DETERMINANTS OF CONTRACEPTIVE UPTAKE AMONG SECONDARY SCHOOL ADOLESCENT GIRLS BETWEEN 10-19 YEARS LIVING IN TESO-NORTH, BUSIA COUNTY

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A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF PUBLIC HEALTH (EPIDEMIOLOGY AND DISEASE CONTROL) OF JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY

DECLARATION

Declaration by the student.

This thesis is my original work and has not been submitted for an award of any degree or Diploma in any other university or institution.

Signature…… Date…….

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Certification by the Supervisors.

I certify that this thesis is submitted to the University for Examination with my approval as the university supervisor, it's titled "*Determinants of contraceptive uptake among secondary school adolescent girls aged 10-19 years living in Teso-North, Busia County*."

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DEDICATION

This thesis is dedicated to my Mother Mrs. Emily Ngesa for her tireless encouragement, guidance and prayers that has enabled me to reach this far. I also dedicate this thesis to my wife Mrs. Elizabeth Khanzira for her continued support, perseverance and encouragement which was a great source of inspiration to me.

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Last but not least, I wish to express my gratitude to my family members. My son Marcellus and daughter Rakel, dad Mr. Makokha, brothers Justus, Gasper and Protus for their love, patience, support and understanding.

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LIST OF ABBREVIATIONS AND ACRONYMS

AACSE- Age Appropriate Comprehensive Sexuality Education.

AGYW- Adolescent Girls and Young Women.

AIDS- Acquired Immune Deficiency Syndrome.

AGI- Allan Guttmacher Institute.

APHRC- African Population and Research Center.

ASRH - Adolescent Sexual Reproductive Health.

AYSRH- Adolescent and Youths Sexual Reproductive Health.

CBOs - Community Based Organizations.

CCP- Center for Communication Programs.

CHVs- Community Health Volunteers.

CRR - Centre for Reproductive Rights.

CPR- Contraceptive Prevalence Rate.

FGDs- Focus Group Discussions.

FHI- Family Health International.

FP - Family Planning.

GOK- Government of Kenya.

HIV- Human Immunodeficiency Virus.

IDEA- Informing Decision-Makers to Act.

IPAS – International Project Assistance Services.

IUDs- Intrauterine Devices.

KDHS- Kenya Demographic and Health Survey.

KHIS- Kenya Health Information System.

KHRC- Kenya Human Rights Commission.

LARC- Long -Acting Reversible Contraceptive

KNBS- Kenya National Bureau of Statistics.

MoE - Ministry of Education.

MOH- Ministry of Health.

NASCOP- National Aids and STI Control Program.

NCAPD- National Coordinating Agency for Population and Development.

NCPD- National Council for Population and Development.

NGOs-	Non- Governmental Organizations.
PRB-	Population Reference Bureau.
PSRI-	Population Studies and Research Institute.
RH-	Reproductive Health
RHR-	Reproductive Health and Research
SAC-	Short -Acting Contraceptive.
SDGs-	Sustainable Development Goals
SGBV-	Sexual Gender Based Violence.
SRH-	Sexual and Reproductive Health.
STI-	Sexually Transmitted Infections.
TFR –	Total Fertility Rate.
UN-	United Nations.
UNFPA-	United Nations Fund for Population Activities.
UNICEF -	United Nations International Children's Emergency Fund or United Nations Children's Fund.
USAID-	United States Agency for International Development.
WHO-	World Health Organization.

DEFINITION OF TERMS OF OPERATION

Access to contraceptives- Refers to the ease with which an adolescent is able to acquire contraceptives and contraceptive services.

Adolescent –Anyone of ages 10-19.

Contraceptive –Any drug or device used to prevent a woman of reproductive age from pregnancy upon the act of having unprotected sexual intercourse.

Determinant – A factor which decisively affects the nature or outcome of something.

Knowledge level on contraception –Is the amount of true information an adolescent has about the available methods of contraception, their proper use and the merits and demerits of such contraceptives.

Perceptions –Refers to the outlook of adolescent contraception.

Sexual behavior –Refers to sexual activity profile of an adolescent in the past six months in terms of the number of sexual partners, frequency of sexual encounters and the plan of the sexual encounters.

Sexually Active adolescent – For this study, an adolescent is defined as sexually active if they have had at least one sexual encounters in the last three months and currently had a sexual partner.

Sexual Health Education – Is a lifelong process of acquiring information and forming attitudes, beliefs, and values about such important topics as identity, relationships, and intimacy.

Uptake of Contraceptive – Refers to not only the utilization of a contraceptive but also the effective utilization of the contraceptive.

ABSTRACT

Contraceptives are devices, drugs, agents, sexual practices, or surgical procedures that prevent a woman of reproductive age from getting pregnant. There are 58.4% of the adolescent girls in Kenya who use any form of contraception, with 43.8% unmet need of contraception. Busia County is ranked the least contraceptive prevalence rate of 18.6% among adolescent girls aged 10-19 years in Kenya. Low use of contraceptives leads to high rates of teenage pregnancy leading to early marriages, school dropouts, unsafe abortions and STIs among adolescent girls and youths in the region. Several Non-Governmental Organizations came up with strategies but all were in vain. The main objective of this study was to establish the determinants of contraceptive uptake among secondary school adolescent girls aged 10-19 years in Teso North and research questions were; what are the socio-demographical, knowledge and informational, and quality of reproductive health services determinants to contraceptive uptake among secondary school adolescent girls aged 10-19 years living in Teso North. This study applied mixed method cross-sectional study design and it had 415 respondents who were secondary school adolescent girls in Teso North Sub County for data collection. Qualitative data was collected by conducting two Focused Group Discussions (FGDs) using interview guide. Data analysis was done by computer software statistical Package for Social Scientists (SPSS) version 25. Analysis methods used were descriptive and inferential statistics comprising of chi-squares and binary logistic regression analysis to identify determinants of contraceptive uptake among adolescent girls. Odds ratios, 95% confidence intervals and p-values were reported. P-values <0.05 and below were considered statistically significant. This study established that 47.2 % (196) of the girls had sexual partners, 72.4 % (301) knew at least a contraceptive method and 29.3 %(122) of them had used a contraceptive method. It revealed that, the class (Form 4s were nine times likely to use contraception compared to Form 1s (AOR 8.9, 95%CI 2.0 - 39.7, P = 0.004), residence (girls from the peri-urban residence were nine times likely to use contraception compared to those from rural residence (AOR 9.0, 95%CI 2.8 - 28.9, P<0.0001), staying with guardians was three times likely to use contraception compared to staying with parents (AOR 2.7, 95%CI 1.2 - 6.1, P = 0.018), having a sexual partner was sixteen times likely to use contraception compared to lack of partner (AOR 16.4, 95%CI 5.8 - 46.6, P<0.0001), discussing contraceptives with anyone was four times likely to use contraception compared to keeping to themselves (AOR 4.2, 95%CI 1.7 - 10.7, P = 0.002), ability to access contraception/ sexual reproductive services at any time at home or school was three times likely to use contraception compared to unable to access (AOR 3.4, 95%CI 1.3 - 9.2, P = 0.016) and knowing a place in the community where one can get contraceptives was five times likely to use contraception compared to failure to know a place in community (AOR 4.9, 95%CI 1.3 - 17.9, P = 0.017) were significant determinants for contraceptive uptake. Contraceptive uptake among the secondary school adolescent girls in Teso North was 29.3%, despite half of the girls being sexually active. The key recommendations based on the study findings; the county government of Busia, ministry of health directorate should collaborate with available partners and the media houses to promote use of contraception using media channels like television, radios and community opinion leaders. Other health care providers should reach out to the people, targeting rural settings to offer sexuality health education on healthy birth spacing, addressing myths and misconceptions surrounding contraception. The parents should always be open and available by creating time to discuss adolescent health matters with their children as per age appropriate comprehensive sexuality education. All the public health facilities should make the adolescent Sexual Reproductive Health services easily accessible to all the people without discrimination of their age, gender, marital status or parity.

CHAPTER ONE:
INTRODUCTION

1.1 Background Information of Study

Anyone between the ages of 10 to 19 years is considered an adolescent (WHO, 2020). This age group makes up 16% of the world's population and is one of the groups with the fastest growth (UNICEF, 2016). Their work is essential to reaching a number of important development goals and strategies, such as improving teen health and rights (UNFPA, 2014). Teenagers are a group whose family planning needs have not been realized (WHO, 2014). Sexual and reproductive health and rights (SRHR) of these populations are a global priority because their reproductive choices have a huge effect on their health, well-being, education, and economy (Darroch *et al.,* 2018).

During adolescence, there is more sexual exploration and exposure to sexual risk behaviors, such as having a sexual encounter at a young age, having multiple sexual partners, having a sexual encounter without protection, or having a sexual encounter while drunk (WHO, 2014). Most of young people start having sexual relations before they turn 20 years. This is because of changing values brought on by urbanization, exposure to foreign culture through rural-urban migration, tourism, mass media, internet, erosion of traditional norms and values, peer pressure, and lack of parental control (Blum *et al.,* 2014).

Contraceptives are devices, drugs, agents, sexual practices, or surgical procedures that prevent a woman of reproductive age from getting pregnant (WHO, 2013). Women who can have children between the ages of 12 and 49 use contraceptives to help them plan when and how many children to have (Trussell *et al.,* 2018). They can easily obtain contraceptives in public health facilities, private/Faith Based Organization clinics, and local retail pharmacies. In general, there are various categories of birth control methods, which are classified as modern and traditional. Modern methods are like condoms, IUDs, implants, injectable depo provera and pills, and traditional ones, like folklore, lacto amenorrhea method and withdrawal (WHO, 2018). Teenagers' main options for birth control are condoms and hormonal birth control. All methods that are safe for adults' bodies are also safe for teenagers' bodies, with only exception of sterilization method (Apter, 2018).

Barrier techniques are utilized to prevent spermatozoa from contacting the ovum. It includes male and female condoms, diaphragms, and cervical caps that are typically used in conjunction with spermicide. Benefits include easy availability, prevention against sexually transmitted diseases, low cost and safety (WHO, 2018). Vaginal film is a thin, two-by-two-inch sheet containing a chemical that kills sperm (a chemical called nonoxynol-9). It is positioned on or close to the cervix (the opening of the womb), where it disintegrates in seconds (Hassoun, 2018). The vaginal sponge functions as a barrier to prevent pregnancy, by preventing the sperm from entering the cervix since it serves as a barrier. Women who have never given birth benefit more from the sponge than those who have (Trussell *et al,* 2018).

Post-coital Emergency contraception is another name for post-coital contraception. There are three forms of emergency contraception: combined oral emergency contraceptives, progestogen-only emergency contraceptives, and copper intrauterine device insertion (Trussell *et al.,* 2018). Copper IUD insertion prior to implantation is highly effective when performed within five days of the first sexual encounter (WHO, 2018).

The natural methods of contraception involve noting the signs and symptoms of the fertile periods of the menstrual cycle and abstaining from sexual activity during the fertile phase. Major benefits of this strategy are the lack of physical adverse effects and independence from medical personnel. The strategy necessitates discipline and frequent documentation. Observation of cervical mucus, body temperature, Coitus interruptus, and the calendar or rhythm approach are examples of natural methods (Sung& Abramovitz, 2020). About 214 million women of reproductive age, including adolescent girls in underdeveloped nations do not use a contemporary contraceptive method (WHO, 2019).

According to UNFPA (2013), 75 percent of young women in sub-Saharan Africa had their first sexual experience by the age of 18. In the majority of sub-Saharan Africa, adolescent sexuality has caused great worry due to low contraceptive use, unintended pregnancies, and sexually transmitted illnesses, such as human immunodeficiency virus or acquired immunodeficiency syndrome (HIV/AIDS) (WHO,2014).

Particularly in sub-Saharan Africa, addressing the reproductive health requirements of teenagers as they commence sexual activity and are exposed to the possibility of pregnancy is one of the greatest obstacles facing family planning initiatives (WHO, 2015).

In Kenya, reproductive health behavior among adolescents is considered as a major health, social, and demographic issue. Although many people are exposed to the risks associated with precocious sexual activity, the use of contraceptives is a delicate matter in a society with strong religious leanings, and young people face numerous obstacles when attempting to obtain birth control. The objective of the government is the "provision of contraceptive services for those men and women who are ready and need them," although teenagers have limited access to such treatments (UNFPA, 2013).

About 12 percent of sexually active, unmarried adolescent girls use contraception. Due to this low contraceptive utilization, rates of unwanted pregnancies, abortions, and sexually transmitted diseases are elevated (NCPD & PSRI, 2013). In low and middle income countries (LMICs), complications related to pregnancy and childbirth are the top cause of death for girls aged 15 to 19 years old (Chandra-Mouli *et al.*, 2014). Compared to women aged 20 to 24 years, adolescent moms (10 to 19 years) are at greater risk for eclampsia, puerperal endometritis, and systemic infections (Ganchimeg *et al.*, 2013).

Perinatal mortality is much greater in infants born to adolescent mothers than to moms aged 20-29, as are other complications such as low birth weight (Chandra-Mouli *et al.*, 2014). Preventing adolescent pregnancy is therefore essential to improving mother and newborn health. Promoting the use of contraceptives and safe sexual behavior among young people is also seen crucial for preventing these negative reproductive health effects (WHO, 2020).

Kenya's 2010 constitution provides the overarching legal and policy framework for the performance of health functions and the delivery of quality health care services at various levels of governance and health system. Article 19 (1) of the Kenyan constitution states that the bill of rights serves as the foundation for social, economic, and cultural policy. Article 26 establishes the right to life, the beginning of life, and

the conditions under which a person may be purposefully deprived of life in accordance with the Constitution or other established law.

Article 43 (1)(a)(2) of the Kenyan constitution provides everyone the right to the greatest achievable health standards, which includes the right to healthcare services, including reproductive healthcare, and states that no one shall be denied emergency medical care. Articles 53-57 outline the rights of special groups, such as children, people with disabilities, the elderly, youth, minorities, and marginalized groups, to basic nutrition, adequate healthcare services, including health facilities, materials, and devices, adequate care and assistance, relevant education, and protection from harmful cultural practices and exploitation. Article 46 (1)(c) stipulates that consumers have the right to protection of their health, safety, and financial interests.

Article 21 says that the state must take the necessary legal, policy, and other steps, such as setting standards, to make sure that the rights in Article 43 are respected and that Kenya meets its international obligations related to human rights and basic freedoms. It also says that the state has to take care of the needs of people who are weaker in society, like women, older people, people with disabilities, children, and young people, members of minority or marginalized groups, and people from certain ethnic, religious, or cultural groups.

The National Reproductive Health Policy, 2022-2032 intended to guide the planning, standardization, implementation, monitoring, and evaluation of reproductive health (RH) services provided by the Government, Non-governmental Organizations (NGOs), faith-based organizations (FBOs), and community-based organizations (CBOs), private-for-profit sectors, and communities in Kenya. The purpose of the policy is to improve the reproductive health status of all Kenyans by expanding equitable access and enhancing the quality, efficiency, and efficacy of service delivery at all levels. (GoK, 2022).

The National Adolescent Sexual and Reproductive Health Policy of 2015 seeks to improve the SRH status of adolescents in Kenya and contribute to their full participation in national development. The policy's main implementation guiding principles sought to: respect for human rights and their fundamental freedoms including the right to life, human dignity, equality and freedom from discrimination whatsoever; responsiveness to varying SRH needs of adolescents in provision of care;

provision of wholesome and integrated ASRH information and services through multi-sectoral approaches that are effective and efficient in reaching adolescents with essential information and services; recognition of the critical role caregivers and communities play in the promotion of SRH of adolescents; involvement of adolescent in the planning, implementation, monitoring and evaluation of ASRH programs for effective program implementation, promotion of partnerships and creation of open channels of communication for achievement of mutual goals and utilization of evidence-based interventions and programming (MOH, 2015).

The primary aim is to increase equal access to ASRH information and services that are of high quality, efficient, and effective for adolescents. Specifically, the policy sought to: promote adolescent sexual reproductive health and rights; contribute to increased access to ASRH information and age-appropriate comprehensive sexuality education (AACSE); contribute to reduction of STIs burden, including human papillomavirus (HPV) and HIV as well as improvement of appropriate response for infected adolescents; reduce early and unintended pregnancies; sexual and gender-based violence (SGBV) incidents amongst adolescents; and reduce sexual and gender disparity (MOH, 2015).

