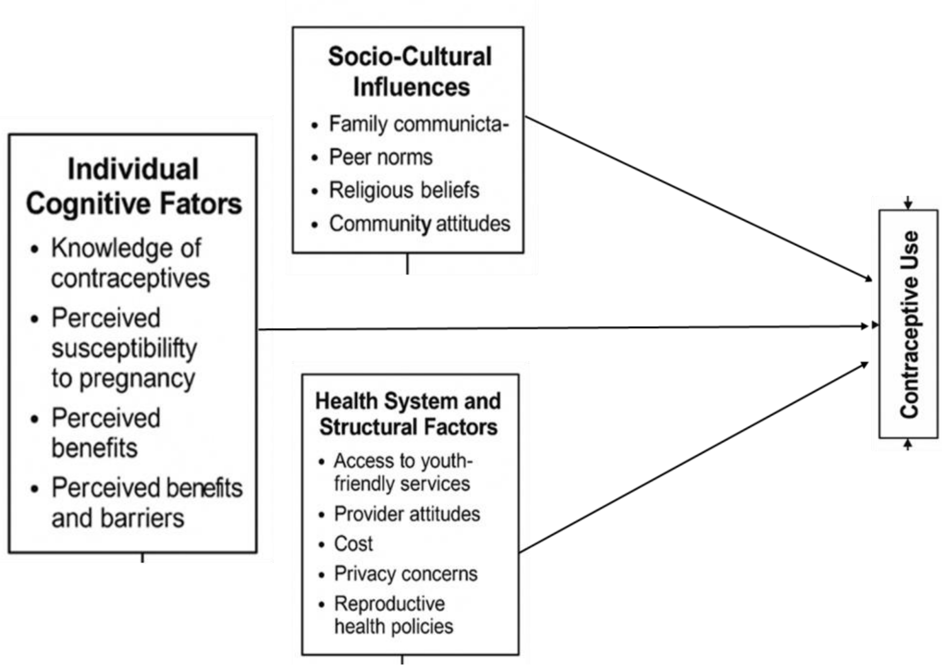

Figure 2.1: Conceptual Framework for Adolescent Contraceptive Use. Sources: Author own construct

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter describes the methods that were used to conduct the study. It presents the study area, research design, population, inclusion and exclusion criteria, sample size determination, sampling procedure, data collection tool, validity and reliability, study variables, data analysis, ethical considerations, and limitations of the study.

3.2 Study Area

The study was conducted in Agona, Wiamoase, and Asamang, which are towns located in the Sekyere South District of the Ashanti Region of Ghana. Agona serves as the district capital. According to the 2021 Population and Housing Census, the district had a population of 120,076 individuals, with 62,011 (51.6%) females and 58,065 males (48.4%) (GSS, 2021). The district is geographically situated between latitudes 6°50'N and 7°10'N and longitudes 1°40'W and 1°25'W. It shares borders with Ejura Sekyedumase Municipal to the north, Mampong Municipal and Sekyere East District to the east, Kwabre East Municipal to the south, and Offinso Municipality to the west (GSS, 2021). Demographic data from the 2021 census showed that out of the total population of 120,076, about 87,553 people lived in urban areas, while 32,523 resided in rural settings. The age distribution indicated that 42,410 individuals were aged 0–14 years, 71,175 were aged 15–64 years, and 6,491 were aged 65 and above. Ethnically, the district was dominated by the Akan group (90,138), followed by Mole-Dagbani (15,266), Gurma (5,913), and other minority ethnic groups (GSS, 2021).

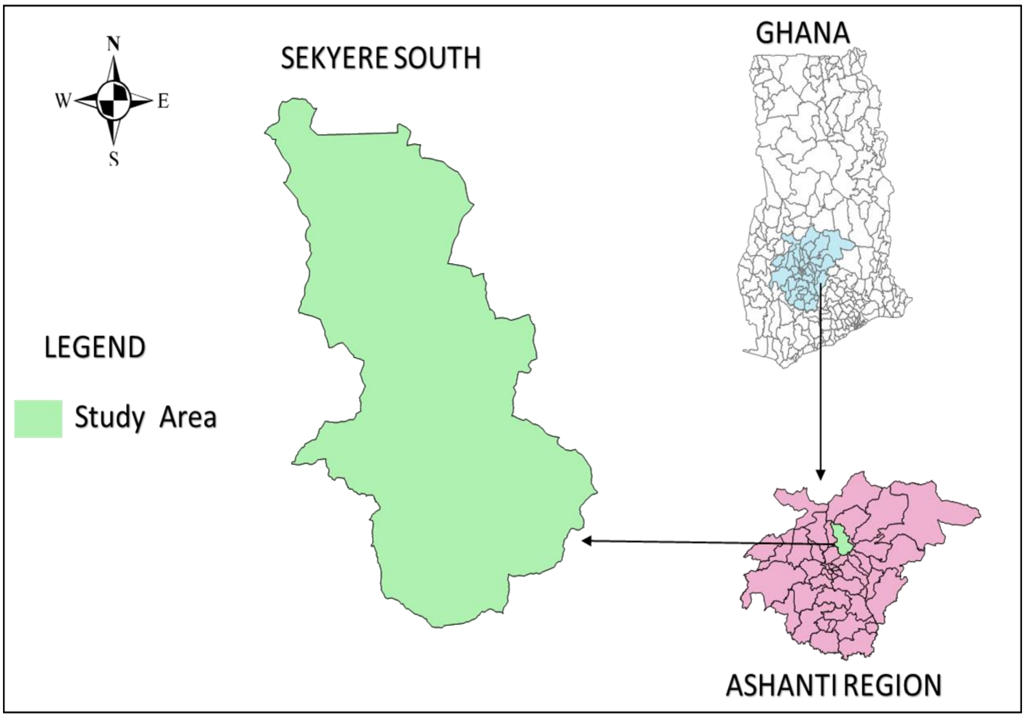

Figure 3.1: Map Sekyere South District

3.3 Research Design

A cross-sectional study design was employed to evaluate the predictors of modern contraceptive use among adolescents aged 10–14 years in the Sekyere South District. This design was appropriate because it enabled data collection from a defined population at a single point in time.

3.4 Population

The target population consisted of adolescents aged 10–14 years living in Agona, Wiamoase, and Asamang. According to the 2021 census, 15,146 adolescents within this age group lived in the district. This group formed the focus of the study.

3.5 Inclusion and Exclusion Criteria

3.5.1 Inclusion Criteria

Adolescents were included in the study if they:

- Were between 10 and 14 years of age.
- Had resided in Wiamoase, Agona, or Asamang for at least six months.
- Were enrolled in school or receiving informal education.
- Provided informed assent, with parental or guardian consent.

3.5.2 Exclusion Criteria

Adolescents were excluded from the study if they:

- Were younger than 10 years or older than 14 years (outside the defined age bracket).
- Were not permanent residents of the selected communities.
- Had a severe physical disability that hindered participation.
- Had a mental health condition that prevented meaningful participation.
- Declined to participate or whose parents/guardians did not provide consent.

3.6 Sample Size Determination

The sample size for this study was determined using the Yamane formula, which is commonly used when the total population is known. The formula provides a clear, practical way to calculate the number of participants required for a chosen margin of error and confidence level. It is suitable for community-based surveys because it helps ensure that the sample is representative while remaining manageable. $n = N / [1 + N(e^2)]$. Where: N = 15,146, e = 0.05. Calculation: n = 15,146 / [1 + 15,146(0.0025)] = 390. For this study, the estimated adolescent population in Wiamoase, Agona, and Asamang was N = 15,146 (Ghana Statistical Service, 2021). A 95% confidence level with a margin of error of 5% (e = 0.05) was selected, a standard practice in public health research to ensure representativeness while minimizing sampling error. Adding 10% for non-response: 390 + 39 = 429. Thus, a sample size of 429 was used for the study.

The sample size for each study site is estimated based on the proportion of the population size.

Communities	Agona	Wiamoase	Asamang
Population	2515	2170	1824
Sample size	167	143	119

3.7 Sampling Technique

A systematic sampling technique selected the study participants from every fifth household in Agon (826), every fourth household in Wiamosae (623), and every third household in Asamang (392). If a chosen household did not have an eligible adolescent aged 10–14 years, the next household in the same direction was chosen until the appropriate sample size for the population was reached. Simple random sampling was used to select participants, with more than three respondents. The study was explained to parents or guardians for consent.

3.8 Data Collection Tool

A structured questionnaire was administered to adolescents to gather quantitative data on their knowledge, attitudes, and practices regarding modern contraceptive use. The questionnaire consisted mainly of closed-ended items focusing on socio-demographic characteristics, awareness of different contraceptive methods, and actual usage. It was developed based on the study’s objectives and guided by relevant literature to ensure alignment with the research's aims (Bolarinwa, 2015). The structured questionnaire enabled easy coding of responses and reliable analysis, while also reducing ambiguity and ensuring consistency across all respondents.

3.9 Data Collection Technique

Data were collected through face-to-face interactions with participants to ensure clarity and accuracy of responses. Trained research assistants visited the selected households to administer the questionnaires. All COVID-19 safety protocols were observed during in-person interactions. This approach helped increase response rates and ensured the inclusion of all eligible participants.

3.10 Validity and Reliability

The questionnaire was pre-tested in the Mampong Municipality, which shares socio-demographic and cultural features with the study communities. Twenty questionnaires were administered to selected adolescents to identify ambiguous or unclear items. The pre-test results showed that most questions were clearly understood by respondents, with only minor rewording required for greater clarity. The questionnaire's internal consistency was assessed using Cronbach's Alpha. The reliability coefficient was 0.82, indicating high internal consistency among the instrument items.

Table 3.1: Reliability Statistics Table

Cronbach's Alpha	N of Items
0.82	25

Feedback from the pre-test was used to refine the tools, improve question clarity, and ensure alignment with the study objectives. The strong reliability score and the consistency in participant responses confirmed that the tools were valid and dependable for use in the main study.

3.11 Study Variables

The primary outcome variable for the study was the use of modern contraceptives (yes or no). Independent variables included age, sex, educational status, religious affiliation, ethnicity, parental influence, access to health services, and exposure to sexual and reproductive health education.

3.12 Data Analysis

Data were entered into Microsoft Excel 2016 and cleaned before being exported to SPSS Version 25 for analysis. For Objective One, descriptive statistics, such as frequencies and percentages, were used to describe knowledge on contraceptives among adolescents aged 10–14 years. For Objective Two, chi-square tests were applied to examine associations between socio-demographic variables and awareness of modern contraceptives. For Objective Three, binary logistic regression was employed to determine predictors of contraceptive use, including age, education, ethnicity, religion, parental influence, and access to health services. For Objective Four, multivariable logistic regression was used to assess the influence of health system and socio-cultural factors on contraceptive utilization. Results were presented using tables, bar charts, and pie charts to aid interpretation.

3.13 Ethical Considerations

Permission to conduct the study was obtained from the Sekyere South District Health Directorate. Ethical clearance was granted by the Committee on Human Research, Publications and Ethics (CHRPE) of the Kwame Nkrumah University of Science and Technology (KNUST) with an approval number CHRPE/AP/664/25. Informed consent was obtained from all participants, and assent from minors. Confidentiality and anonymity were ensured throughout the study.

3.14 Limitations of the Study

One limitation of the study was the reliance on self-reported data, which may have been influenced by recall bias or social desirability bias. Also, adolescents who were not attending school or who could not be reached at home during data collection may have been underrepresented, despite efforts to include all eligible individuals.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter shows and explains the findings on factors that influence the use of modern contraceptives among adolescents aged 10–14 years. The results are arranged according to the study's objectives. First, it looks at knowledge and awareness of modern contraceptives. Second, it examines socio-cultural factors such as beliefs, norms, parental influence, and religion. Third, it explores health system factors and health workers' attitudes. The findings are presented using simple statistics, tables, and charts. They are also compared with other studies to show similarities and differences.

4.2 Demographic Characteristics of Respondents

A total of 429 adolescents aged 10–14 years participated in this study. The majority (50.6%) of respondents were female, and 49.4% were male. Based on the age category proportions, participants aged 13 years accounted for 23.5%, followed by those aged 14 years (21.9%), 12 years (21.4%), and 10 years (15.9%). Regarding participants' educational attainment, 43.6% had upper primary education, 28.7% had Junior High School education, and 27.7% had lower primary education. Christianity was the predominant religion (75.1%), followed by Islam (24.9%). None of the respondents identified as traditionalists or other religious affiliations. All respondents were unmarried. Among the 217 females surveyed, 14 (6.5%) reported having ever been pregnant, while the majority (93.5%) had never been pregnant. Most adolescents (83.2%) relied on their parents as their primary source of livelihood, with smaller proportions depending on extended family (11.2%) or others (5.6%).