For implementation of the ASRH policy 2015, the ministry of health offers technical support to KNBS and other relevant research institutions by ensuring inclusion of ASRH indicators in periodic population-based surveys and research. The policy set out targets and indicators which allows the provision of SRH services to adolescents: teenage pregnancies reduction among adolescent women (15-19 years) from 18.0% (KDHS,2014) to between 12.0%- 10% by (2020-2025), Contraception prevalence rate (CPR) of any FP method increase among adolescent women (15-19 years) from 40.2% (KDHS,2014) to between 50% - 55% by (2020-2025) and use of condom at sexual debut increase for adolescent women (15-24 years) from 67%(KDHS,2014) to between 75%- 80% by (2020-2025).

Family life education, particularly contraceptive education is likewise a delicate matter, and the degree to which schools treat it differs from institution to institution. The announcement and implementation of this context sparked a new round of outrage and discussion. Looking at the adolescents SRH policy guideline of 2015, Busia County and Teso North Sub County in particular is far much behind from

reaching the set targets of teenage pregnancies reduction and CPR. The county's teenage pregnancy stands at 18.3% (KDHS, 2022) and adolescent CPR at 12.4%, while Teso North CPR is at 3.3% (KHIS2, 2022). This study seeks to investigate the determinants of contraceptive uptake among secondary school adolescent girls in Teso North Sub-County, Busia (Kenya), aged 10 to 19.

1.2 Statement of the Problem

Busia County is ranked the least contraceptive prevalence rate of 12.4% among adolescent girls aged 10-19 years (KHIS2, 2022). Teso North sub County had an adolescent girl's population of approximately 17,576 in 2022, of which 572 were able to access contraceptive services; a contraceptive prevalence rate (CPR) of 3.3%. There were 1,009 cases of teenage pregnancy in the same year, of which 39 ended up with neonatal deaths. About 236 of them had low birth weights and 194 accounted for abortion cases (KHIS, 2022).

In Angurai Division of Teso North, Busia County, the situation of teen's pregnancy among adolescent school going girls is worse. According to antenatal care records from Teso North Sub County Hospital and Angurai Hospital, most of women turning up for skilled delivery and antenatal care services are of age 13-20 years. In the same cohort, 45% are secondary and primary school adolescent girls (ANC records, 2021/2022). All this is happening yet the family planning clinics are underutilized in the public health facilities, despite provision of SRH services and contraception for free.

1.3 Purpose of the Study

To investigate determinants of contraceptive uptake among secondary school adolescent girls between 10-19 years living in Teso- North Sub County.

1.4 Research Objectives

This research sought to achieve the following one broad and three specific objectives focusing on determinants of contraceptive uptake among secondary school adolescent girls between 10-19 years living in Teso North Sub County.

1.4.1 Broad Objective

To establish determinants of contraceptive uptake among secondary school adolescent girls between 10-19 years living in Teso- North Sub County.

1.4.2 Specific Objectives;

1. To identify the level of knowledge and information on contraceptive uptake among secondary school adolescent girls between 10-19 years living in Teso North Sub County.
2. To determine socio-demographical determinants of contraceptive uptake among secondary school adolescent girls between 10-19 years living in Teso North Sub County.
3. To establish quality of reproductive health services related determinants of contraceptive uptake among secondary school adolescent girls between 10-19 years of age living in Teso North Sub County.

1.5 Specific Research Question

1. What is the level of knowledge and information on contraceptive uptake among secondary school adolescent girls between 10-19 years living in Teso North Sub County?
2. What are the socio-demographical determinants of contraceptive uptake among secondary school adolescent girls between 10-19 years living in Teso North Sub County?
3. What are the quality of reproductive health services related determinants of contraceptive uptake among secondary school adolescent girls between 10-19 years living in Teso North Sub County?

1.6 Justification of the Study

Contraceptive uptake among adolescents in Teso North is 3.3% (KHIS2,2022), with an increasing prevalence of unplanned teenage pregnancies among secondary school adolescent girls. Contraceptive use reduces maternal mortality and morbidity, improves the health outcomes of adolescent mothers and their children, and lowers the costs associated with teenage pregnancy (de Vargas *et al.,* 2019; Chandra-Moli *et al.,* 2017). Contraceptive usage among secondary school adolescent girls increases the likelihood of attaining higher educational levels, as students will have ample time to stay in school without interfering with their learning schedule unlike non-use which predisposes them to unintended early pregnancies and STIs. Their usage also results in financial independence among adolescent girls and young women, leading to reduced poverty level in the community due to higher educational attainment and job opportunities (Darroch *et al.,* 2016).

1.7 Significance of the Study

This study has been done to its logical end and has established key findings concerning uptake of the contraceptives among secondary school adolescent girls between 10 -19 years of age in Teso North Sub County. Based on those key findings it has identified and key informed recommendations that when implemented, then there will be turnaround of events so that all sexually active secondary school adolescent girls improve on the uptake of contraceptives and use them appropriately. This will in turn reverse the increased unplanned teenage pregnancies and STIs among secondary school adolescent girls which is associated with non-usage of contraceptives, hence the resources being used to manage the challenges would be re-directed to other economic viable activities by their parents and schools. The researcher investigated if there was any association between knowledge on contraceptive uptake, socio demographic factors and quality of reproductive health services related determinants to contraceptive uptake among secondary school adolescent girls with the aim of informing future interventions on determinants of contraceptive uptake targeting students in secondary schools.

1.8 Assumptions of the Study

The researcher assumed that respondents would be available during data collection and respond appropriately to the questions that were being asked. He also assumed that weather conditions would be conducive to facilitate movement from one place to another during data collection.

1.9 Limitations of the Study

Almost all research studies face numerous obstacles. Given the confidential nature of the information being sought, one of the most common is the expectation that respondents will knowingly provide false data or even withhold information. The researcher assured respondents that the collected information would be treated with strict confidentiality. The researcher informed the respondents that the issued questionnaires contained codes, so they were instructed not to include any identifying information. In addition, the researcher assured them that the questionnaires would be irretrievably destroyed after the data was collected. The researcher minimized the time burden by reducing data collection breaks. The topic of the study requested sensitive information that would make respondents hesitant to respond, particularly during FGDs. The researcher ensured that the language utilized in the questionnaire

and FGD guide was courteous and conducive to the respondents' comfort. The establishment of rapport between the researcher and the respondents also contributed to their comfort and preparedness to participate in the FGD sessions.

1.10 Delimitations of the Study

The researcher carried out the study among the secondary school adolescent girls living in Teso North Sub County alone. The study focused only on the school going adolescent girls and therefore did not reference to the total population of adolescent girls given that teenage pregnancy was high in the region, since a good proportion of adolescent girls were out of school. The study also applied mixed method cross sectional design, where data was collected at a single point in time.

1.11 Conceptual Framework

This conceptual framework provides the expression of the relationships between the variables identified for study. These variables include Independent, Intervening and Dependent variables. (Miles & Huberman, 1994).

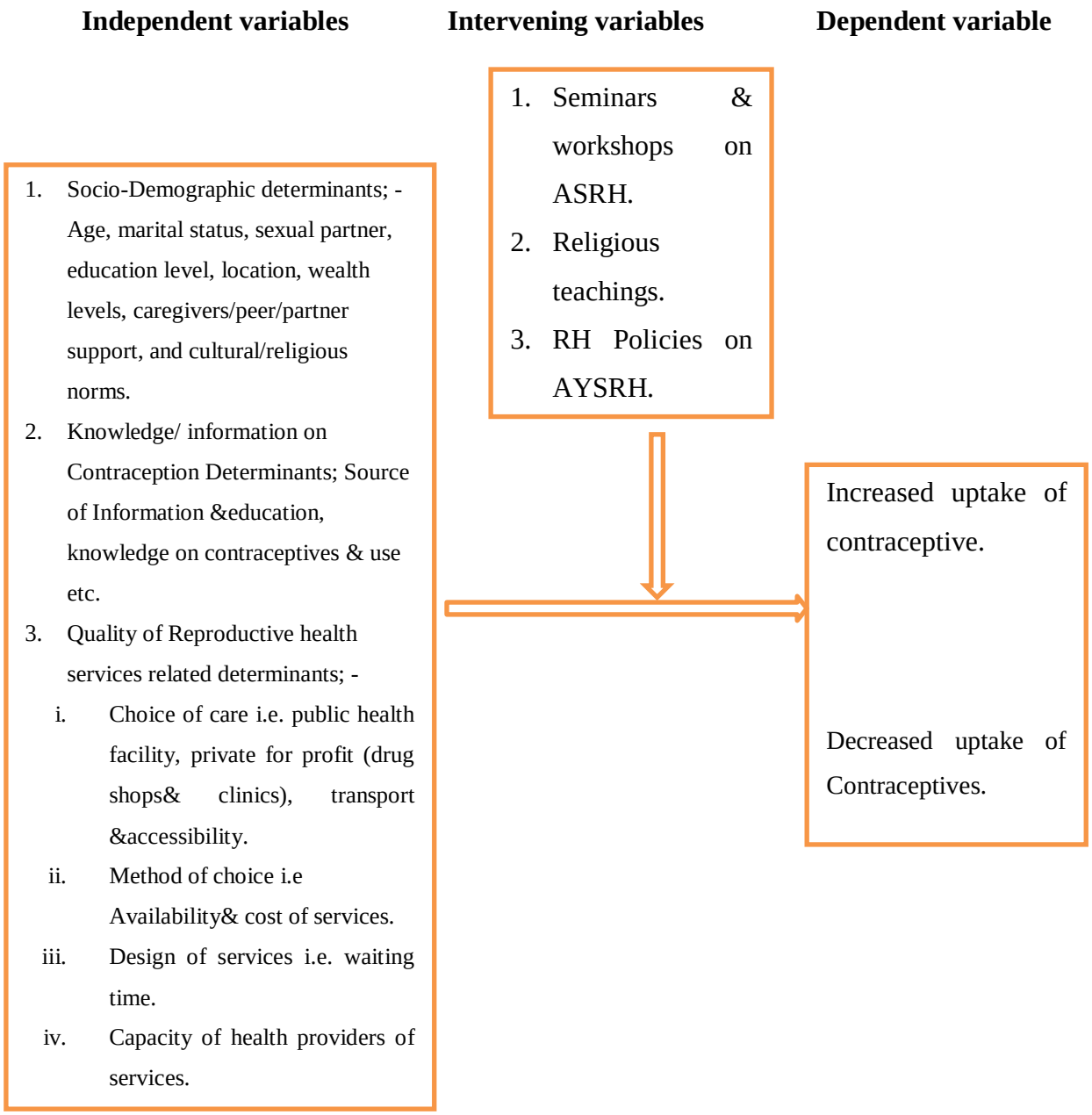

Figure 1: *Conceptual Framework showing determinants influencing uptake of contraceptives among secondary school adolescent girls*

1.12 Description of Relationships of Variables in the Conceptual Framework

Figure 1 shows that the Independent variables comprised of socio-demographical, knowledge/informational, and quality of reproductive health services related determinants with their specific thematic areas of focus for investigation. Data was collected in those areas and analysis was done hence the gap was established for areas of intervention with targets of improvement. Intervening variables were seminars and workshops on ASRH, Religious teachings and RH policies on AYSRH where recommendations regarding these are done appropriately. Then dependent variables will be achieved with main aim to attain positive changes. However, the dependent variable can either be positive or negative or at time the situation may not change hence remain constant. (Ochako *et al.*, 2017).

CHAPTER TWO:
LITERATURE REVIEW

2.1 Introduction

This chapter two comprise of literature reviewed from secondary source of information related to the topic of study, which was sourced from previous studies, text books, articles, journals, seminars, conferences and electronic Medias. The methods used to source for the information was majorly the internet Google scholar and medical publications. The information is organized into two parts; theoretical framework which discusses the key variables under study and conceptual framework of the study which explains the relationships of variables. Those are: knowledge and information on contraception determinants, socio-demographical determinants, and quality of reproductive health services related determinants to contraception by the secondary school adolescent girls aged 10-19 years. It provides a summary of the literature reviewed and gaps identified from the literature reviewed.

2.2 Knowledge and Information Determinants on Contraceptive Uptake among Secondary School Adolescent Girls

Teenage pregnancies are more prevalent among adolescent girls and young women (AGYW) aged 15 to 19 due to a lack of access to contraceptive information and economic issues (Binu *et al.,* 2018). Lack of access to SRH services at health institutions has an effect on the information available to teenagers. In addition to low contraceptive use and restricted access to information and services, studies indicate that teenagers have insufficient knowledge about family planning (Tamang *et al.,* 2017). The primary source of information for adolescents is typically their classmates, whose information is typically unreliable and twisted. Thus, promoting contraceptive myths and fallacies (Munakampe *et al.,* 2018).

(Bitzer et al., 2016) Health care professionals who are against teen birth control give wrong and insufficient information to teens who want to use birth control. This is done to encourage teens to stay away from birth control. A big reason why people don't use contraceptives is that they don't understand how they work or don't have enough of them. Also, most teens don't use birth control because they don't know how to use it or what other options are out there, (Dombola *et al.,* 2021).

Restricting adolescents' access to contraceptive services and information is ineffective in reducing sexual activity and increases the risk of unwanted pregnancy and sexually transmitted illnesses (Naz, 2014). The general lack of parental guidance on sexuality and sex education to their adolescent children was exacerbated by cultural taboos that discouraged such conversations (Godia *et al.,* 2014).

The primary methods of contraception for adolescents are condoms and hormonal contraception, with the exception of female and male sterilization at an early age. Therefore, all the other contraceptive methods that are physiologically safe for adults are also safe for teenagers (Apter, 2018). Despite the availability of these options, contraceptive use among sexually active teens is low due to a number of linked issues (UNICEF, 2020).

Adolescents are more likely to have erroneous or inadequate knowledge of contraception if they don't receive a comprehensive sex education in school, at home, or in youth centers (Sidze *et al.,* 2017). Even in the majority of American homes, the idea of sexual relations is forbidden. Few American schools provide adequate sexuality education. Therefore, the majority of teenagers learn about sexuality through their ignorant and misled classmates (Darroch *et. al.,* 2017).

In Burkina Faso, Ethiopia, and Nigeria, teenagers with secondary and tertiary education had a greater rate of contraceptive use than those with only a primary education (Hounton *et al.,* 2015). Similarly, in Ghana, the likelihood of contraceptive usage was higher among educated female adolescents; as education levels climbed, contraceptive use increased (Nyarko, 2018).

Media-exposed adolescent females may have increased access to SRH knowledge, which could empower them in terms of their sexual rights and decisions (Magnusson *et al.,* 2019). The dissemination of information about sexual and reproductive health through the media may promote healthy sexual development and reduce sexual risk-taking behaviours (Titiloye & Ajuwon, 2017).

2.3 Socio-Demographical Determinants of Contraceptive Uptake among Secondary School Adolescent Girls

The use of contraceptives has traditionally been hindered by cultural, religious and informational barriers, as the majority of African societies place a high priority on large families, resulting in the non-usage of modern contraception (WHO, 2018). Misconceptions about how contraceptives function, as well as culturally and religious considerations, have impeded the use of contraception among adolescent girls in Sub-Saharan Africa (Wirsly *et al.,* 2018). Contraceptives were viewed as a product that should not only be used by adults, but also by adults who were married. Thus, adolescents were not viewed as a prospective target for their usage, despite the fact that a significant proportion of adolescents not only became pregnant but also contract Sexually Transmitted Infections (WHO, 2018).

Cameroon had a comparatively low contraceptive uptake among married adolescents (40%) compared to single adolescents (60%), which may be attributable to the fact that married adolescents were less inclined to access contraceptives openly due to cultural and religious issues (Wirsly *et al.,* 2018).

In Nigeria, Muslim adolescent girls and young women (AGYW) and those of other religions are less likely to use modern contraceptives than Christians, (Adedini *et al.,* 2018). A comparable study found that in faiths where high parity was desired and fertility preference was high, contraception use was uncommon (Obasohan, 2015). Due to the idea that children are a blessing from God, Muslim women have a strong desire to have more children. Therefore, to obtain more of the blessings God has in store for them through children, they will be less likely to utilize contraception (Abdi *et al.,* 2020)

Parents, teachers, religious leaders, and other opinion shapers' emphasis on abstinence has served to stigmatize sex among teens. Sexually active adolescents are less likely to seek contraceptive products and services despite their need for them due to the perception that sexual activity prior to marriage is inappropriate (IPAS & AGI, 2013). The majority of opinion leaders had openly opposed adolescents' use of contraceptives, further discouraged them from using contraception, and women who decided to practice contraception risked social exclusion or familial strife (Capurchande *et al.,* 2016). In some regions, women need their husband's permission

to visit a health center or travel solo, which may have led to clandestine or limited contraceptive use (Dombola *et al.,* 2021).

In Sub-Saharan Africa, where women continue to rely on their husbands for important decisions, including health care, there was support from the spouse for contraception use. Despite World Health Organization and United Nations' concerted efforts, women may not be monetarily empowered to make such decisions independently (Ochako *et al.,* 2016). Compared to never-married or formerly married adolescent girls, those who were married or had a sexual partner had the highest likelihood of contraceptive use (Palamuleni, 2017).

Additionally, cultural and societal stigma associated with young people's sexuality may discourage them from obtaining reproductive health treatments or result in rejections of such services, even when parental agreement is not required. Many adolescents who are sexually active express anxiety, embarrassment, or reluctance to seek family planning assistance (Wirsly *et al,* 2018).

Teens who need birth control may not be financially stable because of their level of education, job skills, age, or gender roles. Some young women may depend on their boyfriends or their parents for money. If there are problems in the relationship or if the partner's finances are unstable, she may not be able to use a service. Dependence on the economy and financial uncertainty have different effects on how often teenagers use birth control. For example, teens may not be able to get to a health care facility because they can't pay for a ride. Teens may not be able to pay for clinic fees and birth control, or they may have to miss work or school to get services (Li Z et al., 2020).

Compared to adolescents in the middle economic quintile, individuals in the poorest wealth quintile are less likely to adopt modern contraceptive methods. The majority of young women in Uganda obtain contraception from private sources at their own expense (Montagu &Goodman, 2016).

Transactional sex, which is sexual activity in exchange for monetary gain, has also been shown to entice adolescents to engage in sexual behavior, predisposing them to unintended births. In settings of transactional sex, teenagers in Sub-Saharan nations may lack the capacity to determine the timing and conditions of sexual activity, according to a study. They have limited negotiating leverage with their partners to

insist on condom use and are more likely to become pregnant and contract sexually transmitted infections (Krugu *et al.,* 2016).

2.4 Quality of Reproductive Health Services Related Determinants to Contraceptive Uptake among Secondary School Adolescent Girls

Quality of Reproductive Health services determinants may either promote or discourage adolescent girls and young women to seek reproductive health treatments in facilities. These elements included the qualities of the facilities and accessibility to the facilities, the design of the services, method choices availability and affordability, contraceptives, and the attributes of the service providers.

Accessing quality reproductive health services is difficult for adolescent girls due to health providers' bias, age stigmatization or restrictions when seeking FP services, and issues regarding privacy, confidentiality, and the judgmental/intrusive attitudes of health workers during counseling sessions, examinations, and procedures. Those who acquired services in secret expressed greater satisfaction with service providers who kept their requirements and personal information private (Olika *et al.,* 2021). WHO guidelines reaffirmed the need to strengthen adolescent health services and interventions in order to make health care "youth-friendly." Several small-scale projects, largely conducted by non-governmental organizations (NGOs) and government-run health facilities, have observed this phenomenon (WHO, 2017).

Lack of privacy can offend women's sense of modesty and make it harder for them to actively choose a contraceptive technique. In a few locations, getting and utilizing contraceptives can be a difficult and dangerous choice that might result in abandonment, violence, social isolation, or divorce. In such circumstances, women require absolute anonymity (Olika *et al.,* 2021).

A systematic evaluation conducted in 2011 and revised in 2016 on youth-friendly SRH services for young people revealed that comprehensive, client-centered family planning counselling is important to young people (Brittain *et al.,* 2019).

Clients desire a variety of services; therefore, offering a vast array of contraceptive techniques can assist them in locating ones that meet their health conditions, lifestyle, and preferences (Jain *et al.,* 2014). The percentage of women who claimed they would prefer to be using a different contraceptive technique ranged from 11% (Mauritius) to 48% (Switzerland) in a study conducted on contraceptive preferences of clients in

nine nations (Costa Rica). The cost of their desired methods, the difficulty of acquiring their present methods, medical ineligibility for other methods, and familial rejection of particular ways were stated as predictors to contraception uptake (Ochako *et al.,* 2015). Dissatisfaction can occur from a lack of supplies; consequently, some clients may stop utilizing family planning completely.

AGYW in Ghana chose long-acting reversible contraception (LARC) over short-acting contraception(SAC) along the lower and medium wealth gradients. Due to the reoccurring costs of condoms and birth control tablets, their choice for LARC had an advantage over SAC. It also minimizes the frequency of hospital bills incurred by patients (Nketiah-Amponsah *et al.,* 2022).

Customers are more likely to utilize low-cost services. This was abundantly demonstrated by AGYW investigations conducted in Chad and Kenya. Clients cited low pricing and close proximity to services as the two most influential factors in their decision to engage the services (Rattan *et al.,* 2016).

Research finds numerous aspects of service design that may actively dissuade teens from utilizing services. Cost, crowded waiting rooms, counseling spaces that do not provide privacy, appointment times that do not accommodate young people's work and school schedules, little or no accommodation for walk-in clients, and limited contraceptive supplies and options are just a few of the obstacles posed by the design of services. Hearing about these hurdles may discourage young people from visiting for the first time. The presence of these hurdles may deter their return (Makola *et al.,* 2019).

A survey of secondary school students in Ethiopia revealed that AGYW had difficulty getting family planning services due to a lack of understanding about where to obtain contraceptives or an inability to finance the services (Binu *et al.,* 2018).

Long waiting periods and inconvenient clinic hours may hinder clients from receiving the necessary services. In Nigeria, Malawi, and Senegal, patrons expressed worry over lengthy wait times (Zaggi, 2014). Some clinics are closed during their scheduled hours of operation. In Kenya, it was discovered that although clinics were nominally open from 8 a.m. to 5 p.m., clinicians discouraged customers from visiting in the afternoon and frequently did not provide treatments to women who could only go in the afternoon (Kinaro *et al.,* 2015).

Adolescent girls may avoid contraceptives due to myths, misconceptions, and fear of side effects (Ochako et al., 2015). In Cameroon, adolescent girls face stigma surrounding non-marital sexual affairs and/or contraceptive use, fear of side effects, lack of knowledge on correct use, and factors contributing to discontinuation, such as reluctance to return for contraceptives after negative first experiences with health care providers.

Attitudes, beliefs, and prejudices of providers about contraceptives reflect what providers genuinely believe, including their support or opposition to provision, as well as opinions that may influence uptake of methods. According to research conducted in Tanzania, some family planning providers continue to limit access to contraceptives on the basis of age or marital status (WHO, 2018).

According to the World Health Organization, adolescent girls face significant barriers to accessing contraception, such as health workers' bias and/or unwillingness to recognize adolescent girls' sexo-reproductive health needs, and restrictive laws/policies regarding the provision of contraceptives based on age or marital status (WHO, 2018).

In addition, service providers can limit access to a family planning method due to their own biases towards the method or its delivery system. Provider bias, which arises when service providers believe they are in a better position to determine the most appropriate method for a client or are biased toward certain methods, may prevent women from adopting a method that is suitable for their circumstances and requirements (NCPD, 2015). If patients do not obtain their preferred technique or service, or if they are turned away without a clear diagnosis, they may discontinue care.

Respect and courtesy, such as the provider's tone, demeanor, and speech patterns, encourage adolescents to use family planning services (Agyemang et al., 2019). Healthcare providers imposed non-evidence-based age limits and consent requirements on unmarried adolescents to restrict contraceptive access (Ahanonu, 2014). According to a separate study, most Kenyan and Zambian nurse-midwives providing sexual and reproductive health care supported contraceptive use by sexually active girls and were willing to educate men on condom use. However, most nurse-midwives in both countries preferred to advise unmarried adolescent boys and girls

who request contraception to abstain. Adolescent sexuality and reproduction continuing education made people more youth-friendly (Ahanonu, 2014).

2.5 Theoretical Framework

The theoretical framework is a particular collection of theories pertaining to a facet of human existence that provides a particular lens for evaluating a topic. Using a formal theory to explain specific events and relationships in a consistent manner, they provide the framework for research. Consequently, it is possible to assert that a theoretical framework is the foundation of any research procedure. Therefore, a theoretical framework is regarded as the most important aspect of the study plan.

This research is guided by one model: The Behavioral Health Model theory.

2.5.1 The Behavioral Health Model

The consumption of health care services is contextualized in terms of sociocultural and economic factors. This paradigm postulates that predisposing, enabling, and need variables influence the utilization of a service, such as contemporary contraceptives. Predisposing factors, such as demographics, health beliefs, and social structures; enabling factors, such as the availability of health personnel and facilities, waiting time, quality of services offered, and health insurance coverage or cost of services; and need for care factors, which focuses on people's perceptions and evaluations of their health that motivate them to seek care (Azfredrick, 2016).

According to Philips *et al.* (1998) the model is based on elements that influence the decision-making process and takes into consideration economic status, travel coverage (distance), educational levels, individual happiness based on previously utilized services, and perceived service quality. According to Rosenthal *et al.,* 1992, the likelihood that adolescent girls and young women (AGYW) will use contemporary contraception depends on their perceptions of the dangers involved like side effects of contraception. Consequently, AGYW who perceive themselves to be at risk for unwanted pregnancies and STIs may be more inclined to take modern contraception than those who do not perceive themselves to be at danger.

According to Pokhrel and Sauerborn (2004), household/individual and/or health system level characteristics must be considered. Thus, political, social, economic, and/or cultural issues, as perceived and understood by either the individual or the society, influence the motivations for health service consumption. In this instance,

adolescent contraceptive uptake involves a review of health care service utilization that leads to an appreciation of the impact of health determinants.

On the basis of this theoretical foundation, it can be asserted that individual and contextual factors have a significant role in AGYW's usage of modern contraceptives. Socio demographical characteristics include age, marital status, religion, ethnicity, educational level, wealth status, and occupation, among others (Makola *et al.*, 2019). This study employs the Behavioral Health Model to investigate the factors influencing contraceptive use.

2.6 Gaps in Literature Reviewed

Resources and energy to promote adolescents' sexual and reproductive health (ASRH) with an emphasis on preventing teenage pregnancy have primarily targeted girls between the ages of 15 and 19, but adolescents aged 13 or younger are the most susceptible to sexually transmitted infections (STIs) and have the highest risk of early pregnancies and their associated complications.

Prior research has demonstrated that adolescents' contraceptive use is influenced by their perceptions and religious beliefs. They believed that contraceptive use leads to infertility and promiscuity among users, but this study aims to reveal alternative perceptions.

A considerable amount of research has been conducted on adolescent knowledge of contraception, but most of it has focused on adolescent knowledge of contraception in terms of what methods of contraception adolescents are familiar with. This study examines two perspectives of acquired knowledge, namely the source of information and education on contraceptives, methods of contraception used, benefits and reasons for non-use.

The study singles out the quality of reproductive health services that could influence contraceptive uptake in wholesomely, unlike other researches that identified the service providers, infrastructures and cost of services. For instance, variables of focus are, accessibility, availability, design of services offered and capacity of health care providers and their attitude towards adolescents’ uptake of contraception.

2.7 Summary of Literature Review

This chapter looked at research on the factors that affect whether or not high school girls use birth control. These factors include socio-demographic factors, knowledge and information, and the quality of reproductive health services. It has shown the talk about the research's theoretical framework and the conceptual framework that guides the study. It has explained how the different parts of the conceptual framework fit together.

CHAPTER THREE:
METHODOLOGY

3.1 Introduction

This third chapter addresses the strategies utilized in this investigation. It covers the study methodology and demonstrates the tools and procedures used to collect data. This chapter focuses on the following topics: research design, study area, target population, study population, determination of sample size, inclusion and exclusion criteria, sampling method, sampling procedure, data collection instruments, pilot study, validity and reliability, data collection, data analysis, and ethical considerations.

3.2 Research Design

This study employed a mixed method cross-sectional design, where data collection utilized both quantitative and qualitative methods. The study was a mixed method cross-sectional in nature because it collected both qualitative and quantitative data within a single study, at a single point in time and from a subset of the entire population. Thus, providing a more wholesome view and snapshot of the information representative of the entire population because they share the same characteristics of factors influencing the use of contraceptives among secondary school adolescent girls aged 10 to 19 years.

3.3 Study Area

Teso North Sub County, which is located inside Busia County in western Kenya, served as the study region. It is bordered by Bumula Sub County to the east, Bungoma West to the north-east, Teso South to the south, Cheptais Sub County to the north, and Uganda to the west. It has an estimated population of 142,613 and a surface area of 265 km2 per square kilometer (KNBS, 2019). It comprises of six administrative wards namely, Malaba East, Malaba Central, Malaba South, Angurai East, Angurai North, and Angurai South. The area has a population of 73,303 females and 69,310 males which is needy in terms of social amenities, medical services and infrastructure being the 3rd most populated in Busia County. It is second ranked in teenage pregnancy of 1,009 and lowest in CPR of 3.3% (KHIS2,2022), making it prime for this study.

3.4 Target Population

This study's target audience comprised the complete group of persons the researchers were interested in studying and generalizing the study's results and conclusions to. This study's target group consisted of all sexually active adolescent girls aged 10 to 19 who had resided in Teso North Sub County for at least six months, with a population of 14,770. (KNBS, 2019).

3.4.1 Study Population

This study population was a sub-set of the target population for carrying out the study. The study population was accessed from the 29 secondary girls' schools which are found in Teso-North, Busia County. These had adolescent secondary school girls estimated population of 5,756 girls aged 10-19 years.

3.5 Sample Size Determination

The sample size was calculated by using Cochran formula; with target population of 14,770 and study population of 5,756 adolescent secondary school girls which is less than 10,000 subjects.

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

(Agyemang *et al.*, 2019)

Where;

n = Sample size,

Z = the value for the given confidence interval, standard normal deviate 1.96 at 95% confidence interval.

e= the desired level of precision or the margin of error; 0.05

p= the (estimated) proportion of the population which has attribute in question. (The proportion is known, 0.44). Contraceptive prevalence rate among the adolescent in Kenya was 43.8% ≈ 44% (KDHS, 2022).

P = 0.44

q= constant usually set at1-p (0.56)

Therefore;

$$n = \frac{(1.96^2 X 0.44 X 0.56)}{0.05^{\ 2}}$$

n=378.6 ≈379

To account for non-response, a 10% upward adjustment was calculated which equaled 38 respondents. The adjusted final sample size for the study was therefore = 415.

3.5.1 Inclusion Criteria

All secondary school adolescent girls between 10 and 19 years with consent or parental/guardian consent or assent, and had resided in Teso-North Sub County for the previous six months were included in the study.

3.5.2 Exclusion Criteria

All secondary school adolescent girls who did not consent were excluded from the study.

3.6 Sampling Methods

The researcher employed both purposive and stratified random sampling techniques to acquire data from subjects who were adolescent girls enrolled in secondary school. This survey comprised 12 secondary schools for girls, both day/boarding and mixed day/boarding schools.

The selection of schools was conducted using a purposive sampling technique to find the required 12 secondary schools out of the total 29, while the selection of study respondents was conducted using a stratified random sample method using study forms as the strata. Stratified random sampling was utilized to produce a sample population that most accurately represented the whole population under study, ensuring that each subgroup of interest was adequately represented.

3.6.1 Sampling Procedure

Using a proportional stratified random sampling strategy, the number of adolescent girls per school was assigned using a stratified random sampling method to identify respondents. Each stratum was organized according to form I, II, III, and IV, and simple random selection was used to identify respondents from these strata. The lottery approach was used to select specific study participants from the forms; the researcher put numbers on slips of paper and placed them in a bowl; those who drew the desired numbers were selected as study participants.

3.6.2 Schools

All secondary girls' schools in Teso North Sub- County were identified.

There were 12 secondary girls' schools which were purposively selected, 2 per ward involved and assessed on the uptake of contraceptives among adolescent girls. In total all the twelve schools identified were included in the study which had approximately 3124 adolescent girls. The sample in each school was proportionately allocated to the number of adolescent girls per school.

$$Resp. = \frac{\text{School Limit}}{\text{Total Population}} \times Sample\ size$$

$$Resp. = \frac{220}{3124} \times 415 = 29.2 = 29$$ School no. 1 Respondents = 29

NB/ This the number that was divided among the four Forms I, II, III & IV proportionately

Table 3.1: *Proportionate sampling.*

Serial no.	Schools	No. of adolescent girls per school.	Proportionate allocated adolescent girls per school.
1.	Kamolo Mixed Secondary Day	220	29
2.	Kocholia Mixed Day & Boarding	250	33
3.	Kamuriai Mixed Day/Boarding	300	40
4.	Oduya Opurong Mixed Day	174	23
5.	Amagoro Girls Day& Boarding	533	71
6.	Malaba Mixed Day	212	28
7.	Kolanya Girls National	424	56
8.	Changara Mixed Day	126	17
9.	Aboloi S.A Girls Day& Boarding	208	28
10.	Katakwa Mixed Day	320	43
11.	Moding Mixed Day& Boarding	205	27
12.	Kakemer Mixed Day	152	20
TOTAL		3,124	415(Sample Size)

3.7 Data Collection Instrument

Focus Group Discussion guide was used to gather qualitative data from secondary school adolescent girls. The questions were assigned as per the specific objectives and thematic areas of the study.