Table 4.1: Demographic Characteristics of Respondents

Variable	Frequency (n)	Percentage (%)
Sex		
Male	212	49.4
Female	217	50.6
Age (years)		
10	68	15.9
11	74	17.2
12	92	21.4
13	101	23.5
14	94	21.9
Level of education		
No formal education	0	0
Lower primary	119	27.7
Upper primary	187	43.6
Junior High School	123	28.7
Other	0	0
Religious		
Christian	322	75.1
Muslim	107	24.9
Traditionalist	0	0
Other	0	0
Marital status		
Married	0	0
Not married	429	100
Ever been pregnant (females, n = 217)		
Yes	14	6.5
No	203	93.5
Main source of livelihood		
Parents	357	83.2
Extended family	48	11.2
Others	24	5.6
Area of residence		
Rural	285	66.4
Peri-urban	87	20.3
Urban	57	13.3
Living arrangement		
Both parents	286	66.7
Single parent	104	24.2
Guardian/Other	39	9.1
Parent/guardian education		
No formal education	52	12.1
Primary	179	41.7
Junior High School	131	30.5
Senior High/Tertiary	67	15.6

Sources: Field Survey, 2025

4.3 Knowledge on Contraceptives among Adolescents aged 10–14 years.

Most respondents (88.3%, 95% CI: 85.1–91.0) had heard of modern contraceptives, with awareness significantly higher among females than males ($\chi^2 = 4.62$, $p = 0.032$). The majority (68.3%, 95% CI: 63.8–72.5) correctly identified contraceptives as drugs to avoid pregnancy, while 13.3% recognised them as preventing sexually transmitted infections. Misconceptions included taking them before sex (4.9%) or for sexual pleasure (1.9%). Understanding differed significantly by sex, with females more likely to provide the correct definition ($\chi^2 = 16.84$, $p = 0.002$).

Table 4.2: Knowledge on Contraceptives among Adolescents aged 10–14 years.

Response	Frequency (n)	Percentage (%)	95% CI	χ^2	p-value
Heard of contraceptives before?					
Yes	379	88.3	85.1 – 91.0	4.62	0.032*
No	50	11.7	9.0 – 14.9		
Understand contraceptives					
A drug taken before sex	21	4.9	3.0 – 7.3	16.84	**0.002***
A drug to enhance sexual pleasure	8	1.9	0.8 – 3.8		
A drug to avoid pregnancy	293	68.3	63.8 – 72.5		
A drug to prevent STIs	57	13.3	10.3 – 16.9		
Other (specify)	0	0.0	–		
Source of information					
Friend	116	27.0	23.0 – 31.3	1.45	0.229
Health worker	205	47.8	43.2 – 52.4		
Teacher	134	31.2	26.9 – 35.7		
Parent	88	20.5	16.9 – 24.4		
Media	165	38.5	34.1 – 43.1		

Sources: Field Survey, 2025

The study found that participants had different levels of knowledge about modern contraceptive methods (Figure 4.1). Condoms were the most known method, mentioned by 291 (67.8%), followed by pills, mentioned by 248 (57.8%). Awareness of injectables was 184 (42.9%), and 136 (31.7%) knew about implants. Only 98 (22.8%) had heard of emergency contraceptives (EC), and 22 (5.1%) knew about intrauterine devices (IUDs). About 35 (8.2%) could not mention any modern contraceptive method.

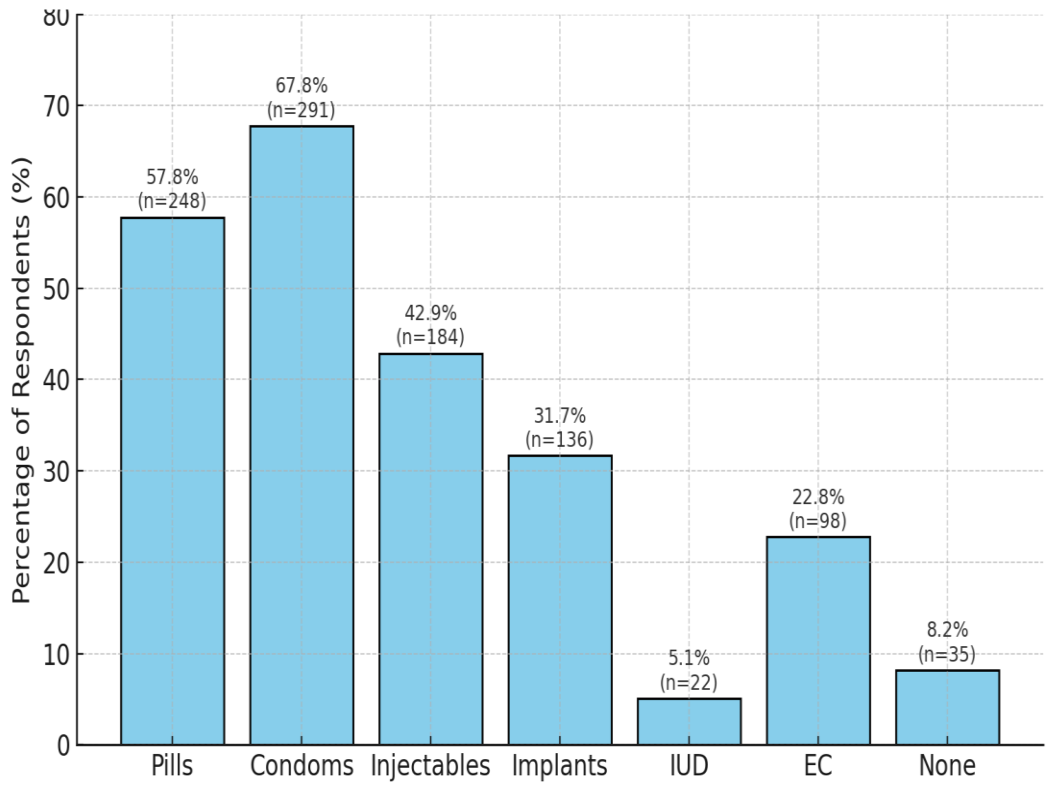

Figure 4.1: Levels of Knowledge about Modern Contraceptive Methods

Table 4.3 shows the knowledge score of modern contraceptive methods by sex. More females (71; 32.7%) had a high knowledge score compared to males (43; 20.2%), giving a total of 114 (26.6%) respondents in this category. Males were more represented in the low knowledge category (72; 34.0%) than females (40; 18.4%), totaling 112 (26.1%). The relationship between sex and knowledge score was statistically significant (p = 0.001).

Table 4.3: Knowledge Score of Modern Contraceptive Methods by Sex

Knowledge Score	Male (n=212)	Female (n=217)	Total	χ^2 (df=2)	p-value
Low (0–1 methods)	72 (34.0%)	40 (18.4%)	112 (26.1%)	14.87	0.001*
Moderate (2–3 methods)	97 (45.8%)	106 (48.8%)	203 (47.3%)		
High (4–6 methods)	43 (20.2%)	71 (32.7%)	114 (26.6%)		

Sources: Field Survey, 2025

Table 4.4 presents the knowledge score by education level. Adolescents in Junior High School were more likely to have high knowledge scores (52; 42.3%) than those in lower primary (16; 13.4%). Those in upper primary had 46 (24.6%) with high knowledge scores. The majority of lower primary respondents (52; 43.7%) fell into the low score category, while most upper primary respondents (101; 54.0%) had moderate scores. The relationship between education level and knowledge score was highly significant ($p < 0.001$).

Table 4.4: Knowledge Score by Education Level

Education Level	Low Score	Moderate Score	High Score	Total (n)	χ^2 (df=4)	p-value
Lower primary (n=119)	52 (43.7%)	51 (42.9%)	16 (13.4%)	119	49.32	<0.001*
Upper primary (n=187)	40 (21.4%)	101 (54.0%)	46 (24.6%)	187		
Junior High (n=123)	20 (16.3%)	51 (41.5%)	52 (42.3%)	123		

Sources: Field Survey, 2025

Across all education levels (n = 429), the composite knowledge score shows that 112 adolescents (26.1%) had high knowledge, 203 (47.3%) had moderate knowledge, and 114 (26.6%) had low knowledge. This indicates that nearly half of the respondents demonstrated a moderate level of knowledge, while about one in four had either low or high knowledge. The distribution highlights an overall middle-level awareness among the participants, with a strong influence of education level on knowledge outcomes. Adolescents in Junior High School were more likely to achieve high scores compared to those in lower or upper primary. The significant association ($\chi^2 = 49.32$; $p < 0.001$) underscores education as a key determinant of knowledge level among adolescents

Table 4.5 shows awareness of dual protection methods by the main source of information. Adolescents who received information from health workers (172; 83.9%) had the highest awareness, followed by those informed by teachers (102; 76.1%) and media (124; 75.2%). Those informed by parents had 61 (69.3%) aware, while friends had the lowest awareness rate with only 66 (56.9%). The relationship between source of information and awareness of dual protection was statistically significant ($p < 0.001$).

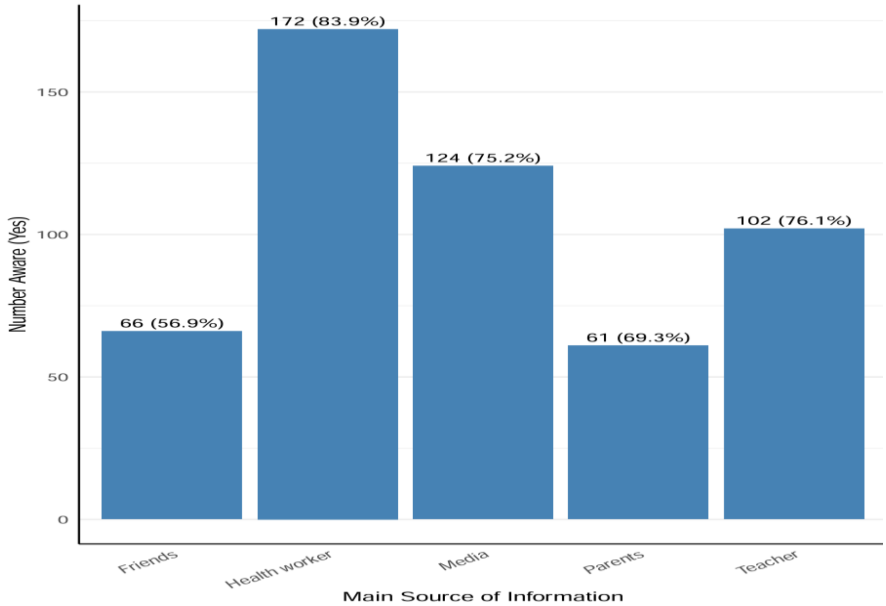

Figure 4.2: Awareness of Dual Protection Methods by Main Source of Information

Table 4.5: Logistic Regression Predicting High Knowledge of Modern Contraceptive Methods

Predictor Variable	Adjusted Odds Ratio (AOR)	95% CI	p-value
Sex			
- Female (ref.)	1.00	–	–
- Male	0.54	0.35 – 0.83	0.005*
Age group			
- 10–12 (ref.)	1.00	–	–
- 13–14	1.62	1.05 – 2.51	0.030*
Education level			
- Lower primary (ref.)	1.00	–	–
- Upper primary	2.11	1.18 – 3.77	0.012*
- Junior High School	3.45	1.87 – 6.38	<0.001*
Main source of information			
- Health worker (ref.)	1.00	–	–
- Teacher	0.81	0.45 – 1.45	0.468
- Media	0.60	0.34 – 1.06	0.079
- Friends	0.34	0.18 – 0.64	0.001*
- Parent	0.39	0.19 – 0.81	0.011*

Sources: Field Survey, 2025

Males had significantly lower odds of high knowledge of modern contraceptive methods compared to females (AOR = 0.54, 95% CI: 0.35–0.83, p = 0.005). Adolescents aged 13–14 years were more likely to have high knowledge than those aged 10–12 years (AOR = 1.62, 95% CI: 1.05–2.51, p = 0.030). Education level was a strong predictor; respondents in upper primary (AOR = 2.11, 95% CI: 1.18–3.77, p = 0.012) and Junior High School (AOR = 3.45, 95% CI: 1.87–6.38, p < 0.001) had greater odds of high knowledge compared to lower primary. Using health workers as the reference, obtaining information from friends (AOR = 0.34, 95% CI: 0.18–0.64, p = 0.001) or parents (AOR = 0.39, 95% CI: 0.19–0.81, p = 0.011) was associated with significantly lower odds of high knowledge.

4.4 Socio-Cultural Factors Influencing the Uptake of Modern Contraceptives

Out of the 429 respondents, (34.3%) reported community taboos against adolescent contraceptive use. A larger number, (65.7%), said there were no such restrictions.

About (41.0%) said their culture promotes male dominance in reproductive decisions. The remaining (59.0%) did not see such cultural influence. A total of (80.0%) reported that sex before marriage is not permitted in their culture. Only (20.0%) said it is allowed. Regarding religion, (46.2%) said contraceptive use by unmarried adolescents is sinful. The other (53.8%) did not agree with this view. More than half, (55.7%), said they need parental or partner approval to use contraceptives. The rest, (44.3%), said they do not.