The questionnaire was also used comprising of both open and closed ended questions for qualitative and quantitative data collection respectively. They were arranged as per the specific objectives of the study.

3.8 Pretest of the Study

Before doing a full-scale research project, Hulley et al. (2007) did a pre-test of this study to find out if it was possible, how long it would take, how much it would cost, and how statistically variable it would be. This was done to try to figure out an appropriate sample size and improve the study design. A pre-test study was done to ensure the validity and reliability of the research instrument was realized. The questionnaires were pre-tested by being administered in 3 public secondary schools in Nambale Sub County which border the study area, whose characteristics was similar to the actual Teso North and locality that was Busia County. There was a total of 42 students who participated, randomly selected representing 10% of the sample size. The questionnaires were through face to face direct interviews of the participants who were encouraged in this research to make suggestions about the instructions, clarity of questions and relevance.

3.9 Validity and Reliability

These the processes of identifying whether the research is sensitive and reliable such that when the same research is done by another person or organization, then it would still produce the same results.

3.9.1 Validity

Validity is the extent to which an instrument measures what it purports to measure, that is, the theoretical concept (variable). The validity of the questionnaire was based on internal validity by engaging expert opinion, who were sought by researcher to offer some professional advice on modification and improvement of data collection instruments. They helped in proper wording of the questions, language and structure check to avoid ambiguity. Validity was also realized after administration of the questionnaire which provided areas of adjustment of the questionnaire where areas of incompleteness and inconsistencies on the tool were adjusted.

3.9.2 Reliability

(Mugenda & Mugenda, 1999) Reliability is the degree to which a research tool gives the same results every time it is used. A pre-test was done with 42 respondents who

weren't in the actual sample. The data was analyzed by SPSS, and Cronbach Alpha () 2004 was used to find that all of the study instruments had a reliability coefficient of 0.7 or higher. Cronbach's Alpha (α) Reliability Coefficient is a measure of internal consistency, that is, how closely related a set of items are as a group. The calculation using the SPSS yielded a reliability coefficient value of 0.856.

3.10 Data Collection

Primary data was collected using mixed methods, that's the questionnaire for quantitative and qualitative data, while focus group discussion guide was used to collect qualitative data.

Questionnaire were administered to respondents by trained research assistants and the data was collected through face to face interview. The 415 respondents were accessed from respective secondary schools that were proportionately allocated as well as simple random sampling was applied for each strata (form).

Focused Group Discussion guide (FGD) was used to direct and guide interview process, whereby the two (2) sessions were conducted in two different schools representing each administrative Divisions; one discussant (Researcher) leading the questions or leading the session while the research assistant taking notes of the discussions. Each session had thirteen participants and during the session all COVID 19 Protocols were observed adhered to strictly, such as; ensuring physical distance of 1 meter a part and wearing of a face mask. Discussions took 45 minutes and the whole process of FGD was also voice recorded. After which transcription of the collected data were transcribed to ensure completeness and logical flow. This qualitative data was used to reinforce the quantitative findings in this study.

The whole process of data collection was done on voluntary understanding and anonymity was assured and maintained in the whole process. Before the start of this process of data collection at any level, informed consent was sought and where consent was granted data collection process went ahead. The collected data were reviewed for cleaning to ensure accurateness and completeness of such data.

3.11 Data Analysis

Data entry, coding, cleaning, checking for errors and missing values was done using SPSS version 25. The unit of analysis was the adolescent girl student. Questionnaires for quantitative data was checked and cleaned manually daily for completeness and

coded for appropriate computer entry by data clerks. Equivalent responses were pooled to arrange the responses in different categories. The independent variables comprised of the demographic, socio-cultural, educational, economic and reproductive health related characteristics/determinants. All the responses for these independent variables were categorized and coded. For 'yes' or 'no' responses, these were coded as '2' for 'no' and '1' for 'yes'. The dependent variable (have you used contraceptives) was binary and coded as '2' for 'no' and '1' for 'yes'.

Verbatim transcripts of the qualitative data from the focus group discussions were transcribed into Microsoft Word, and thematic content analysis was done based on the determinants influencing the uptake of contraceptives. The Quantitative data was managed by IBM Statistical Package for Social Scientists (SPSS) 25.0, summarizing it into univariate; percentages, proportions and frequencies, then bivariate; Chi-square test, coupled with correlation analysis were used to determine for possible association between variables.

At the univariate analysis, frequencies and proportions were computed. To test for correlations, a collinearity diagnostics tool in SPSS was used and variables with a variance inflation factor (VIF) of less than 5 were retained in the final model. At bivariate analysis, Chi-square tests and Fishers exact tests (where cells had frequencies of less than 5) were used to test for associations between the independent variables (determinants) and the dependent variable; p-values less than 0.05 were considered statistically significant. Statistically significant determinants at the bivariate analysis were progressed to the multivariate analysis stage. To establish the determinants of contraceptive uptake among the respondents and controlling for possible confounding, a multivariate analysis using the binary logistic regression under the generalized linear model approach was used. Adjusted odds ratios (AOR), 95% confidence intervals (CI) and p-values were reported. P-values of less than 0.05 were considered statistically significant.

3.12 Ethical Considerations

This work was approved by the University of Eastern Africa, Baraton- Research Ethics Committee following ethical evaluation. The National, Commission on Science, Technology, and Innovation (NACOSTI) granted this study permission to collect data, and permission to collect data was also sought from the Busia County

Director of Education and the Teso North Sub-County Director of Education Officer, as well as from the respective principals of respective secondary schools. Before those over the age of 18 signed a consent form, informed consent was finally obtained from the respondents by providing them with sufficient information about the purpose of the study. Respondents under the age of 18 gave their approval to participate through their parents/guardians or guidance and counseling instructor, who signed a consent form on their behalf. The respondents were told that the information they supplied in the questionnaire and during FGDs would not be shared with their instructors or parents on an individual basis, but rather in an aggregate and anonymous fashion. All information obtained at any given moment was always safeguarded and kept under lock and key. The issue of privacy was handled by the respondents' usage of classrooms during the period of data collection and by the absence of respondents' names on completed surveys in favor of unique number codes. The respondents' participation in the data gathering was likewise voluntary, and those who chose not to participate were able to opt out of the study. In addition, the researcher offered the respondents' contact information in case they required clarification on any subject.

CHAPTER FOUR:
RESULTS

4.1 Introduction

This chapter covers data analysis and results presentation obtained from the data collected which is based on the study objectives. There are five sections covered in the chapter starting from section 2 up to 5 which include the study findings involving socio-demographical determinants, knowledge and information on contraceptive determinants, Quality of reproductive health services related determinants, relationship between determinants and contraceptive uptake and statistically significant determinants of contraceptive uptake among secondary school adolescent girls in Teso North, Busia County.

4.2 Socio-Demographical Determinants of Contraceptive uptake

Table 4.1 revealed that a total of 415 girls participated in the study and 70.3% (292/415) of the respondents were between 16 - 19 years of age and the rest between 10-15 years of age. This study also established that 41.0% (170/415) of the respondents were from mixed day schools, while 35.9% (149/415) of them were from the 'girls only boarding' with 6.2% (26/415) from the 'girls only day' school. This study revealed that 67.2% (279/415) of the respondents resided in rural areas and 99.0% (411/415) were single. On religion, Catholics and protestants were the majority at 43.8% (182/415) and 49.7% (206/415) respectively. It was also identified that 72.4% (301/415) of these respondents stayed with their parents, followed by 26.6% (110/415) stayed with guardians and 1.0% (4/415) stayed with partners. There was 47.2% (196,415) of the respondents who had sexual partners and thought that at their age they should use family planning.

Table 4.1: *Socio-demographical Determinants of Contraceptive Uptake*

Characteristic		Frequency (n = 415)	Percent (%)
Age (years)	10-15	123	29.7
	16-19	292	70.3
Class	Form 1	80	19.3
	Form 2	122	29.3
	Form 3	106	25.5
	Form 4	107	25.9
Type of school	Girls only day school	26	6.2
	Girls only boarding	149	35.9
	Mixed day school	170	41.0
	Mixed boarding school	70	16.9
Religion	Catholic	182	43.8
	Muslim	27	6.6
	Protestant	206	49.7
Residence	Rural	279	67.2
	Urban	53	12.8
	Peri-urban	83	20.0
Marital status	Single	411	99.0
	Married	4	1.0
Care giver	Parent	301	72.4
	Guardian	110	26.6
	Partner	4	1.0
Has sexual partner	No	219	52.8
	Yes	196	47.2

4.2.1 Decision makers on Contraceptive Uptake among Secondary School Adolescent Girls

Table 4.2 revealed that 39.3% (48,122) of respondents who used the contraceptives made their own informed decision, 37.7% (46,122) was by their sexual partner or boyfriend, 18.1% (22,122) was by their fellow peers and 4.9% (6,122) was by their parents or guardian.

Table 4.2: *Decision makers on Contraceptive Uptake*

Descriptions		Frequency (n = 122)	Percent (%)
Who decided on FP use for you			
	Myself	48	39.3
	Peers/Friend	22	18.1
	Partner/boyfriend	46	37.7
	Parent	6	4.9

4.2.2 Social believes among secondary school adolescent girls on Contraceptive uptake

Table 4.3 Shows believes on contraceptives use among adolescents, 37.6% (156/415) of the respondents believed that unmarried people who used contraceptives were promiscuous or sexually immoral, while 31.4% (130/415) believed contraceptive were for married people only, then 26.6% (110/415) said that were too young to use contraceptives. About 22.8% (95/415) of the respondents reported people should use contraceptives only if they regularly had sex and finally 17.6% (73/415) of them had a belief that young people who were sexually active should use contraceptives.

Table 4.3: *Social Believes among secondary school adolescent girls on contraceptive uptake*

Characteristics	**Frequency (n=415)**	**Percent (%)**
Which statement do you think is true about contraceptives?		
Contraceptives are for married people	130	31.4
I am too young to use contraceptives	110	26.6
Unmarried people who use contraceptives are promiscuous or sexually immoral.	156	37.6
Young people who are sexually active should use contraceptives	73	17.6
People should use contraceptives only if they regularly have sex	95	22.8

4.3 Knowledge and Informational determinants of Contraceptive Uptake

Table 4.4 revealed that 23.4% (97/415) of the respondents reporting had received sex education at home. This study at the same time identified that 57.2% (237/415) of the respondents had discussed contraceptives with anyone. It showed that 81.0% (336/415) of the respondents heard about contraceptives and 72.4% (301/415) knew at least a contraceptive method. On contraceptives training, 14.1% (59/415) of the respondents had received formal training on contraceptives and their use. There was 23.4 %(97/415) of respondents who had received sex education at home. About 64.5% (268/415) of the respondents believed they could get pregnant as a result of having one unprotected sexual encounter.

During Focused Group Discussion; it was also revealed that most of parents don't create time to talk to their adolescent girls concerning sexual reproductive health as respondents said in Angurai Division that;

> *"Our parents don't have time for us to share about our sexual and emotional feelings, it's a taboo to talk about sex with our parents. We end up exploring this on our own with our friends and due to peer pressure, some of our fellows become pregnant. Others get STIs and some of them drop out of schools*."

Table 4.4: *Knowledge and Information on Contraceptive Uptake among adolescent girls*

Descriptions		**Frequency (n = 415)**	**Percent (%)**
Sex education at home	No	318	76.6
	Yes	97	23.4
Do you discuss about FP with anyone	No	178	42.8
	Yes	237	57.2
Do you think your age should use FP	No	217	52.4
	Yes	198	47.6
Have you heard about contraceptives	No	79	19.0
	Yes	336	81.0
Do you know any contraceptive method	No	114	27.5
	Yes	301	72.4
Can a girl become pregnant from one unprotected sex	No	147	35.5
	Yes	268	64.5
Have you been trained on contraceptives and use	No	356	85.8
	Yes	59	14.1
Have you ever used contraceptives	No	293	70.7
	Yes	122	29.3

4.3.1 Contraceptive Uptake among Secondary School Adolescent Girls

Table 4.5 revealed contraceptive utilization among the adolescent girls. Out of 415 respondents who participated in this study, only 29.3% (122/415) of them were reported to have used a modern method of contraception. The most commonly used contraception methods were 53.0% (65/122) condoms, 24.7% (30/122) pills, 14.1% (17/122) injection Depo-Provera and 8.2%(10/122) was implant as a method of contraception was reported to had been used by the respondents.

Table 4.5: *Contraceptive Utilization among Secondary School Adolescent Girls*

Characteristic	Frequency	%
Use of contraceptives (n=415)		
Yes	122	29.3
No	293	70.7
Contraceptive used (n=122)		
Condoms	65	53.0
Pills	30	24.7
Injection Depo	17	14.1
Implants	10	8.2

4.4 Quality of Reproductive Health Services related Determinants to Contraceptive Uptake

Table 4.6 showed 31.0%(129/415) of the respondents stayed within 5km to the nearest hospital providing ASRH services, while 21.4% (89/415) stayed more than 10km away from health facilities offering ASRH services. In terms of affordability and accessibility, 64.5% (268/415) of respondents believed contraceptives were expensive and only 12.1% (50/415) of them believed they were able to access family planning services at any time at home or school. Some of adolescent girls from Amagoro division reported during FGDs.

> "*We don't have time to visit the hospital clinic while at school or home and the environment is not good for us. Mixing with old women who some of them know us, will definitely look at us with bad eyes or report to our parents*".

It was also revealed that 71.0% (295/415) of the respondents knew at least a place in the community where they could get contraceptives. 78.9% (327/415) of the respondents shied away from obtaining contraceptive services. Some of the respondents during the FGD in Angurai Division said that,

> "*It is hard for us to visit hospitals to seek for those services because we fear being seen by our relatives who some work there and others also go to seek the same services*",

Table 4.6: *Contraceptive Uptake Access and Affordability among adolescent girls*

Descriptions		Frequency (n = 415)	Percent (%)
Distance to nearest hospital for ASRH services	Less than 1 km	83	20.0
	1-5 km	129	31.0
	5-10 km	114	27.6
	more than 10 km	89	21.4
Are contraceptives expensive	No	147	35.5
	Yes	268	64.5
Are you able to access FP services at any time at home or school	No	365	87.9
	Yes	50	12.1
Do you know a place in community where can get contraceptives	No	120	29.0
	Yes	295	71.0
Do you shy away from obtaining contraceptive services	No	88	21.1
	Yes	327	78.9

4.4.1 Reproductive Health Services Related Perceptions among secondary school adolescent girls on contraceptive uptake

Table 4.7: shows adolescent girls perceptions on contraceptives non-use. 33.4% (139/415) of the respondents feared the side effect of contraceptives, 17.2% (71/415) of them felt that contraceptives were expensive to acquire. At the same time 13.5% (56/415) of the respondents believed contraceptives were for married people, as 13.1% (54/415) felt embarrassed to purchase or access the service providers. About 7.6% (32/415) of them had belief that contraceptives were for older people, while 4.8% (20/415) of them felt embarrassed to use contraceptives. Another 3.8% (16/415) of respondents had a notion that health care providers couldn't allow them to use and 6.6% (27/415) had not engaged in sexual intercourse. Fear of contraceptives side effects and age factors played a big role among adolescent girls on non-use of contraceptives. This was also witnessed during a FGDs in one of the secondary school in Amagoro division.

> "*Am still too young to start using those things. When used by young girls can spoil their eggs and make them infertile when it reaches time of marriage, they will not sire children. It can also make someone to bleed in excess leading to death*."

Reported by a 16-year-old form two adolescent girl in one of the school in Amagoro division.

Table 4.7: *Perceptions among secondary school adolescent girls on SRH services & Contraception Uptake*

Characteristics	Frequency(n=415)	Percent (%)
Your reason for not using contraceptives regularly		
Contraceptives are used by older people	32	7.6
Contraceptives are for married people	56	13.5
Contraceptives are expensive	71	17.2
I fear the side effects of using contraceptives	139	33.4
I feel embarrassed to use	20	4.8
I feel embarrassed to purchase or access the service providers.	54	13.1
Health care providers cannot allow me	16	3.8
Never engaged in sexual intercourse	27	6.6

4.5 Relationship between Determinants and Contraceptive Uptake

4.5.1 Association between Socio Demographical Determinants and Contraceptive Uptake

Table 4.8 revealed at the bivariate level, there was a statistically significant difference between girls aged 16-19 years (38.2%) compared to 12 - 15 years (8.1%) who used contraceptives (P<0.0001). Similarly, there were statistically significant differences between contraceptives use and the class level (with form 4s highest at 58.7% and form 1s lowest at 5.4%), type of school (mixed schools higher than girls only schools), residence (peri-urban highest at 48.3% while rural lowest at 22.6%), marital status (married at 100% and singles at 28.6%), next of kin (those staying with partner at 100% and 22.4% for those staying with parents), whether one had a sexual (56.2% for those with partner and 5.2% for those without partner) partner.

Table 4.8. *Association between contraceptive use and socio-demographical characteristics to contraceptives*

		Have you used contraceptives?					
Factor		No	%	Yes	%	**Total**	**P-value**
Age (years)	12-15	113	91.9%	19	8.1%	123	**<0.0001**
	16-19	180	61.8%	112	38.2%	292	
Class	Form 1	76	94.6%	4	5.4%	80	**<0.0001**
	Form 2	99	81.2%	23	18.8%	122	
	Form 3	75	70.3%	31	29.7%	106	
	Form 4	44	41.3%	63	58.7%	107	
Type of school	Girls only day school	16	88.9%	2	11.1%	26	**0.025**
	Girls only boarding	115	77.3%	34	22.7%	149	
	Mixed day school	108	63.5%	62	36.5%	170	
	Mixed boarding school	44	63.3%	26	36.7%	70	
Religion	Catholic	132	72.4%	50	27.6%	182	0.767
	Muslim	20	73.7%	7	26.3%	27	
	Protestant	142	68.8%	64	31.3%	206	
Residence	Rural	216	77.4%	63	22.6%	279	**0.001**
	Urban	34	64.9%	19	35.1%	53	
	peri-urban	43	51.7%	40	48.3%	83	
Marital status	Single	293	71.4%	118	28.6%	411	**0.025**
	Married	0	0.0%	4	100.0%	4	
Caregiver	Parent	234	77.6%	67	22.4%	301	**<0.0001**
	Guardian	60	54.5%	50	45.5%	110	
	Partner	0	0.0%	4	100.0%	4	
Have a sexual partner	No	208	94.8%	11	5.2%	219	**<0.0001**
	Yes	86	43.8%	110	56.2%	196	

4.5.2 Association between Knowledge/ Informational Determinants and Contraceptive Uptake

Table 4.9 revealed at the bivariate level, there was a statistically significant difference between respondents who had received sexuality education at home/school against those who didn't get sexuality education(39.7% vs. 26.1%), whether one

discussed contraceptives with anyone against didn't discuss contraceptives with anyone (44.6% vs. 8.9%), whether one had been trained or attended AYSRH seminars/workshops on SRH and contraceptive use against those who didn't train on contraceptive and SRH (54.8% vs. 25.0%).

Table 4.9. *Association between Knowledge/ Informational Determinants and Contraceptive Uptake.*

		Have you used contraceptives?					
Factor		No	%	Yes	%	**Total**	**P-value**
Do you get sex education at home	No	235	73.9%	83	26.1%	318	**0.031**
	Yes	58	60.3%	39	39.7%	97	
Do you discuss about contraceptives with anyone	No	161	91.1%	16	8.9%	177	**<0.0001**
	Yes	132	55.4%	106	44.6%	238	
Have you been trained on contraceptives and use	No	266	75.0%	89	25.0%	355	**<0.0001**
	Yes	27	45.2%	33	54.8%	60	

4.5.3 Association between Quality of Reproductive Health Services Related and Contraceptive Uptake

Table 4.10 revealed at the bivariate level, there was a statistically significant difference between ability to access FP services at any time at home or school against not able to access FP services (54.3% vs. 25.9%) and whether one knew a place in the community where they could get contraceptives against didn't knew a place to get contraceptives (38.8% vs. 6.0%) ($P<0.05$).

Table 4.10. *Association between access/affordability to contraceptives and contraceptive Uptake*

		Have you used contraceptives?					
Factor		No	%	Yes	%	**Total**	**P-value**
Distance to nearest hospital for ASRH services	Less than 1 km	57	69.0%	26	31.0%	83	0.896
	1-5 km	92	71.1%	37	28.9%	129	
	5-10 km	78	68.8%	36	31.3%	114	
	More than 10 km	66	74.2%	23	25.8%	89	
Do you find contraceptives expensive to buy	No	101	68.9%	46	31.1%	147	0.626
	Yes	192	71.7%	76	28.3%	268	
Are you able to access FP services at any time at home or school?	No	270	74.1%	95	25.9%	365	**0.001**
	Yes	23	45.7%	27	54.3%	50	
Do you know a place in community where one can get contraceptives?	No	113	94.0%	7	6.0%	120	**<0.0001**
	Yes	181	61.2%	114	38.8%	295	

P<0.05 statistically significant

4.6 Statistically Significant Determinants of Contraceptive Uptake

4.6.1 Statistically Significant Socio demographical Determinants of Contraceptive Uptake

Table 4.11 indicated that controlling for all other determinants, educational level, residence, caregiver and having a sexual partner were statistically significant determinants for contraceptive use among the students. For instance, Form 4s were nine times likely to use contraceptives compared to Form 1s (AOR 8.9, 95% CI 2.0 - 39.7, P = 0.004). Girls from the peri-urban residence were nine times compared to those from rural residence (AOR 9.0, 95% CI 2.8 - 28.9, P<0.0001), staying with guardians was three times compared to staying with parents (AOR 2.7, 95% CI 1.2 - 6.1, P = 0.018), having a sexual partner was 16 times compared to not having a partner (AOR 16.4, 95% CI 5.8 - 46.6, P<0.0001).

Table 4.11: *Statistically significant Socio demographical Determinants of contraceptive uptake among secondary school adolescent girls in Teso North, Busia County*

Determinant		AOR	95%CI		P-value
Age (years)	12-15 (ref)	1			
	16-19	2.401	0.586	9.835	0.223
Class	Form 1 (ref)	1			
	Form 2	4.605	1.104	19.203	**0.036**
	Form 3	3.564	0.763	16.649	0.106
	Form 4	8.926	2.004	39.764	**0.004**
Type of school	Girls only day school	1.000			
	Girls only boarding (ref)	0.982	0.238	4.058	0.980
	Mixed day school	1.432	0.357	5.744	0.612
	Mixed boarding school	1.387	0.310	6.203	0.669
Residence	Rural (ref)	1.000			
	Urban	3.037	0.898	10.277	0.074
	Peri-urban	8.999	2.807	28.850	**0.0001**
Caregiver	Parent (ref)	1.000			
	Guardian	2.677	1.180	6.071	**0.018**
	Partner	1			
Have a sexual partner	No (ref)	1.000			
	Yes	16.420	5.791	46.560	**0.0001**

4.6.2 Statistically Significant Knowledge and Informational Determinants of Contraceptive Uptake

Table 4.12 indicated that controlling for all other determinants, whether one discussed contraceptives with someone else was statistically significant determinant for contraceptive uptake among secondary school adolescent girls. For instance, those discussing contraceptives with anyone were four times compared to those who did not discuss with anyone about contraceptives (AOR 4.2, 95% CI 1.7 - 10.7, P = 0.002).

Table 4.12. *Statistically significant Knowledge/Informational Determinants of contraceptive uptake among secondary school adolescent girls in Teso North, Busia County*

Determinant		AOR	95%CI		P-value
Do you get sex education at home	No (ref)	1.000			
	Yes	0.672	0.292	1.547	0.350
Do you discuss about contraceptives with anyone	No (ref)	1.000			
	Yes	4.223	1.662	10.728	**0.002**
Have you been trained on contraceptives and use	No (ref)	1.000			
	Yes	1.508	0.499	4.560	0.466

4.6.3 Statistically Significant Quality of Reproductive Health Services Determinants of Contraceptive Uptake

Table 4.13 indicated that controlling for all other determinants, whether one could access contraceptives at any time at home or school and whether one knew a place in the community where one could get contraceptives were statistically significant determinants for contraceptive use among the students. For instance, ability to access FP services at any time at home or school against not able to access FP services (AOR 3.4, 95% CI 1.3 - 9.2, P = 0.016) and knowing a place in the community where one can get contraceptives was five times compared to not knowing a place to access contraceptives (AOR 4.9, 95% CI 1.3 - 17.9, P = 0.017) to use contraceptives.

Table 4.13: *Statistically significant Quality of Reproductive Health Services Determinants of contraceptive uptake among secondary school adolescent girls in Teso North, Busia County*

Determinant		AOR	95%CI		P-value
Are you able to access FP services at any time at home or school	No (ref)	1.000			
	Yes	3.402	1.258	9.198	**0.016**
Do you know a place in community where can get contraceptives	No (ref)	1.000			
	Yes	4.888	1.332	17.942	**0.017**

P<0.05 statistically significant

CHAPTER FIVE:
DISCUSSION

5.1 Introduction

In this chapter current articles are discussed and compared to the findings of this study. Section two to four provides a discussion on determinants to contraceptive uptake among secondary school adolescent girls under study in Teso North, Busia County.

5.2 Socio-demographical Determinants of Contraceptive Uptake

Contraceptive uptake among the adolescent girls in Teso North was 29.3% and almost a half proportion of the secondary school adolescent girls had sexual partners, therefore they were considered sexually active. Having a sexual partner implied that the adolescent girls were sexually active and therefore they considered themselves at risk of becoming pregnant and hence they needed protection from unplanned pregnancy and STIs. The findings of this study agreed with KDHS, 2022; KNBS & ICF International, 2023 which reported that use of any contraceptive method was higher among sexually active and unmarried women.

The uptake of contraceptives increased with age among secondary school adolescent girls. Adolescent girl aged between 16-19 years or more were likely to use any contraceptive method as compared to their counterpart of lesser age. The finding of this study agreed with the findings of Murigi *et al.,* 2016 which showed adolescent girls aged 18 years or more were likely to utilize contraceptives as compared to their counterparts of a lesser age. This could be attributed to more exposure to education on contraception and sexuality health education among the respondents.

Peri-urban and urban residence was associated with a higher contraceptive use compared to the rural residence in this study. The findings of this study agreed with Kenya National Bureau of Statistics (KNBS) and ICF International, 2023; Ochako *et al.,* 2016 which stated that uptake of contraceptives was higher among women in urban areas compared to the rural areas. This finding also agreed with Paul *et al.,* 2015 who revealed that urban women were more likely to use contraceptives compared to their rural counterparts. According to Okigbo *et al.,* 2015 they agreed that people in urban and peri-urban areas are more exposed to information through

mass media on contraceptives and their use compared to their rural counterparts leading to this disparity.

In terms of decision making on uptake of contraceptive methods in the last time, it was established that two fifth of respondents made their own initiative while another two fifth was decided by their sexual partners. This still showed some influence by spousal or familial support of or opposition to family planning. This study finding agreed with Ochako *et al.,* 2015 which showed that spousal approval for contraception use existed in the typical woman in Sub Saharan Africa, who still relied on the husband for key decision making including health care due to lack of empowerment economically. This calls for the empowerment of a girl child by provision of adequate information on SRH education and life skills in decision making about their own health and wellbeing.

It is believed from the study findings by a third of respondents that contraceptives were for married people only and almost two fifth of them reported that unmarried people who used contraceptives were regarded to be promiscuous or immoral. Those were misconceptions about contraceptives among respondents which misguided and discouraged them in uptake of contraception. This study finding agreed with WHO, 2018 which found out contraceptives being seen as a product that should be used by not just adults, but married adults. Thus adolescents were not seen as a possible target for their use, ignoring the still large number of adolescents who not only conceived but also contracted STIs. A similar study of Wirsly *et al.,* 2019 in Cameroon revealed adolescent girls faced barriers preventing contraceptive uptake even when they were able to obtain contraceptives; stigma of non-marital sexual affairs and/or contraceptive use. Hence, there is need to create awareness in the communities on contraceptive uptake among adolescents by dispelling all the raised myths and misconceptions.

5.3 Knowledge and Informational Determinants of Contraceptive Uptake

Knowledge level of adolescent girls on SRH and contraceptives have influence on the rate of contraceptive uptake and that varies according to their different levels. This study established that majority of the respondents had heard about contraceptives, and a higher proportion of them knew at least a modern contraceptive method. Despite these high level of knowledge, just a few number of them had used any contraceptive

method before yet almost half of them had a sexual partner. This finding of this study agreed with UNFPA, 2015 which stated that availability of contraceptive choices for adolescents were in place, but uptake was low among sexually active adolescents which contributed to several factors associated with its low uptake.

Almost half of the respondents thought that at their age they should use family planning, as more than half of them believed they could get pregnant from one unprotected sexual encounter. The findings of this study agreed with Apter, 2018 who stated that all methods are physiologically safe for adults are also physiologically safe for adolescents except the permanent methods of contraception. This calls for provision of age appropriate comprehensive sexuality education (AACSE), contraception counselling and emergency contraceptives in schools, health facilities and community as the respondents were afraid of unwanted pregnancy and contracting of sexual transmitted infections.

There was more than a third of respondents with inaccurate or incomplete information about sexuality and reproduction concerning one unprotected sexual encounter if it could lead to pregnancy. This study finding agreed with Binu *et al.,* 2018 who postulated that lack of adequate information on sexuality predispose adolescent girls and young women (AGYW) to teenage pregnancies. Hence, this study calls for continuous in cooperation of sexual reproductive health in school curriculum as per age appropriate for empowering adolescents with adequate knowledge and information on SRH.

Training of adolescents on contraceptives or attending AYSRH workshops and seminars reported a low rate with almost three quarter of respondents had not received sex education at home. It was established in the FGDs where adolescent girls reported of their parents lacked time for them to discuss matters of sexual and reproduction, alleging it to cultural taboos for parents to utter about sexual intercourse word in front of their children. Adolescent girls ended up discovering themselves by accessing incorrect information from fellow peers of which some was misguiding and led to teenage pregnancy, contracting STIs and some of them dropping out of school. This study finding agreed with Kumar *et al.,* 2017 which stated that, a major factor associated with non-use of contraceptives was lack of knowledge on modern contraceptive methods or unmet need for contraceptives. Most adolescents also do not

use contraceptives due to lack of knowledge about its use or even the type of method to use. It is high time for parents or guardians to take fore front role of counseling their adolescent girls on SRH to equip them with knowledge and information about sexuality.

There were statistically significant differences between contraceptive uptake and class level of respondents, where Form 4s were nine times likely to use contraceptives compared to form 1s. This study finding agreed with Nyarko, 2018 which showed the odds of contraceptives use were higher among educated female adolescent as the level of education increased in Ghana. It was also established by Sidze *et al.*, 2017 in Ghana that lack of comprehensive sex education in schools, home or youth centers predisposes adolescents to incorrect or deficient information about contraception.
There is a need to integrate the school teaching curriculum with adolescent and sexual reproductive health focusing on contraception. Evidence from a systematic review by Lopez *et al.*, 2016 showed that the group using a modified integrated curriculum was more likely than the standard-curriculum group to use a contraceptive during sexual intercourse (OR 1.62), condom use during last sex (OR 1.91) or less frequent sex without a condom (OR 0.5).

Adolescent girls who were able to discuss about contraceptives with anyone were four times more likely to use contraceptives compared to those who did not discuss with anyone about contraceptives. This study finding agreed with Bhushan *et al.*, 2021 which showed that contraceptives communication among peers led to three times more likely to use and among partners was five times more likely to use compared to those who did not discuss. However, this study showed that respondents staying with parents were less likely to use contraceptives compared to those who stayed with guardians. This study finding disagreed with Zulu, 2019 who found out that parents were considered an important source of information and therefore calls for early parent-child communication in facilitating contraceptive use. The findings highlighted the need to consider the influence of social ties in the design of future family planning interventions and suggested that interventions which encourage interpersonal communication about contraception and targeted peer-based descriptive norms had the potential to impact uptake of contraceptives in the at risk communities.

5.4 Quality of Reproductive Health Services related Determinants to Contraceptives Uptake

In contrast to a third of respondents who did not know where to locate reproductive health services, the majority of respondents knew where they could obtain these services. Knowing where to get reproductive health services, such as contraceptives, was five times more statistically significant for contraceptive use than not knowing where to access these services. This study finding agreed with Abdul *et al.,* 2021 in Ghana, who found that teenagers' knowledge of where to access contraceptives in the community was a predictor of their contraceptive use. This result suggests the necessity to provide adolescents with enough information about safe locations where they can easily access contraceptive services.