About (23.8%) would avoid using contraceptives despite health benefits. Most respondents, (76.2%), said they would not avoid using them. Peer influence was mostly positive, with (68.5%) willing to encourage peers to use contraceptives. The remaining (31.5%) said they would not. A total of (50.3%) described peer influence as positive, (24.5%) as negative, and (25.2%) as neutral. Parental communication was low. Only (42.2%) said parents or guardians talk about contraceptives. The other (57.8%) said they do not. Regarding religious leaders, (21.9%) were seen as supportive of contraceptive use. About (42.4%) were opposed, and (35.7%) had no opinion or did not discuss the issue.

Logistic regression showed that adolescents from communities with taboos had lower odds of contraceptive use (OR = 0.54, 95% CI: 0.32–0.89, p = 0.015). Those requiring parental or partner approval were also less likely to use contraceptives (OR = 0.59, 95% CI: 0.36–0.96, p = 0.034). Respondents avoiding contraceptive use despite health benefits had reduced odds (OR = 0.47, 95% CI: 0.26–0.85, p = 0.012). Adolescents encouraging peers to use contraceptives were over twice as likely to use them (OR = 2.05, 95% CI: 1.23–3.41, $p = 0.006$). Positive peer influence was linked with higher odds of contraceptive use (OR = 1.78, 95% CI: 1.12–2.85, $p = 0.014$).

Table 4.6: Binary Logistic regression of Sociocultural Factors Associated with Adolescent Contraceptive Use

Variables	Use n (%)	Non-use n (%)	χ^2 (p-value)	AOR (95% CI)	p-value
Community taboo					
Yes	40 (27.2)	107 (72.8)	5.9 (.015)	0.54 (0.32, 0.89)	0.015
No	120 (42.6)	162 (57.4)		Ref.	
Male dominance					
Yes	55 (31.3)	121 (68.7)	2.0 (.156)	0.71 (0.44, 1.14)	0.156
No	105 (41.5)	148 (58.5)		Ref.	
Sex before marriage permitted					
Yes	38 (44.2)	48 (55.8)	3.0 (.082)	1.62 (0.94, 2.78)	0.082
No	122 (35.6)	221 (64.4)		Ref.	
Religion considers use sinful					
Yes	60 (30.3)	138 (69.7)	2.6 (.111)	0.68 (0.42, 1.09)	0.111
No	100 (43.3)	131 (56.7)		Ref.	
Need parental/partner approval					
Yes	65 (27.2)	174 (72.8)	4.5 (.034)	0.59 (0.36, 0.96)	0.034
No (Ref.)	95 (50.0)	95 (50.0)		Ref.	
Avoid despite health benefits					
Yes	20 (19.6)	82 (80.4)	6.4 (.012)	0.47 (0.26, 0.85)	0.012
No	140 (42.8)	187 (57.2)		Ref.	
Encourage peers					
Yes	140 (47.6)	154 (52.4)	7.5 (.006)	2.05 (1.23, 3.41)	0.006
No	30 (22.2)	105 (77.8)		Ref.	
Peer influence (Positive)					
Positive	110 (50.9)	106 (49.1)	6.0 (.014)	1.78 (1.12, 2.85)	0.014
Neutral	30 (27.8)	78 (72.2)		Ref.	
Peer influence (Negative)					
Negative	34 (32.4)	71 (67.6)	0.1 (.742)	0.92 (0.56, 1.52)	0.742
Neutral	30 (27.8)	78 (72.2)		Ref.	
Parental communication					
Yes	70 (38.7)	111 (61.3)	1.8 (.179)	1.36 (0.87, 2.14)	0.179
No	100 (40.3)	148 (59.7)		Ref.	

4.5 Health System Factors influencing the use of Modern Contraceptives

Out of 429 respondents, (40.6%) had visited a health facility. Among them, (64.4%) used public facilities. Most respondents, (45.7%), lived 1–2 km from the nearest facility. About (31.0%) faced challenges accessing services, with (86.8%) confirming contraceptives were available. A total of (68.4%) were offered contraceptives, and (71.3%) rated care as good. More than half, (59.2%), had providers discuss contraceptive options, and (55.7%) received accurate information. Health workers were the main source of information for (44.5%) respondents.

Visiting a health facility increased the odds of using modern contraceptives (OR = 1.92, p = 0.009). Living less than one kilometre from a facility raised the odds (OR = 2.15, p = 0.018) compared to those living over two kilometres away. Contraceptive availability was strongly associated with use (OR = 2.84, p = 0.011). Being offered a method also increased the odds (OR = 2.11, p = 0.005). Provider discussions were linked to higher use (OR = 1.76, p = 0.025). Health workers as a main source of information increased odds of use (OR = 1.88, p = 0.012). Other health system factors were not statistically significant.

Table 4.7: Frequency Distribution of Health System Factors among Respondents

Variable	Category	Frequency (n)	Percentage (%)
Visited health facility	Yes	174	40.6
	No	255	59.4
Facility type (n = 174)	Public	112	64.4
	Private	48	27.6
	Other	14	8.0
Distance to facility	<1 km	147	34.3
	1–2 km	196	45.7
	>2 km	86	20.0
Contraceptives available (n = 174)	Yes	151	86.8
	No	23	13.2
Offered method at facility (n = 174)	Yes	119	68.4
	No	55	31.6
Quality of care (n = 174)	Poor	21	12.1
	Good	124	71.3
	Excellent	29	16.6
Provider discussed options (n = 174)	Yes	103	59.2
	No	71	40.8
Provider gave accurate info (n = 174)	Yes	97	55.7
	No	77	44.3
Provider seemed judgmental (n = 174)	Yes	48	27.6
	No	126	72.4
Health workers are the primary source	Yes	191	44.5
	No	238	55.5
Barriers: Cost	Yes	102	23.8
	No	327	76.2
Barriers: Distance	Yes	91	21.2
	No	338	78.8
Barriers: Lack of information	Yes	79	18.4
	No	350	81.6
Barriers: Cultural beliefs	Yes	88	20.5
	No	341	79.5
Denied contraceptives	Yes	39	9.1
	No	390	90.9

Table 4.8: Binary Logistic Regression of Health System Factors Associated with Adolescent Contraceptive Use

Variables	Frequency n (%)	χ^2 (p-value)	AOR (95% CI)	p-value
Visited the health facility	174 (40.6)	6.8 (.009)	1.92 (1.18 – 3.12)	0.009
No	255 (59.4)		Ref.	
Facility type (among users)				
Public	112 (64.4)	1.4 (.239)	1.37 (0.81 – 2.31)	0.239
Private	48 (27.6)		Ref.	
Other	14 (8.0)		-	-
Distance to facility				
<1 km	147 (34.3)	5.6 (.018)	2.15 (1.14 – 4.05)	0.018
1–2 km	196 (45.7)	2.8 (.091)	1.68 (0.92 – 3.08)	0.091
>2 km	86 (20.0)		Ref.	
Contraceptives available				
Yes	151 (86.8)	6.5 (.011)	2.84 (1.27 – 6.37)	0.011
No	23 (13.2)		Ref.	
Offered method at facility				
Yes	119 (68.4)	7.9 (.005)	2.11 (1.25 – 3.55)	0.005
No	55 (31.6)		Ref.	
Quality of care				
Poor	21 (12.1)		Ref	
Good	124 (71.3)	1.6 (.210)	1.54 (0.78 – 3.06)	0.21
Excellent	29 (16.6)	2.4 (.118)	1.92 (0.85 – 4.34)	0.118
Provider discussed options	103 (59.2)	5.1 (.025)	1.76 (1.07 – 2.88)	0.025
No	71 (40.8)		Ref	
Provider gave accurate info	97 (55.7)	3.7 (.054)	1.61 (0.99 – 2.63)	0.054
No	77 (44.3)		Ref	
Provider seemed judgmental	48 (27.6)	1.3 (.247)	0.74 (0.44 – 1.24)	0.247
No	126 (72.4)		Ref	
Health workers as main source	191 (44.5)	6.3 (.012)	1.88 (1.15 – 3.06)	0.012
No	238 (55.5)		Ref	
Barriers: Cost	102 (23.8)	0.7 (.408)	0.81 (0.49 – 1.34)	0.408
No	327 (76.2)		Ref	
Barriers: Distance	91 (21.2)	0.9 (.340)	0.77 (0.45 – 1.32)	0.34
No	338 (78.8)		Ref	
Barriers: Lack of information	79 (18.4)	1.9 (.170)	0.69 (0.40 – 1.17)	0.17
No	350 (81.6)		Ref	
Barriers: Cultural beliefs	88 (20.5)	0.5 (.477)	0.83 (0.49 – 1.39)	0.477
No	341 (79.5)		Ref	
Denied contraceptives	39 (9.1)	1.4 (.234)	0.64 (0.31 – 1.34)	0.234
No	390 (90.9)		Ref	

CHAPTER FIVE

DISCUSSION

5.1 Introduction

This study evaluated predictors of modern contraceptive use among adolescents aged 10–14 years in Sekyere South District, Ghana. The findings are interpreted in relation to existing literature, with emphasis on their implications for adolescent reproductive health in Ghana. The demographic profile revealed that most respondents were female, Christian, and currently enrolled in school. Similar patterns have been observed in previous studies in Ghana, where female adolescents are more likely to participate in reproductive health surveys due to higher school attendance and community engagement (Asiedu et al., 2020). Educational status is a known determinant of contraceptive awareness, as schooling provides access to information through both formal curricula and peer networks (Aggrey-Korsah et al., 2025). Religious affiliation also plays a role. Christian denominations in Ghana have varied teachings on contraception, with some promoting its use for family planning, while others discourage it due to doctrinal beliefs (Ahinkorah et al., 2021). This variation could influence how adolescents receive and interpret information on contraceptives.

5.2 Knowledge on Modern Contraceptives among Adolescents Aged 10-14 years

Knowledge of modern contraceptive methods was generally high. A large proportion of respondents identified at least one method, with injectables, pills, and condoms most commonly known. This aligns with the 2014 Ghana Demographic and Health Survey (Olika et al., 2021) and findings from Kenya, Uganda, and South Africa, which reported high adolescent awareness. The high knowledge levels here may be linked to school-based reproductive health education, peer-led initiatives, Ghana Health Service outreach, and increased exposure to radio, television, and mobile health campaigns (Kantorová et al., 2021).

Similar successes have been seen in Ethiopia, Tanzania, and Rwanda, where youth-focused programs improved awareness. In Ethiopia, for example, the Health Extension Program has integrated adolescent reproductive health education into community outreach, significantly raising knowledge levels among young people (Ahinkorah et al., 2020). In Rwanda, the "Youth Corner" initiative in health facilities has created a safe space for adolescents to learn about contraception without fear of judgment (Ahissou et al., 2022). Countries like Bangladesh (Ahmed & Seid, 2020), Vietnam (Ivankovich, 2022), and the Philippines (Phongluxa et al., 2020) have shown that media campaigns, school clubs, and peer education significantly boost knowledge. In Bangladesh, the use of interactive radio programs that allow young people to ask anonymous questions has been particularly effective (Mpunga et al., 2022). In the Philippines, integrating reproductive health into extracurricular school activities has increased student engagement with the topic. In Latin America (Henry et al., 2021), such as in Peru and Brazil (Gyan & Marhefka-Day, 2021), integration of reproductive health into primary and secondary school curricula has yielded positive awareness outcomes and improved attitudes toward contraceptive use (Phongluxa et al., 2020).

Despite these gains, knowledge alone does not guarantee use. Evidence from Ghana, Nigeria, Malawi, and Nepal shows that high awareness often coexists with low uptake. This is due to misconceptions, fear of side effects, limited privacy at clinics, partner disapproval, and socio-cultural restriction (Gebrekidan et al., 2024; Hailegebreal et al., 2021; Takyi et al., 2023). For example, in Ghana, some adolescents believe that contraceptives cause long-term infertility, which discourages use. In Nigeria, fear of being judged by healthcare workers deters adolescents from seeking services, even when they are aware of available methods. In rural Cambodia, Bolivia, and parts of Indonesia, entrenched gender norms, misinformation, cost barriers, lack of adolescent-friendly services, and logistical constraints such as distance to facilities have similarly limited translation of awareness into use. In some contexts, a lack of decision-making power among young females further restricts contraceptive choices. For example, in rural parts of Indonesia, young women often need spousal or parental consent to access contraceptive services, creating additional barriers (Hailegebreal et al., 2021).

Stigma from peers or adults can discourage adolescents from seeking services, even when they are informed. This has been documented in research from Pakistan (Mahmud et al., 2021) and Sierra Leone (Kebede et al., 2021), where young people avoid family planning clinics to prevent being labelled as sexually active. In Ghana, similar stigma exists, particularly in rural areas, where community members may gossip about young people seen visiting health facilities (Kistiana et al., 2020). Addressing these challenges requires not only health education but also multi-sectoral strategies involving schools, parents, community leaders, health professionals, and policymakers to create an enabling environment for informed, voluntary contraceptive choice (Nkenguye et al., 2023). In practice, this means expanding adolescent-friendly corners in health facilities, integrating comprehensive sexuality education into school curricula, engaging religious and traditional leaders in advocacy, and ensuring that supply chains for contraceptives remain reliable (Zegeye et al., 2022).