Over three-quarter of respondents shied away from obtaining contraceptives or other sexual reproductive health services. This was established from FGDs which was contributed by fear of their privacy, due to overcrowded waiting places and long waiting times or being mixed up with older women who were like their parents in public FP clinics. This study finding agreed with Godia *et al.,* 2014 & Zaggi, 2014 which stated that design of RH services offered in public health facilities verses convenient schedules, privacy and waiting times affected the level of clients' uptake of sexual RH services among the adolescents and youths. It therefore, calls for MOH through the county government of Busia to improve on Adolescent and youth-friendly services in all public health facilities by creation of youth-friendly corners with service charters updated or digitalization of SRH services for AGYW.

Three- fifth of respondents reported having negative attitude towards health care providers offering SRH services. This was further established in FGDs where it was said that some of the service providers were friendly to them especially the young, but old nurses looked at them with sharp and terrifying eyes which discouraged or put them off from expressing their sexual needs. This study findings agreed with WHO, 2018 which showed that some family planning providers still restricted access to contraceptives based on age or marital status .Hence, there was need for public health facilities to ensure FP clinics adhere to provision of quality service delivery which includes clients' privacy and confidentiality, convenient schedules with reduced turnaround time and providers of services offer respectful and friendly environment favorable to adolescent sexual and reproductive care without creation of age biasness.

Health care providers need to be continuously capacity built in AGYW- SRH services to improve in adolescents' contraception accessibility and uptake.

On health impacts of contraceptives, a third of the respondents feared the side effects of contraceptive use hence non-used. This was further established in FGDs where it was reported by a 16-year-old respondent that at her age she could not use contraceptives because they can render her infertile. This kind of misinformation given to adolescents by opinion shapers discouraged them from access to contraception services.

It was established that accessibility to contraceptives at any time, at home or school was significantly associated with increased contraceptive uptake that was three times more likely to use contraceptives by respondents if accessible to them. This study finding agreed with Murigi *et al.,* 2016 which showed that accessibility to contraceptives among respondents led them four times more likely to use in Kiambu County.

Over three-quarter of the respondents shied away from obtaining contraceptives or sexual reproductive health services. This was well elaborated in the FGDs where it was reported that some respondents feared being seen by their relatives who work in health facilities or chemists and they didn't had time to visit those facilities while at school or at home. This study finding agreed with Makola *et al.,* 2019 which found that reproductive health services were mostly inadequate and inaccessible to the adolescents either due to unavailability, unaffordability and the poor attitude from health care givers. This study finding therefore, calls for the county government through its health care providers to create an enabling youths and adolescent friendly environment for accessibility of the SRH services.

Interestingly, the cost of contraceptives was not a hindrance to its use among the respondents. This demonstrated that the contraceptives were readily available to school going adolescents and no measures of restrictions existed on who should receive the commodities and for what purpose. This could be attributed to the fact that contraceptives were offered at no cost in public health facilities in Kenya making them easily accessible for use. This study finding disagreed with Asaolu *et al.,* 2019 which demonstrated that women residing at areas with health facilities providing sexual reproductive health services at no cost were more likely to access those

services in Kenya, Nigeria and Ghana. Therefore, there is need to strengthen contraceptive provision in Kenya, including targeted information and services to adolescent girls still in school as demonstrated in a study by Morgan *et al.*,2014 in Kenya and Nigeria, which shows the two countries had the highest rates of emergency contraceptive use in sub-Saharan Africa.

CHAPTER SIX:
CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter covers conclusions, recommendations, what is known about the study, what the study adds and further research study made by the researcher which is based on the specific objectives and key study findings.

6.2 Conclusion

The study revealed that contraceptive prevalence among secondary school adolescent girls in Teso North was 29.3%, despite half of the girls being sexually active and most of them having knowledge of contraceptive and its use. Among the respondents who use contraceptives, condoms were the commonest used method then followed with oral pills. The major contributory factors to non-use of contraception were perceived side effects and myths and misconceptions surrounding them. Key determinants to contraceptive uptake in this study were: socio demographical, knowledge and informational level and quality of RH services to contraceptive uptake. Educational level, residence, caregivers and having a sexual partner were identified as socio demographical determinants which were statistically significant to contraceptive uptake among secondary school adolescent girls. Interpersonal communication or discussing with anyone on contraception was found to be a knowledge/ Informational level determinant which was statistically significant to contraceptive uptake among secondary school adolescent girls. Accessibility to SRH services at any time and knowing a place or health facility where one could get contraceptive services was established as a quality of RH services related determinants which were statistically significant to contraceptive uptake among secondary school adolescent girls.

6.3 Recommendations

The researcher made the following recommendations based on the study findings;

1. The county government of Busia ministry of health and sanitation directorate should collaborate with available partners supporting reproductive health programs and the media houses to promote use of contraceptives like television, radio stations and community health opinion leaders like CHVs. Other health care providers should be motivated to reach out to the people, targeting the rural settings where there was low uptake of contraception to offer counselling and sexuality health education on healthy birth spacing, addressing myths and misconceptions surrounding adolescent's contraception.
2. The parents should always be open and available by creating time to discuss adolescent health matters with their children as per age appropriate comprehensive sexuality education (AACSE).
3. All the public health facilities should make the adolescent SRH services easily accessible to all the people without discrimination of their age, gender, marital status or parity.

6.4 What is known about this study?

i. Educational level, place of residence, caregivers and having a sexual partner are known to influence secondary school adolescent girls from contraceptive uptake.
ii. Knowledge level on contraception does not translate into uptake, high level but low uptake among secondary school adolescent girls.
iii. Interpersonal communication or use of social media channels can increase the uptake of contraception among secondary school adolescent girls.
iv. Making the SRH services and contraception centres easily accessible to adolescent girls can influence their uptake of contraception.

6.5 What this Study Adds

i. Adolescents who stay with their guardians appear to use contraceptives the most than those who stay with their parents.
ii. Providers attitude (friendly ones) encourages the adolescents' uptake of contraceptives.

6.5 Further Research

The research feels that more study should be done to understand why the high knowledge level was not associated with high contraceptive uptake patterns.

REFERENCES

Abdi B, Okal J, Serour G, Temmerman M (2020). "Children are blessing from God"- a qualitative study exploring the socio-cultural factors influencing contraceptive use in two Muslim communities in Kenya. Reprod Health, 17:1-11.

Adedini SA, Babalola S, Ibeawuchi C, Omotoso O, Akiode A, Odeku M (2018). Role of religious leaders in promoting contraceptive use in Nigeria: evidence from the Nigerian urban reproductive health initiative. Glob Health Sci Pract, 6(3):500-14.

Ahanonu, E. L. (2014). Attitudes of Healthcare providers towards Providing Contraceptives for unmarried Adolescents in Ibadan, Nigeria. Journal of Family and Reproductive Health Vol.8, No.1.

Abdul- Razak Adam, John K Ganle, Benard Y Asare, Dian Baafi and Timothy S Letsa (2021). *Risky sexual behaviors, contraceptive use and associated factors among unmarried female adolescents in an urban municipality in Ghana*. African Journal of Reproductive Health December; 25(6): 39-40.

Alemi Kebede Olika, Sena Belina Kitila, Yonas Biratu Terfa and Ayantu Kebede Olika (2021). Contraceptive use among sexually active female adolescents in Ethiopia: trends and determinants from national demographic and health surveys.BMC Reproductive Health,18:104. https://doi.org/10.1186/s12978-021-01161-4.

APHRC, MOH, IPAS, Guttmacher Institute. (2013). Incidence and complications of unsafe abortions in Kenya: Key findings of a national study…Nairobi, Kenya: APHRC, MOH, IPAS, Guttmacher Institute.

Apter D (2018). Contraception options: Aspects unique to adolescent and young adult. Best pract Res Clin obstet Gynaecol; 48:115-127.Epub2017 Sep28.

Asaolu, I., Nuño, V. L., Ernst, K., Taren, D., & Ehiri, J. (2019). Healthcare system indicators associated with modern contraceptive use in Ghana, Kenya, and Nigeria: evidence from the Performance Monitoring and Accountability 2020 data. *Reproductive health, 16*(1), 1-10.

Azfredrick EC (2016). Using Anderson's model of health service utilization to examine use of services by adolescent girls in South- Eastern Nigeria. Int J Adolesc Youth, 21(4):523-9.

Best, J., & Kahn (1989). Research in Education. New Jersey: Prentice Hall.

Bhushan, N. L., Fisher, E. B., Maman, S., Speizer, I. S., Gottfredson, N. C., Phanga, T., . . . Rosenberg, N. E. (2021). Communication, social norms, and contraceptive use among adolescent girls and young women in Lilongwe, Malawi. *Women & health, 61*(5), 440-45.

Biddlecom A ,Riley T, Darroch JE, et al.,(2018). Future Scenerios of Adolescent Contraceptive use, cost and Impact in Developing Regions. Guttmacher Institute.

Binu W, Marama T, GerbabaM, Sinaga M (2018). Sexual and reproductive health services utilization and associated factors among secondary school students in Nekeme town, Ethiopia. Reprod Health,15(1): 64.

Bitzer J, Abalos V, Apter D, Martin R, Black A (2016). Global CARE (Contraception: Access, Resources, Education) Group. Targeting factors for change: contraceptive counselling and care of female adolescents. Eur J contracept Reprod Health Care; 21: 417-430. Epub 2016 Oct 5.

Blum RW et al., (2014). A conceptual framework for early adolescence: a platform for research, International Journal of Adolescent Medicine and Health, 26 (3):321-331.

Brittain et al (2019). Youth-friendly family planning services for young people: a systematic review update. Am J Prev Med.2018; 55(5):725-35. https://doi.org/10.1016/j.amepre.2018.06.010.Surveys.Lancet Glob Health; /: e904-11.

Capurchande RCG, Schockaert I, Macia M, Meulemans H (2016). It is challenging…. oh, nobody likes it! a qualitative study exploring Mozambican adolescents and young adults' experiences with contraception. BMC Women's Health.

Casey SE, Gallagher MC, Kakesa J, Kalyanpur A, Muselemu J-B, Rafano-harana RV, Spilotros N (2020). Contraceptive use among adolescent and young women in North and South Kivu, Democratic Republic of Congo: a cross-sectional population- based survey. PloSMed, 17(3) e1003086.

Center for Reproductive Rights; UNFPA. (2010). The right to contraceptive information and services to women and adolescents. New York, USA: Center for Reproductive Rights; UNFPA.

Chandra-Mouli, V, McCarraher, D. R, Phillips,S.J. Williamson, N.E., & Hainsworth, G. (2014).Contraception for adolescents in low and middle income countries: needs, barriers and access. *Reproductive Health*, 11(1), 1-8. (2014).

Chandra-Mouli V, Parameshwar PS, Parry M, et al (2017). A never-before opportunity to strengthen investment and action on adolescent contraception and what we must do to make full use of it. Reprod Health, 14(1):85.

Cleland J, Harbison S, Shah IH (2014). Unmet need for contraception: issues and challenges. Stud Fam Plann. doi:10.1111/j.1728-4465.2014. 00380.x

Darroch JE, Woog V, Bankole A, Ashford LS (2016). ADDING UP. Costs and benefits of meeting the contraceptive needs of adolescents;(May 2016). https://www.guttmacher.org/adding-it-up.

Darroch J, Woog V, Bankole A, Ashford L.S (2016). adding it up: Costs and benefits of meeting the contraceptive needs of adolescents. Guttmacher Institute, New York (2016). Available from: https://www.guttmacher.org/report/adding-it-meeting-contraceptive-needs-of -adolescents.

Darroch JE *et al.*, (2017). Adding it up: *investing in contraception and maternal and newborn health*, 2017.New York: Guttmacher Institute; [Available from: https:// www.guttmacher.org/fact-sheet/addingitup-contraception-mnh-2017].

De Vargas Nunes Coll C, Fwerling F, Hellwing F, de Barros AJD (2019). Contraception in adolescence: the influence of parity and marital status on contraceptive use in 73 low-and- middle-income countries. *Reproductive Health,* 16(1):21.

Dennis ML, Radovich E, Wong KLM, Owolabi O, Cavallaro FL, Mbizvo MT, Binagwaho A, Waiswa P, Lynch CA, Benova L (2017). Pathways to increased coverage: an analysis of time trends in contraceptive need and use among adolescents and young women in Kenya, Rwanda, Tanzania and Uganda. Reproductive Health, 14(1): 130.

Engelman R, Rosen JF, Wong, Sylvia (2014). The power of 1.8 billion. Adolescents, youth and the transformation of the future. State of world population.1.8 billion. UNFPA.2014.

Family Planning: A Global Handbook for Providers (2018). World Health Organization and John Hopkins Bloomberg School of Public Health.

Ganchimeg T, Mori R, Ota E, Koyanagi A, Gilmour S, Shibuya K, et al (2013). Maternal and Perinatal outcomes among nulliparous adolescents in low and middle-income countries: a multi-country study. BJOG 2013; 120: 1622-33.

Gift Mtawali Dombola, Wanangwa Chimwaza Manda and Effie Chipeta (2021). Factors influencing contraceptive decision making and use among adolescents in urban Lilongwe, Malawi: a qualitative study. BMC Reproductive Health, 18:209 https://doi.org/10.1186/s12978-01259-9.

Godia P, Olenja J, LavussaL, J., Quinney D., Hofman J & Broek N. (2014, 11). Sexual reproductive health services provision to young people in Kenya; health service providers' experiences. *BMC Health Service Research (Impact factor: 1.77)*, 13(1): 476.https://dx.doi.org/10.1016/s0968-8080 (06)27231-8.

Hassoun D (2018). Natural Family Planning methods and barrier. CNGOF Contraception guidelines. Gynecol Obstet Fertil Senol.2018; 46:873-82.

Hounton S, Barros AJD, Amouzou A, Shiferaw S, Maiga A, Akinyemi A, et al (2015).Patterns and trends of contraceptive use among sexually active adolescents in Burkina Faso, Ethiopia and Nigeria: Evidence from cross-sectional studies.Glob Health Action;8(1):29737 [cited 2018 Jan 22] Available from: https:/ /www.tandfoline.com/doi/full/10.3402/gha.v.29737.

Jain A K, Ramarao S, Kim J, and Costello M (2014). Evaluation of an Intervention to improve quality of care in family planning programme in the Philippines Biosoc Sci; 44(1):27-41.

Joyce Agyemang, Sam Newton, Isaac Nkrumah, Joyce Mahlako Tsoka- Gwegweni, Samuel Nambile Cumber (2019). Contraceptive use and associated factors among sexually active adolescents in Atwima Kwanwoma District, Ashanti region- Ghana. Pan African Medical Journal, 32: 182. Doi: 10.11604/ panmj.2019.32.182.15344.

Kenya Human Rights Commission (KHRC) and Kenya Reproductive Health and Rights Alliance (KRHRA). (2010). Teenage pregnancies and unsafe abortions. Journal on unsafe abortions in Kenya.941, 60-65.

Kenya National Bureau of Statistics (KNBS) and ICF International. (2023). *Kenya Demographic and Health Survey (KDHS) 2022*. Retrieved from https://dhsprogram.com/pubs/pdf/fr308/fr308.pdf.

Kenya National Bureau of Statistics. (2019).Kenya Demographic Health Survey 2019.

KHIS. (2022, July 27). Khis-pivot. Retrieved from khis website: http:// www.hiskenya.org.

Kinaro, J., Kimani, M., Ikamari, L. and Ayiemba, E.H.O (2015). Perceptions and Barriers to contraceptive use among Adolescents aged 15-19 years in Kenya: A case study of Nairobi. Health, 7, 85-97. https://dx.doi.org/10.4236/ health.2015.71010.

Krugu JK, Mevissen FE, Prinsen A, Ruiter RA (2016). Who's that girl? A qualitative analysis of adolescent girls' views on factors associated with teenage pregnancies in Bolgatanga, Ghana. Reprod Health, 13:39.

Kumar, Dinesh and Kapoor Gitanjali (2017). "Menstrual hygiene: knowledge and practice among adolescent school girls in rural settings". International Journal of Reproduction, Contraception, Obstetrics and Gynecology, vol, 6, no. 3, Mar. 2017.

Li Z, Patton G, Sabet, Zhou Z, Subramanian SV, Lu C (2020). Contraceptive use in adolescent girls and adult women in low-and-middle-income countries. JAMA Netw Open.2020; 3(2): e19214337.

Lopez, L. M., Bernholc, A., Chen, M., & Tolley, E. E. (2016). School- based interventions for improving contraceptive use in adolescents. *Cochrane Database of Systematic Reviews*(6).