Furthermore, interventions must address gender inequality, which plays a significant role in reproductive health decision-making (Allotey & Bosoka, 2024). Empowering girls through education, economic opportunities, and legal protections can increase their ability to make informed decisions about their sexual and reproductive health. Lessons can be drawn from programs in Uganda (Henry et al., 2021) and Kenya (Gyan & Marhefka-Day, 2021) that combine vocational training with reproductive health education, resulting in both increased contraceptive uptake and improved socio-economic outcomes (Oppong, et al., 2021). Finally, technology offers new opportunities to close the gap between knowledge and use. Mobile health (mHealth) interventions, such as SMS reminders, confidential chat platforms, and online counseling, have shown promise in countries like Kenya (Mahmud et al., 2021), India, and South Africa. Implementing similar programs in Ghana could provide adolescents with confidential access to information and services, especially in remote areas where healthcare facilities are scarce (Ivankovich, 2022).

5.3 Socio-Cultural Influences on Contraceptive use among Adolescents Aged 10-14 years

Socio-cultural factors play a central role in shaping contraceptive behaviour among adolescents, often mediating the link between knowledge, access, and actual use. The present findings revealed that adolescents who engaged in discussions about contraception with parents or partners were more likely to adopt contraceptive methods. This outcome is supported by studies in Ghana, which emphasize that family communication serves as a protective factor in adolescent sexual and reproductive health (Kistiana et al., 2020). Similar evidence from Kenya, Uganda, and Ethiopia reinforces the conclusion that dialogue within families and intimate relationships fosters informed decision-making and responsible contraceptive uptake (Otim, 2020; Hailegebreal et al., 2021; Olagunju et al., 2020).

Despite these positive influences, socio-cultural norms often act as barriers, limiting open communication. In many Ghanaian communities, sexuality is considered a sensitive or taboo subject, particularly for adolescents. Discussions on contraception are frequently stigmatized as promoting immorality or sexual promiscuity (Appiah et al., 2025). This cultural constraint is not unique to Ghana; similar dynamics have been documented in rural Malawi and conservative Indian communities, where silence on sexual health issues perpetuates misinformation and discourages healthy behaviour (Mahmud et al., 2021). These restrictive cultural scripts create an environment where adolescents fear judgment, thereby reducing their willingness to seek information or negotiate contraceptive use. Community norms, reinforced by elders, religious leaders, and peer networks, also shape adolescent attitudes toward contraception. Taboos linking contraception to infertility, moral decline, or spiritual disobedience remain prevalent, and these beliefs are often transmitted across generations (Salifu & Mohammed, 2020). For instance, respondents in this study indicated that myths of reduced fertility after contraceptive use discouraged uptake. These findings echo evidence from Nigeria and Pakistan, where similar misconceptions were found to lower contraceptive prevalence (Olagunju et al., 2020; Nkenguye et al., 2023). Such misconceptions not only undermine individual agency but also perpetuate systemic barriers to reproductive health services.

Religion further compounds socio-cultural influences. Many religious teachings in Ghana and other sub-Saharan African countries emphasize abstinence before marriage and view contraceptive use as contrary to moral codes. Religious opposition, especially from churches and mosques, contributes to stigma around contraceptive uptake. Studies have shown that adolescents affiliated with conservative denominations often report lower contraceptive use, as adherence to faith-based teachings supersedes health-seeking behavior (Henry et al., 2021). Thus, while religious institutions can be influential platforms for health advocacy, in many cases they reinforce restrictive norms. Peer influence is another significant socio-cultural determinant. Among adolescents, peers often act as key sources of information, yet this information may be inaccurate or biased by prevailing myths. Negative peer narratives associating contraceptive use with promiscuity, infertility, or health complications can discourage adolescents from adopting contraception. Conversely, positive peer influence has been shown to facilitate greater openness to contraceptive uptake in contexts where reproductive health education is normalized (Agbadi et al., 2020). This dual role of peer networks suggests that interventions must strategically harness positive peer dynamics while counteracting misinformation.

Gender dynamics also intersect with socio-cultural influences on contraceptive use. In patriarchal societies such as Ghana, adolescent girls often have less decision-making autonomy compared to boys. Male partners and elders frequently hold disproportionate power in sexual and reproductive decision-making. This power imbalance means that even when girls are knowledgeable about contraception, cultural expectations of obedience and submissiveness may prevent them from acting on their knowledge. Evidence from other African settings shows that girls who attempt to negotiate contraceptive use risk being labelled as promiscuous or unfaithful (Hailegebreal et al., 2021). These gendered constraints underscore the need for empowerment strategies that address both cultural and structural inequalities. Urban-rural differences also illustrate the strength of socio-cultural influences. In rural Ghana, where traditional beliefs and community surveillance are stronger, adolescents often face greater scrutiny and resistance to contraceptive use compared to their urban counterparts. Rural adolescents may also rely more heavily on traditional healers or informal advice, which can perpetuate myths and discourage modern contraceptive methods. Studies across sub-Saharan Africa confirm that rural residence is associated with lower contraceptive prevalence due to the combined effect of cultural conservatism, limited services, and community-level stigma (Mahmud et al., 2021).

In sum, socio-cultural influences are deeply embedded in adolescents' contraceptive behaviours. They operate at multiple levels: family, community, peer, religious, and gender and often override individual knowledge and access. Addressing these barriers requires culturally sensitive, community-based interventions that promote open dialogue, engage religious and community leaders, and correct myths through accurate reproductive health education. Empowering adolescents, especially girls, within their socio-cultural contexts is essential to achieving meaningful increases in contraceptive use.

5.4 Health System Factors Influencing the Use of Modern Contraceptives

Health system factors significantly shape adolescent contraceptive use by influencing access, availability, and the quality of care. The present findings indicate that adolescents living less than one kilometre from a health facility were more likely to use modern contraceptives. This proximity effect has been widely documented in Ghana and other sub-Saharan African countries, where reduced distance lowers transportation costs, increases service contact, and ultimately improves utilization (Henry et al., 2021). The expansion of the Ghana Health Service's Community-based Health Planning and Services (CHPS) compounds underscores the importance of decentralizing healthcare delivery. By situating services within communities, CHPS facilities increase opportunities for adolescents to seek confidential reproductive health care without the barrier of long-distance travel. This is particularly relevance in rural areas, where transportation challenges and family supervision may otherwise restrict service use.

Availability of contraceptives at health facilities emerged as another strong predictor of uptake. Stock-outs or inconsistent supply chains not only discourage adolescents from seeking services but also erode trust in the health system. Studies in Kenya and Nigeria confirm that regular supply enhances reliability and encourages continued use among young clients (Debuo Der & Tarkang, 2023). Thus, ensuring an uninterrupted contraceptive supply is not merely a logistical issue but a determinant of adolescent reproductive health outcomes. Supply chain inefficiencies disproportionately affect marginalized groups, making sustained investments in procurement and distribution critical. Provider behaviour was also a central determinant. Adolescents who were actively offered a method or received counselling on contraceptive options were more likely to adopt contraception. This finding resonates with evidence from Ethiopia and Kenya, where provider counselling and client-centred engagement have been consistently linked to increased uptake (Debuo Der & Tarkang, 2023). Counselling provides accurate information, dispels myths, and enhances adolescents' confidence in decision-making. Furthermore, health workers as trusted sources of information were associated with higher contraceptive use compared to peers or media sources. This highlights the corrective role of formal health communication in addressing misinformation circulating in communities and social networks.

Interestingly, provider judgmental attitudes were not statistically significant predictors of contraceptive use in this study. This contrasts with findings from urban Ghana and other African contexts, where perceived judgment, stigmatization, or breaches of confidentiality discouraged adolescents from seeking care (Olika et al., 2021). The difference may reflect recent investments in adolescent-friendly service training across facilities in rural Ashanti Region, suggesting that efforts to promote respectful, non-judgmental care are yielding results. It may also point to context-specific differences, where smaller rural facilities allow for more personal interactions that enhance trust between providers and clients. The implications of these findings for reproductive health policy and practice in Ghana are multifaceted. First, although knowledge of contraceptives among adolescents is generally high, persistent misconceptions about side effects and long-term health consequences remain. School-based comprehensive sexuality education can help bridge these gaps, but programs must be designed with cultural sensitivity to ensure acceptance and avoid community backlash (Boadu, 2022). Evidence from other settings shows that culturally adapted curricula improve both knowledge and contraceptive adoption rates.

Second, community and parental involvement are vital. Adolescents are embedded within broader social systems, and parental disapproval or silence often creates barriers to use. Training parents and community leaders to engage in open, non-judgmental conversations can normalize contraceptive discussions and reduce stigma (Allotey & Bosoka, 2024). Programs that position parents and elders as partners, rather than opponents, in adolescent reproductive health can have long-term benefits. Third, improving access to the structural health system essential. Beyond physical proximity, this includes ensuring reliable availability of contraceptives, expanding adolescent-friendly corners in CHPS compounds, and training providers in confidentiality and respectful communication (Hailegebreal et al., 2021). Mobile clinics and outreach programs can complement fixed facilities to reach underserved rural adolescents.

Finally, targeted engagement with religious institutions is critical. Religion plays a profound role in shaping health-seeking behaviours, and opposition from faith leaders can undermine health interventions. Strategic partnerships with churches, mosques, and faith-based youth groups could help dispel myths and promote accurate contraceptive information within trusted community structures (Amoah et al., 2023b). Faith leaders who are equipped with accurate information can act as powerful advocates for responsible adolescent reproductive health. In summary, health system factors ranging from proximity and availability to provider behaviour and institutional support exert a strong influence on adolescent contraceptive use. Addressing these factors requires a holistic approach that integrates supply-side improvements, culturally sensitive education, community involvement, and faith-based partnerships. Only by strengthening these systems holistically can Ghana achieve sustained improvements in adolescent reproductive health outcomes.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter presents a summary of the study findings, conclusions drawn from both major and minor objectives, and recommendations for policy, practice, and future research. The focus is on the predictors of modern contraceptive use among adolescents aged 10–14 years in Sekyere South District, Ghana.

6.2 Summary of Findings

The study found that knowledge of modern contraceptives among adolescents aged 10–14 years in Sekyere South District was generally high. Most respondents were aware of commonly used methods such as condoms, pills, and injectables. This level of awareness suggests that adolescents are not entirely excluded from sexual and reproductive health information. However, the study also revealed that knowledge did not always translate into use. Many adolescents with high awareness of contraceptives still reported non-use, indicating the presence of other barriers such as fear of side effects, community stigma, and lack of confidence in negotiating contraceptive use. This finding highlights the need for interventions that go beyond knowledge creation to focus on addressing underlying misconceptions and building self-efficacy.

Socio-cultural factors emerged as strong predictors of contraceptive uptake. Adolescents who engaged in open discussions with parents or partners were more likely to use modern contraceptives compared to those who did not. This suggests that family and partner communication can act as protective factors by supporting informed decision-making. However, the study also revealed that stigma, myths, and cultural taboos surrounding adolescent sexuality limited contraceptive use. Some communities associated contraceptive use with promiscuity, infertility, or moral decline. These negative perceptions discouraged adolescents from seeking or using contraceptives even when they had knowledge and access. The findings emphasize that socio-cultural influences can either encourage or block contraceptive use, making them critical factors for targeted interventions.

Health system factors also played a significant role in shaping contraceptive behaviour among adolescents. The study revealed that proximity to health facilities was a strong predictor, as adolescents living within one kilometre of a facility were more likely to use contraceptives. Availability of contraceptive methods at facilities was another important factor, as stockouts discouraged use. Provider engagement, including counseling and being offered a method, further increased uptake, showing the importance of supportive service delivery. Interestingly, provider judgmental attitudes were not statistically significant in this setting, suggesting improvements in adolescent-friendly services within the rural Ashanti Region. These findings highlight that a reliable, accessible, and supportive health system is crucial in promoting adolescent contraceptive use, and gaps in service delivery directly affect uptake.

6.2 Conclusions

The study concluded that knowledge of modern contraceptives among adolescents in Sekyere South District was generally high. Many respondents were able to identify common methods such as condoms, pills, and injectables. However, knowledge alone did not guarantee actual use, as some adolescents who were aware of contraceptives still reported non-use. This shows that awareness must be supported with practical guidance and confidence-building strategies. The implication is that health education should not only provide information but also address misconceptions, fears about side effects, and low self-efficacy ensuring that adolescents can apply their knowledge in real-life situations. Socio-cultural influences also played a significant role in shaping contraceptive behaviour.

Adolescents who discussed contraceptives with parents or partners were more likely to use them, confirming the importance of communication in reproductive health decisions. However, negative influences such as cultural taboos, stigma, and myths discouraged uptake. In many communities, contraceptives were wrongly linked to infertility, promiscuity, or moral decline, which discouraged adolescents from seeking services. The implication is that interventions must go beyond individual education and actively involve parents, peers, community elders, and religious leaders to help break the silence around adolescent sexuality, reduce stigma, and create supportive environments for contraceptive use.

Health system factors were also strong predictors of contraceptive uptake. Proximity to health facilities, availability of contraceptives, and provider counselling increased the likelihood of use, showing that access and service delivery remain critical. Adolescents who lived close to facilities, received counselling, or were directly offered contraceptives were more likely to adopt modern methods. Interestingly, providers' judgmental attitudes were not a significant barrier in this study, which may reflect improvements in adolescent-friendly training in the Ashanti Region. The implication is that sustaining and expanding youth-friendly services, ensuring reliable contraceptive supplies, and training providers in confidentiality and respectful care will remain essential for improving adolescent contraceptive uptake.

6.3 Recommendations

Based on the findings of this study, the following targeted recommendations are made:

6.3.1 For Policy Makers

- Strengthen Comprehensive Sexuality Education (CSE) in schools by ensuring that the Ghana Education Service integrates culturally sensitive and age-appropriate materials, in collaboration with the Ministry of Health.
- Improve contraceptive supply chains through the Ministry of Health and Ghana Health Service to guarantee consistent availability of methods in rural and peri-urban facilities.
- Parliament of Ghana should review adolescent reproductive health policies to clarify the rights of adolescents aged 10–14 to confidential contraceptive services.

6.3.2 For Health Practitioners and Service Providers (CHPS Compounds, Hospitals, and Health Centres)

- Expand adolescent-friendly services in CHPS compounds and other facilities by ensuring confidential counselling, flexible service hours, and the presence of trained, youth-friendly staff.
- Use media and technology, especially local radio stations and mobile health platforms, coordinated by District Health Directorates, to reach adolescents with accurate and confidential information.

6.3.3 For Community Stakeholders

- Train parents and teachers to engage in open, non-judgmental communication with adolescents about reproductive health, supported by community-based NGOs.
- Partner with religious and traditional leaders to reduce stigma and dispel myths about contraception in communities.
- Integrate reproductive health into youth empowerment and skills training programs run by local assemblies and NGOs, linking health with socio-economic development.

6.3.4 For Future Research (Universities and Research Institutions)

- Explore predictors of contraceptive use among adolescents in other districts for comparative analysis.
- Assess the long-term impact of CSE and community-based interventions on adolescent contraceptive uptake.
- Investigate the role of digital platforms in improving adolescent reproductive health knowledge and service utilization in rural Ghana.

REFERENCES

Ã, K. M., & Ben-zur, H. (2017). *Risk-taking among adolescents : Associations with social and affective factors Risk-taking among adolescents : Associations with social and affective factors*. *March 2007*. https://doi.org/10.1016/j.adolescence.2005.03.009.

Abdi, B., Okal, J., Serour, G., & Temmerman, M. (2020). *" Children are a blessing from God " – a qualitative study exploring the socio-cultural factors influencing contraceptive use in two Muslim communities in Kenya*. 1–11.

Abdulai, M., Kenu, E., Ameme, D. K., Bandoh, D. A., Tabong, P. T., Lartey, A., Noora, C. L., Adjei, E. Y., & Nyarko, K. M. (2020). *Demographic and socio-cultural factors influencing contraceptive uptake among women of reproductive age in Tamale Metropolis , Northern Region , Ghana*. *54*(2).

Adongo, P. B., et al. (2014). Cultural beliefs and practices in northern Ghana: Implications for reproductive health. *Reproductive Health*, 11(1), 1–13.

Agbadi, P., Eunice, T. T., Akosua, A. F., & Owusu, S. (2020). Complex samples logistic regression analysis of predictors of the current use of modern contraceptive among married or in-union women in Sierra Leone: Insight from the 2013 demographic and health survey. *PLoS One*, *15*(4), e0231630.

Aggrey-Korsah, J., Adoma, P. O., Oke, S., & Agorinya, I. A. (2025). Factors influencing contraceptive use among teenage girls in Ghana: Analysis of the Ghana living standard survey 7. *Contraception and Reproductive Medicine*, *10*(1), 47.

Agyei, W. K., & Biritwum, R. B. (2019). Religion and family planning in Ghana. *Ghana Medical Journal*, *53*(2), 92–99.

Agyekum, M. W., Henry, E. G., Kushitor, M. K., Obeng-Dwamena, A. D., Agula, C., Opoku Asuming, P., Toprah, T., Agyei-Asabere, C., Shah, I., & Bawah, A. A. (2022). Partner support and women's contraceptive use: Insight from urban poor communities in Accra, Ghana. *BMC Women's Health*, *22*(1), 1–10. https://doi.org/10.1186/s12905-022-01799-7.

Agyekum, M. W., Henry, E. G., Kushitor, M. K., Obeng-Dwamena, A. D., Agula, C., Opoku Asuming, P., Toprah, T., Agyei-Asabere, C., Shah, I., & Bawah, A. A. (2022). Partner support and women's contraceptive use: insight from urban poor communities in Accra, Ghana. *BMC Women's Health*, *22*(1), 1–10. https://doi.org/10.1186/s12905-022-01799-7.

Agyemang, J., Newton, S., Nkrumah, I., Tsoka-Gwegweni, J. M., & Cumber, S. N. (2019). Contraceptive use and associated factors among sexually active female adolescents in Atwima Kwanwoma District, Ashanti region-Ghana. *Pan African Medical Journal*, *32*(1). https://www.ajol.info/index.php/pamj/article/view/210000

Ahinkorah, B. O., Ameyaw, E. K., & Seidu, A. A. (2020). Socio - economic and demographic predictors of unmet need for contraception among young women in sub - Saharan Africa : evidence from cross - sectional surveys. *Reproductive Health*, 1–11.

Ahinkorah, B. O., Budu, E., Aboagye, R. G., Agbaglo, E., Arthur-Holmes, F., Adu, C., Archer, A. G., Aderoju, Y. B. G., & Seidu, A.-A. (2021). Factors associated with modern contraceptive use among women with no fertility intention in sub-Saharan Africa: Evidence from cross-sectional surveys of 29 countries. *Contraception and Reproductive Medicine*, *6*(1), 22. https://doi.org/10.1186/s40834-021-00165-6.

Ahinkorah, B. O., Seidu, A.-A., Appiah, F., Budu, E., Adu, C., Aderoju, Y. B. G., Adoboi, F., & Ajayi, A. I. (2020). Individual and community-level factors associated with modern contraceptive use among adolescent girls and young women in Mali: A mixed effects multilevel analysis of the 2018 Mali demographic and health survey. *Contraception and Reproductive Medicine*, *5*(1), 27. https://doi.org/10.1186/s40834-020-00132-7.

Ahissou, N. C. A., Benova, L., Delvaux, T., Gryseels, C., Dossou, J.-P., Goufodji, S., Kanhonou, L., Boyi, C., Vigan, A., & Peeters, K. (2022). Modern contraceptive use among adolescent girls and young women in Benin: A mixed-methods study. *BMJ Open*, *12*(1), e054188. https://bmjopen.bmj.com/content/12/1/e054188.abstract.

Ahmed, M., & Seid, A. (2020). Association Between Exposure to Mass Media Family Planning Messages and Utilization of Modern Contraceptive Among Urban and Rural Youth Women in Ethiopia. *International Journal of Women's Health*, *Volume 12*, 719–729. https://doi.org/10.2147/IJWH.S266755.

Akuiyibo, S., Anyanti, J., Idogho, O., Piot, S., Amoo, B., Nwankwo, N., & Anosike, N. (2021). Impact of peer education on sexual health knowledge among adolescents and young persons in two North Western states of Nigeria. *Reproductive Health*, *18*(1). https://doi.org/10.1186/s12978-021-01251-3.

Akunvane, R., Badzi, C. D., Ampimah, B. C., & Annan, E. (2024). Attitudes and Social Norms Influencing Adolescents' Contraception Utilisation in Bongo District, Ghana. *Journal of Advocacy, Research and Education, 11*(2), 282–294.

Alhassan, A. R., Abdulai, K., & Alhassan, M. A. (2021). Early Sexual Debut among Ghanaian Women: Correlates and Psychological Effect. *BioMed Research International*, *2021*. https://doi.org/10.1155/2021/5838510.

Allen, R. H. (2007). Emergency contraception: a clinical review. Clinical Obstetrics Gynecology, 50(4), 27–36.

Allotey, N.-K., & Bosoka, S. (2024). Demographic, Sociocultural, and Behavioral Predictors of Modern Contraceptive Uptake Among Couples in Northern Ghana. *Open Access Journal of Contraception*, *Volume 15*, 23–40. https://doi.org/10.2147/OAJC.S430288.

Amenya, R. M., Manortey, S., Boateng, M. O., Kushitor, S., & Sutherland, E. (2024). Determinants of Modern Contraceptive Uptake among the Youth in Akuse Township in the Lower Manya Krobo Municipality, Ghana. *Health*, *16*(1), 72–86.

Amoah, E. J., Hinneh, T., & Aklie, R. (2023a). Determinants and prevalence of modern contraceptive use among sexually active female youth in the Berekum East Municipality, Ghana. *PloS One*, *18*(6), e0286585.

Amoah, E. J., Hinneh, T., & Aklie, R. (2023b). Determinants and prevalence of modern contraceptive use among sexually active female youth in the Berekum East Municipality, Ghana. *PloS One*, *18*(6), e0286585.

Amoako Johnson, F. (2022). Geographical hotspots and correlates of early sexual debut among women in Ghana. *Reproductive Health*, *19*(1), 1–12. https://doi.org/10.1186/s12978-022-01425-7.

Angdembe, M. R., Sigdel, A., Paudel, M., Adhikari, N., Bajracharya, K. T., & How, T. C. (2019). Modern contraceptive use among young women aged 15–24 years in selected municipalities of Western Nepal: results from a cross-sectional survey in 2019. BMJ Open, 12.

Ankomah, A., et al. (2016). Family communication and adolescent reproductive health in Ghana. *African Journal of Reproductive Health*, *20*(3), 42–50.

Apambila, R. N., Owusu-Asubonteng, G., & Dassah, E. T. (2020). Contraceptive use among young women in northern Ghana: A community-based study. *The European Journal of Contraception & Reproductive Health Care, 25*(5), 339–344.

Appiah, S. C. Y., Ofori, R., & Boampong, M. S. (2025). When knowledge of modern contraceptives does not lead to uptake: A mixed method study among early adolescents in Koforidua Municipality, Ghana. *Discover Public Health*, *22*(1), 134. https://doi.org/10.1186/s12982-025-00531-8.

Apter, D. (2012). Adolescent contraception. In Pediatric and Adolescent Gynecology (Vol. 22, pp. 287-301). Karger Publishers.

Asiedu, A., Asare, B. Y.-A., Dwumfour-Asare, B., Baafi, D., Adam, A.-R., Aryee, S. E., & Ganle, J. K. (2020). Determinants of modern contraceptive use: A cross-sectional study among market women in the Ashiaman Municipality of Ghana. *International Journal of Africa Nursing Sciences*, *12*, 100184.

Asut, O., Ozenli, O., Gur, G., Deliceo, E., Cagin, B., Korun, O., Turk, O., & Vaizoglu, S. (2018). *The knowledge and perceptions of the first year medical students of an International University on family planning and emergency contraception in Nicosia (TRNC)*. 1–11.

Awusabo-Asare, K., et al. (2017). Adolescent sexual and reproductive health in Ghana. *Guttmacher Institute*.

Bakesiima, R., Cleeve, A., Larsson, E., Tumwine, J. K., Ndeezi, G., Danielsson, K. G., Nabirye, R. C., & Kashesya, J. B. (2020). Modern contraceptive use among female refugee adolescents in northern Uganda: Prevalence and associated factors. *Reproductive Health*, *17*(1), 1–10. https://doi.org/10.1186/s12978-020-00921-y.

Balocchini, E., Chiamenti, G., & Lamborghini, A. (2013). *Adolescents : which risks for their life and health ?* 191–194.

Bearak, J., Popinchalk, A., Alema, A. and Sedgh, G. (2018) 'Global, regional, and subregional trends in unintended pregnancy and its outcomes from 1990 to 2014: estimates from a Bayesian hierarchical model', Lancet, 6, pp. e380–e389.

Black, A., & Guilbert, E. (2020). Society of Obstetricians and Gynaecologists of Canada. Canadian Contraception Consensus. *J Obstet Gynaecol,* 936-942.

Blanc A. K. & Way, A. A., (2014). Adolescents Contraceptives Knowledge and Use among Sexually Active Adolescents in Developing Countries. *JSTOR*, *29*(2), 106– 116.