Magnusson BM, Crandall A, Evans K (2019). Early sexual debut and risky sex in young adults: the role of low self- control. BMC Public Health, https://doi.org/10.1186/s12889-019-7734-9.

Makola L, Mlangeni L, Mabaso M, Chibi B, Sokhela Z, Silimfe Z, et al (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): 158. https://doi.org/10.1186/s12905-019-0861-8.

Miles, M., & Huberman, A. (1994). Qualitative Data Analysis (2nd edition). In M.Miles, & A. Huberman. *Qualitative Data analysis (p.18) Thousand Oaks, CA: Sage publications.*

MoH, GoK (2022). The National Reproductive Health Policy 2022-2032 (pp.1-80).

MoH, GoK (2015). National Adolescent Sexual and Reproductive Health Policy.

Montagu D, Goodman C (2016). Prohibit, constrain, encourage or purchase: how should we engage with the private health-care sectors? Lancet, 6736:1-9.

Morgan, G., Keesbury, J., & Speizer, I. (2014). Emergency contraceptive knowledge and use among urban women in Nigeria and Kenya. *Studies in Family Planning, 45*(1), 59-72.

Mugenda, O.M., & Mugenda, A.M. (1999). Research Methods; Qualitative and Quantitative Approach. Nairobi: Acts Press.

Munakampe MN, Zulu JM, 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):909.

Murigi, M., Butto, D., Barasa, S., Maina, E., & Munyalo, B. (2016). Overcoming barriers to contraceptive uptake among adolescents: the case of Kiambu County, Kenya. *Journal of biosciences and medicines*, *4*(09), 1.

Naz, R (2014). Sex Education in Fiji. Sexuality& Culture 18, 664-687. Available from: https://doi.org/10.1007/s12119-013-9204-3.

NCPD (2015). National Adolescent and Youth Survey. *Factors influencing contraceptive use among adolescents' and youths*. National Council for Population and Development.

Nketiah-Amponsah E, Samuel Ampaw and Priscilla Twumasi Baffour (2022). Socioeconomic determinant of use and choice of modern contraceptive methods in Ghana. *Tropical Medicine and Health, 50:33*. https://doi.org/10.1186/s41182-022-00424-5

Nyarko SH (2015). Prevalence and correlates of contraceptive use among female adolescents in Ghana. BMC Womens Health, 15(1):60. [Cited 2018 Jan 19] Available from:http://dx.doi.org/https:doi.org/10.1186/s12905-015-0221-2.

Obasohan PE (2015). Religion, ethnicity and contraceptive use among reproductive age women in Nigeria. Intl J MCH AIDS, 3(1): 65.

Ochako R., Mbondo M, Aloo S, Kaimenyi S, Thompson R, Temmerman M et al (2015).Barriers to modern contraceptive methods uptake among young women in Kenya. A qualitative study. BMC Public Health,15(1):118.[cited 2018 Jan 22] Available from:http://bmcpublichealth.biomedcentral.com/article/https://doi.org/10.1186/s12889-015-1483-1.

Ochako, R., Askew, I., Okal, J., Oucho, J., & Temmerman, M. (2016). Modern contraceptive use among migrant and non-migrant women in Kenya.

Ochako R, Temmerman M, Mbondo M & Askew I.(2017). Determinants of modern contraceptive use among sexually active men in Kenya.BioMed Central Reproductive Health.(2017) 14:56. Available from: https://doi.org/10.1186/s12978-017-0316-3.

Okigbo, C. C., Speizer, I. S., Corroon, M., & Gueye, A. (2015). Exposure to family planning messages and modern contraceptive use among men in urban Kenya, Nigeria, and Senegal: a cross-sectional study. *Reproductive health*, *12*(1), 1-11.

Pamela M. Godia, Joyce M Olenja, Jan J Hofman and Nynke Van den Broek (2014). Sexual Reproductive health services provision to young people in Kenya; Health Service Providers Experiences. BMC Health Services Research,14: 172.htttp://www.biomedcentral.com/1472-6963/14/172.

Palamuleni M (2017). Trends and determinants of contraceptive use among female adolescents in Malawi; 5239-350.

Patton GC, Sawyer SM, Santelli JS, Ross DA, Afifi R, Allen NB, et al (2016). Our future: A Lancet communication on adolescent health and wellbeing. Lancet; 387(10036):2423-78. https://doi.org/10.1016/S0140-6736 (16)00579-1.

Paul, B., Ayo, A. S., & Ayiga, N. (2015). Rural-urban contraceptive use in Uganda: evidence from UDHS 2011. *Journal of Human Ecology*, *52*(3), 168-182.

Phillips, K.A, Morrison, K.R., Andersen, R., & Aday, L.A. (1998). Understanding the context of Health Care Utilization: Assessing Environmental and Provider Related variables in the Behavioral Model of Utilization. Health services Research, 33 (3 pt 1), 571-596.

Pokhrel, S. & Sauerborn, R. (2004). Household Decision Making on child Health care in Developing countries: The case of Nepal. Health policy & planning, 19 (4), 218-233.

Rattan J, Noznesky E, Curry DW, Galavotti C, Hwang S, Rodriguez M (2016). Rapid contraceptive uptake and changing method mix with high use of long-acting reverse contraceptives in crisis-affected populations in Chad and the Democratic Republic of Congo. Glob Health Sci Pract; 4(supplement 2): S5- S20.

Rosenthal DA, Hall C, Moore SM (1992). AIDS, adolescents and sexual risk taking; a test of the health belief model. Aust Psychol; 27(3): 166-71.

Sidze EM, Stillman M, Keogh S, Mulupi S, Egesa CP, Leong E, et al (2017). From paper to practice: sexuality education policies and their implementation in Kenya. New York: Guttmacher Institute.

Sung S, Abramovitz A (2020). Natural Family Planning. Treasure Island, FL: Stat Pearls.

Tamang L, Raynes- Greenow C, McGreechan K, Black K (2017). Factors associated with contraceptive use among sexually active Nepalese youths in the Kathmandu Valley. Contracept Reprod Med; 2(1):64.

The Kenyan Constitution.(2010). Retrieved from www.Kenyanconstitution.org.

Titiloye MA, Ajuwon AJ (2017). Knowledge and quality of adolescents reproductive health communication between parents and their adolescent children in Ibadan, Nigeria. Journal of Public Health in Africa;8(1).

Trussell J, Aiken ARA, Micks E, Guthrie KA (2018). Efficacy, safety, and personal considerations. In: Hatcher RA, Nelson AL, Trussell J, Cwiak C, Cason P, Policar MS, Edelman A, Aiken AKA, Marrazzo J, Kowal D, eds. Contraceptive technology.21st ed.New York, NK: Ayer Company Publishers, Inc.

NCPD, & PSRI. (2013). Kenya population situation Analysis. Nairobi: GOK.

UNFPA. (2013). The state of the world report 2013: Focus on adolescent pregnancies. London: United Nations.

UNFPA. (2013). Motherhood in Childhood: Facing the challenges of adolescent pregnancy (The state of world population). Retrieved from https://www.unfpa.org/publications/state-world.population-2013.

UNFPA, CREPHA, UNICEF, Ministry of Health and population department of Health Services Family Health Division (2015). The Qualitative study on Assessing supply side constraints Affecting the quality of Adolescent Friendly Health Services and the Barriers for service utilization in Nepal, January.119 P.

UNFPA: Center for Reproductive Rights (CRR). (2015). Right to Contraceptive Information and Services for Women and Adolescents. New York: UNFPA: Center for Reproductive Rights.

United Nations Children's Fund. (2013). Towards an AIDS Free Generation-Children and AIDS: Sixth Stock Taking Report. New York: UNICEF.

UNICEF. Adolescent Demographics UNICEF Data (2016). Available at https://data.unicef.org/topic/adolescents/overview/:2016.

UNICEF, UNWomen. Plan International (2020). A new era for girls: taking stock of 25 years of progress. UNICEF, New York. Available from: https://www.unicef.org/reports/news-era-for-girls-2020.

Wirsly FS, Nsagha DS, Njajou OT, et al (2018). Determinants of Reproductive Health Needs of Adolescent Girls in Africa. African Journal of Integrated Health 8: 7.

Wirsly FS, Nsagha DS, Njajou OT, et al (2019). Determinants of sexo-Reproductive Health Needs of Adolescent Girls in the Kumbo West Health District of Cameroon. Journal of Environmental Science and Public Health 3:28.

World Health Organization (WHO). (2019). Family planning/ Contraception.

World Health Organization (WHO). (2018). Adolescent pregnancy, [cited 2019 Apr 9]. Available from:https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy.

World Health Organization (WHO). (2017). Engaging young people in their own care is key to improving adolescent health.

World Health Organization (WHO). (2018). Adolescent pregnancy.

World Health Organization. (2020). Adolescent pregnancy. Geneva. [cited 2020 Jan 31] Available from: https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy.

World Health Organization. (2014). Adolescents: health risks and solutions. In: Fact sheet No. 345. Geneva: World Health Organization.

World Health Organization. (2020). Adolescence: A period needing special attention. Age-not the whole story. Available from: https://apps.who.int/adolescent/second.decade/section2/page2/age-not-the-whole-story.html.

World Health Organization. (2013). Family Planning Fact Sheet No.351. Updated May 2013. Available at. https://www.who.int/mediacentre/factsheets/fs351/en/.

World Health Organization (WHO). (2014). *Health for the world's adolescents: a second chance in the second decade [multimedia online report]*. Geneva: [cited 2015 Aug 4]. Available from: https://www.who.int/maternal_child_adolescent/topics/adolescence/second-decade/en/

WHO: (2012). Preventing early pregnancy and poor reproductive outcomes among adolescents in developing countries: what the evidence says. Geneva: WHO; Available from http://www.who.int/maternal_child_adolescent/documents/preventing_early_pregnancy/en/.

Woog V, Singh S, Browne A, Philbin J (2015). Adolescent women's need for and use of sexual and reproductive health services in Developing Countries. New York: Guttmacher Institute.

Zaggi H. (2014) Contraceptive Knowledge and Practices among students in Federal polytechnic Kaduna, Nigeria: An Exploratory Study. Available at: https://schoolar.sun.ac.za/handle/10019.1/96083.

Zulu, B. S. (2019). *Factors facilitating and inhibiting contraceptive use among White University students in Durban South Africa.*

APPENDICES

Appendix I: Consent Form

PART 1: Information Sheet

Introduction

The research seeks to study the determinants of contraceptives uptake among adolescent secondary school girls in Teso North Sub County, Busia County. The information you shall provide, shall be used for academic purpose and shall be treated with utmost confidentiality. You are therefore requested not to provide any information that might identify you like your name, nickname, mobile number or email addresses. Should you be interested in the findings of this research, you can place your request on the addresses provided. A copy of the research report will be retained at the Jaramogi Oginga Odinga University of Science and Technology (JOOUST) library for future reference. You are under no obligation to participate in this research and thus no rewards will be accorded to you as a result of your participation in this research. Further should you feel uncomfortable to proceed with the research, you can discontinue and no ramifications shall befall you.

Thank you in advance for your cooperation.

Yours thankfully,

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Appendix II: Adolescent's Minor (Below 18 Years) Assent Form

The information about the study has been explained to me. I fully understand the nature of the study and how I will participate in it. I fully understand that if I agree to participate in the study, I will either fill a questionnaire or participate in a focused group discussion for a period of 45 Minutes to 1 hour. I understand that participation is voluntary and I am free to withdraw from the study at any time. I am also aware that if I decide to participate in the study, it will not affect the services I receive in school. I also understand that the information in the Focused Group Discussions will be tape recorded. By signing this form, I will be accepting to participate in the study.

I agree to take part in this study.

Signature ……. Date …….

Researcher

Name …….

Signature …… Date ……....

Appendix III: Structured & Semi- Structured Questionnaire

Informed Consent

I have read and understood the information sheet. Having been assured of confidentiality and anonymity, I accept to take part in this questionnaire voluntarily to help facilitate the accuracy and validity of this study.

Signature …… Date …….

Instructions

1. Do not write your name on the questionnaire.

2. Tick in the boxes provided where applicable.

3. For open- ended questions write the answers in the space provided.

4. Answer all questions.

5. All information obtained will remain confidential.

Section One: Socio-Demographic Characteristics

Q1. What is your age bracket?

1. 10-13 [ ] 3. 16-17 [ ]

2. 14-15 [ ] 4. 18-19 [ ]

Q2. Which form are you?

1. Form 1 [ ] 3. Form 3 [ ]

2. Form 2 [ ] 4. Form 4 [ ]

Q3. What is the type of your school?

1. Girls only Day school [ ] 3. Mixed day school [ ]

2. Girls only Boarding school [ ] 4. Mixed boarding school [ ]

Q4. What is your religion?

1. Catholic [ ] 3. Protestant. [ ]

2. Muslim [ ] 4. Others. [ ]

Q5. Where do you live?

1. Rural area [ ] 3. Peri-Urban area [ ]

2. Urban area [ ]

Q6. Marital status:

1. Single [ ]

2. Married [ ]

Q7. Who do you stay with?

1. Parents [ ]

2. Guardian [ ]

3. Partner [ ]

Q8. Do you have a sexual partner or boyfriend?

1. Yes [ ] 2. No [ ]

Q9. Did you get education on sex in the house or at home?

1. Yes [ ]

2. No [ ]

3. Don't know [ ]

Q10.The last time you used a contraceptive, who decided on what to use?

1. Influence. [ ] 4. Partner/ Boyfriend. [ ]

2. Myself. [ ] 5. Parent. [ ]

3. Friend. [ ] 6. Others specify …… [ ]

Q11.Which of these statements do you think are true about contraceptives? (You are allowed to tick more than one).

1. [ ] Contraceptives are for married people only.

2. [ ] I am too young to use contraceptives.

3. [ ] Un married people who use contraceptives are promiscuous –sexually loose.

4. [ ] Young people who are sexually active should use contraceptives.

5. [ ] Use of contraceptives can make one to become sexually loose.

6. [ ] People should use contraceptives only if they regularly have sex.

Q12.Do you think your age should use contraceptives?

1. [ ] Yes, if they are married.

2. [ ] Yes, if they are sexually active.

3. [ ] No.

Q 13. Do you discuss/communicate about contraceptives with anyone?

1. Yes [ ]

2. No [ ]

If yes, please explain ……

If no, please explain ……

Q14. In your own opinion, would you encourage the sexually active adolescent girls to use contraceptives?

1. Yes [ ]

2. No [ ]

Q15. Why Yes/ No in Q14? .....

Section Two: Determinants of Contraceptive Uptake Among Adolescents

i) Informational/ Knowledge Determinants

Q1. Have you heard about contraceptives?

1. Yes [ ]

2. No [ ]

Q2. If yes, how did you hear about it?

1. Radio [ ] 5. Friends [ ]

2. Teacher [ ] 6. Partner [ ]

3. Health worker [ ] 7. Print media [ ]

4. Family member [ ] 8. Others specify ……...

Q3. Contraception is any method or procedures used to prevent pregnancy?

1. Yes [ ]

2. No [ ]

3. Don't known [ ]

Q4. Have you heard of any contraceptive methods before?

1. Yes [ ]

2. No [ ]

Q5. If yes, mention the methods that you know; ……

Q6. Have you ever used any contraceptive?

1. Yes [ ] 2. No [ ]

Q7. If Yes, which one?

1. Condoms [ ] 3. Pills [ ]

2. Implants [ ] 4. Others specify ……

Q8. If Yes in Q6, State the main reason for choosing that specific contraceptives……..

Q9. Can a girl become pregnant from just one unprotected sex?

1. Yes [ ]

2. No [ ]

3. Don't know [ ]

4. Others specify …….

Q10.Which of these statements describes you;

1. [ ] I am knowledgeable about contraceptives and can effectively train others and properly respond to their questions.

2. [ ] I am knowledgeable about contraceptives but I don't think I'm knowledgeable enough to train others and respond to their questions.

3. [ ] I am not knowledgeable about contraceptives and would like to know more about them.

4. [ ] I am not knowledgeable about contraceptives and I don't think it's the right time for me to know about them.

Q11.Have you been formally trained on contraceptives and contraceptive use OR attended youths' centers?

1. Yes [ ]

2. No [ ]

Q12.Does your school syllabus include sex education?

1. Yes [ ]

2. No [ ]

3. Don't know [ ]

4. Not applicable [ ]

Q13.Which of these statements describes best your use of contraceptives in the past six months?

1. [ ] I used a contraceptive every time I had sex.

2. [ ] I sometimes used contraceptives.

3. [ ] I never used contraceptives.