Blumenberg, C., Hellwig, F., Ewerling, F., & Barros, A. J. D. (2020). *Socio-demographic and economic inequalities in modern contraception in 11 low- and middle-income countries : an analysis of the PMA2020 surveys*. 1–13.

Boadu, I. (2022). Coverage and determinants of modern contraceptive use in sub-Saharan Africa: further analysis of demographic and health surveys. *Reproductive Health*, *19*(1), 1–11. https://doi.org/10.1186/s12978-022-01332-x.

Boamah, E. A., Asante, K. P., Mahama, E., Manu, G., Ayipah, E. K., Adejini, E., & Owusu-Agyei, S. (2020). Use of contraceptives among adolescents in Kintampo, Ghana: a cross-sectional study. Open Access Journal of Contraception, 5, 7-15.

Budu, E., Okyere, J., Osei, M. D., Seidu, A. A., & Ahinkorah, B. O. (2023). Determinants of contraceptive continuation among women in sub-Saharan Africa. *BMC Women's Health*, *23*(1), 1–8. https://doi.org/10.1186/s12905-023-02578-8.

Casey, K. M. (2012). Putting the "global" back in global health. *Archives of Surgery, 147*(5), 404-407.

Casey, S. E., Gallagher, M. C., Kakesa, J., Kalyanpur, A., Muselemu, J.-B., Rafanoharana, R. V., & Spilotros, N. (2020). Contraceptive use among adolescent and young women in North and South Kivu, Democratic Republic of the Congo: A cross-sectional population-based survey. *PLoS Medicine*, *17*(3), e1003086.

Chandra-Mouli, V., & Akwara, E. (2020). Improving access to and use of contraception by adolescents: What progress has been made, what lessons have been learnt, and what are the implications for action? *Best Practice & Research Clinical Obstetrics & Gynaecology*, *66*, 107–118. https://www.sciencedirect.com/science/article/pii/S1521693420300675

Chandra-Mouli, V., et al. (2017). Adolescent contraceptive use: A global review. *Reproductive Health*, 14(1), 1–15.

Cleland, J., Blacker, J., Mayhew, S., & Campbell, O. (2006). The Impact of Population Growth on the Attainment of the Millennium Development Goals. Submission of the London School of Hygiene & Tropical Medicine to the All Party Parliamentary Group on Population & Reproductive Health. March, 17.

Cohen, R., Sheeder, J., Kane, M., & Teal, S. B. (2017). Factors associated with contraceptive method choice and initiation in adolescents and young women. *Journal of Adolescent Health*, *61*(4), 454–460.

Coles, M. S., Makino, K. K., & Stanwood, N. L. (2011). Contraceptive experiences among adolescents who experience unintended birth. *Contraception, 84*(6), 578-584.

Collaborative Group on Epidemiological Studies on Endometrial Cancer. (2015) 'Endometrial cancer and oral contraceptives: An individual participant meta-analysis of 27,276 women with endometrial cancer from 36 epidemiological studies', . *Lancet Oncology , 16*(9), pp. 1060–1070.

Crawford, E. E., Atchison, C. J., Ajayi, Y. P., & Doyle, A. M. (2021). Modern contraceptive use among unmarried girls aged 15 – 19 years in South Western Nigeria: Results from a cross - sectional baseline survey for the Adolescent 360 (A360) impact evaluation. *Reproductive Health*, 1–13. https://doi.org/10.1186/s12978-020-01056-w.

Darroch, J.E., Woog, V., Bankoleand, A. and Ashford, L.S. (2016) Adding It Up: Costs and Benefits of Meeting the Contraceptive Needs of Adolescents. New York.

Darteh, E. K., et al. (2016). Spatial analysis of health facility use in Ghana. *BMC Health Services Research*, 16(1), 1–9.

Debuo Der, A., & Tarkang, E. E. (2023). Knowledge, Attitude and Utilisation of Modern Contraceptives among Female Senior High School Students in the Kpando Municipality, Ghana. *medRxiv*, 2023–10.

Decat, P., De Meyer, S., Jaruseviciene, L., Orozco, M., Ibarra, M., Segura, Z., . . . Temmerman, M. (2015). Sexual onset and contraceptive use among adolescents from poor neighbourhoods in Managua, Nicaragua. *The European Journal of Contraception & Reproductive Health Care*, *20*(2), 88-100.

Dioubaté, N., Manet, H., Bangoura, C., Sidibé, S., Kouyaté, M., Kolie, D., Ayadi, A. M. E., & Delamou, A. (2021). Barriers to contraceptive use among urban adolescents and youth in Conakry, in 2019, Guinea. *Frontiers in Global Women's Health*, *2*, 655929. https://www.frontiersin.org/journals/global-womens-health/articles/10.3389/fgwh.2021.655929/full.

Dioubaté, N., Manet, H., Bangoura, C., Sidibé, S., Kouyaté, M., Kolie, D., . . . Delamou, A. (2021). Barriers to Contraceptive Use Among Urban Adolescents and Youth in Conakry, in 2019, Guinea. *Frontiers in Global Women's Health, 2*, 1-11.

Ezenwaka, U., Mbachu, C., Ezumah, N., Eze, I., Agu, C., Agu, I., & Onwujekwe, O. (2020). Exploring factors constraining utilization of contraceptive services among adolescents in Southeast Nigeria: An application of the socio-ecological model. *BMC Public Health, 20*(1). https://doi.org/10.1186/s12889-020-09276-2

Forty, J., Rakgoasi, S. D., & Keetile, M. (2021). Patterns and determinants of modern contraceptive use and intention to usecontraceptives among Malawian women of reproductive ages (15–49 years). *Contraception and Reproductive Medicine*, *6*(1), 21. https://doi.org/10.1186/s40834-021-00163-8

Gaferi, S. M., Al-Harbi, M. F., Yakout, S. M., & Soliman, A. T. (2018). Knowledge, attitude and practice related to reproductive health among female adolescents. *Journal of Nursing Education and Practice*, *8*(8), 53–65. https://www.researchgate.net/profile/Sharifa-Jaferi/publication/324041512_Knowledge_attitude_and_practice_related_to_reproductive_health_among_female_adolescents/links/65896b752468df72d3d737c0/Knowledge-attitude-and-practice-related-to-reproductive-health-among-female-adolescents.pdf

Gbagbo, F. Y. (2020). Contraceptive Use among Basic School Pupils in Ghana: A Case Study of a Municipality. *International Journal of Pediatrics*, *2020*, 1–8.

GDHS. (2014). Ghana Demographic and Health Survey. *Ghana Statistical Service*.

Gebre, M. N., & Edossa, Z. K. (2020). Modern contraceptive utilization and associated factors among reproductive-age women in Ethiopia: Evidence from 2016 Ethiopia demographic and health survey. *BMC Women's Health*, *20*(1), 1–14. https://doi.org/10.1186/s12905-020-00923-9

Gebrekidan, H., Alemayehu, M., & Debelew, G. T. (2024). Individual and community level factors associated with modern contraceptive utilization among women in Ethiopia: Multilevel modeling analysis. *Plos One*, *19*(5), e0303803.

Gierisch, J.M., Coeytaux, R.R., Urrutia, R.P., Havrilesky, L.J., Moorman, P.G., Lowery, W.J., Dinan, M., McBroom, A.J., Hasselblad, V., Sanders, G.D. and Myers, E.R. (2013) 'Oral contraceptive use and risk of breast, cervical, colorectal, and endometrial cancers: a systematic review', Cancer Epidemiology, Biomarkers & Prevention, 22(11), pp. 1931–1943. Available at: https://doi.org/10.1158/1055-9965.EPI-13-0298.

Gipson, J. D., Koenig, M. A., & Hindin, M. J. (2008). The effects of unintended pregnancy on infant, child, and parental health: a review of the literature. *Studies in Family Planning, 39*(1), 18-38.

Glasier, A., Gülmezoglu, A. M., Schmid, G. P., Moreno, C. G., & Van Look, P. F. (2006). Sexual and reproductive health: a matter of life and death. *The Lancet, 368*(9547), 1595-1607.

Godia, P. M., Olenja, J. M., Lavussa, J. A., Quinney, D., Hofman, J. J., & Van Den Broek, N. (2013). Sexual reproductive health service provision to young people in Kenya; health service providers" experiences. *BMC Health Services Research, 13*(1), 476.

Godia, P., et al. (2014). Youth-friendly sexual and reproductive health services in Kenya. *African Journal of Reproductive Health*, 18(3), 25–32.

Guzzo, K. B., & Hayford, S. R. (2018). Adolescent Reproductive and Contraceptive Knowledge and Attitudes and Adult Contraceptive Behavior. *Maternal and Child Health Journal*, *22*(1), 32–40. https://doi.org/10.1007/s10995-017-2351-7

Gyan, S. E., & Marhefka-Day, S. (2021). Exploring Adolescents' (Non-)Use of Modern Contraceptives in Ghana Through the Lens of the Theory of Gender and Power. *Archives of Sexual Behavior*, *50*(6), 2411–2421. https://doi.org/10.1007/s10508-021-01914-z.

Hailegebreal, S., Seboka, B. T., Ahmed, M. H., Teferi, G. H., Regasa, Z., Tekabe, B., Sako, S., & Gilano, G. (2021). Individual and community-level factors associated with modern contraceptive use among adolescent girls and young women in Ethiopia: A multilevel analysis of 2016 Ethiopia demographic and health survey. *Archives of Public Health*, *79*(1), 204. https://doi.org/10.1186/s13690-021-00736-8

Hall, T. N. & Rende, E. K. (2017). "Practice Guideline: Contraception for Adolescents with Chronic Illness". *Journal of Pediatric Health Care*. doi: 10.1016/j.pedhc.2017.02.002.

Havrilesky, L.J., Moorman, P.G., Lowery, W.J., Gierisch, J.M., Coeytaux, R.R., Urrutia, R.P., Dinan, M., McBroom, A.J., Hasselblad, V., Sanders, G.D. and Myers, E.R. (2013). 'Oral contraceptive pills as primary prevention for ovarian cancer: A systematic review and meta-analysis'. *Obstetrics and Gynecology , 122*(1), 139–147.

Henry, E. G., Agula, C., Agyei-Asabere, C., Asuming, P. O., Bawah, A. A., Canning, D., & Shah, I. (2021). Dynamics of Emergency Contraceptive Use in Accra, Ghana. *Studies in Family Planning, 52*(2), 105–123. https://doi.org/10.1111/sifp.12154

Hoopes, A. J., Gilmore, K., Cady, J., Akers, A. Y., & Ahrens, K. R. (2016). A qualitative study of factors that influence contraceptive choice among adolescent school-based health center patients. *Journal of Pediatric and Adolescent Gynecology*, *29*(3), 259–264. https://www.sciencedirect.com/science/article/pii/S108331881500354X.

Ikamari, L., & Towett, R. (2007). Sexual initiation and contraceptive use among female adolescents in Kenya. *African Journal of Health Sciences, 14*(1), 1-13.

Ivankovich, M. B. (2022). *Examining Gender Equality and Other Factors Associated with Modern Contraceptive Use among Adolescent Girls and Young Women in Mozambique: A Mixed Methods Study* [PhD Thesis, Boston University].

Iversen, L., Sivasubramaniam, S., Lee, A.J., Fielding, S. and Hannaford, P.C. (2017). 'Lifetime cancer risk and combined oral contraceptives: The Royal College of General Practitioners' Oral Contraception Study'. *American Journal of Obstetrics and Gynecology , 216*(6), 580.e1-580.e9.

Iyoke, C., Ezugwu, F., Lawani, O., Ugwu, G., Ajah, L., & Mba, S. (2014). Peer-driven contraceptive choices and preferences for contraceptive methods among students of tertiary educational institutions in Enugu, Nigeria. *Patient Preference and Adherence, 8*, 1043.

Izugbara, C. (2018). Workers Notions of Unsafe Sexual Constituting the Unsafe: *Nigerian Sex Conduct, 50*(3), 29–49.

Kaniki, F. R., Sanni, O. F., Kyampof, K. N., & Lazare, S. R. (2023). A retrospective analysis of the trends in modern contraceptive use among adolescents and young women (15–24 years) in the Democratic Republic of the Congo in the last two decades. *Journal of Family Medicine and Primary Care*, *12*(10), 2260–2267.

Kantorová, V., Wheldon, M. C., Dasgupta, A. N., Ueffing, P., & Castanheira, H. C. (2021). Contraceptive use and needs among adolescent women aged 15–19: Regional and global estimates and projections from 1990 to 2030 from a Bayesian hierarchical modelling study. *PloS One, 16*(3), e0247479.

Kareem, M., & Samba, A. (2016). Contraceptive Use Among Female Adolescents in Korle-Gonno, Accra, Ghana Gynecology & Obstetrics, 6(12). https://doi.org/10.4172/2161-0932.1000414.

Katama, S. K., & Hibstu, D. T. (2016). Knowledge, attitude and practice of contraceptive use among female students of Dilla secondary and preparatory school, Dilla town, South.

Kavanaugh, M.L. and Anderson, R.M. (2013) Contraception and Beyond: The Health Benefits of Services Provided at Family Planning Centers. New York .

Kebede, A., Belina, S., Biratu, Y., & Kebede, A. (2021). Modern contraceptive use among sexually active female adolescent: Trends and determinants insight from National Demographic and health survey. *Reprod Health [Internet]*.

Khan, S., Bradley, S. E. K., Fishel, J., & Mishra, V. (2006). Unmet Need and the Demand for Family Planning in Uganda, 1995–2006.

Kinaro, J., Kimani, M., Ikamari, L., & Ayiemba, E. H. (2015). *Perceptions and barriers to contraceptive use among adolescents aged 15-19 years in Kenya: A case study of Nairobi*. https://erepository.uonbi.ac.ke/handle/11295/84421.

Kinsman, J., Nyanzi, S., & Pool, R. (2000). Socializing influences and the value of sex: the experience of adolescent school girls in rural Masaka, Uganda. *Culture, Health & Sexuality*, *2*(2), 151-166.

Kistiana, S., Gayatri, M., & Sari, D. P. (2020). Determinants of modern contraceptive use among young married women (age 15–24) in Indonesia. *Glob J Health Sci*, *12*(13), 1–37. https://www.academia.edu/download/71977664/46413.pdf

Klutse, C. A. (2021). *Contraceptive use Among Female Adolescents in Twifo Praso Senior Secondary School in the Twifo Atti-Mokwa District in Central Region of Ghana* [PhD Thesis, University of Ghana]. https://ugspace.ug.edu.gh/items/8394aad5-66b0-43b0-b93e-9cbdaec32a92

Kumar, N., & Brown, J. D. (2016). Access barriers to long-acting reversible contraceptives for adolescents. *Journal of Adolescent Health*, *59*(3), 248–253.

Lasong, J., Zhang, Y., Gebremedhin, S. A., Opoku, S., Abaidoo, C. S., Mkandawire, T., Zhao, K., & Zhang, H. (2020). Determinants of modern contraceptive use among married women of reproductive age: A cross-sectional study in rural Zambia. *BMJ Open*, *10*(3), e030980. https://bmjopen.bmj.com/content/10/3/e030980.abstract.

Leeman, L. (2021). Medical barriers to effective contraception. Obstet Gynecol Clin North A, 34, 19-29.

Lim, M. S., Zhang, X.-D., Kennedy, E., Li, Y., Yang, Y., Li, L., Li, Y.-X., Temmerman, M., & Luchters, S. (2015). Sexual and reproductive health knowledge, contraception uptake, and factors associated with unmet need for modern contraception among adolescent female sex workers in China. *PloS One*, *10*(1), e0115435.

Liu, Z., Lin, Z., Cao, W., Li, R., Liu, L., Wu, H., & Tang, K. (2021). Identify key determinants of contraceptive use for sexually active young people: A hybrid ensemble of machine learning methods. *Children*, *8*(11), 968. https://www.mdpi.com/2227-9067/8/11/968.

Luan, N.N., Wu, L., Gong, T.T., Wang, Y.L., Lin, B. and Wu, Q.J. (2015) 'Nonlinear reduction in risk for colorectal cancer by oral contraceptive use: A meta-analysis of epidemiological studies', Cancer Causes and Control , 26(1), pp. 65–78.

Mahmud, A., Ekoriano, M., Titisari, A. S., Wijayanti, U. T., Sitorus, M. A., & Rahmadhony, A. (2021). Determinants of modern contraceptives use in Indonesia: A spatial analysis. *Systematic Reviews in Pharmacy*, *12*(3), 769–777.

Makola, L., Mlangeni, L., Mabaso, M., Chibi, B., Sokhela, Z., Silimfe, Z., Seutlwadi, L., Naidoo, D., Khumalo, S., Mncadi, A., & Zuma, K. (2019). Predictors of contraceptive use among adolescent girls and young women (AGYW) aged 15 to 24 years in South Africa: Results from the 2012 national population-based household survey. *BMC Women's Health*, *19*(1). https://doi.org/10.1186/s12905-019-0861-8.

Makwinja, A. K., Maida, Z. M., Linda, A., & Mipando, N. (2021). Delivery strategies for optimizing uptake of contraceptives among adolescents aged 15 – 19 years in Nsanje District, Malawi. *Reproductive Health*, 1–9. https://doi.org/10.1186/s12978-020-01065-9.

Mardi, A., Ebadi, A., Shahbazi, S., Esmaelzade Saeieh, S., & Behboodi Moghadam, Z. (2018). Factors influencing the use of contraceptives through the lens of teenage women: A qualitative study in Iran. *BMC Public Health*, *18*(1). https://doi.org/10.1186/s12889-018-5116-3.

Marrone, G., Abdul-Rahman, L., De Coninck, Z., & Johansson, A. (2014). Predictors of contraceptive use among female adolescents in Ghana. *African Journal of Reproductive Health*, *18*(1), 102-109.

Masatu, M. C., KvÅle, G., & Klepp, K.-I. (2003). Frequency and perceived credibility of reported sources of reproductive health information among primary school adolescents in Arusha, Tanzania. *Scandinavian Journal of Social Medicine, 31*(3), 216-223.

Mbachu, C. O., Agu, I. C., Obayi, C., Eze, I., Ezumah, N., & Onwujekwe, O. (2021). Beliefs and misconceptions about contraception and condom use among adolescents in south-east Nigeria. *Reproductive Health*, *18*(1). https://doi.org/10.1186/s12978-020-01062-y

Mbadu Muanda, F., Gahungu, N. P., Wood, F., & Bertrand, J. T. (2018a). Attitudes toward sexual and reproductive health among adolescents and young people in urban and rural DR Congo. *Reproductive Health*, *15*(1). https://doi.org/10.1186/s12978-018-0517-4

Mbadu Muanda, F., Gahungu, N. P., Wood, F., & Bertrand, J. T. (2018b). Attitudes toward sexual and reproductive health among adolescents and young people in urban and rural DR Congo. *Reproductive Health*, *15*(1). https://doi.org/10.1186/s12978-018-0517-4.

Michelle C. Kegler, Cam EscofferyIris C. AlcantaraJohanna HinmanAnn, A. G. (2012). Perceptions of Social and Environmental Support for Healthy Eating and Physical Activity in Rural Southern Churches. *Journal of Religion and Health, 51*(3), 799-811.

Michels, K.A., Pfeiffer, R.M., Brinton, L.A. and Trabert, B. (2018) 'Modification of the associations between duration of oral contraceptive use and ovarian, endometrial, breast, and colorectal cancers.' *JAMA Oncology*, *4*(4), 516–521.

Mpunga, D. M., Chenge, F. M., Mambu, T. Nm., Akilimali, P. Z., Mapatano, M. A., & Wembodinga, G. U. (2022). Determinants of the use of contraceptive methods by adolescents in the Democratic Republic of the Congo: Results of a cross-sectional survey. *BMC Women's Health*, *22*(1), 478. https://doi.org/10.1186/s12905-022-02084-3.

Mugoyela, V., & Kimaro, B. (2010). Knowledge, attitude, and practice on contraceptive use among secondary school students in Dar es Salaam, Tanzania. *East and Central African Journal of Pharmaceutical Sciences, 13*(2).

Munakampe, M. N., Zulu, J. M., & Michelo, C. (2018). Contraception and abortion knowledge, attitudes and practices among adolescents from low and middle-income countries: A systematic review. *BMC Health Services Research*, *18*(1). https://doi.org/10.1186/s12913-018-3722-5.

Murigi M., Butto D., Barasa S., Maina E., & Munyalo B. (2016). Overcoming Barriers to Contraceptive Uptake among Adolescents : The Case of Kiambu Country, Kenya. *Journal of Biosciences and Medicines, 53*(4), 1–10. https://doi.org/10.4236/jbm.2016.49001.

Murphy, N., Xu, L., Zervoudakis, A., Xue, X., Kabat, G., Rohan, T.E., Wassertheil-Smoller, S., O'Sullivan, M.-J., Thomson, C., Messina, C., Strickler, H.D. and Gunter, M.J. (2017). 'Reproductive and menstrual factors and colorectal cancer incidence in the Women's Health Initiative Observational Study'. *British Journal of Cancer*, *116*(1), 117–125.

Muula A. S. (2008). Trends in Contraceptive Knowledge and Use among Adolescent Married Women in Malawi. *Croat Medical Journal, 49*(10). https://doi.org/10.3325/cmj.2008.4.561.

Mwanangombe, C., Mundende, K., Muzata, K. K., Muleya, G., & Francis Simui, V. K. (2020). *Peeping into the pot of contraceptives utilization among adolescents within a conservative culture Zambia.*

National Center for Biotechnology Information (NCBI), (2010) Medroxyprogesterone injection http://www.ncbi.nlm.nih.gov/pubmedhealth/PMHT0011058/

Nkenguye, W., Ismail, H., Urassa, E. P., Yongolo, N. M., Kagoye, S., & Msuya, S. E. (2023). Factors associated with modern contraceptive use among out of school adolescent girls in Majengo and Njoro wards of Moshi Municipality, Tanzania. *East African Health Research Journal*, *7*(1), 32–39. https://www.ajol.info/index.php/eahrj/article/view/259356.

Nsanya, M. K., Atchison, C. J., Bottomley, C., Doyle, A. M., & Kapiga, S. H. (2019). Modern contraceptive use among sexually active women aged 15–19 years in North-Western Tanzania: Results from the Adolescent 360 (A360) baseline survey. *BMJ Open*, *9*(8), e030485. https://bmjopen.bmj.com/content/9/8/e030485.abstract.

Nsubuga, H., Sekandi, J. N., Sempeera, H., & Makumbi, F. E. (2021). Contraceptive use, knowledge, attitude, perceptions and sexual behavior among female University students in Uganda: a cross-sectional survey. *BMC Women's Health,* 1-11.

Nyarko, S. H. (2015a). Prevalence and correlates of contraceptive use among female adolescents in Ghana. *BMC Women's Health*, *15*(1). https://doi.org/10.1186/s12905-015-0221-2.

Nyarko, S. H. (2015b). Prevalence and correlates of contraceptive use among female adolescents in Ghana. *BMC Women's Health*, *15*(1). https://doi.org/10.1186/s12905-015-0221-2.

Obare, F., Birungi, H., Undie, C., Wanjiru, M., Liambila, W., & Askew, I. (2011). Levels trends and determinants of contraceptive use among adolescent girls in Kenya.

Okereke, C. I. (2007). Unmet Reproductive Health Needs and Health-Seeking Behaviour of Adolescents in Owerri, Nigeria, 14(1), 43–54.

Olagunju, O. S., Bolarinwa, O. A., & Erinfolami, T. P. (2020). Knowledge and factors associated with modern contraceptive use among young women in West African countries. *International Journal of All Research Writings*, *1*(11), 148–161. https://www.academia.edu/download/88386801/IJARW1248.pdf.

Olika, A. K., Kitila, S. B., Terfa, Y. B., & Olika, A. K. (2021). Contraceptive use among sexually active female adolescents in Ethiopia: Trends and determinants from national demographic and health surveys. *Reproductive Health*, *18*(1), 104. https://doi.org/10.1186/s12978-021-01161-4.

O'Mahony, D., Yogeswaran, P., & Wright, G. (2013). Knowledge, attitudes, and practices about contraception amongst schoolgirls aged 12-14 years in two schools in King Sabata Dalindyebo Municipality, Eastern Cape. African Journal of Primary Health Care and Family Medicine, 5(1), 1-8.

Onasoga, A. O., Afolayan, J. A., Asamabiriowei, T. F., Jibril, U. N., & Imam, A. A. (2019). Adolescents' knowledge, attitude and utilization of emergency contraceptive pills in Nigeria's Niger Delta Region. *International Journal of MCH and AIDS*, *5*(1), 53-60.

Oppong, F. B., Logo, D. D., Agbedra, S. Y., Adomah, A. A., Amenyaglo, S., Arhin-, K., Asiedu, S. A.-, & Ae-, K. A. (2021). *Determinants of contraceptive use among sexually active unmarried adolescent girls and young women aged 15 – 24 years in Ghana: A nationally representative cross- - sectional study*. 1–10. https://doi.org/10.1136/bmjopen-2020-043890.

Otim, J. (2020). Contraceptive nonuse among women in Uganda: A comparative assessment of predictors across regions. *BMC Women's Health*, *20*(1), 275. https://doi.org/10.1186/s12905-020-01148-6.

Phongluxa, K., Langeslag, G., Jat, T. R., Kounnavong, S., Khan, M. A., & Essink, D. R. (2020). Factors influencing sexual and reproductive health among adolescents in Lao PDR. *Global Health Action*, *13*(sup2), 1791426. https://doi.org/10.1080/16549716.2020.1791426.

Pritt, N. M., Norris, A. H., & Berlan, E. D. (2017). Barriers and facilitators to adolescents' use of long-acting reversible contraceptives. *Journal of Pediatric and Adolescent Gynecology*, *30*(1), 18–22. https://www.sciencedirect.com/science/article/pii/S108331881630095X.