Q14.What is your reasons for using contraceptives?

1. [ ] To avoid teenage pregnancy.

2. [ ] To prevent STIs.

3. [ ] To delay childbirth.

4. [ ] Others (list) ……

Q15.Are you using any type of contraceptive currently?

1. Yes [ ] 2. No [ ]

Q16.If Yes, which one? .....

ii) Quality of Reproductive Health Services Determinants

Q1. How far away from where you stay are the sexual reproductive services found?

1. [ ] Less than 1km. 3. [ ] 5-10 km.

2. [ ] 1- 5km. 4. [ ] more than 10km.

Q2. Has transport ever hindered you from accessing FP services?

1. [ ] Yes. 2. [ ] No.

Q3. Do you find contraceptives expensive to buy?

1. [ ] Yes. 2. [ ] No.

Q4. Are you able to access FP services at any time while home or in school?

1. [ ] Yes. 2. [ ] No.

Q5. Do you know a place in your community where you can get contraceptives?

1. Yes [ ] 2. No [ ]

Q6. If yes, where?

1. Hospital/Clinic [ ] 4. Family planning clinic [ ]

2. Pharmacy/Chemist [ ] 5. FriQQends [ ]

3. Health provider [ ] 6. Others specify ……..

Q7. Do you find it difficult to acquire contraceptives?

1. [ ] Yes 2. [ ] No 3. [ ] I never attempted to acquire contraceptives.

Q8. If Yes, what makes it difficult for you to acquire contraceptives?

……

Q9. Do you shy away from buying or obtaining contraceptive services?

1. Yes. [ ] 2. No. [ ]

Q10.If you don't use contraceptives regularly, what is your reason?

1. [ ] Contraceptives are used by older people.

2. [ ] Contraceptives are for married people.

3. [ ] Contraceptives are expensive.

4. [ ] I fear the side effects of using contraceptives.

5. [ ] I feel embarrassed to use.

6. [ ] I feel embarrassed to purchase or access the service providers.

7. [ ] Health care providers cannot allow me.

8. [ ] Other reasons ……

Q11.How would you describe the health providers' attitude towards adolescents use of contraceptives? 1. Positive [ ] 2. Negative [ ]

Q12.What is the impact of unwanted pregnancy among adolescent girls?

1. Health risks [ ] 3. Academic delay [ ]

2. Economic burden [ ] 4. School dropout [ ]

Q13.If you realize you are pregnant now, what can you do?

1. Terminate the pregnancy [ ]

2. Dropout of school [ ]

3. Report to my parents [ ]

4. Others specify ……

Appendix IV: Focused Group Discussion Consent Form

Only one consent form will be signed by the researcher to show that all the participants have accepted to take part in the study.

Identification of the focused group discussion …….

Number of participants in the FGD …….

Date of the FGD ……. Place of the FGD……

Moderator's name …….

Each of the participants has either read the information sheet. I have also explained to the participants the information contained in the information sheet. They have assured me that they fully understand that if they participate in the study, they will have a group discussion of between 8-15 persons which will take 45 minutes to 1 hour. They understand that they are free to withdraw from the discussion at any time and this will not have any adverse effects. They also understand that the discussion will be tape recorded.

Participants have agreed to take part in the study.

Name of the researcher ……...

Signature …… Date …….

Appendix V: Focused Group Discussion Guide

Exploring adolescents' Educational level on SRH

1. What do you understand by the term Sexual Reproductive Health (SRH) education?

2. Where can you get the information about SRH education?

3. Does your school curriculum cover content on sexual health education? If Yes, what is it that is covered in the syllabus?

4. Have you heard about contraceptives? Yes/ NO. If yes, where did you get the information from?

5. Can youths/ adolescents use Family Planning services?

6. Why do sexually active adolescent students use contraceptive methods?

7. Who will make you use FP services?

8. Which contraceptive methods can prevent STIs& HIV/AIDS?

9. Were you taught on proper use of contraceptives? If yes, by who?

Exploring the SRH problems of adolescents

1. What problems do adolescents experience in this community?

2. What contributes to the sexual and reproductive health problems?

3. Where can you seek SRH /FP services in the community?

4. Are you able to access these SRH/ FP services in the community? If yes, at what cost?

5. Has financial constraint ever hindered you from accessing FP services?

6. Do your religious beliefs act as a barrier to contraceptives use?

Exploring the RH related/Health facilities set up in uptake of SRH services among adolescents

1. Can you easily access SRH services from health workers'/ drug shops anytime?

2. How can you describe the relationship/ interaction between adolescents and the provider of the above services?

3. Does the environment in which health workers'/ drug shops operate in convenient for you?

4. Are health facilities/ drug shops services accessed by all people in your community irrespective of age, religion or social background?

5. What are benefits/negative effects in your opinion one can derive from family planning?

6. Can youths/adolescents get advice on questions concerning their sexuality? If yes, from where?

7. What in your opinion, do you want to see changing with the current SRH services provision at community level, schools and health facilities?

THANK YOU

Appendix VI: NACOSTI Letter

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 678457

Date of Issue: 08/March/2021

RESEARCH LICENSE

This is to Certify that Mr.. Emmanuel Oduory Makokha of Jaramogi Oginga Odinga University of Science and Technology, has been licensed to conduct research in Busia on the topic: DETERMINANTS OF CONTRACEPTIVES UPTAKE AMONG ADOLESCENT GIRLS BETWEEN 12-19 YEARS OF AGE LIVING IN TESO- NORTH, BUSIA COUNTY for the period ending : 08/March/2022.

License No NACOSTI/P/21/9269

678457

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this docume
Scan the QR Code using QR scanner application.

Appendix VII: Research Ethics Committee

OFFICE OF THE DIRECTOR OF GRADUATE STUDIES AND RESEARCH
UNIVERSITY OF EASTERN AFRICA, BARATON
P.O. BOX 2500-30100, Eldoret, Kenya, East Africa

B1719022021 February 19, 2021

TO: Makhoha Emmanuel Oduory
Department of Public Health
Jaramogi Oginga Odinga University of Science and Technology

Dear Emmanuel,

RE: Determinants of Contraceptives Uptake Among Adolescent Girls Between 12-19 Years Of Age Living In Teso-North, Busia County

This is to inform you that the Research Ethics Committee (REC) of the University of Eastern Africa Baraton has reviewed and approved your above research proposal. Your application approval number is UEAB/REC/17/2/2021. The approval period is 19th February 2021 – 19th February, 2022.

This approval is subject to compliance with the following requirements;

i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by the Research Ethics Committee (REC) of the University of Eastern Africa Baraton.
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to the Research Ethics Committee (REC) of the University of Eastern Africa Baraton within 72 hours of notification.
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to the Research Ethics Committee (REC) of the University of Eastern Africa Baraton within 72 hours.
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to the Research Ethics Committee (REC) of the University of Eastern Africa Baraton.

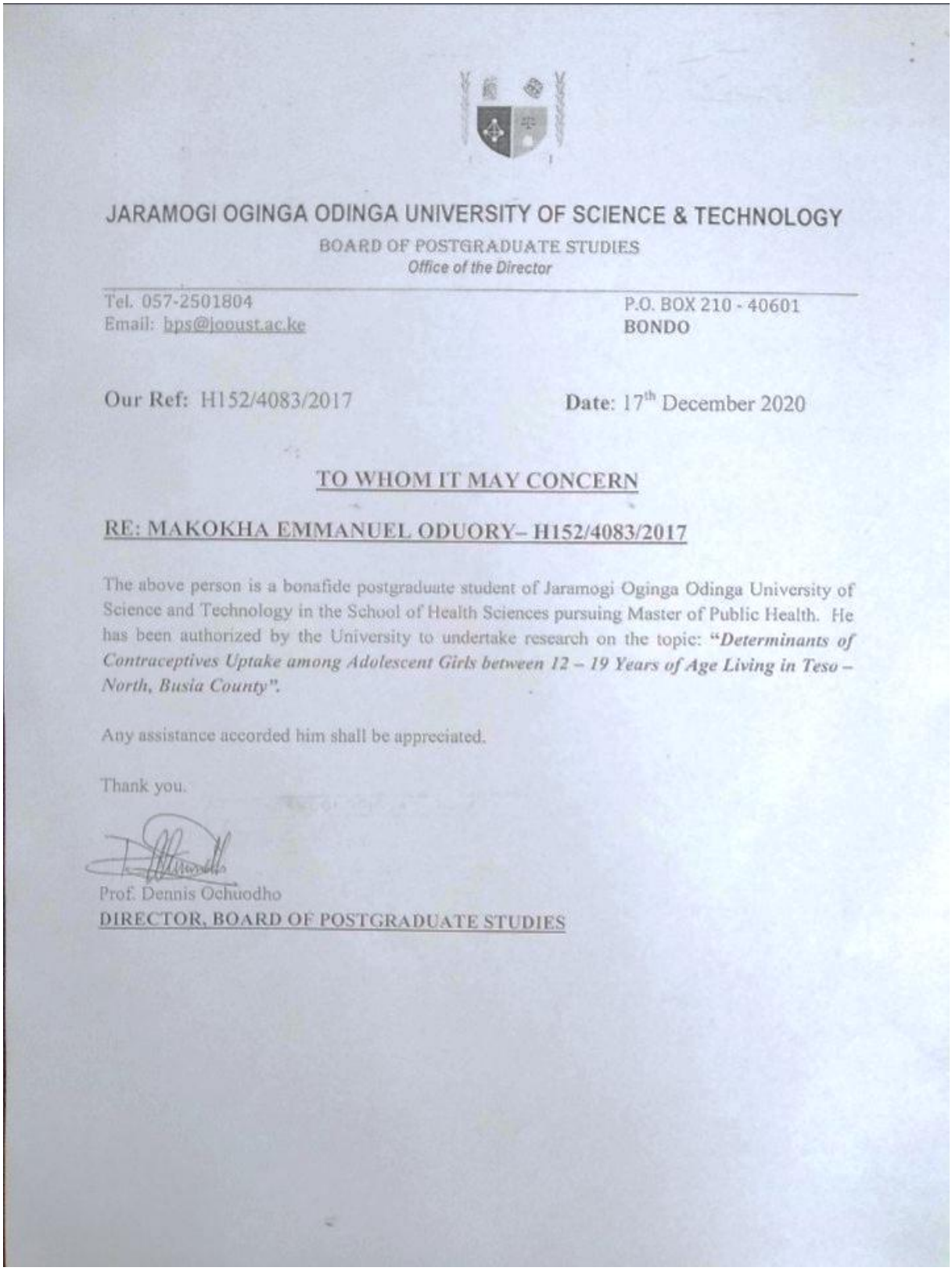
Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and also obtain other clearances needed.

Sincerely yours,

University of Eastern Africa, Baraton
19 FEB 2021
Ethics Committee

Prof. Jackie K. Obey, PhD
Chairperson, Research Ethics Committee

Appendix VIII: Letter from University



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY

BOARD OF POSTGRADUATE STUDIES

Office of the Director

Tel. 057-2501804
Email: bps@jooust.ac.ke

P.O. BOX 210 - 40601
BONDO

Our Ref: H152/4083/2017 **Date**: 17th December 2020

TO WHOM IT MAY CONCERN

RE: MAKOKHA EMMANUEL ODUORY– H152/4083/2017

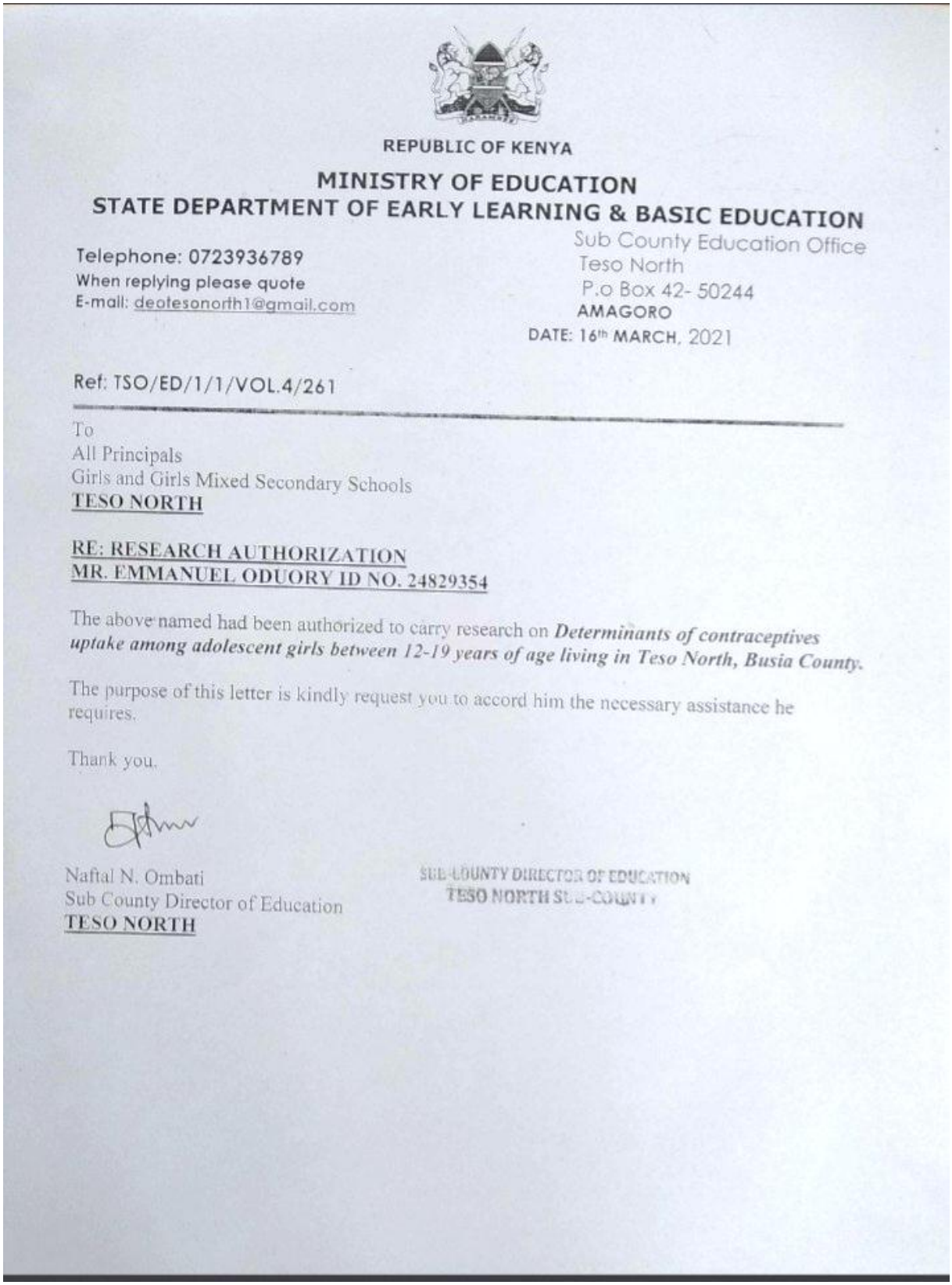
The above person is a bonafide postgraduate student of Jaramogi Oginga Odinga University of Science and Technology in the School of Health Sciences pursuing Master of Public Health. He has been authorized by the University to undertake research on the topic: ***"Determinants of Contraceptives Uptake among Adolescent Girls between 12 – 19 Years of Age Living in Teso – North, Busia County".***

Any assistance accorded him shall be appreciated.

Thank you.

Prof. Dennis Ochuodho
DIRECTOR, BOARD OF POSTGRADUATE STUDIES

Appendix XI: Introductory Letter from Ministry of Education.



REPUBLIC OF KENYA

MINISTRY OF EDUCATION
STATE DEPARTMENT OF EARLY LEARNING & BASIC EDUCATION

Telephone: 0723936789
When replying please quote
E-mail: deotesonorth1@gmail.com

Sub County Education Office
Teso North
P.o Box 42- 50244
AMAGORO
DATE: 16th MARCH, 2021

Ref: TSO/ED/1/1/VOL.4/261

To
All Principals
Girls and Girls Mixed Secondary Schools
TESO NORTH

RE: RESEARCH AUTHORIZATION
MR. EMMANUEL ODUORY ID NO. 24829354

The above named had been authorized to carry research on ***Determinants of contraceptives uptake among adolescent girls between 12-19 years of age living in Teso North, Busia County.***

The purpose of this letter is kindly request you to accord him the necessary assistance he requires.

Thank you.

Naftal N. Ombati
Sub County Director of Education
TESO NORTH

SUB-COUNTY DIRECTOR OF EDUCATION
TESO NORTH SUB-COUNTY