Relwani, N., Saoji, A., Kasturwar, N., Nayse, J., Junaid, M., & Dhatrak, P. (2012). Emergency contraception: Exploring the knowledge, attitude, and practices of engineering college girls in Nagpur district of central India. National Journal of Community Medicine, 3(1), 14-19.

Salifu, M. G., & Mohammed, K. (2020). Prevalence and Predictors of Contraceptives Use among Women Aged (15–49 years) with Induced Abortion History in Ghana. *Advances in Preventive Medicine*, *2020*, 1–7. https://doi.org/10.1155/2020/2630905.

Sanchez, E. K., Speizer, I. S., Tolley, E., Calhoun, L. M., Barrington, C., & Olumide, A. O. (2020). Influences on seeking a contraceptive method among adolescent women in three cities in Nigeria. *Reproductive Health*, 1–11. https://doi.org/10.1186/s12978-020-01019-1.

Sharma, A., McCabe, E., Jani, S., Gonzalez, A., Demissie, S., & Lee, A. (2021). Knowledge and attitudes towards contraceptives among adolescents and young adults. *Contraception and Reproductive Medicine*, *6*(1). https://doi.org/10.1186/s40834-020-00144-3.

Sharma, A., McCabe, E., Jani, S., Gonzalez, A., Demissie, S., & Lee, A. (2021). Knowledge and attitudes towards contraceptives among adolescents and young adults. Contraception and Reproductive Medicine, 1-6.

Shu, C., Fu, A., Lu, J., Yin, M., Chen, Y., Qin, T., Shang, X., Wang, X., Zhang, M., & Xiong, C. (2016). Association between age at first sexual intercourse and knowledge, attitudes and practices regarding reproductive health and unplanned pregnancy: A cross-sectional study. *Public Health*, *135*, 104–113. https://www.sciencedirect.com/science/article/pii/S0033350616000408.

Skrzeczkowska, A., Heimrath, J., Surdyka, J., & Zalewski, J. (2015). Knowledge of contraceptive methods among adolescents/young adults. *Polish Journal of Public Health*, *125*(3), 144–148. https://czasopisma.umlub.pl/pjph/article/view/1340.

Sokkary N., Mansouri R., Yoost J., Focseneanu M., Dumont T., Dietrich J. E., (2013). Original Study A Multicenter Survey of Contraceptive Knowledge among Adolescents in North America. Journal of Pediatric and Adolescent Gynecology, 26(5), 274–276. https://doi.org/10.1016/j.jpag.2013.04.010.

Speizer, I. S., Mullen, S. A., & Amégee, K. (2001). Gender differences in adult perspectives on adolescent reproductive behaviors: evidence from Lomé, Togo. *International Family Planning Perspectives*, 178-185.

Sserwanja, Q., Musaba, M. W., & Mukunya, D. (2021). Prevalence and factors associated with modern contraceptives utilization among female adolescents in Uganda. *BMC Women's Health*, 1–7. https://doi.org/10.1186/s12905-021-01206-7.

Sweya, M. N., Msuya, S. E., Johnson Mahande, M., & Manongi, R. (2016a). Contraceptive knowledge, sexual behavior, and factors associated with contraceptive use among female undergraduate university students in Kilimanjaro region in Tanzania. *Adolescent Health, Medicine and Therapeutics*, *Volume 7*, 109–115. https://doi.org/10.2147/ahmt.s108531.

Sweya, M. N., Msuya, S. E., Johnson Mahande, M., & Manongi, R. (2016b). Contraceptive knowledge, sexual behavior, and factors associated with contraceptive use among female undergraduate university students in Kilimanjaro region in Tanzania. *Adolescent Health, Medicine and Therapeutics*, *Volume 7*, 109–115. https://doi.org/10.2147/ahmt.s108531.

Takyi, A., Sato, M., Adjabeng, M., & Smith, C. (2023). Factors that influence modern contraceptive use among women aged 35 to 49 years and their male partners in Gomoa West District, Ghana: A qualitative study. *Tropical Medicine and Health*, *51*(1), 40. https://doi.org/10.1186/s41182-023-00531-x.

Tamang, L., Raynes-Greenow, C., McGeechan, K., & Black, K. (2020). Factors associated with contraceptive use among sexually active Nepalese youths in the Kathmandu Valley. *Contraception and Reproductive Medicine*, 1-8.

Tampah-Naah, A. M., Yendaw, E., & Sumankuuro, J. (2023). Residential status and household wealth disparities in modern contraceptives use among women in Ghana: A cross-sectional analysis. *BMC Women's Health*, *23*(1), 1–11. https://doi.org/10.1186/s12905-023-02684-7.

Thakuri, D. S., Singh, Y. K. C., Karkee, R., & Khatri, R. B. (2022). Knowledge and practices of modern contraceptives among religious minority (Muslim) women: A cross-sectional study from Southern Nepal. *PLoS ONE*, *17*(12 December), 1–15. https://doi.org/10.1371/journal.pone.0278899

Todd, N., & Black, A. (2020). Contraception for adolescents. *Journal of Clinical Research in Pediatric Endocrinology*, *12*(Suppl 1), 28. https://jag.journalagent.com/jcrpe/pdfs/JCRPE_12_50_28_40.pdf.

Trussel, D. F. (2019). Attitudes of University Students Towards Abortion in Nigeria. International Journal of Tropical Medicine, 5(8), 465-471.

Trussell, J. (2013). NIH Public Access, 83(5), 397–404. https://doi.org/10.1016/j.contraception.2011.01.021.Contraceptive

UNFPA. (2010). State of world population 2010 From conflict and crisis to renewal :

UNFPA. (2013). State of the World Population 2013.

Watts, N. C., Mimmie, C., Liamputtong, P., & Carolan, M. (2014). Contraception knowledge and attitudes: truths and myths among African Australian teenage mothers in Greater Melbourne, Australia. *Journal of Clinical Nursing, 23*(15-16), 2131-2141.

Wentzensen, N., Poole, E.M., Trabert, B., White, E., Arslan, A.A., Patel, A. V., Setiawan, V.W., Visvanathan, K., Weiderpass, E., Adami, H.-O., Black, A. and Bernstein, L. (2016) 'Ovarian cancer risk factors by histologic subtype: An analysis from the Ovarian Cancer Cohort Consortium', Journal of Clinical Oncology , 34(24), pp. 2888–2898.

WHO (2019). Contraception. Geneva.

Williams, B. N., Jauk, V. C., Szychowski, J. M., & Arbuckle, J. L. (2021). Adolescent emergency contraception usage, knowledge, and perception. *Contraception, 103*(5), 361–366. https://www.sciencedirect.com/science/article/pii/S0010782421000056.

World Health Organization. (2018). Recommendations on Maternal Health: Guidelines Approved by the WHO Guidelines Review Committee. Geneva: World Health Organization.

World Health Organization. (2020). Adolescent Sexual Reproductive Health. Retrieved May 27, 2025, from https://www.who.int/southeastasia/activities/adolescent-sexual-reproductive-health.

Wulifan, J. K., Brenner, S., Jahn, A., & De Allegre, A. (2021). A scopingreview on determinants of unmet need for family planningamong women of reproductive age in low- and middle-incomecountries. BMC Women's Health, 16(1), 18-23.

Yen, S., Parmar, D. D., Lin, E. L., & Ammerman, S. (2015). Emergency contraception pill awareness and knowledge in uninsured adolescents: High rates of misconceptions concerning indications for use, side effects, and access. *Journal of Pediatric and Adolescent Gynecology*, *28*(5), 337–342. https://www.sciencedirect.com/science/article/pii/S1083318814003568.

Yidana, A., Ziblim, S.-D., Azongo, T. B., & Abass, Y. I. (2015). *Socio-cultural determinants of contraceptives use among adolescents in northern Ghana*.

Zegeye, B., Idriss-Wheeler, D., Ahinkorah, B. O., Ameyaw, E. K., Seidu, A.-A., Keetile, M., & Yaya, S. (2022). Individual, household, and community-level predictors of modern contraceptive use among married women in Cameroon: A multilevel analysis. *International Health*, *14*(6), 648–659. https://academic.oup.com/inthealth/article-abstract/14/6/648/6506131.

APPENDIXES

EVALUATING THE PREDICTORS OF MODERN CONTRACEPTIVE USE AMONG ADOLESCENTS AGE 10-14 YEARS: EVIDENCE FROM SEKYERE SOUTH DISTRICT OF GHANA.

Dear Respondent,

This is a study carried out among adolescents in the Sekyere South District of Ashanti Region on the uptake of Modern Contraceptive. I would like to take few minutes of your precious time to respond to these questions for me. Your name and response would not be reported in my research.

Thank you.

Question Number	Questions	Response(s)
Respondent ID …………………		
SECTION A	**DEMOGRAPHIC CHARACTERISTICS**	
1	What is your age as at last birthday? ………………………………………	|___|
2	What is your highest level of education? • No education • Low primary • Upper primary • Junior High School • If other, please specify ……………….	|___|
3	What is your religious affiliation? A. Christian B. Muslim C. Traditionalist D. If other, please specify ……………………..	|___|

4	What is your marital status? A. Married B. Not married	
5	Have you experienced pregnancy before? • Yes • No	
6	If yes to **Question 5,** how many birth from the pregnancies ………………………………………	
7	What is your source of living? 1. Parents 2. Extended family 3. Neighbors	
8	How much income do you earn every month? ……………………………………	
9	How would you classify your area of residence? A. Rural B. Peri-urban C. Urban	
SECTION B: KNOWLEDGE ON MODERN CONTRACEPTIVES AMONG ADOLESCENTS.		
10	Have you heard of contraceptives before? 1. Yes 2. No	
11	If yes to **Question 11**, what is it? A . Drug taken before having sex B. Drug that is taken to enhance sexual pleasure C. A drug taken to avoid pregnancy D. A drug taken to avoid Sexual transmitted infection E. If other, please specify ………………..	

12	Where did you hear it from? 1. Friend 2. Health Woker 3. Teacher 4. Parent 5. If other, please specify ……………………..	|___|
13	What is the name of the contraceptive you have used in the last 3 month? ………………………………………………..	|___|
14	Do you think the use of contraceptive promote good health outcome? A. Yes B. No	|___|
15	If yes to **Queston 15,** what are the possible health outcome of using modern contraceptive? A. Prevent unwanted pregnancy B. Prevent Sexual transmitted Infection C. It enhances sexual pleasure D. If other, please specify …………………..	|___|
SECTION C: SOCIO-CULTURAL FACTORS INFLUENCING THE USE OF MODERN CONTRACEPTIVES AMONG ADOLESCENTS		
16	Do you have any taboo in your community that forbids adolescents from using modern contraceptives? 1. Yes 2. No	|___|
17	Does your culture makes you see the male or partner as superior than you? 1. Yes 2. No	|___|

18	Is sex before marriage permitted in your culture? 4. Yes 5. No	
19	According to your religious faith, is preventing the chance of becoming pregnant a sin for unmarried people? A. Yes B. No	
20	Are you required to see the approval of your parent or partner before using modern contraceptives? A. Yes B. No	|__|
21	Will you avoid using modern contraceptives knowing that it can promote good health outcome for you? • Yes • No	
22	Will you encourage your fellow adolescent to use modern contraceptives? • Yes • No	
SECTION D: HEALTH SYSTEM FACTORS INFLUENCING THE USE OF MODERN CONTRACEPTIVES AMONG ADOLESCENT		
24	Have you ever visited a health facility for reproductive health services? A. Yes B. No	|__|
25.	What type of health facility do you usually visit? A. Private B. Public C. Others	|__|

26	How far is the nearest health facility from your home? (Distance in km/minutes) Please specify	|___|
27	Have you ever faced any challenges in accessing health services? ▪ Yes ▪ No	|___|
28	If yes, to **question 27** what were the challenges? Please specify	|___|
29	Are modern contraceptives available at the health facilities you visit? A. Yes B. No	|___|
30	Which types of modern contraceptives are available? a. Pills b. Condoms c. Injectables d. Implants e. Other (specify)	|___|
31	Have you ever been offered a modern contraceptive method at a health facility? 1. Yes 2. No	|___|

32	How would you rate the quality of care received at the health facility? A. Poor B. Good C. Excellent	
33	Did health providers discuss modern contraceptive options with you? A. Yes B. No	
34	Did health providers provide you with accurate information about modern contraceptives? A.Yes B. No	
35	Did health providers seem judgmental about your desire for modern contraceptives? A.Yes B. No	
36	What sources of information do you rely on for modern contraceptives? a. Health providers b. Peers c. Family members d. Media e. Other (specify)	

37	What barriers have you faced in accessing modern contraceptives? a. Cost b. Distance to health facility c. Lack of information d. Provider attitudes e. Other (specify)	
38	Have you ever been denied access to modern contraceptives at a shealth facility? A. Yes B. No	

THANK YOU.